

A brand of  **legrand**[®]

ZUCCHINI BUSBAR

THE BACKBONE OF
MODERN BUILDINGS



■ POWERED BY SPECIALISTS

ZUCCHINI

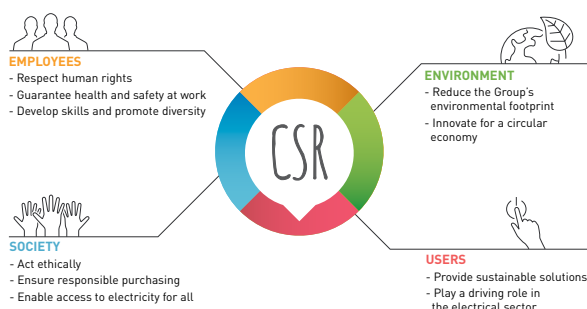
Global strength built on local knowledge

Legrand is the global specialist in electrical and digital building infrastructures. Innovation is the driving force behind its development.

With an increasing investment in research and development (circa 5% of sales) and more than 4,000 active patents, the Legrand Group is focused on maintaining a high rate of new product launches that present innovative solutions to the market.

CORPORATE SOCIAL RESPONSIBILITY

Legrand's 2014-2018 CSR roadmap is a natural extension to the governance and sustainable development approach in which the company has been engaged for many years. The CSR roadmap firmly asserts Legrand's ongoing commitment to sustainable development.



LEGRAND'S POWER DISTRIBUTION BUSINESS UNIT

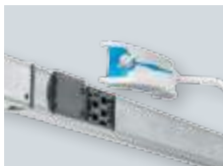
From Zucchini transformers, through high power distribution and rising main busbar to Electrak powertrack, desk modules and lighting control, Legrand's power distribution business unit provides market leading solutions to the increasing demands of today's buildings.





ZUCCHINI

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LOW POWER

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MEDIUM POWER

| | |
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HIGH POWER

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ZUCCHINI

the specialist in
busbar systems



Established in 1958 and now part of the Legrand Group, Zucchini has become a leading name in busbar power distribution systems and cast resin transformers.

Zucchini busbar is manufactured in state-of-the-art production facilities, including one of the most technically advanced aluminium plating processing units in Europe. These exceptional manufacturing capabilities enable Legrand to offer a fully tested range of products that are superior in terms of quality and design.

All Zucchini busbar trunking systems are certified to IEC EN 61439-6 by third party test houses CESI/RINA and are manufactured in accordance with ISO 9001 : 2008 quality standards.

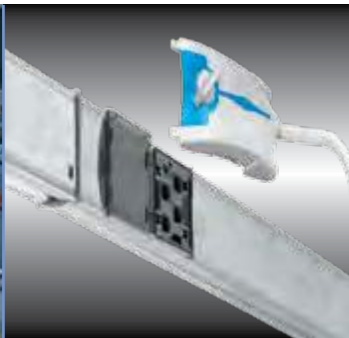




An extensive range...

The Zucchini range of prefabricated busbars is one of the most comprehensive on the market, ranging from 25 A lighting through to 6300 A high power systems. Zucchini busbar is widely used for power distribution in both industrial and commercial applications.

Its modular construction and wide variety of busbar accessories allow an infinite number of trunking combinations, providing a versatile and flexible technical solution to any layout.



LB PLUS - LOW POWER BUSBAR SYSTEM

LB PLUS is the new range of Zucchini busbars for electrical distribution within low power applications.

It offers simplicity, high performance and easy installation and can meet all lighting and power demands from 25 A to 63 A.

see page 4

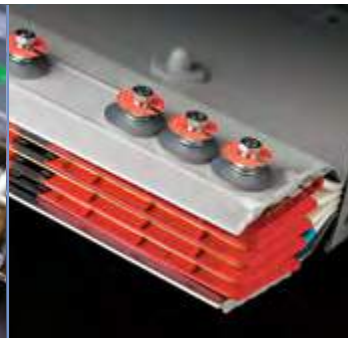


MEDIUM POWER BUSBAR SYSTEMS

Zucchini medium power busbars offer speed, simplicity and flexibility during planning and installation.

MS is ideal for commercial and industrial applications from 63 A to 160 A and MR offers the perfect solution for rising mains up to 1000 A.

see page 20



SCP - HIGH POWER BUSBAR SYSTEM

SCP is the Zucchini busbar range used for the transport and distribution of high power.

Ranging from 630 A to 6300 A the dimensions of super compact and its 'sandwich' construction enhance resistance to short circuit stresses.

see page 58



CAST RESIN TRANSFORMERS

Legrand also offers a wide range of high quality, environmentally friendly cast resin transformers from 160 kVA up to 16 mVA.

This comprehensive range is further enhanced by technical expertise and the ability to create bespoke solutions.

visit www.legrand.co.uk

ZUCCHINI LB PLUS - LIGHTING AND POWER BUSBAR

Zucchini LB PLUS is a new range of 25 to 63 A busbars that are ideal for the distribution of power for lighting and low power applications. With a single product, LB PLUS replaces the LB, HL, and SL ranges, offering a busbar that is simpler, better performing, and easier to install.



A winning solution delivering performance and simplicity... with increased functionality, fewer part numbers and common accessories for all versions



SHOPPING CENTRES,
STORES, OFFICES



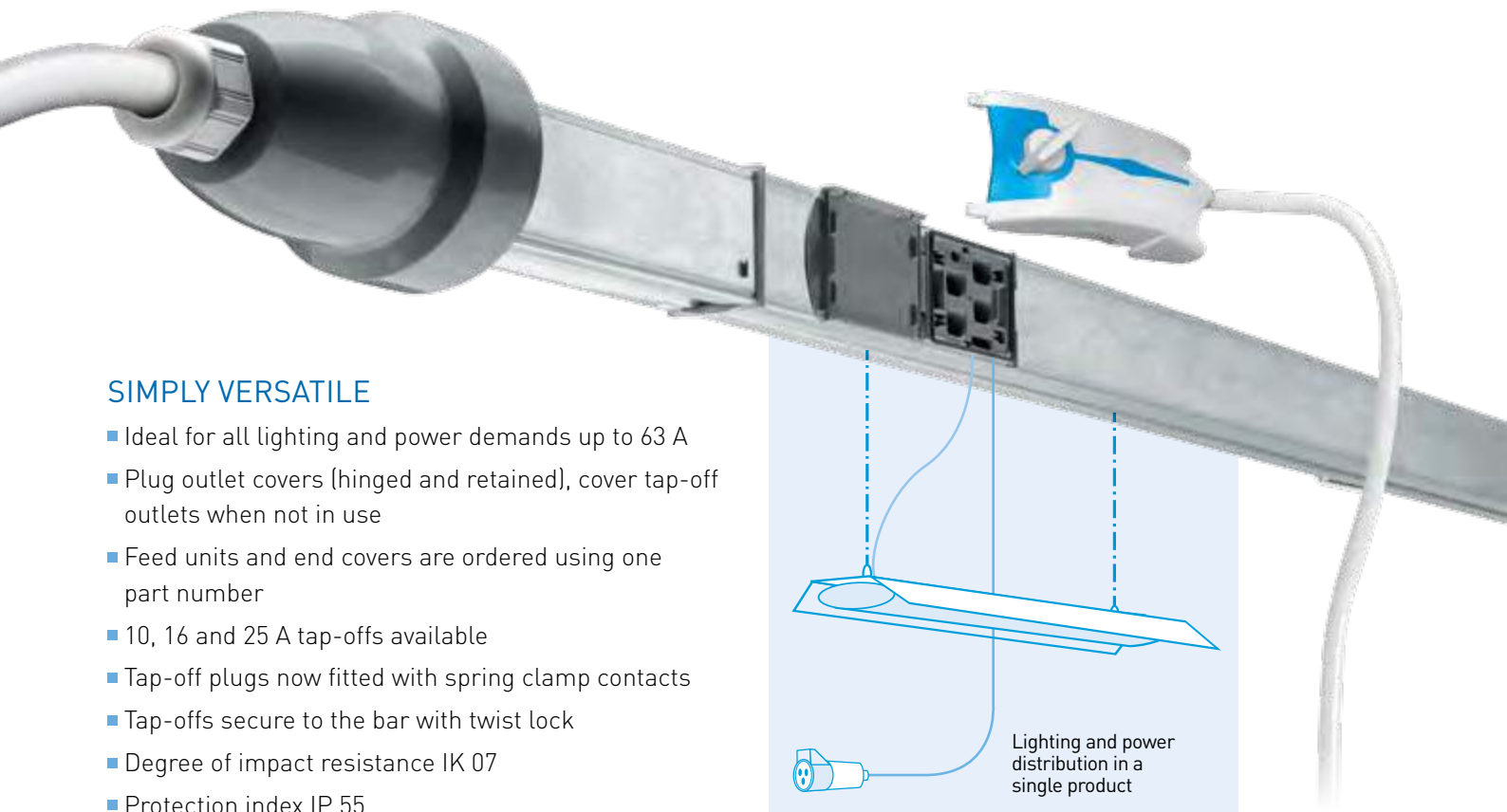
WAREHOUSES,
GYMS, UNDERGROUND
CAR PARKS



HOSPITALS,
LABORATORIES



WORKSHOPS,
MAINTENANCE AND
REPAIR FACILITIES,
PRODUCTION SITES



SIMPLY VERSATILE

- Ideal for all lighting and power demands up to 63 A
- Plug outlet covers (hinged and retained), cover tap-off outlets when not in use
- Feed units and end covers are ordered using one part number
- 10, 16 and 25 A tap-offs available
- Tap-off plugs now fitted with spring clamp contacts
- Tap-offs secure to the bar with twist lock
- Degree of impact resistance IK 07
- Protection index IP 55



NEW TAP-OFF PLUGS

- Can be moved when the bar is energised
- With spring clamp contacts
- Self-extinguishing plastic components
- IP 55 without using additional accessories
- Can be fitted with positioning pin to ensure tap-off can only access the correct side of a double-sided bar



BRACKETS

- For ceiling, wall or floor mounting installation
- Can be positioned anywhere on straight length, even over unused tap-off outlets

LB PLUS busbar trunking systems

selection chart

| | 25 A | | | | 40 A | | 63 A |
|--|-----------------------|--------------|--------------|------------------------|-----------------------|--------------|--------------|
| | 2 conductors | 4 conductors | 6 conductors | 8 conductors | 4 conductors | 8 conductors | 4 conductors |
| LB PLUS STRAIGHT LENGTHS – TYPE A | 252 | 254 | 256 | 258 | 404 | 408 | 634 |
| 3 m length – 2 outlets | 75150101 | 75160101 | – | – | 75200101 | – | – |
| 3 m length – 4 outlets | – | 75160102 | – | – | 75200102 | – | – |
| 3 m length – 2 + 2 outlets | – | – | 75170101 | 75180101 | – | 75220101 | 75240101 |
| 3 m length – 4 + 4 outlets | – | – | – | 75180102 | – | 75220102 | 75240102 |
| 1.5 m length – 2 outlets | 75200111 | | – | – | 75200111 | – | – |
| 1.5 m length – 1 + 1 outlets | – | – | 75220111 | | – | 75220111 | 75240111 |
| LB PLUS STRAIGHT LENGTHS – TYPE B | 252 | 254 | 256 | 258 | 404 | 408 | 634 |
| 3 m length – 4 outlets | 75350102H | 75360102H | – | – | 75400102H | – | – |
| 3 m length – 6 outlets | – | 75360103H | – | – | 75400103H | – | – |
| 3 m length – 4 + 4 outlets | – | – | 75370101H | 75380101H | – | 75420101H | 75440101H |
| 3 m length – 6 + 6 outlets | – | – | – | 75380102H | – | 75420102H | 75440102H |
| 1.5 m length – 2 outlets | 75400111H | | – | – | 75400111H | – | – |
| 1.5 m length – 1 + 1 outlets | – | – | 75420111H | | – | 75420111H | 75440111H |
| FEED UNITS | 252 | 254 | 256 | 258 | 404 | 408 | 634 |
| RH feed unit + end cover (reduced dimensions) | 75201003 | | 75221003 | | 75201003 | 75221003 | 75241003 |
| LH feed unit + end cover (reduced dimensions) | 75201004 | | 75221004 | | 75201004 | 75221004 | 75241004 |
| Fast fit – feed unit RH | 75161001 | | – | – | – | – | – |
| Fast fit – feed unit LH | 75161002 | | – | – | – | – | – |
| Centre feed unit + end covers (reduced dimensions) | 75201153 | | 75221153 | | 75201153 | 75221153 | 75241153 |
| FLEXIBLE JOINT | 75201261 | | 75221261 | | 75201261 | 75221261 | 75241261 |
| BRACKETS AND SUSPENSIONS | 252 | 254 | 256 | 258 | 404 | 408 | 634 |
| 60 kg suspension bracket | 75003000 (for TYPE A) | | | and | 75003004 for (TYPE B) | | |
| Hook for lamp | | | | 75003001 | | | |
| Ring | | | | 75003002 | | | |
| Pigtail for chain | | | | 75003005 | | | |
| 5 m steel cable with self locking clamp (TYPE B) | | | | 75003008 (TYPE B only) | | | |
| Bracket with 3 m steel cable (TYPE A) | | | | 75003009 (TYPE A only) | | | |
| CABLE CHANNEL | 252 | 254 | 256 | 258 | 404 | 408 | 634 |
| PVC cable channel with cover (3 m) | | | | 75000104 | | | |
| Bracket for cable channel | | | | 75003006 | | | |

| 10 A SINGLE PHASE TAP-OFFS | 252 | 254 | 256 | 258 | 404 | 408 | 634 |
|--|-------------|--------------|------------|------------|------------|------------|------------|
| 10 A plug with 1 m cable - L1-N | 75005011 | | | | | | |
| 10 A plug with 1 m cable - L2-N | – | 75005012 | | | | | |
| 10 A plug with 1 m cable - L3-N | – | 75005013 | | | | | |
| 10 A plug with 1 m cable - L-N2 | – | 75005014 | | | | | |
| 10 A plug with 3 m cable - L1-N | 75005021 | | | | | | |
| 10 A plug with 3 m cable - L2-N | – | 75005022 | | | | | |
| 10 A plug with 3 m cable - L3-N | – | 75005023 | | | | | |
| 10 A plug with 3 m cable - L-N2 | – | 75005024 | | | | | |
| 16 A PHASE SELECTION TAP-OFFS | 252 | 254 | 256 | 258 | 404 | 408 | 634 |
| 16 A plug (unfused) | 75005000 | | | | | | |
| 16 A plug + 1 x (5 x 20) | – | 75005100 | | | | | |
| 16 A plug + 1 x (CH8) | – | 75005200 | | | | | |
| 16 A PRE-WIRED TAP-OFFS | 252 | 254 | 256 | 258 | 404 | 408 | 634 |
| SP & N with 1.5 m cable and 6.3 A fuse - L1-N | 750051001L1 | | | | | | |
| SP & N with 1.5 m cable and 6.3 A fuse - L2-N | – | 750051001L2 | | | | | |
| SP & N with 1.5 m cable and 6.3 A fuse - L3-N | – | 750051001L3 | | | | | |
| SP & N with 1.5 m cable and 6.3 A fuse - L-N2 | – | 750051001LN2 | | | | | |
| DP & N with 1.5 m cable and 1 x 6.3 A fuse - L1+L3-N | – | 7500510014C | | | | | |
| SP & N with 3 m cable and 6.3 A fuse - L1-N | 750051003L1 | | | | | | |
| SP & N with 3 m cable and 6.3 A fuse - L2-N | – | 750051003L2 | | | | | |
| SP & N with 3 m cable and 6.3 A fuse - L3-N | – | 750051003L3 | | | | | |
| SP & N with 3 m cable and 6.3 A fuse - L-N2 | – | 750051003LN2 | | | | | |
| DP & N with 3 m cable and 1 x 6.3 A fuse - L1+L3-N | – | 7500510034C | | | | | |
| THREE-PHASE TAP-OFFS – 16 - 25 A | 252 | 254 | 256 | 258 | 404 | 408 | 634 |
| 16 A 3 phase (unfused) | – | 75005005 | | | | | |
| 25 A 3 phase (unfused) | – | 75007005 | | | | | |
| 25 A 3 phase + 3 x (CH8) | – | 75007205 | | | | | |
| 25 A 3 phase + 3 x (CH8) + 4 DIN BOX | – | 75007206 | | | | | |
| 25 A 3 phase + (unfused) + 8 DIN BOX | – | 75007207 | | | | | |
| 25 A 3 phase + (unfused) + 4 DIN BOX | – | 75007006 | | | | | |
| TAP-OFF ACCESSORIES | 252 | 254 | 256 | 258 | 404 | 408 | 634 |
| 16 A mobile contact | 75105000 | | | | | | |
| Window kit code | 75105001 | | | | | | |

LB PLUS straight lengths – Type A

straight lengths 25-63 A

LB PLUS straight lengths – Type B

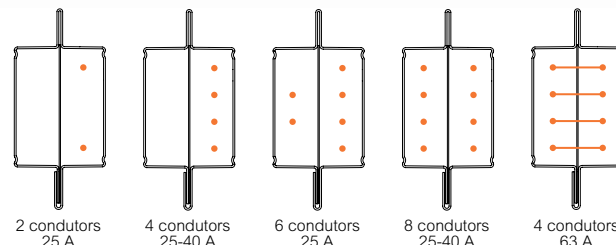
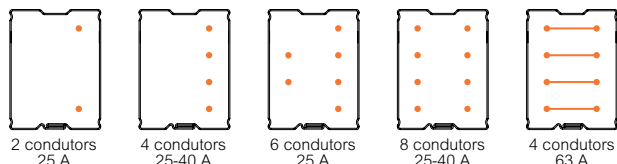
straight lengths 25-63 A



75160102



75360102H



Selection chart **p. 6-7**
 Technical data **p. 12**
 Dimensions and technical information **p. 14-15**



Selection chart **p. 6-7**
 Technical data **p. 13**
 Dimensions and technical information **p. 14-15**

| Pack | Cat. Nos. | Straight lengths – Type A | | | | | | | | | | |
|------------|-----------------------|---|---------------|-------------|------------|---------------|-------------|----|---|-----|-------|------|
| | | Rigid galvanised steel casing 3 m maximum distance between suspension brackets Conductors insulated with self-extinguishing plastic (IEC 60695-2-12 and V0 according to UL94) Standard tap-off outlets with captive IP 55 plug-outlet covers Protection index IP 55 Impact resistance : IK 07 252 with 2 x 25 A conductors | | | | | | | | | | |
| 1 | 75150101 | <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Conductors</th> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>25</td> <td>2</td> <td>3-0</td> <td>2</td> <td>3-00</td> </tr> </tbody> </table> | Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | 25 | 2 | 3-0 | 2 | 3-00 |
| Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | | | | | | | | |
| 25 | 2 | 3-0 | 2 | 3-00 | | | | | | | | |
| | | 254 with 4 x 25 A conductors | | | | | | | | | | |
| 1 | 75160101 | <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Conductors</th> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>25</td> <td>4</td> <td>3-0</td> <td>2</td> <td>3-10</td> </tr> </tbody> </table> | Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | 25 | 4 | 3-0 | 2 | 3-10 |
| Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | | | | | | | | |
| 25 | 4 | 3-0 | 2 | 3-10 | | | | | | | | |
| 1 | 75160102 | <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Conductors</th> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>25</td> <td>4</td> <td>3-0</td> <td>4</td> <td>3-20</td> </tr> </tbody> </table> | Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | 25 | 4 | 3-0 | 4 | 3-20 |
| Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | | | | | | | | |
| 25 | 4 | 3-0 | 4 | 3-20 | | | | | | | | |
| | | 256 with 6 x 25 A conductors | | | | | | | | | | |
| 1 | 75170101 | <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Conductors</th> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>25</td> <td>6</td> <td>3-0</td> <td>2 + 2</td> <td>3-65</td> </tr> </tbody> </table> | Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | 25 | 6 | 3-0 | 2 + 2 | 3-65 |
| Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | | | | | | | | |
| 25 | 6 | 3-0 | 2 + 2 | 3-65 | | | | | | | | |
| | | 258 with 8 x 25 A conductors | | | | | | | | | | |
| 1 | 75180101 | <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Conductors</th> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>25</td> <td>8</td> <td>3-0</td> <td>2 + 2</td> <td>3-75</td> </tr> </tbody> </table> | Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | 25 | 8 | 3-0 | 2 + 2 | 3-75 |
| Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | | | | | | | | |
| 25 | 8 | 3-0 | 2 + 2 | 3-75 | | | | | | | | |
| 1 | 75180102 | <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Conductors</th> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>25</td> <td>8</td> <td>3-0</td> <td>4 + 4</td> <td>3-85</td> </tr> </tbody> </table> | Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | 25 | 8 | 3-0 | 4 + 4 | 3-85 |
| Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | | | | | | | | |
| 25 | 8 | 3-0 | 4 + 4 | 3-85 | | | | | | | | |
| | | 404 with 4 x 40 A conductors | | | | | | | | | | |
| 1 | 75200101 | <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Conductors</th> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>40</td> <td>4</td> <td>3-0</td> <td>2</td> <td>3-55</td> </tr> </tbody> </table> | Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | 40 | 4 | 3-0 | 2 | 3-55 |
| Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | | | | | | | | |
| 40 | 4 | 3-0 | 2 | 3-55 | | | | | | | | |
| 1 | 75200102 | <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Conductors</th> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>40</td> <td>4</td> <td>3-0</td> <td>4</td> <td>3-65</td> </tr> </tbody> </table> | Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | 40 | 4 | 3-0 | 4 | 3-65 |
| Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | | | | | | | | |
| 40 | 4 | 3-0 | 4 | 3-65 | | | | | | | | |
| 1 | 75200111 ¹ | <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Conductors</th> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>40</td> <td>4</td> <td>1-5</td> <td>2</td> <td>2-00</td> </tr> </tbody> </table> | Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | 40 | 4 | 1-5 | 2 | 2-00 |
| Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | | | | | | | | |
| 40 | 4 | 1-5 | 2 | 2-00 | | | | | | | | |
| | | 408 with 8 x 40 A conductors | | | | | | | | | | |
| 1 | 75220101 | <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Conductors</th> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>40</td> <td>8</td> <td>3-0</td> <td>2 + 2</td> <td>4-70</td> </tr> </tbody> </table> | Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | 40 | 8 | 3-0 | 2 + 2 | 4-70 |
| Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | | | | | | | | |
| 40 | 8 | 3-0 | 2 + 2 | 4-70 | | | | | | | | |
| 1 | 75220102 | <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Conductors</th> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>40</td> <td>8</td> <td>3-0</td> <td>4 + 4</td> <td>4-80</td> </tr> </tbody> </table> | Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | 40 | 8 | 3-0 | 4 + 4 | 4-80 |
| Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | | | | | | | | |
| 40 | 8 | 3-0 | 4 + 4 | 4-80 | | | | | | | | |
| 1 | 75220111 ² | <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Conductors</th> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>40</td> <td>8</td> <td>1-5</td> <td>1 + 1</td> <td>2-50</td> </tr> </tbody> </table> | Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | 40 | 8 | 1-5 | 1 + 1 | 2-50 |
| Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | | | | | | | | |
| 40 | 8 | 1-5 | 1 + 1 | 2-50 | | | | | | | | |
| | | 634 with 4 x 63 A conductors | | | | | | | | | | |
| 1 | 75240101 | <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Conductors</th> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>63</td> <td>4</td> <td>3-0</td> <td>2 + 2</td> <td>4-70</td> </tr> </tbody> </table> | Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | 63 | 4 | 3-0 | 2 + 2 | 4-70 |
| Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | | | | | | | | |
| 63 | 4 | 3-0 | 2 + 2 | 4-70 | | | | | | | | |
| 1 | 75240102 | <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Conductors</th> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>63</td> <td>4</td> <td>3-0</td> <td>4 + 4</td> <td>4-80</td> </tr> </tbody> </table> | Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | 63 | 4 | 3-0 | 4 + 4 | 4-80 |
| Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | | | | | | | | |
| 63 | 4 | 3-0 | 4 + 4 | 4-80 | | | | | | | | |
| 1 | 75240111 | <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Conductors</th> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>63</td> <td>4</td> <td>1-5</td> <td>1 + 1</td> <td>2-50</td> </tr> </tbody> </table> | Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | 63 | 4 | 1-5 | 1 + 1 | 2-50 |
| Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | | | | | | | | |
| 63 | 4 | 1-5 | 1 + 1 | 2-50 | | | | | | | | |

1 : For use with both 25 and 40 A systems, and also 2 and 4 conductor versions
 2 : For use with both 25 and 40 A systems, and also 6 and 8 conductor versions

| Pack | Cat. Nos. | Straight lengths – Type B | | | | | | | | | | |
|------------|------------------------|---|---------------|-------------|------------|---------------|-------------|----|---|-----|-------|------|
| | | Reinforced highly rigid galvanised steel casing 7 m maximum distance between suspension brackets Conductors insulated with self-extinguishing plastic ZH (zero halogen) Standard tap-off outlets with captive IP 55 plug-outlet covers Mechanical separation of the 2 sides of the bar, (6 and 8 conductors versions) Protection index IP 55 Impact resistance : IK 07 252 with 2 x 25 A conductors | | | | | | | | | | |
| 1 | 75350102H | <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Conductors</th> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>25</td> <td>2</td> <td>3-0</td> <td>4</td> <td>5-45</td> </tr> </tbody> </table> | Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | 25 | 2 | 3-0 | 4 | 5-45 |
| Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | | | | | | | | |
| 25 | 2 | 3-0 | 4 | 5-45 | | | | | | | | |
| | | 254 with 4 x 25 A conductors | | | | | | | | | | |
| 1 | 75360102H | <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Conductors</th> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>25</td> <td>4</td> <td>3-0</td> <td>4</td> <td>5-55</td> </tr> </tbody> </table> | Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | 25 | 4 | 3-0 | 4 | 5-55 |
| Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | | | | | | | | |
| 25 | 4 | 3-0 | 4 | 5-55 | | | | | | | | |
| 1 | 75360103H | <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Conductors</th> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>25</td> <td>4</td> <td>3-0</td> <td>6</td> <td>5-60</td> </tr> </tbody> </table> | Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | 25 | 4 | 3-0 | 6 | 5-60 |
| Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | | | | | | | | |
| 25 | 4 | 3-0 | 6 | 5-60 | | | | | | | | |
| | | 256 with 6 x 25 A conductors | | | | | | | | | | |
| 1 | 75370101H | <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Conductors</th> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>25</td> <td>6</td> <td>3-0</td> <td>4 + 4</td> <td>6-10</td> </tr> </tbody> </table> | Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | 25 | 6 | 3-0 | 4 + 4 | 6-10 |
| Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | | | | | | | | |
| 25 | 6 | 3-0 | 4 + 4 | 6-10 | | | | | | | | |
| | | 258 with 8 x 25 A conductors | | | | | | | | | | |
| 1 | 75380101H | <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Conductors</th> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>25</td> <td>8</td> <td>3-0</td> <td>4 + 4</td> <td>6-20</td> </tr> </tbody> </table> | Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | 25 | 8 | 3-0 | 4 + 4 | 6-20 |
| Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | | | | | | | | |
| 25 | 8 | 3-0 | 4 + 4 | 6-20 | | | | | | | | |
| 1 | 75380102H | <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Conductors</th> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>25</td> <td>8</td> <td>3-0</td> <td>6 + 6</td> <td>6-35</td> </tr> </tbody> </table> | Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | 25 | 8 | 3-0 | 6 + 6 | 6-35 |
| Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | | | | | | | | |
| 25 | 8 | 3-0 | 6 + 6 | 6-35 | | | | | | | | |
| | | 404 with 4 x 40 A conductors | | | | | | | | | | |
| 1 | 75400102H | <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Conductors</th> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>40</td> <td>4</td> <td>3-0</td> <td>4</td> <td>6-00</td> </tr> </tbody> </table> | Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | 40 | 4 | 3-0 | 4 | 6-00 |
| Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | | | | | | | | |
| 40 | 4 | 3-0 | 4 | 6-00 | | | | | | | | |
| 1 | 75400103H | <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Conductors</th> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>40</td> <td>4</td> <td>3-0</td> <td>6</td> <td>6-10</td> </tr> </tbody> </table> | Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | 40 | 4 | 3-0 | 6 | 6-10 |
| Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | | | | | | | | |
| 40 | 4 | 3-0 | 6 | 6-10 | | | | | | | | |
| 1 | 75400111H ¹ | <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Conductors</th> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>40</td> <td>4</td> <td>1-5</td> <td>2</td> <td>3-20</td> </tr> </tbody> </table> | Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | 40 | 4 | 1-5 | 2 | 3-20 |
| Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | | | | | | | | |
| 40 | 4 | 1-5 | 2 | 3-20 | | | | | | | | |
| | | 408 with 8 x 40 A conductors | | | | | | | | | | |
| 1 | 75420101H | <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Conductors</th> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>40</td> <td>8</td> <td>3-0</td> <td>4 + 4</td> <td>7-10</td> </tr> </tbody> </table> | Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | 40 | 8 | 3-0 | 4 + 4 | 7-10 |
| Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | | | | | | | | |
| 40 | 8 | 3-0 | 4 + 4 | 7-10 | | | | | | | | |
| 1 | 75420102H | <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Conductors</th> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>40</td> <td>8</td> <td>3-0</td> <td>6 + 6</td> <td>7-30</td> </tr> </tbody> </table> | Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | 40 | 8 | 3-0 | 6 + 6 | 7-30 |
| Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | | | | | | | | |
| 40 | 8 | 3-0 | 6 + 6 | 7-30 | | | | | | | | |
| 1 | 75420111H ² | <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Conductors</th> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>40</td> <td>8</td> <td>1-5</td> <td>1 + 1</td> <td>3-70</td> </tr> </tbody> </table> | Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | 40 | 8 | 1-5 | 1 + 1 | 3-70 |
| Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | | | | | | | | |
| 40 | 8 | 1-5 | 1 + 1 | 3-70 | | | | | | | | |
| | | 634 with 4 x 63 A conductors | | | | | | | | | | |
| 1 | 75440101H | <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Conductors</th> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>63</td> <td>4</td> <td>3-0</td> <td>4 + 4</td> <td>7-10</td> </tr> </tbody> </table> | Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | 63 | 4 | 3-0 | 4 + 4 | 7-10 |
| Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | | | | | | | | |
| 63 | 4 | 3-0 | 4 + 4 | 7-10 | | | | | | | | |
| 1 | 75440102H | <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Conductors</th> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>63</td> <td>4</td> <td>3-0</td> <td>6 + 6</td> <td>7-30</td> </tr> </tbody> </table> | Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | 63 | 4 | 3-0 | 6 + 6 | 7-30 |
| Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | | | | | | | | |
| 63 | 4 | 3-0 | 6 + 6 | 7-30 | | | | | | | | |
| 1 | 75440111H | <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Conductors</th> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>63</td> <td>4</td> <td>1-5</td> <td>1 + 1</td> <td>3-70</td> </tr> </tbody> </table> | Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | 63 | 4 | 1-5 | 1 + 1 | 3-70 |
| Rating (A) | Conductors | Length (m) | Outlet points | Weight (kg) | | | | | | | | |
| 63 | 4 | 1-5 | 1 + 1 | 3-70 | | | | | | | | |

1 : For use with both 25 and 40 A systems, and also 2 and 4 conductor versions
 2 : For use with both 25 and 40 A systems, and also 6 and 8 conductor versions

LB PLUS trunking components



75201003



75161001



75201004



75221263



Selection chart **p. 6-7**

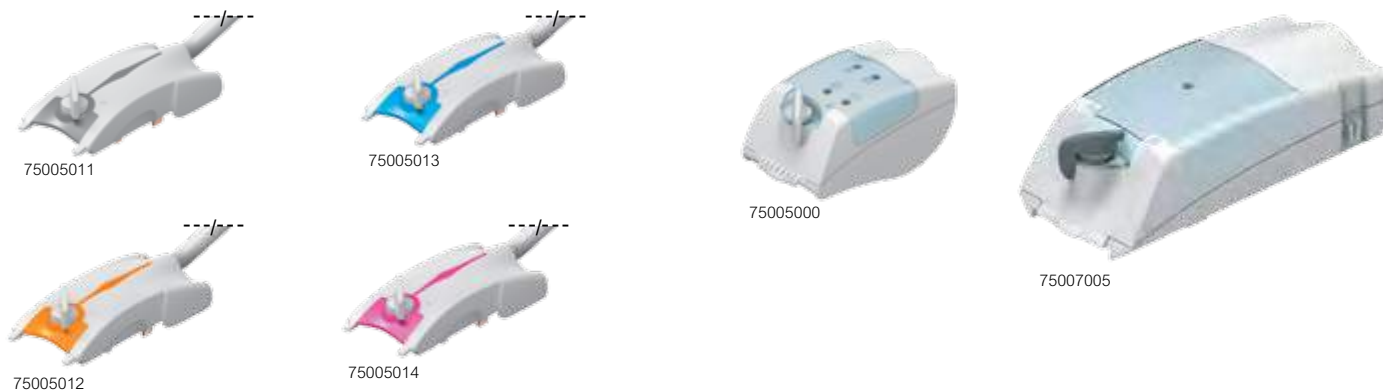
Technical data **p. 12-13**

Dimensions and technical information **p. 16-17**

| Pack | Cat. Nos. | End feed units | |
|------|-----------|---|-------------|
| | | Allow electrical powering of the LB PLUS busbar With terminals for the connection of stranded or solid copper wire cables Delivered with corresponding cable glands | |
| | | Right hand feed units (reduced dimensions) | |
| | | Supplied complete with corresponding end cover Cable terminal capacity 6 mm ² to 25 mm ² Max. cable Ø 32 mm | |
| | | Type | Weight (kg) |
| 1 | 75201003 | 25 / 40 A – 2 / 4 conductors version | 0·80 |
| 1 | 75221003 | 25 / 40 A – 6 / 8 conductors version | 0·90 |
| 1 | 75241003 | 63 A – 4 conductors version | 0·80 |
| | | Left hand feed units (reduced dimensions) | |
| | | Supplied complete with corresponding end cover Cable terminal capacity 6 mm ² to 25 mm ² Max. cable Ø 32 mm | |
| | | Type | Weight (kg) |
| 1 | 75201004 | 25 / 40 A – 2 / 4 conductors version | 1·00 |
| 1 | 75221004 | 25 / 40 A – 6 / 8 conductors version | 1·20 |
| 1 | 75241004 | 63 A – 4 conductor version | 1·10 |
| | | Fast fit feed unit | |
| | | Supplied complete with corresponding end cover Cable terminal capacity up to 6 mm ² Cable Ø from 12 mm to 18 mm | |
| | | Type | Weight (kg) |
| 1 | 75161001 | 25 A – 2 / 4 conductors version RH | 0·45 |
| 1 | 75161002 | 25 A – 2 / 4 conductors version LH | 0·85 |

| Pack | Cat. Nos. | Centre feed units | |
|------|-----------|--|-------------|
| | | Centre feed units can be used to power the busbar from an intermediate point of the line, reducing the voltage drop at the end of the line and/or facilitating the installation when the power supply point is near the centre of the line Complete with all internal wiring One set of terminals feeds both left hand and right hand feed sections Supplied with both end caps | |
| | | Type | Weight (kg) |
| 1 | 75201151 | 25 / 40 A – 2 / 4 conductors version | 3·70 |
| 1 | 75221151 | 25 / 40 A – 6 / 8 conductors version | 4·40 |
| 1 | 75241151 | 63 A – 4 conductors version | 2·70 |
| | | Flexible joints (reduced dimensions) | |
| | | Consists of a right hand and left hand unit Used to change direction, change level or overcome obstructions Flexible cable length : 940 mm | |
| | | Type | Weight (kg) |
| 1 | 75201263 | 25 / 40 A – 2 / 4 conductors version | 2·00 |
| 1 | 75221263 | 25 / 40 A – 6 / 8 conductors version | 3·10 |
| 1 | 75241263 | 63 A – 4 conductors version | 2·50 |

LB PLUS tap-off plugs



Selection chart **p. 6-7**
 Technical data **p. 12-13**
 Dimensions and technical information **p. 16-17**

| Pack | Cat. Nos. | 10 A single phase tap-offs | | | |
|------|-----------|--|------------|-------------|------------|
| | | For use with Type A and Type B busbar, all ratings | | | |
| | | L1 colour code grey, cable type H05WF | | | |
| | | Phase | Length (m) | Weight (kg) | Fuseholder |
| 1 | 75005011 | L1-N | 1 | 0.16 | unfused |
| 1 | 75005021 | L1-N | 3 | 0.38 | unfused |
| | | L2 colour code orange, cable type H05WF | | | |
| | | Phase | Length (m) | Weight (kg) | Fuseholder |
| 1 | 75005012 | L2-N | 1 | 0.16 | unfused |
| 1 | 75005022 | L2-N | 3 | 0.38 | unfused |
| | | L3 colour code blue, cable type H05WF | | | |
| | | Phase | Length (m) | Weight (kg) | Fuseholder |
| 1 | 75005013 | L3-N | 1 | 0.16 | unfused |
| 1 | 75005023 | L3-N | 3 | 0.38 | unfused |
| | | L-N2 colour code magenta, cable type H05WF | | | |
| | | Phase | Length (m) | Weight (kg) | Fuseholder |
| 1 | 75005014 | L-N2 | 1 | 0.16 | unfused |
| 1 | 75005024 | L-N2 | 3 | 0.38 | unfused |
| | | 16 A phase selection tap-offs | | | |
| | | For use with Type A and Type B busbar, all ratings | | | |
| | | | | Weight (kg) | |
| 1 | 75005000 | 16 A plug (unfused) | | 0.12 | |
| 1 | 75005100 | 16 A plug + 1 x (5x20) | | 0.13 | |
| 1 | 75005200 | 16 A plug + 1 x (CH8) | | 0.13 | |

| Pack | Cat. Nos. | 16 A pre-wired tap-offs | |
|------|--------------|--|-------------|
| | | For use with Type A and Type B busbar, all ratings | |
| | | With 1.5 m cable | |
| | | | Phase |
| 1 | 750051001L1 | SP & N with 6.3 A fuse | L1-N |
| 1 | 750051001L2 | SP & N with 6.3 A fuse | L2-N |
| 1 | 750051001L3 | SP & N with 6.3 A fuse | L3-N |
| 1 | 750051001LN2 | SP & N with 6.3 A fuse | L-N2 |
| 1 | 7500510014C | DP & N with 1 x 6.3 A fuse | L1+L3-N |
| | | With 3 m cable | |
| | | | Phase |
| 1 | 750051003L1 | SP & N with 6.3 A fuse | L1-N |
| 1 | 750051003L2 | SP & N with 6.3 A fuse | L2-N |
| 1 | 750051003L3 | SP & N with 6.3 A fuse | L3-N |
| 1 | 750051003LN2 | SP & N with 6.3 A fuse | L-N2 |
| 1 | 7500510034C | DP & N with 1 x 6.3 A fuse | L1+L3-N |
| | | 3 phase tap-offs – 16-25 A | |
| | | For use with Type A and Type B busbar, all ratings | |
| | | | Weight (kg) |
| 1 | 75005005 | 16 A 3 phase (unfused) | 0.13 |
| 1 | 75007005 | 25 A 3 phase (unfused) | 0.12 |
| 1 | 75007205 | 25 A 3 phase + 3 x (CH8) | 0.12 |
| 1 | 75007206 | 25 A 3 phase + 3 x (CH8) + 4 DIN box | 0.63 |
| 1 | 75007207 | 25 A 3 phase (unfused) + 8 DIN box | 0.80 |
| 1 | 75007006 | 25 A 3 phase (unfused) + 4 DIN box | 0.63 |

| Pack | Cat. Nos. | Tap-off accessories | |
|------|-----------|---|--|
| | | Used with Cat. Nos. 75005000 or 75005100 to make contact with additional conductors on the busbar | |
| 10 | 75105000 | 16 A mobile contact | |
| | | Enables tap-off to access a single designated side of the busbar | |
| 20 | 75105001 | Window kit code | |

LB PLUS busbar trunking system

hangers and cable channel



75003000



75003004



75000104



75003006



75003002



75003001



75003005



EEC348



EEA313



EEC353



Dimensions and technical information p. 18-19

| Pack | Cat. Nos. | Hangers |
|------|-----------|---|
| 12 | 75003000 | 60 kg suspension bracket Bracket Cat. No. 75003000 can be used for the suspension of the line and the suspension of light fittings at the same time, while bracket Cat. No. 75003004 may only perform one of the two functions, depending on its rotation For Type A busbar – weight 0.045 kg For Type B busbar – weight 0.045 kg |
| 12 | 75003004 | |
| 10 | 75003001 | Hook for lamp Must always be used with brackets Cat. Nos. 75003000 or 75003004, depending on the type of busbar Weight 0.015 kg |
| 10 | 75003002 | Ring Must always be used with brackets Cat. Nos. 75003000 or 75003004, depending on the type of busbar Weight 0.015 kg |
| 10 | 75003005 | Pigtail for chain Must always be used with brackets Cat. Nos. 75003000 or 75003004, depending on the type of busbar Weight 0.015 kg |
| 1 | 75003007 | Spacer on brackets For floor installation Weight 0.040 kg |
| 12 | 75003008 | 5 m steel cable with self locking clamp For Type B busbar – weight 0.085 kg |
| 12 | 75003009 | Bracket with 3 m steel cable For Type A busbar – weight 0.05 kg |

| Pack | Cat. Nos. | PVC cable channel |
|------|-----------|--|
| 1 | 75000104 | PVC cable channel with cover 3 m – weight 0.884 kg |
| 6 | 75003006 | Bracket for cable channel Must always be used with brackets Cat. Nos. 75003000 or 75003004 depending on the type of busbar and cable channel Cat. No. 71000104 Weight 0.135 kg |
| 1 | EEC348 | Steel cable tray Cable tray 3 m (L) x 50 mm (W) x 13 mm (H) Trunking suspended fixing bracket c/w cable tray stirrup. Used when running cable tray on top of busbar trunking Cable tray fixing bracket |
| 1 | EEA313 | |
| 1 | EEC353 | |

LB PLUS busbar trunking systems

technical data

■ LB PLUS - Type A

| Type | | 252 | 254 | 256 | 258 | 404 | 408 | 634 |
|---|--|--------------------|---------|---------|---------|---------|---------|---------|
| Number of live conductors | | 2 | 4 | 6 | 8 | 4 | 8 | 4 |
| Casing overall dimensions | LxH [mm] | 35 x 46 | 35 x 46 | 35 x 46 | 35 x 46 | 35 x 46 | 35 x 46 | 35 x 46 |
| Rated current | I _n [A] | 25 | 25 | 25 | 25 | 40 | 40 | 63 |
| Operating voltage | U _e [V] | 400 | 400 | 400 | 400 | 400 | 400 | 400 |
| Insulation voltage | U _i [V] | 500 | 500 | 500 | 500 | 500 | 500 | 500 |
| Frequency | f [Hz] | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 |
| Rated short-time current (0.1 s) | I _{cw} [kArms] | – | 2.2 | 2.2 | 2.2 | 2.7 | 2.7 | 2.7 |
| Peak current | I _{pk} [kA] | – | 3.3 | 3.3 | 3.3 | 4.1 | 4.1 | 4.1 |
| Single phase rated short-time current (0.1 s) | I _{cw} [kArms] | 1.3 | 1.3 | 1.3 | 1.3 | 1.6 | 1.6 | 1.6 |
| Single phase peak current | I _{pk} [kA] | 2.0 | 2.0 | 2.0 | 2.0 | 2.4 | 2.4 | 2.4 |
| Thermal limit | I ² t [A ² s x 10 ⁶] | 0.174 | 0.484 | 0.484 | 0.484 | 0.729 | 0.729 | 0.729 |
| 20° C phase resistance | R ₂₀ [mΩ/m] | 4.761 | 4.761 | 4.761 | 4.761 | 3.190 | 3.190 | 1.595 |
| Phase resistance at thermal conditions | R _t [mΩ/m] | 5.656 | 5.656 | 5.656 | 5.656 | 3.802 | 3.802 | 1.901 |
| Phase reactance (50Hz) | X [mΩ/m] | 0.229 | 0.229 | 0.229 | 0.229 | 0.236 | 0.236 | 0.118 |
| Phase impedance | Z [mΩ/m] | 4.767 | 4.767 | 4.767 | 4.767 | 3.199 | 3.199 | 1.599 |
| Resistance of the protective conductor ¹ | R _{PE} [mΩ/m] | 1.695 | 1.695 | 1.695 | 1.695 | 1.695 | 1.695 | 1.695 |
| Reactance of the protective conductor ¹ (50Hz) | X _{PE} [mΩ/m] | 0.222 | 0.222 | 0.222 | 0.222 | 0.222 | 0.222 | 0.222 |
| Resistance of the fault loop | R _o [mΩ/m] | 6.456 | 6.456 | 6.456 | 6.456 | 4.885 | 4.885 | 3.290 |
| Reactance of the fault loop (50Hz) | X _o [mΩ/m] | 0.451 | 0.451 | 0.451 | 0.451 | 0.458 | 0.458 | 0.340 |
| Impedance of the fault loop | Z _o [mΩ/m] | 6.472 | 6.472 | 6.472 | 6.472 | 4.906 | 4.906 | 3.308 |
| Voltage drop with distributed load referred to V3f ³ | ΔV 10 ⁻³ cosφ = 0.70 [V/m/A] | 4.123 ² | 3.570 | 3.570 | 3.570 | 2.830 | 2.451 | 1.225 |
| | ΔV 10 ⁻³ cosφ = 0.75 [V/m/A] | 4.393 ² | 3.805 | 3.805 | 3.805 | 3.008 | 2.605 | 1.302 |
| | ΔV 10 ⁻³ cosφ = 0.80 [V/m/A] | 4.662 ² | 4.038 | 4.038 | 4.038 | 3.183 | 2.757 | 1.378 |
| | ΔV 10 ⁻³ cosφ = 0.85 [V/m/A] | 4.928 ² | 4.268 | 4.268 | 4.268 | 3.356 | 2.906 | 1.453 |
| | ΔV 10 ⁻³ cosφ = 0.90 [V/m/A] | 5.190 ² | 4.495 | 4.495 | 4.495 | 3.525 | 3.052 | 1.526 |
| | ΔV 10 ⁻³ cosφ = 0.95 [V/m/A] | 5.445 ² | 4.715 | 4.715 | 4.715 | 3.686 | 3.192 | 1.596 |
| | ΔV 10 ⁻³ cosφ = 1.00 [V/m/A] | 5.656 ² | 4.898 | 4.898 | 4.898 | 3.802 | 3.293 | 1.646 |
| Weight | p [kg/m] | 1.00 | 1.04 | 1.25 | 1.28 | 1.19 | 1.56 | 1.56 |
| Fire load | [kWh/m] | 1.0 | 1.0 | 1.9 | 1.9 | 1.0 | 1.9 | 1.9 |
| Protection index | IP | 55 | 55 | 55 | 55 | 55 | 55 | 55 |
| Degree of impact-resistance | IK | 07 | 07 | 07 | 07 | 07 | 07 | 07 |
| Joule effect losses at rated current | P [W/m] | 10.6 | 10.6 | 10.6 | 10.6 | 18.2 | 18.2 | 22.6 |
| Ambient temperature min / MAX | t [°C] | -5/+50 | -5/+50 | -5/+50 | -5/+50 | -5/+50 | -5/+50 | -5/+50 |

1 : Metal casing

2 : Single phase values with distributed load

3 : Three phase

$$\Delta V_{3f} = \sqrt{3}/2 \times (R_t \cos\varphi + X \sin\varphi)$$

$$\Delta V_{3f}(In) = I \times L \times \Delta V_{3f} : (\text{knowing the current and length of the line})$$

$$\Delta V_{3f}(In)\% = (\Delta V_{3f}(In) / U_e) \times 100 (\%)$$

To calculate the ΔV1f (Single phase) on distributed load:

$$\Delta V_{1f} = 1/2 \times (2R_t \cos\varphi + 2X \sin\varphi)$$

$$\Delta V_{1f}(In) = I \times L \times \Delta V_{1f} : (\text{knowing the current and length of the line})$$

$$\Delta V_{1f}(In)\% = (\Delta V_{1f}(In) / U_e) \times 100 (\%)$$

I = operating current (A)

L = length (m)

Short circuit protection for Zucchini's product ranges (I_n ≤ 100A)

Zucchini busbar trunking systems with a rated current lower than or equal to 100A (LB PLUS-MS 63 and 100) are properly protected through an MCB (Modular Circuit Breaker) with a rated current lower than or equal to that of the busbar. This protection is guaranteed up to the MCB breaking capacity

Product fully in compliance with IEC EN 61439-6

LB PLUS busbar trunking systems

technical data

■ LB PLUS – Type B

| Type | | 252 | 254 | 256 | 258 | 404 | 408 | 634 |
|---|--|--------------------|---------|---------|---------|---------|---------|---------|
| Number of live conductors | | 2 | 4 | 6 | 8 | 4 | 8 | 4 |
| Casing overall dimensions | LxH [mm] | 35 x 77 | 35 x 77 | 35 x 77 | 35 x 77 | 35 x 77 | 35 x 77 | 35 x 77 |
| Rated current | I _n [A] | 25 | 25 | 25 | 25 | 40 | 40 | 63 |
| Operating voltage | U _e [V] | 400 | 400 | 400 | 400 | 400 | 400 | 400 |
| Insulation voltage | U _i [V] | 500 | 500 | 500 | 500 | 500 | 500 | 500 |
| Frequency | f [Hz] | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 |
| Rated short-time current (0.1 s) | I _{cw} [kArms] | – | 2.2 | 2.2 | 2.2 | 2.7 | 2.7 | 2.7 |
| Peak current | I _{pk} [kA] | – | 3.3 | 3.3 | 3.3 | 4.1 | 4.1 | 4.1 |
| Single phase rated short-time current (0.1 s) | I _{cw} [kArms] | 1.3 | 1.3 | 1.3 | 1.3 | 1.6 | 1.6 | 1.6 |
| Single phase peak current | I _{pk} [kA] | 2.0 | 2.0 | 2.0 | 2.0 | 2.4 | 2.4 | 2.4 |
| Thermal limit | I ² t [A ² s x 10 ⁶] | 0.174 | 0.484 | 0.484 | 0.484 | 0.729 | 0.729 | 0.729 |
| 20 °C phase resistance | R ₂₀ [mΩ/m] | 4.761 | 4.761 | 4.761 | 4.761 | 3.190 | 3.190 | 1.595 |
| Phase resistance at thermal conditions | R _t [mΩ/m] | 5.656 | 5.656 | 5.656 | 5.656 | 3.802 | 3.802 | 1.901 |
| Phase reactance (50Hz) | X [mΩ/m] | 0.229 | 0.229 | 0.229 | 0.229 | 0.236 | 0.236 | 0.118 |
| Phase impedance | Z [mΩ/m] | 4.767 | 4.767 | 4.767 | 4.767 | 3.199 | 3.199 | 1.599 |
| Resistance of the protective conductor ¹ | R _{PE} [mΩ/m] | 1.195 | 1.195 | 1.195 | 1.195 | 1.195 | 1.195 | 1.195 |
| Reactance of the protective conductor ¹ (50Hz) | X _{PE} [mΩ/m] | 0.274 | 0.274 | 0.274 | 0.274 | 0.274 | 0.274 | 0.274 |
| Resistance of the fault loop | R _o [mΩ/m] | 5.956 | 5.956 | 5.956 | 5.956 | 4.385 | 4.385 | 2.790 |
| Reactance of the fault loop (50Hz) | X _o [mΩ/m] | 0.503 | 0.503 | 0.503 | 0.503 | 0.510 | 0.510 | 0.392 |
| Impedance of the fault loop | Z _o [mΩ/m] | 5.977 | 5.977 | 5.977 | 5.977 | 4.415 | 4.415 | 2.817 |
| Voltage drop with distributed load referred to V3f ³ | ΔV 10 ⁻³ cosφ = 0.70 [V/m/A] | 4.123 ² | 3.570 | 3.570 | 3.570 | 2.830 | 2.451 | 1.225 |
| | ΔV 10 ⁻³ cosφ = 0.75 [V/m/A] | 4.393 ² | 3.805 | 3.805 | 3.805 | 3.008 | 2.605 | 1.302 |
| | ΔV 10 ⁻³ cosφ = 0.80 [V/m/A] | 4.662 ² | 4.038 | 4.038 | 4.038 | 3.183 | 2.757 | 1.378 |
| | ΔV 10 ⁻³ cosφ = 0.85 [V/m/A] | 4.928 ² | 4.268 | 4.268 | 4.268 | 3.356 | 2.906 | 1.453 |
| | ΔV 10 ⁻³ cosφ = 0.90 [V/m/A] | 5.190 ² | 4.495 | 4.495 | 4.495 | 3.525 | 3.052 | 1.526 |
| | ΔV 10 ⁻³ cosφ = 0.95 [V/m/A] | 5.445 ² | 4.715 | 4.715 | 4.715 | 3.686 | 3.192 | 1.596 |
| | ΔV 10 ⁻³ cosφ = 1.00 [V/m/A] | 5.656 ² | 4.898 | 4.898 | 4.898 | 3.802 | 3.293 | 1.646 |
| Weight | p [kg/m] | 1.80 | 1.83 | 2.02 | 2.02 | 1.98 | 2.33 | 2.33 |
| Fire load | [kWh/m] | 1.1 | 1.1 | 2.1 | 2.1 | 1.1 | 2.1 | 2.1 |
| Protection index | IP | 55 | 55 | 55 | 55 | 55 | 55 | 55 |
| Degree of impact-resistance | IK | 07 | 07 | 07 | 07 | 07 | 07 | 07 |
| Joule effect losses at rated current | P [W/m] | 10.6 | 10.6 | 10.6 | 10.6 | 18.2 | 18.2 | 22.6 |
| Ambient temperature min-/MAX- | t [°C] | -5/+50 | -5/+50 | -5/+50 | -5/+50 | -5/+50 | -5/+50 | -5/+50 |

1 : Metal casing

2 : Single phase values with distributed load

3 : Three phase - see pg 12

Temperature rating schedule according to the room temperature

| Room temperature [°C] | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
|-----------------------|------|------|------|------|-------|----|-------|------|------|------|
| K1 Factor | 1.15 | 1.12 | 1.08 | 1.05 | 1.025 | 1 | 0.975 | 0.95 | 0.93 | 0.89 |

Multiplier coefficient of rated current for room temperature values different from 40° C

Mechanical loads permitted table

The table shows the maximum weights (kg) that can be supported, both for concentrated, and distributed loads

| LB PLUS – TYPE B | LB PLUS – TYPE A | Distance between suspension brackets | Concentrated load | Distributed load |
|------------------|------------------|--------------------------------------|-------------------|------------------------------|
| | | 1.5 | 40 | 50 kg/m (75 kg) ⁴ |
| 2.0 | 30 | 30 kg/m (60 kg) ⁴ | | |
| 3.0 | 20 | 13 kg/m (39 kg) ⁴ | | |
| 5.0 | 13 | 5 kg/m (25 kg) ⁴ | | |
| 7.0 | 7 | 2 kg/m (14 kg) ⁴ | | |

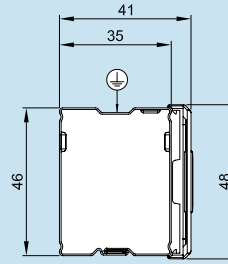
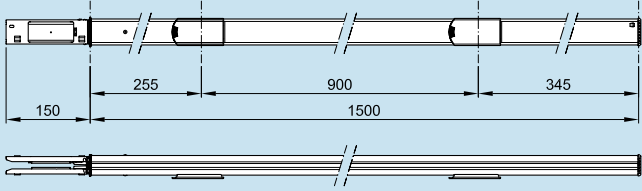
4 : Distributed load total weight

LB PLUS busbar trunking systems

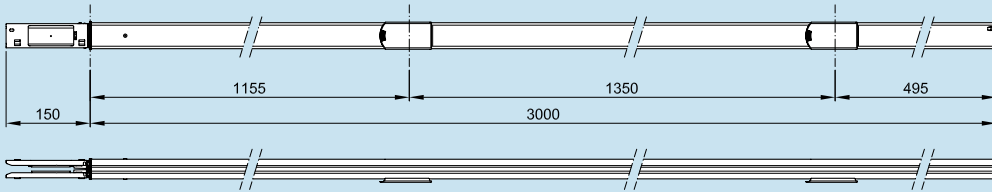
technical information

■ LB PLUS – Type A – 252/254/404

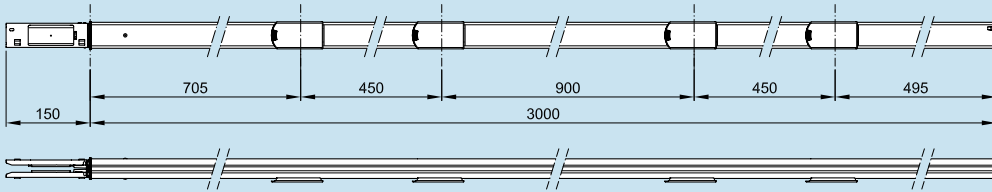
1.5 m - 2 outlets (single sided only)



3 m - 2 outlets (single sided only)

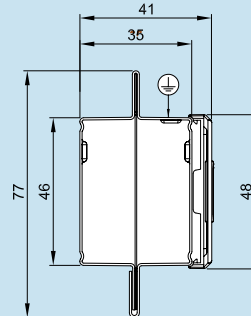
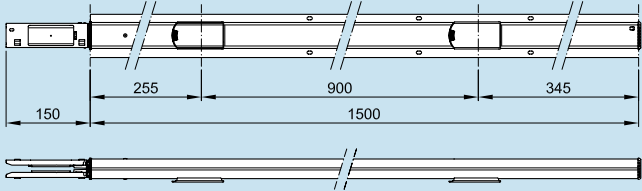


3 m - 4 outlets (single sided only)

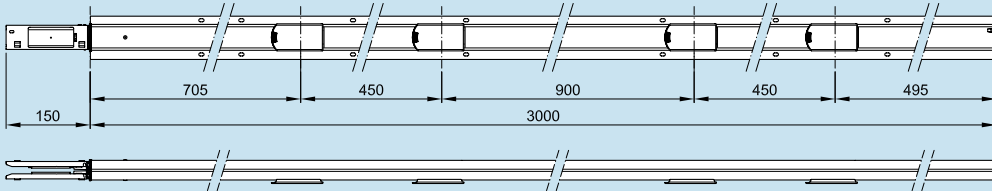


■ LB PLUS – Type B – 252/254/404

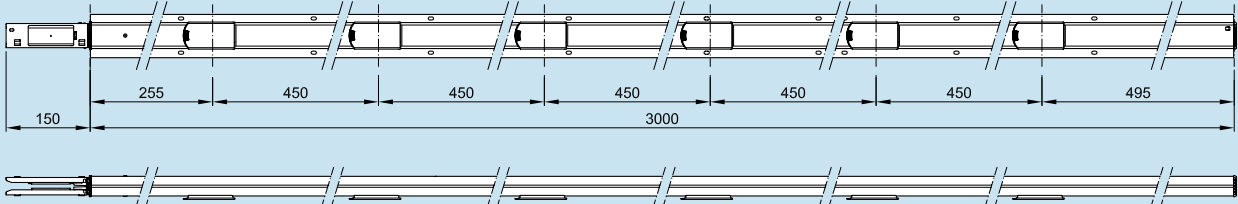
1.5 m - 2 outlets (single sided only)



3 m - 4 outlets (single sided only)



3 m - 6 outlets (single sided only)

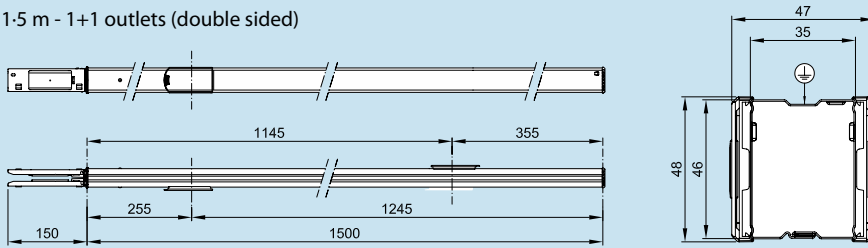


LB PLUS busbar trunking systems

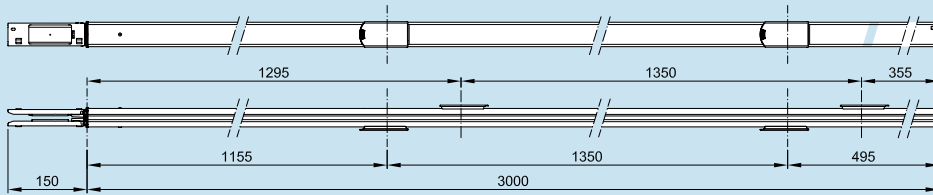
technical information

■ LB PLUS – Type A – 256/258/408/634

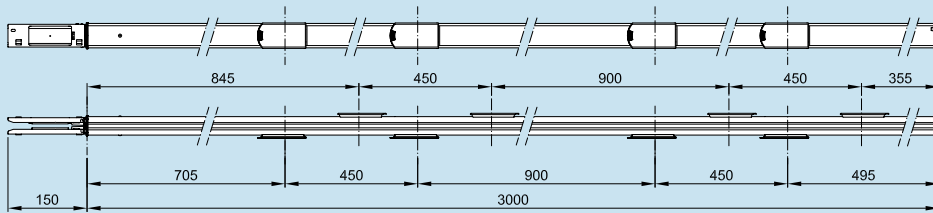
1.5 m - 1+1 outlets (double sided)



3 m - 2+2 outlets (double sided)

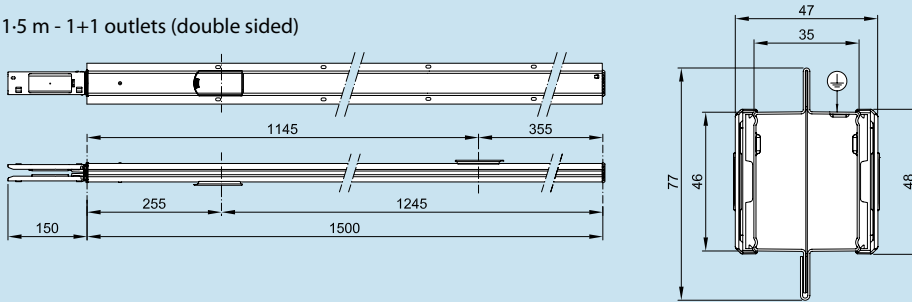


3 m - 4+4 outlets (double sided)

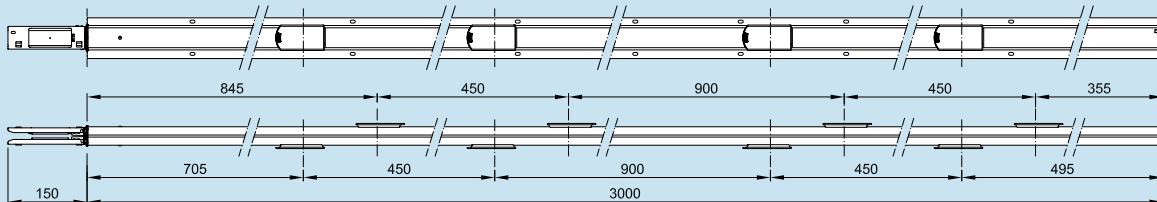


■ LB PLUS– Type B – 256/258/408/634

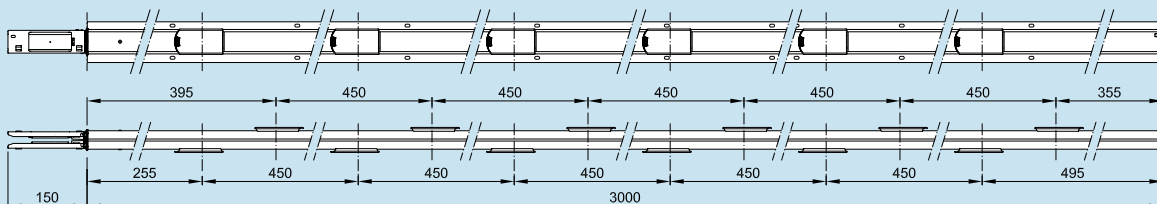
1.5 m - 1+1 outlets (double sided)



3 m - 4+4 outlets (double sided)



3 m - 6+6 outlets (double sided)

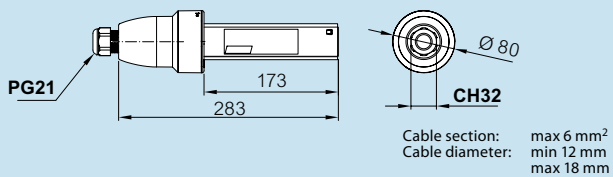


LB PLUS busbar trunking systems

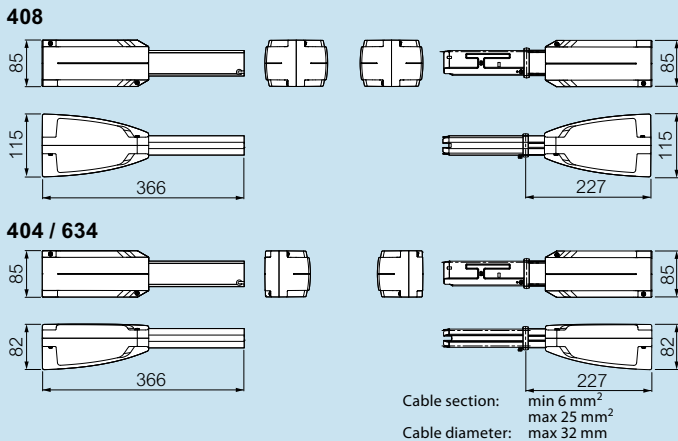
technical information

Trunking components

Feed unit 254

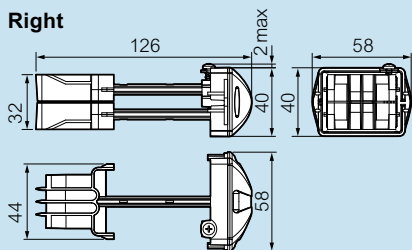


Feed unit (reduced dimensions) 40 / 63 A



End cover

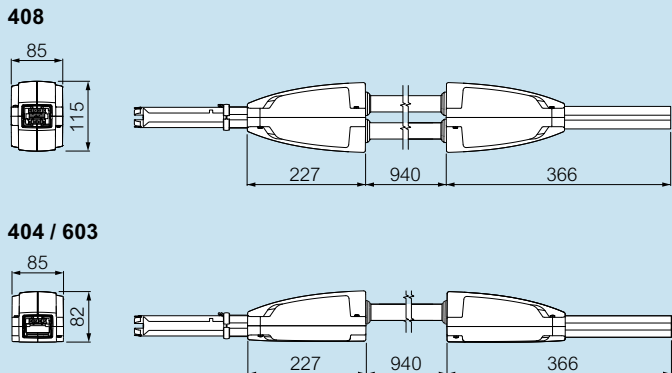
Right



Left

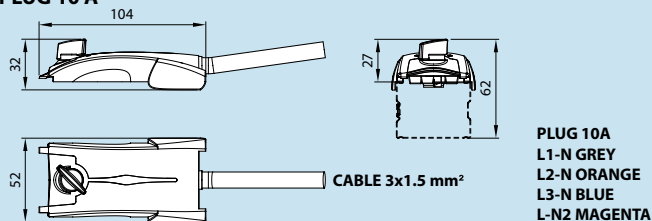


Flexible joint (reduced dimensions) 404 / 408 / 634

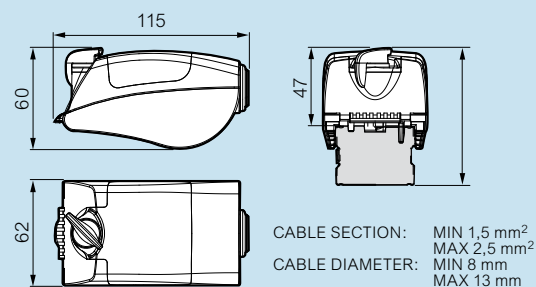


Tap-offs

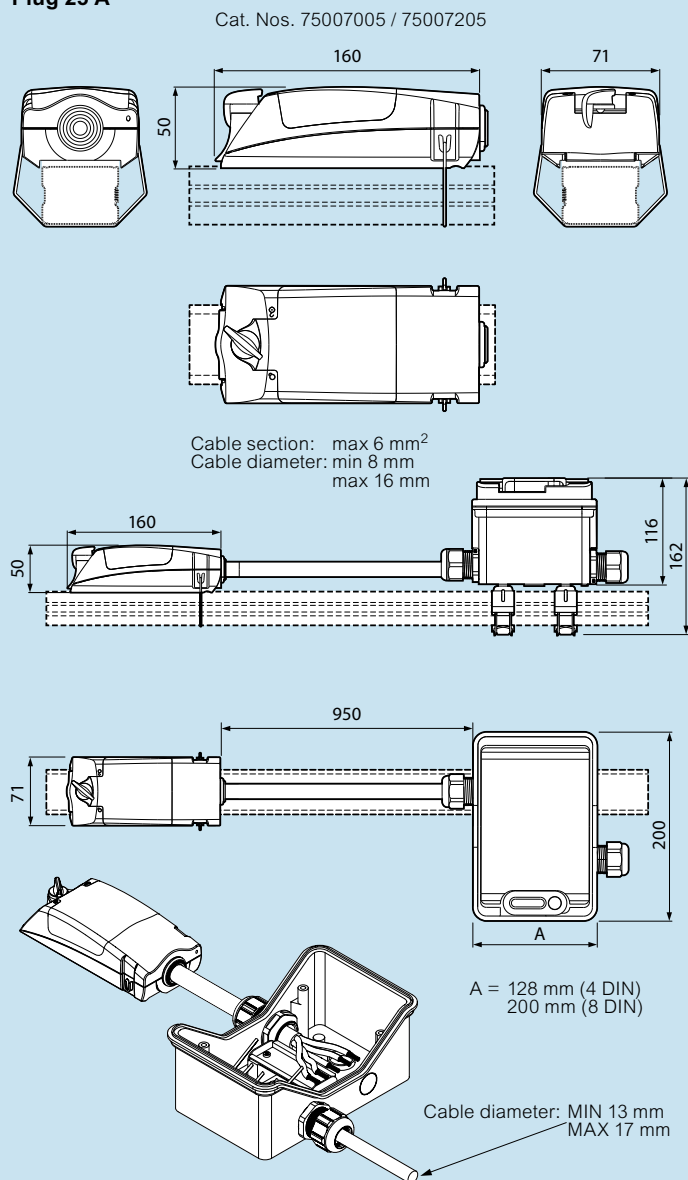
PLUG 10 A



Plug 16 A



Plug 25 A

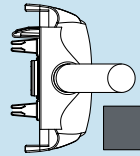
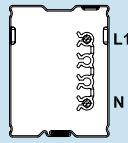


LB PLUS busbar trunking systems

technical information

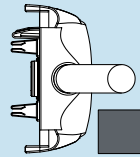
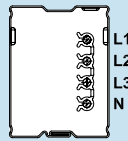
■ Colour coding for 10 A single phase tap-offs

2 CONDUCTORS

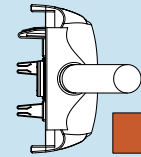


L1-N
75005011 / 75005021

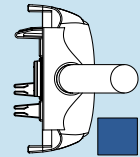
4 CONDUCTORS
three-phase



L1-N
75005011 / 75005021

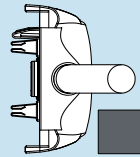
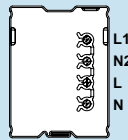


L2-N
75005012 / 75005022

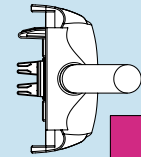


L3-N
75005013 / 75005023

4 CONDUCTORS
dual single phase

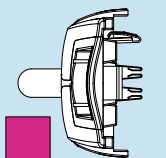


L1-N
75005011 / 75005021

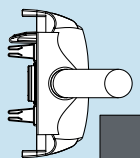
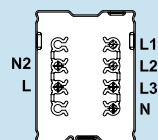


L-N2
75005014 / 75005024

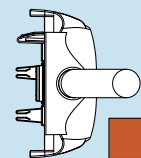
6 CONDUCTORS



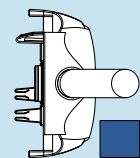
L-N2
75005014 / 75005024



L1-N
75005011 / 75005021



L2-N
75005012 / 75005022

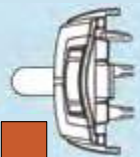


L3-N
75005013 / 75005023

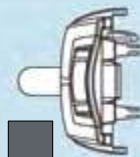
8 CONDUCTORS



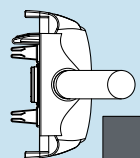
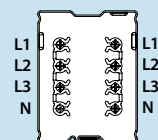
L3-N
75005013 / 75005023



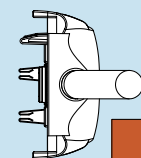
L2-N
75005012 / 75005022



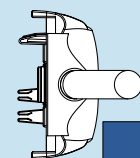
L1-N
75005011 / 75005021



L1-N
75005011 / 75005021

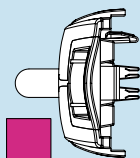


L2-N
75005012 / 75005022

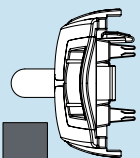


L3-N
75005013 / 75005023

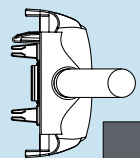
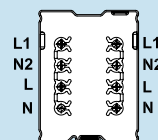
4 x SINGLE PHASE



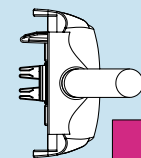
L-N2
75005014 / 75005024



L1-N
75005011 / 75005021



L1-N
75005011 / 75005021



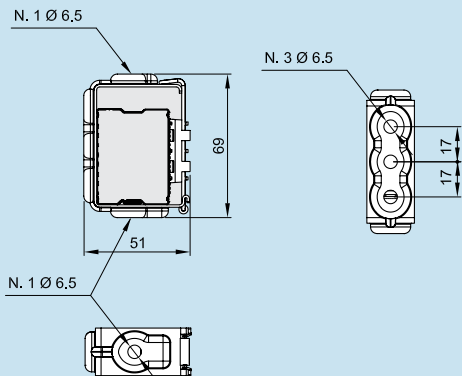
L-N2
75005014 / 75005024

LB PLUS busbar trunking systems

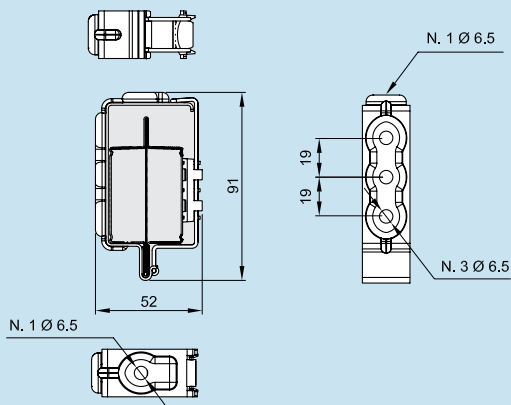
technical information

■ Hangers and cable channel

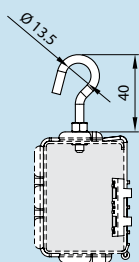
60 kg suspension bracket for Type A busbar Cat. No. 75003000



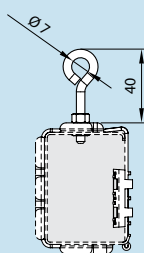
60 kg suspension bracket for Type B busbar Cat. No. 75003004



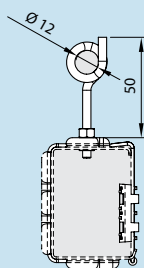
Hook for lamp Cat. No. 75003001



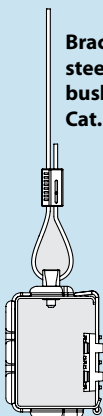
Ring Cat. No. 75003002



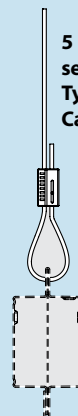
Pig tail for chain Cat. No. 75003005



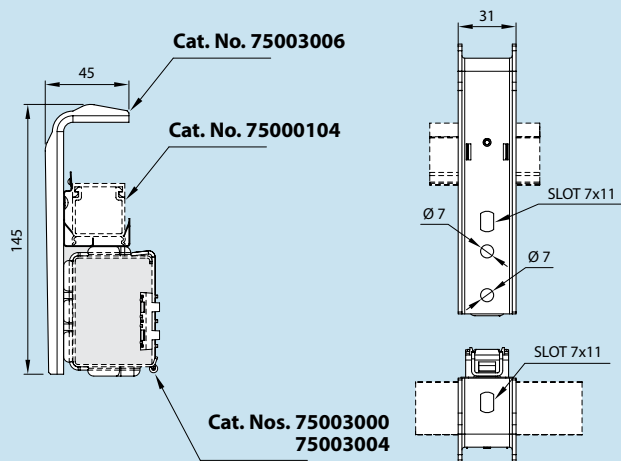
Bracket with 3 m steel cable for Type A busbar Cat. No. 75003009



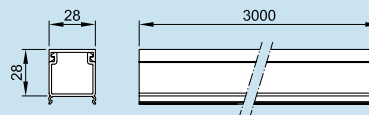
5 m steel cable with self-locking clamp for Type B busbar Cat. No. 75003008



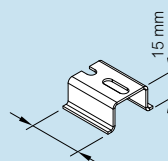
Bracket for cable channel



PVC cable channel with cover Cat. No. 75000104



Spacer on brackets for floor installation Cat. No. 75003007



LB PLUS busbar trunking systems

installation methods

LB PLUS requires a fixing bracket Cat. No. 75003000 for Type A and a fixing bracket Cat. No. 75003004 for Type B
Both brackets come with a 6.5 mm Ø hole and can be fixed to 6 mm² threaded rod

■ Suspension

For suspension, the bracket must be fitted with a range of appropriate accessories, which must be added according to the installation requirements

Ceiling suspension of LB PLUS Type A

Pigtail for chain

This solution is possible by ordering suspension bracket item Cat. No. 75003000 and accessory Cat. No. 75003005, preset for the connection of a chain



Bracket with steel cable

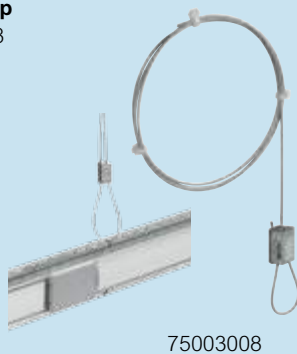
This solution is already supplied as a kit Cat. No. 75003009, consisting of a suspension bracket and a 3 m steel cable



Ceiling suspension of LB PLUS Type B

5 m cable with self locking clamp

This accessory Cat. No. 75003008 allows the suspension of the reinforced (Type B) straight lengths using the slots along the reinforcement plate at the top of the bar



■ Suspension of light fittings

LB PLUS - single and double sided

For the suspension of light fittings, use hook Cat. No. 75003001 or ring Cat. No. 75003002
These accessories can be installed on the brackets used for the suspension of the busbar (Cat. Nos. 75003000 and 75003004).





ZUCCHINI MS - LOW TO MEDIUM POWER BUSBAR

The flexibility of the Zucchini MS range during planning and installation makes it ideal for frequently changing requirements in small to medium sized commercial and industrial premises.

With versions ranging from 63 A to 160 A, the vast selection of elbows, tees and other accessories make any configuration possible, with bespoke solutions also available on request.

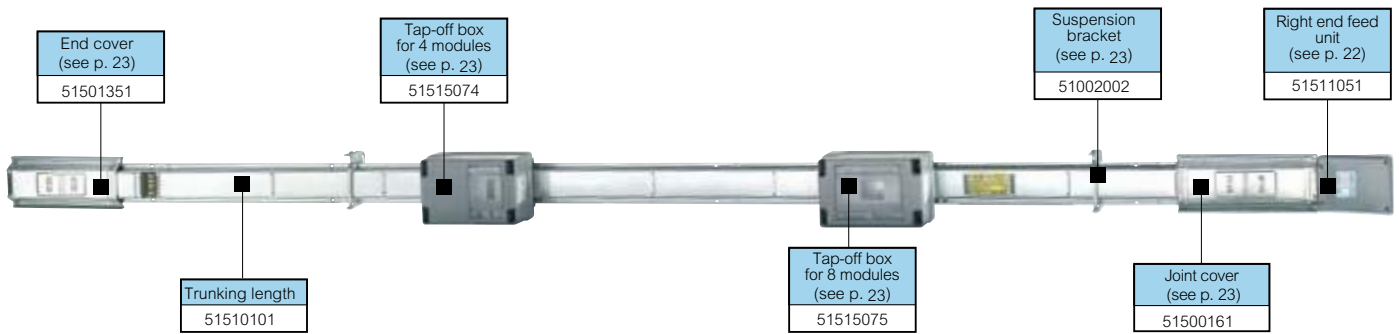
In addition to the wide range of accessories, a choice of tap-off boxes from 16 to 63 A accommodate protection devices up to 16 DIN modules.



To find out more call our technical support team on
+44 (0) 370 608 9020

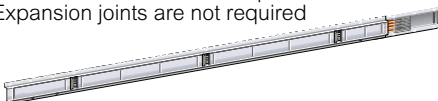
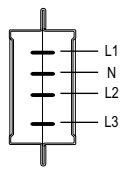
MS double sided busbar

low and medium power 63/100/160 A



Dimensions and technical information p. 24
 Technical data p. 27

Conforms to BS EN 60439-2. Casing manufactured from Senzimir quality galvanised steel suitable for use as a protective earth IP 40 as standard, increasing to IP 55 with use of appropriate accessories

| Pack | Cat. Nos. | 63 A trunking lengths | | | | | | | | | | | | | | | | | | | | | |
|------------|---------------|---|------------|---------------|-------------|---|-------|-------|---|-------|-------|-----|-------|-------|---|-------|-------|-------|---|---|-------|---|---|
| | | Tap-off outlets are spaced every 1.0 m on both sides and are fitted with shutters to prevent accidental contact with live parts Expansion joints are not required  | | | | | | | | | | | | | | | | | | | | | |
| | | Standard lengths <table border="1"> <thead> <tr> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>3 + 3</td> <td>7.890</td> </tr> <tr> <td>2</td> <td>2 + 2</td> <td>5.260</td> </tr> <tr> <td>1.5</td> <td>1 + 1</td> <td>3.945</td> </tr> <tr> <td>1</td> <td>1 + 1</td> <td>2.630</td> </tr> <tr> <td>< 1.5</td> <td>-</td> <td>-</td> </tr> <tr> <td>> 1.5</td> <td>-</td> <td>-</td> </tr> </tbody> </table> | Length (m) | Outlet points | Weight (kg) | 3 | 3 + 3 | 7.890 | 2 | 2 + 2 | 5.260 | 1.5 | 1 + 1 | 3.945 | 1 | 1 + 1 | 2.630 | < 1.5 | - | - | > 1.5 | - | - |
| Length (m) | Outlet points | Weight (kg) | | | | | | | | | | | | | | | | | | | | | |
| 3 | 3 + 3 | 7.890 | | | | | | | | | | | | | | | | | | | | | |
| 2 | 2 + 2 | 5.260 | | | | | | | | | | | | | | | | | | | | | |
| 1.5 | 1 + 1 | 3.945 | | | | | | | | | | | | | | | | | | | | | |
| 1 | 1 + 1 | 2.630 | | | | | | | | | | | | | | | | | | | | | |
| < 1.5 | - | - | | | | | | | | | | | | | | | | | | | | | |
| > 1.5 | - | - | | | | | | | | | | | | | | | | | | | | | |
| | | Fire barrier Lengths are fitted with a fire barrier and are used to pass through fire-resistant walls In accordance with DIN 4102-9 and EN 1366-3  | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51530101 | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51530116 | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51530115 | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51530114 | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51530112 | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51530113 | | | | | | | | | | | | | | | | | | | | | | |
| | | Thrust unit Thrust unit to be located at the bottom and is required for vertical runs or riser applications exceeding 12-15 m <table border="1"> <thead> <tr> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>3 + 3</td> <td>7.990</td> </tr> </tbody> </table> | Length (m) | Outlet points | Weight (kg) | 3 | 3 + 3 | 7.990 | | | | | | | | | | | | | | | |
| Length (m) | Outlet points | Weight (kg) | | | | | | | | | | | | | | | | | | | | | |
| 3 | 3 + 3 | 7.990 | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51530131 | | | | | | | | | | | | | | | | | | | | | | |
| | | Thrust unit Thrust unit to be located at the bottom and is required for vertical runs or riser applications exceeding 12-15 m <table border="1"> <thead> <tr> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>3 + 3</td> <td>7.890</td> </tr> </tbody> </table> | Length (m) | Outlet points | Weight (kg) | 3 | 3 + 3 | 7.890 | | | | | | | | | | | | | | | |
| Length (m) | Outlet points | Weight (kg) | | | | | | | | | | | | | | | | | | | | | |
| 3 | 3 + 3 | 7.890 | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51530141 | | | | | | | | | | | | | | | | | | | | | | |

| Pack | Cat. Nos. | 100 A trunking lengths | | | | | | | | | | | | | | | | | | | | | |
|------------|---------------|---|------------|---------------|-------------|---|-------|-------|---|-------|-------|-----|-------|-------|---|-------|-------|-------|---|---|-------|---|---|
| | | Standard lengths <table border="1"> <thead> <tr> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>3 + 3</td> <td>7.890</td> </tr> <tr> <td>2</td> <td>2 + 2</td> <td>5.260</td> </tr> <tr> <td>1.5</td> <td>1 + 1</td> <td>3.945</td> </tr> <tr> <td>1</td> <td>1 + 1</td> <td>2.630</td> </tr> <tr> <td>< 1.5</td> <td>-</td> <td>-</td> </tr> <tr> <td>> 1.5</td> <td>-</td> <td>-</td> </tr> </tbody> </table> | Length (m) | Outlet points | Weight (kg) | 3 | 3 + 3 | 7.890 | 2 | 2 + 2 | 5.260 | 1.5 | 1 + 1 | 3.945 | 1 | 1 + 1 | 2.630 | < 1.5 | - | - | > 1.5 | - | - |
| Length (m) | Outlet points | Weight (kg) | | | | | | | | | | | | | | | | | | | | | |
| 3 | 3 + 3 | 7.890 | | | | | | | | | | | | | | | | | | | | | |
| 2 | 2 + 2 | 5.260 | | | | | | | | | | | | | | | | | | | | | |
| 1.5 | 1 + 1 | 3.945 | | | | | | | | | | | | | | | | | | | | | |
| 1 | 1 + 1 | 2.630 | | | | | | | | | | | | | | | | | | | | | |
| < 1.5 | - | - | | | | | | | | | | | | | | | | | | | | | |
| > 1.5 | - | - | | | | | | | | | | | | | | | | | | | | | |
| | | Fire barrier Lengths are fitted with a fire barrier and are used to pass through fire-resistant walls In accordance with DIN 4102-9 and EN 1366-3 <table border="1"> <thead> <tr> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>3 + 3</td> <td>7.990</td> </tr> </tbody> </table> | Length (m) | Outlet points | Weight (kg) | 3 | 3 + 3 | 7.990 | | | | | | | | | | | | | | | |
| Length (m) | Outlet points | Weight (kg) | | | | | | | | | | | | | | | | | | | | | |
| 3 | 3 + 3 | 7.990 | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51510101 | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51510116 | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51510115 | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51510114 | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51510112 | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51510113 | | | | | | | | | | | | | | | | | | | | | | |
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| Length (m) | Outlet points | Weight (kg) | | | | | | | | | | | | | | | | | | | | | |
| 3 | 3 + 3 | 7.890 | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51510131 | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51510141 | | | | | | | | | | | | | | | | | | | | | | |

| Pack | Cat. Nos. | 160 A trunking lengths | | | | | | | | | | | | | | | | | | | | | |
|------------|---------------|---|------------|---------------|-------------|---|-------|--------|---|-------|-------|-----|-------|-------|---|-------|-------|-------|---|---|-------|---|---|
| | | Standard lengths <table border="1"> <thead> <tr> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>3 + 3</td> <td>9.290</td> </tr> <tr> <td>2</td> <td>2 + 2</td> <td>6.190</td> </tr> <tr> <td>1.5</td> <td>1 + 1</td> <td>4.645</td> </tr> <tr> <td>1</td> <td>1 + 1</td> <td>3.100</td> </tr> <tr> <td>< 1.5</td> <td>-</td> <td>-</td> </tr> <tr> <td>> 1.5</td> <td>-</td> <td>-</td> </tr> </tbody> </table> | Length (m) | Outlet points | Weight (kg) | 3 | 3 + 3 | 9.290 | 2 | 2 + 2 | 6.190 | 1.5 | 1 + 1 | 4.645 | 1 | 1 + 1 | 3.100 | < 1.5 | - | - | > 1.5 | - | - |
| Length (m) | Outlet points | Weight (kg) | | | | | | | | | | | | | | | | | | | | | |
| 3 | 3 + 3 | 9.290 | | | | | | | | | | | | | | | | | | | | | |
| 2 | 2 + 2 | 6.190 | | | | | | | | | | | | | | | | | | | | | |
| 1.5 | 1 + 1 | 4.645 | | | | | | | | | | | | | | | | | | | | | |
| 1 | 1 + 1 | 3.100 | | | | | | | | | | | | | | | | | | | | | |
| < 1.5 | - | - | | | | | | | | | | | | | | | | | | | | | |
| > 1.5 | - | - | | | | | | | | | | | | | | | | | | | | | |
| | | Fire barrier Lengths are fitted with a fire barrier and are used to pass through fire-resistant walls In accordance with DIN 4102-9 and EN 1366-3 <table border="1"> <thead> <tr> <th>Length (m)</th> <th>Outlet points</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>3 + 3</td> <td>10.290</td> </tr> </tbody> </table> | Length (m) | Outlet points | Weight (kg) | 3 | 3 + 3 | 10.290 | | | | | | | | | | | | | | | |
| Length (m) | Outlet points | Weight (kg) | | | | | | | | | | | | | | | | | | | | | |
| 3 | 3 + 3 | 10.290 | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51520101 | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51520116 | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51520115 | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51520114 | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51520112 | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51520113 | | | | | | | | | | | | | | | | | | | | | | |
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| Length (m) | Outlet points | Weight (kg) | | | | | | | | | | | | | | | | | | | | | |
| 3 | 3 + 3 | 9.290 | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51520131 | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51520141 | | | | | | | | | | | | | | | | | | | | | | |

MS double sided busbar

trunking components



51500361



51500461



51511151



Dimensions and technical information p. 24-25

Conforms to BS EN 60439-2. Casing manufactured from Senzimir quality galvanised steel suitable for use as a protective earth IP 40 as standard, increasing to IP 55 with use of appropriate accessories

| Pack | Cat. Nos. | Trunking components | Pack | Cat. Nos. | Trunking components (continued) | | | | | | | | | | | | | | | | | | |
|--------------|-------------|--|------------|--|---------------------------------|-------------|--------------|-------|-------------|-------|-----------|----------|--|------------|-------------|--------------|-------|-------------|-------|-----------|-------|----------|-------|
| 1 | 51530351 | <p>For changing the route of trunking, either horizontally or vertically</p> <p>Horizontal elbows – right hand</p> <p>Right and left elbows differ because of the position of junction blocks</p> <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>63</td> <td>1.6</td> </tr> <tr> <td>100</td> <td>1.6</td> </tr> <tr> <td>160</td> <td>2.6</td> </tr> </tbody> </table> | Rating (A) | Weight (kg) | 63 | 1.6 | 100 | 1.6 | 160 | 2.6 | 1 | 51530561 | <p>Left hand tee – female</p> <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>63</td> <td>2.29</td> </tr> <tr> <td>100</td> <td>2.29</td> </tr> <tr> <td>160</td> <td>3.79</td> </tr> </tbody> </table> | Rating (A) | Weight (kg) | 63 | 2.29 | 100 | 2.29 | 160 | 3.79 | | |
| Rating (A) | Weight (kg) | | | | | | | | | | | | | | | | | | | | | | |
| 63 | 1.6 | | | | | | | | | | | | | | | | | | | | | | |
| 100 | 1.6 | | | | | | | | | | | | | | | | | | | | | | |
| 160 | 2.6 | | | | | | | | | | | | | | | | | | | | | | |
| Rating (A) | Weight (kg) | | | | | | | | | | | | | | | | | | | | | | |
| 63 | 2.29 | | | | | | | | | | | | | | | | | | | | | | |
| 100 | 2.29 | | | | | | | | | | | | | | | | | | | | | | |
| 160 | 3.79 | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51500361 | 1 | 51500562 | <p>Left hand tee – male</p> <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>63</td> <td>2.29</td> </tr> <tr> <td>100</td> <td>2.29</td> </tr> <tr> <td>160</td> <td>3.79</td> </tr> </tbody> </table> | Rating (A) | Weight (kg) | 63 | 2.29 | 100 | 2.29 | 160 | 3.79 | | | | | | | | | | | |
| Rating (A) | Weight (kg) | | | | | | | | | | | | | | | | | | | | | | |
| 63 | 2.29 | | | | | | | | | | | | | | | | | | | | | | |
| 100 | 2.29 | | | | | | | | | | | | | | | | | | | | | | |
| 160 | 3.79 | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51520351 | 1 | 51520561 | <p>Crossovers</p> <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>63</td> <td>2.29</td> </tr> <tr> <td>100</td> <td>2.29</td> </tr> <tr> <td>160</td> <td>3.79</td> </tr> </tbody> </table> | Rating (A) | Weight (kg) | 63 | 2.29 | 100 | 2.29 | 160 | 3.79 | | | | | | | | | | | |
| Rating (A) | Weight (kg) | | | | | | | | | | | | | | | | | | | | | | |
| 63 | 2.29 | | | | | | | | | | | | | | | | | | | | | | |
| 100 | 2.29 | | | | | | | | | | | | | | | | | | | | | | |
| 160 | 3.79 | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51530361 | <p>Horizontal elbows – left hand</p> <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>63</td> <td>1.6</td> </tr> <tr> <td>100</td> <td>1.6</td> </tr> <tr> <td>160</td> <td>2.6</td> </tr> </tbody> </table> | Rating (A) | Weight (kg) | 63 | 1.6 | 100 | 1.6 | 160 | 2.6 | 1 | 51530581 | <p>Flexible elbow</p> <p>For horizontal and vertical changes of direction up to 90°</p> <p>Not available for 160 A rating</p> <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>63-100</td> <td>2.29</td> </tr> <tr> <td>160</td> <td>3.79</td> </tr> </tbody> </table> | Rating (A) | Weight (kg) | 63-100 | 2.29 | 160 | 3.79 | | | | |
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| 63 | 1.6 | | | | | | | | | | | | | | | | | | | | | | |
| 100 | 1.6 | | | | | | | | | | | | | | | | | | | | | | |
| 160 | 2.6 | | | | | | | | | | | | | | | | | | | | | | |
| Rating (A) | Weight (kg) | | | | | | | | | | | | | | | | | | | | | | |
| 63-100 | 2.29 | | | | | | | | | | | | | | | | | | | | | | |
| 160 | 3.79 | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51500362 | 1 | 51500564 | <p>Vertical elbows – right hand</p> <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>63</td> <td>1.6</td> </tr> <tr> <td>100</td> <td>1.7</td> </tr> <tr> <td>160</td> <td>2.7</td> </tr> </tbody> </table> | Rating (A) | Weight (kg) | 63 | 1.6 | 100 | 1.7 | 160 | 2.7 | | | | | | | | | | | |
| Rating (A) | Weight (kg) | | | | | | | | | | | | | | | | | | | | | | |
| 63 | 1.6 | | | | | | | | | | | | | | | | | | | | | | |
| 100 | 1.7 | | | | | | | | | | | | | | | | | | | | | | |
| 160 | 2.7 | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51520361 | 1 | 51520581 | <p>Vertical elbows – left hand</p> <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>63</td> <td>1.6</td> </tr> <tr> <td>100</td> <td>1.6</td> </tr> <tr> <td>160</td> <td>2.6</td> </tr> </tbody> </table> | Rating (A) | Weight (kg) | 63 | 1.6 | 100 | 1.6 | 160 | 2.6 | | | | | | | | | | | |
| Rating (A) | Weight (kg) | | | | | | | | | | | | | | | | | | | | | | |
| 63 | 1.6 | | | | | | | | | | | | | | | | | | | | | | |
| 100 | 1.6 | | | | | | | | | | | | | | | | | | | | | | |
| 160 | 2.6 | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51530451 | <p>Right hand tees – male</p> <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>63</td> <td>2.29</td> </tr> <tr> <td>100</td> <td>2.29</td> </tr> <tr> <td>160</td> <td>3.79</td> </tr> </tbody> </table> | Rating (A) | Weight (kg) | 63 | 2.29 | 100 | 2.29 | 160 | 3.79 | 1 | 51530651 | <p>End feed units IP 55</p> <p>IP 55 protection as standard. Supplied with cable clamp and terminals for 35 mm (MS 63/100) and 70 mm (MS 160) cables</p> <p>Switched-end feed units are also available with in-line bus switches on request</p> <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>Right 63-100</td> <td>1.732</td> </tr> <tr> <td>Left 63-100</td> <td>1.874</td> </tr> <tr> <td>Right 160</td> <td>2.218</td> </tr> <tr> <td>Left 160</td> <td>2.360</td> </tr> </tbody> </table> | Rating (A) | Weight (kg) | Right 63-100 | 1.732 | Left 63-100 | 1.874 | Right 160 | 2.218 | Left 160 | 2.360 |
| Rating (A) | Weight (kg) | | | | | | | | | | | | | | | | | | | | | | |
| 63 | 2.29 | | | | | | | | | | | | | | | | | | | | | | |
| 100 | 2.29 | | | | | | | | | | | | | | | | | | | | | | |
| 160 | 3.79 | | | | | | | | | | | | | | | | | | | | | | |
| Rating (A) | Weight (kg) | | | | | | | | | | | | | | | | | | | | | | |
| Right 63-100 | 1.732 | | | | | | | | | | | | | | | | | | | | | | |
| Left 63-100 | 1.874 | | | | | | | | | | | | | | | | | | | | | | |
| Right 160 | 2.218 | | | | | | | | | | | | | | | | | | | | | | |
| Left 160 | 2.360 | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51500461 | <p>Vertical elbows – left hand</p> <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>63</td> <td>1.6</td> </tr> <tr> <td>100</td> <td>1.6</td> </tr> <tr> <td>160</td> <td>2.6</td> </tr> </tbody> </table> | Rating (A) | Weight (kg) | 63 | 1.6 | 100 | 1.6 | 160 | 2.6 | 1 | 51500661 | <p>Centre feed units IP 55</p> <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>63-100</td> <td>3.5</td> </tr> <tr> <td>160</td> <td>5.0</td> </tr> </tbody> </table> | Rating (A) | Weight (kg) | 63-100 | 3.5 | 160 | 5.0 | | | | |
| Rating (A) | Weight (kg) | | | | | | | | | | | | | | | | | | | | | | |
| 63 | 1.6 | | | | | | | | | | | | | | | | | | | | | | |
| 100 | 1.6 | | | | | | | | | | | | | | | | | | | | | | |
| 160 | 2.6 | | | | | | | | | | | | | | | | | | | | | | |
| Rating (A) | Weight (kg) | | | | | | | | | | | | | | | | | | | | | | |
| 63-100 | 3.5 | | | | | | | | | | | | | | | | | | | | | | |
| 160 | 5.0 | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51520451 | 1 | 51520651 | <p>Right hand tees – female</p> <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>63</td> <td>2.29</td> </tr> <tr> <td>100</td> <td>2.29</td> </tr> <tr> <td>160</td> <td>3.79</td> </tr> </tbody> </table> | Rating (A) | Weight (kg) | 63 | 2.29 | 100 | 2.29 | 160 | 3.79 | | | | | | | | | | | |
| Rating (A) | Weight (kg) | | | | | | | | | | | | | | | | | | | | | | |
| 63 | 2.29 | | | | | | | | | | | | | | | | | | | | | | |
| 100 | 2.29 | | | | | | | | | | | | | | | | | | | | | | |
| 160 | 3.79 | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51530461 | <p>Right hand tees – male</p> <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>63</td> <td>2.29</td> </tr> <tr> <td>100</td> <td>2.29</td> </tr> <tr> <td>160</td> <td>3.79</td> </tr> </tbody> </table> | Rating (A) | Weight (kg) | 63 | 2.29 | 100 | 2.29 | 160 | 3.79 | 1 | 51511261 | <p>Feed units</p> | | | | | | | | | | |
| Rating (A) | Weight (kg) | | | | | | | | | | | | | | | | | | | | | | |
| 63 | 2.29 | | | | | | | | | | | | | | | | | | | | | | |
| 100 | 2.29 | | | | | | | | | | | | | | | | | | | | | | |
| 160 | 3.79 | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51500462 | 1 | 51521261 | <p>End feed units IP 55</p> <p>IP 55 protection as standard. Supplied with cable clamp and terminals for 35 mm (MS 63/100) and 70 mm (MS 160) cables</p> <p>Switched-end feed units are also available with in-line bus switches on request</p> <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>Right 63-100</td> <td>1.732</td> </tr> <tr> <td>Left 63-100</td> <td>1.874</td> </tr> <tr> <td>Right 160</td> <td>2.218</td> </tr> <tr> <td>Left 160</td> <td>2.360</td> </tr> </tbody> </table> | Rating (A) | Weight (kg) | Right 63-100 | 1.732 | Left 63-100 | 1.874 | Right 160 | 2.218 | Left 160 | 2.360 | | | | | | | | | |
| Rating (A) | Weight (kg) | | | | | | | | | | | | | | | | | | | | | | |
| Right 63-100 | 1.732 | | | | | | | | | | | | | | | | | | | | | | |
| Left 63-100 | 1.874 | | | | | | | | | | | | | | | | | | | | | | |
| Right 160 | 2.218 | | | | | | | | | | | | | | | | | | | | | | |
| Left 160 | 2.360 | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 51520461 | 1 | 51521261 | <p>Centre feed units IP 55</p> <table border="1"> <thead> <tr> <th>Rating (A)</th> <th>Weight (kg)</th> </tr> </thead> <tbody> <tr> <td>63-100</td> <td>3.5</td> </tr> <tr> <td>160</td> <td>5.0</td> </tr> </tbody> </table> | Rating (A) | Weight (kg) | 63-100 | 3.5 | 160 | 5.0 | | | | | | | | | | | | | |
| Rating (A) | Weight (kg) | | | | | | | | | | | | | | | | | | | | | | |
| 63-100 | 3.5 | | | | | | | | | | | | | | | | | | | | | | |
| 160 | 5.0 | | | | | | | | | | | | | | | | | | | | | | |

MS double sided busbar

tap-offs and accessories



51515056



51515058



51500161



Tap-offs can be supplied pre-wired and fitted with protective devices

Contact us on +44 (0) 845 600 6266



51515052



51500160



51515051

Dimensions and technical information p. 25-26

Tap-off boxes can be used to connect and energise one and three phase loads up to 63 A. Tap-offs can be inserted and removed when the busbar is energised and when the fixture is under load, up to a capacity 32 A. Compliant with IEC 60695-2-10 with V1 self-extinguishing degree (UL 94) Standard IP 55 degree of protection

| Pack | Cat. Nos. | Tap-off boxes IP 55 | Pack | Cat. Nos. | Tap-off boxes with isolating device on the cover | | | | | | | | | | | | |
|------------|-------------|---|------------|-------------|--|------|------------|-------------|--|------------|-------------|----------|--|------------|-------------|----|-------|
| 1 | 51515071 | <p>Energy withstand 400·10³ A²S Totally insulated tap-off box Max. cable size 25 mm²</p> <p>Max. power losses 10 W</p> <p>Empty tap-off box with DIN (4 mod.)</p> <table border="1"> <tr> <th>Rating (A)</th> <th>Weight (kg)</th> </tr> <tr> <td>32</td> <td>0.68</td> </tr> </table> <p>Tap-off box with CH10 fuseholder (10·3 x 38)</p> <table border="1"> <tr> <th>Rating (A)</th> <th>Weight (kg)</th> </tr> <tr> <td>32</td> <td>0.68</td> </tr> </table> | Rating (A) | Weight (kg) | 32 | 0.68 | Rating (A) | Weight (kg) | 32 | 0.68 | 1 | 51515051 | <p>Tap-off box with CH10 fuseholder (10·3 x 38)</p> <p>10·3 x 38 fuses not included</p> <table border="1"> <tr> <th>Rating (A)</th> <th>Weight (kg)</th> </tr> <tr> <td>16</td> <td>0.908</td> </tr> </table> | Rating (A) | Weight (kg) | 16 | 0.908 |
| Rating (A) | Weight (kg) | | | | | | | | | | | | | | | | |
| 32 | 0.68 | | | | | | | | | | | | | | | | |
| Rating (A) | Weight (kg) | | | | | | | | | | | | | | | | |
| 32 | 0.68 | | | | | | | | | | | | | | | | |
| Rating (A) | Weight (kg) | | | | | | | | | | | | | | | | |
| 16 | 0.908 | | | | | | | | | | | | | | | | |
| 1 | 51515076 | <p>Tap-off box with D01 fuseholder</p> <table border="1"> <tr> <th>Rating (A)</th> <th>Weight (kg)</th> </tr> <tr> <td>16</td> <td>0.95</td> </tr> </table> | Rating (A) | Weight (kg) | 16 | 0.95 | 1 | 51515052 | <p>Tap-off box with CH14 fuseholder (14 x 51)</p> <p>14 x 51 fuses not included</p> <table border="1"> <tr> <th>Rating (A)</th> <th>Weight (kg)</th> </tr> <tr> <td>50</td> <td>0.908</td> </tr> </table> | Rating (A) | Weight (kg) | 50 | 0.908 | | | | |
| Rating (A) | Weight (kg) | | | | | | | | | | | | | | | | |
| 16 | 0.95 | | | | | | | | | | | | | | | | |
| Rating (A) | Weight (kg) | | | | | | | | | | | | | | | | |
| 50 | 0.908 | | | | | | | | | | | | | | | | |
| 1 | 51515077 | <p>Tap-off box with D02 fuseholder</p> <table border="1"> <tr> <th>Rating (A)</th> <th>Weight (kg)</th> </tr> <tr> <td>32</td> <td>0.95</td> </tr> </table> | Rating (A) | Weight (kg) | 32 | 0.95 | 1 | 51515057 | <p>63 A tap-off boxes</p> <p>Energy withstand 400·10³ A²S MAX power losses 20W Tap-off box with transparent cover Weight 1.1 kg</p> | | | | | | | | |
| Rating (A) | Weight (kg) | | | | | | | | | | | | | | | | |
| 32 | 0.95 | | | | | | | | | | | | | | | | |
| 1 | 51515078 | <p>Tap-off box for (4 mod.) DIN</p> <table border="1"> <tr> <th>Rating (A)</th> <th>Weight (kg)</th> </tr> <tr> <td>32</td> <td>0.73</td> </tr> </table> | Rating (A) | Weight (kg) | 32 | 0.73 | 1 | 51515056 | <p>Tap-off box with transparent cover and hinged door (up to 4 mod.) Weight 1.2 kg</p> | | | | | | | | |
| Rating (A) | Weight (kg) | | | | | | | | | | | | | | | | |
| 32 | 0.73 | | | | | | | | | | | | | | | | |
| 1 | 51515072 | <p>Max. power losses 16 W</p> <p>Empty tap-off box (8 mod)</p> <table border="1"> <tr> <th>Rating (A)</th> <th>Weight (kg)</th> </tr> <tr> <td>32</td> <td>0.93</td> </tr> </table> | Rating (A) | Weight (kg) | 32 | 0.93 | 1 | 51515067 | <p>Tap-off box with hinged door (up to 7 mod.) Weight 1.1 kg</p> | | | | | | | | |
| Rating (A) | Weight (kg) | | | | | | | | | | | | | | | | |
| 32 | 0.93 | | | | | | | | | | | | | | | | |
| 1 | 51515073 | <p>Tap-off box (4 mod) DIN (long version)</p> <table border="1"> <tr> <th>Rating (A)</th> <th>Weight (kg)</th> </tr> <tr> <td>32</td> <td>0.96</td> </tr> </table> | Rating (A) | Weight (kg) | 32 | 0.96 | 1 | 51515058 | <p>Tap-off box with hinged door (up to 16 mod.)</p> <p>Energy withstand 400·10³ A²S MAX power losses 20W Weight 2.5 kg</p> | | | | | | | | |
| Rating (A) | Weight (kg) | | | | | | | | | | | | | | | | |
| 32 | 0.96 | | | | | | | | | | | | | | | | |
| 1 | 51515074 | <p>Tap-off box (8 mod) DIN (long version)</p> <table border="1"> <tr> <th>Rating (A)</th> <th>Weight (kg)</th> </tr> <tr> <td>32</td> <td>0.99</td> </tr> </table> | Rating (A) | Weight (kg) | 32 | 0.99 | 1 | 51501351 | <p>Accessories</p> <p>End cover IP 55</p> <p>End covers are fitted to the last length in each run to maintain IP 55 protection Weight 0.57 kg</p> | | | | | | | | |
| Rating (A) | Weight (kg) | | | | | | | | | | | | | | | | |
| 32 | 0.99 | | | | | | | | | | | | | | | | |
| 1 | 51515075 | | 1 | 51500161 | <p>Joint cover IP 55</p> <p>One for each joint Weight 0.788 kg</p> | | | | | | | | | | | | |
| | | | 1 | 51500160 | <p>Tap-off outlet cover IP 55</p> <p>6 per 3 m straight length Weight 0.061 kg</p> | | | | | | | | | | | | |
| | | | 1 | 51002002 | <p>Suspension bracket</p> <p>Universal fixing brackets enable trunking to be either suspended or wall mounted 1 per 2 m Weight 0.1 kg</p> | | | | | | | | | | | | |

MS double sided busbar

technical information

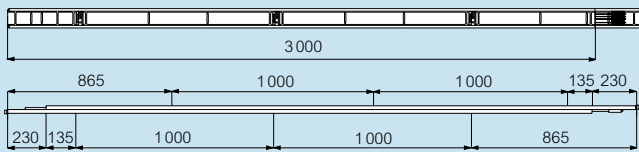
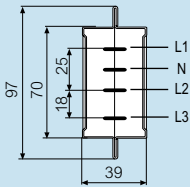
General features

MS is fully compliant with IEC EN 61439-6. Specifically, the rated current of the Zucchini busbar trunking system is always referred to the average ambient temperature of 40°C (NB : the standard requires 35°C), thus offering the market suitably oversized products

Trunking lengths

The components and the features of the MS trunking lengths are :

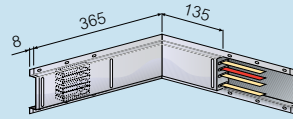
- a casing made of Senzimir quality galvanised steel, with a sheet-metal thickness that allows its use as the protective earth (PE) and ensures the electrical continuity during mounting with no added accessories
- section bar dimensions : 39 x 97 mm
- number of conductors : 4 with the same section 3P + N available for capacities 63 A, 100 A and 160 A
- separation between the conductors using plastic insulating devices, reinforced with 20% of glass fibres, which ensure a V1 self-extinguishing degree (according to UL94) and are in compliance with the glow-wire test according to IEC 60695-2-10
- tap-off outlets with a constant centre distance of 1 m on both sides of the busbar (3 + 3 outlets every 3 m), set up for connection to tap-off boxes
- an electric joint block, with silver-plated copper contacts for automatically connecting live parts and the PE (protective earth) Quick connection between straight lengths. One operation provides an electrical and mechanical connection, whilst at the same time, IP 40 protection is guaranteed. The upgrade to IP 55 is easily achieved by adding joint covers and outlet covers. Flame retardant in compliance with the IEC 60332-3 standard
- trunking lengths with fire barrier (internal + external) are used when fire-resistant walls need to be passed through. The lengths fitted with a fire barrier have been lab-tested (in accordance with DIN 4102-9 and EN 1366-3) in order to confirm that, if correctly installed, they will maintain the essential fire-resistant features of the wall
- trunking lengths with thrust unit are provided with a device which blocks the conductors from slipping when supporting the weight of the riser (when installed vertically). This type of length is required for 10 m riser intervals



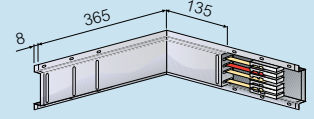
Trunking components

IP 55 (according to BS EN 60529)

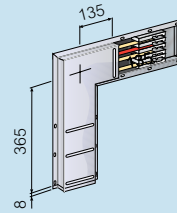
Horizontal elbow - right hand



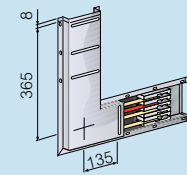
Horizontal elbow - left hand



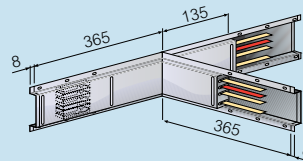
Vertical elbow - right hand



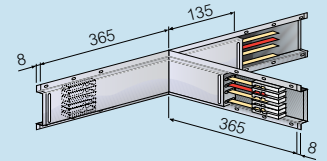
Vertical elbow - left hand



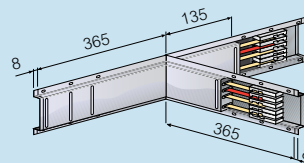
Right hand tees - male



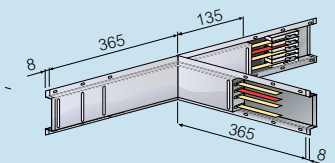
Right hand tees - female



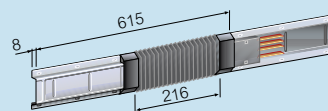
Left hand tees - female



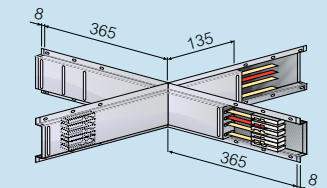
Left hand tees - male



Flexible elbow



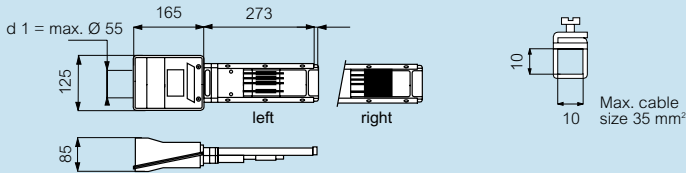
Crossovers



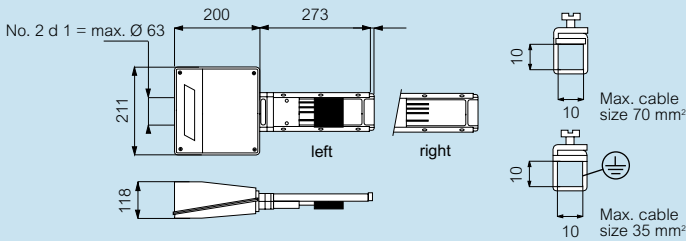
■ End feed units

Installation is carried out with a quick junction connection. The feed units have terminals for the connection of copper cables for sections of up to 35 mm² for the 63/100 A feed unit and 70 mm² for the 160 A feed unit. The entrance point of the cables is positioned at the end of the feed unit.

63 – 100 A

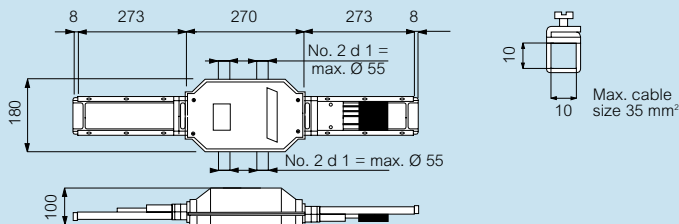


160 A

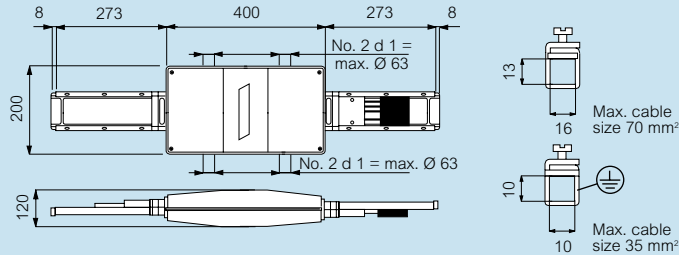


■ Centre feed units

63 – 100 A



160 A



Tap-off boxes

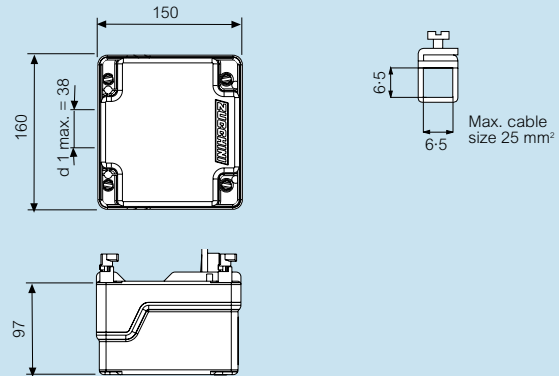
Used to connect and energise single phase and three phase loads up to 63 A. Features include :

- the PE contact (protective earth) is the first to make an electrical connection when inserting the box into the outlet and it is the last to disconnect when removing
- compliance with all insulating plastic components according to the glow-wire test (IEC 60695-2-10) with V1 self-extinguishing degree (UL94)
- standard IP 55 degree of protection without using additional accessories
- can be inserted and removed when the busbar is energised and when the fixture is under load, up to a capacity of 32 A

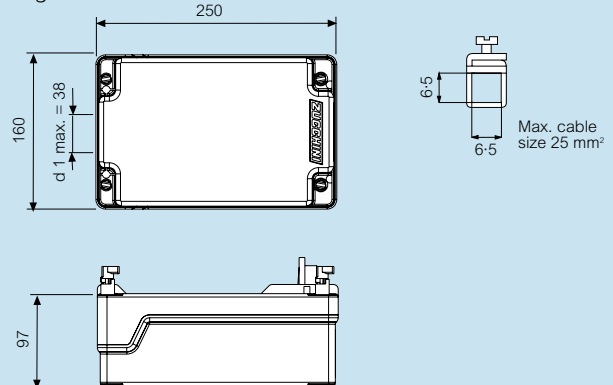
These boxes are available in a wide range of versions :

- 63 A empty boxes (only with a terminal board for connecting cables), with an internal DIN rail and transparent door
- 16 A - available with a set of three cylindrical fuse carriers (10.3 x 38 mm)
- 16/32 A - available with a set of three cylindrical fuse carriers - DIAZED (D01 : 16 A; D02 : 32 A);
- 50 A - available with cylindrical fuse carriers (14 x 51 mm)
- 63 A - available with 4-7-16 DIN mod.
- 16 to 63 A - available with a disconnection device integral with the cover

Standard version



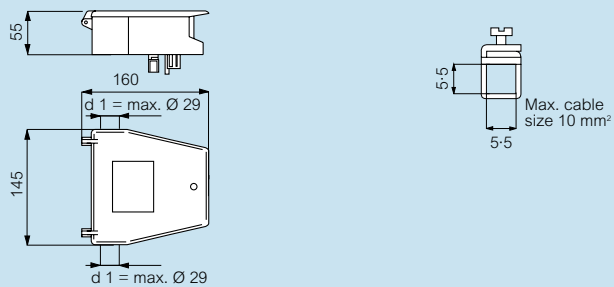
Long version



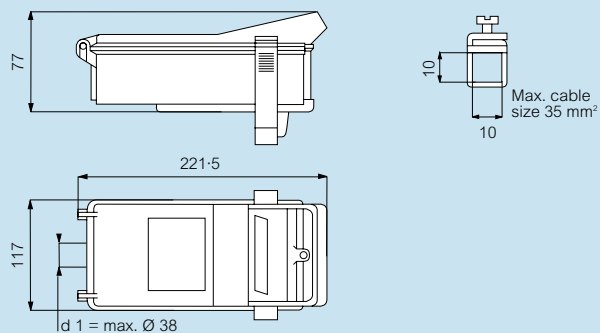
MS double sided busbar

technical information

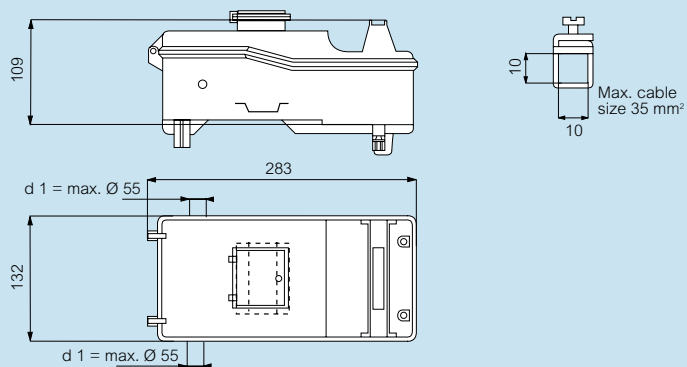
■ Tap-off box with CH10 fuseholder (10-3 x 38)



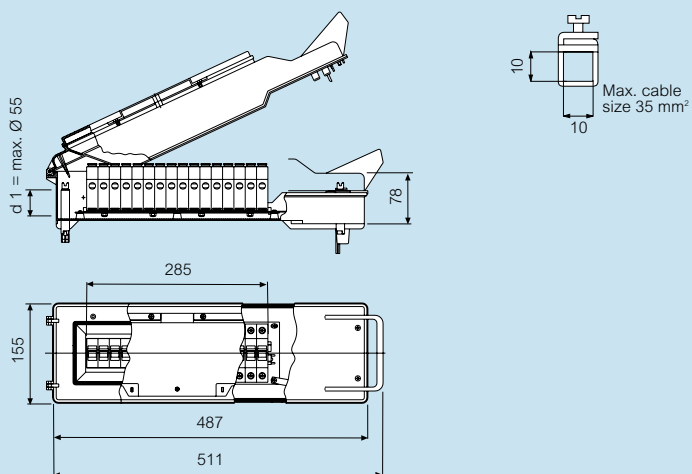
■ Tap-off box with CH14 fuseholder (14 x 51)



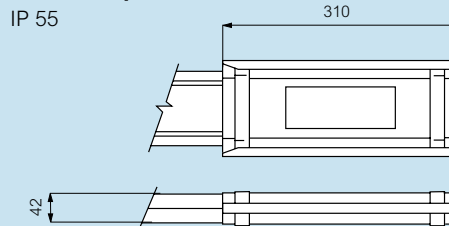
■ 63 A tap-off boxes



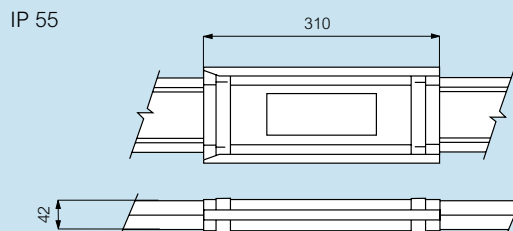
Tap-off box with hinged door (up to 16 modules DIN)



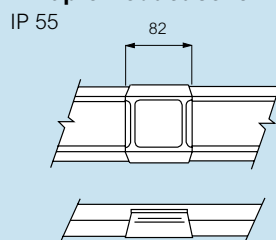
■ End stop



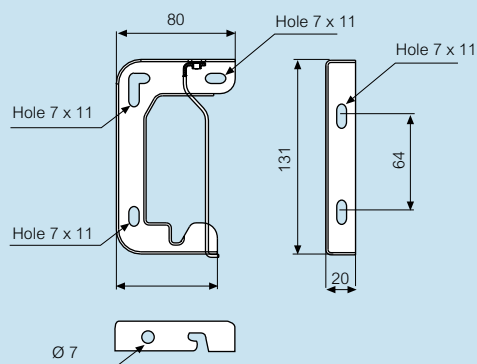
■ Joint cover



■ Tap-off outlet cover



■ Suspension bracket



All dimensions (mm) are nominal

MS double sided busbar

technical data

Complies to :

IEC EN 61439-6

DIN VDE 0660 part 500 and 502

Suitable for the following climates :

Constant humid climate (DIN IEC 68 and 2-3)

Cyclical humid climate (DIN IEC 68 and 2-30)

Short circuit protection for Zucchini product ranges (In≤100 A)

Zucchini busbar systems with a nominal current less or equal to 100

A (LB PLUS / MS 63 and 100 A) are correctly protected against short

circuit effects through an MCB (Miniature Circuit Breaker) with a nominal

current less or equal to the one of the busbar

This protection is assured up to MCB short circuit withstand

The busbar trunking systems LB PLUS / MS 63 and 100 A are flame retardant in compliance with IEC 332-3 : 1992

| Rating (A) | | 63 | 100 | 160 |
|--|---|---------|---------|---------|
| Live conductors | No. | 4 | 4 | 4 |
| Casing overall dimension | A x B (mm) | 39 x 97 | 39 x 97 | 39 x 97 |
| Rated current | In (A) | 63 | 100 | 160 |
| Cross-section of conductors (3P + N) | S (mm ²) | 26 | 26 | 39 |
| Cross-section of protective conductor eq. Cu | SPE (mm ²) | 21 | 21 | 21 |
| Operational voltage | Ue (V) | 400 | 400 | 400 |
| Insulation voltage | Ui (V) | 750 | 750 | 750 |
| Rated frequency | f (Hz) | 50/60 | 50/60 | 50/60 |
| Rated short-time current (0.1 s) | Icw (kA)rms | 3.5 | 5 | 5.5 |
| Peak current | Ipk (kA) | 5.25 | 10 | 10 |
| Maximum thermal limit | I ² t (A ² s x 106) | 1.225 | 2.500 | 3.025 |
| Phase resistance | R20 (mΩ/m) | 1.250 | 0.658 | 0.478 |
| Phase reactance (50Hz) | X (mΩ/m) | 0.366 | 0.366 | 0.247 |
| Phase impedance | Z (mΩ/m) | 1.302 | 0.753 | 0.538 |
| Resistance of the protective bar | RPE (mΩ/m) | 0.857 | 0.857 | 0.857 |
| Reactance of the protective bar (50Hz) | XPE (mΩ/m) | 0.090 | 0.090 | 0.102 |
| Resistance of the fault loop | Ro (mΩ/m) | 1.85 | 1.26 | 1.08 |
| Reactance of the fault loop (50Hz) | Xo (mΩ/m) | 0.456 | 0.456 | 0.349 |
| Impedance of the fault loop | Zo (mΩ/m) | 1.91 | 1.34 | 1.13 |
| $\Delta V_{1F} = \frac{1}{2} (2 R_{20} \cos\varphi + 2 X \sin\varphi)$ | $\frac{\Delta V (V/m/A)10^{-3} \cos\varphi = 0.70}{\Delta V (V/m/A)10^{-3} \cos\varphi = 0.75}$ | 0.98 | 0.63 | 0.44 |
| | $\frac{\Delta V (V/m/A)10^{-3} \cos\varphi = 0.80}{\Delta V (V/m/A)10^{-3} \cos\varphi = 0.85}$ | 1.02 | 0.64 | 0.45 |
| | $\frac{\Delta V (V/m/A)10^{-3} \cos\varphi = 0.80}{\Delta V (V/m/A)10^{-3} \cos\varphi = 0.85}$ | 1.06 | 0.65 | 0.46 |
| Voltage drop with distributed load (k) | $\frac{\Delta V (V/m/A)10^{-3} \cos\varphi = 0.85}{\Delta V (V/m/A)10^{-3} \cos\varphi = 0.90}$ | 1.09 | 0.65 | 0.46 |
| | $\frac{\Delta V (V/m/A)10^{-3} \cos\varphi = 0.90}{\Delta V (V/m/A)10^{-3} \cos\varphi = 0.95}$ | 1.11 | 0.65 | 0.47 |
| | $\frac{\Delta V (V/m/A)10^{-3} \cos\varphi = 0.95}{\Delta V (V/m/A)10^{-3} \cos\varphi = 1.00}$ | 1.13 | 0.64 | 0.46 |
| Straight length weight | $\frac{\Delta V (V/m/A)10^{-3} \cos\varphi = 0.95}{\Delta V (V/m/A)10^{-3} \cos\varphi = 1.00}$ | 1.08 | 0.57 | 0.41 |
| | p (kg/m) | 2.0 | 2.6 | 2.8 |
| | (kWh/m) | 1.64 | 1.64 | 1.64 |
| Fire load | IP | 40/55 | 40/55 | 40/55 |
| Protection degree | P (W/m) | 14.9 | 19.7 | 36.7 |
| Losses for the Joule effect at full load | t (°C) | -5/+50 | -5/+50 | -5/+50 |
| Min./max. ambient temperature | | | | |

Temperature rating schedule

| Mean room temperature (°C) | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
|----------------------------|------|------|------|------|-------|----|-------|------|------|------|
| K1 factor | 1.15 | 1.12 | 1.08 | 1.05 | 1.025 | 1 | 0.975 | 0.95 | 0.93 | 0.89 |

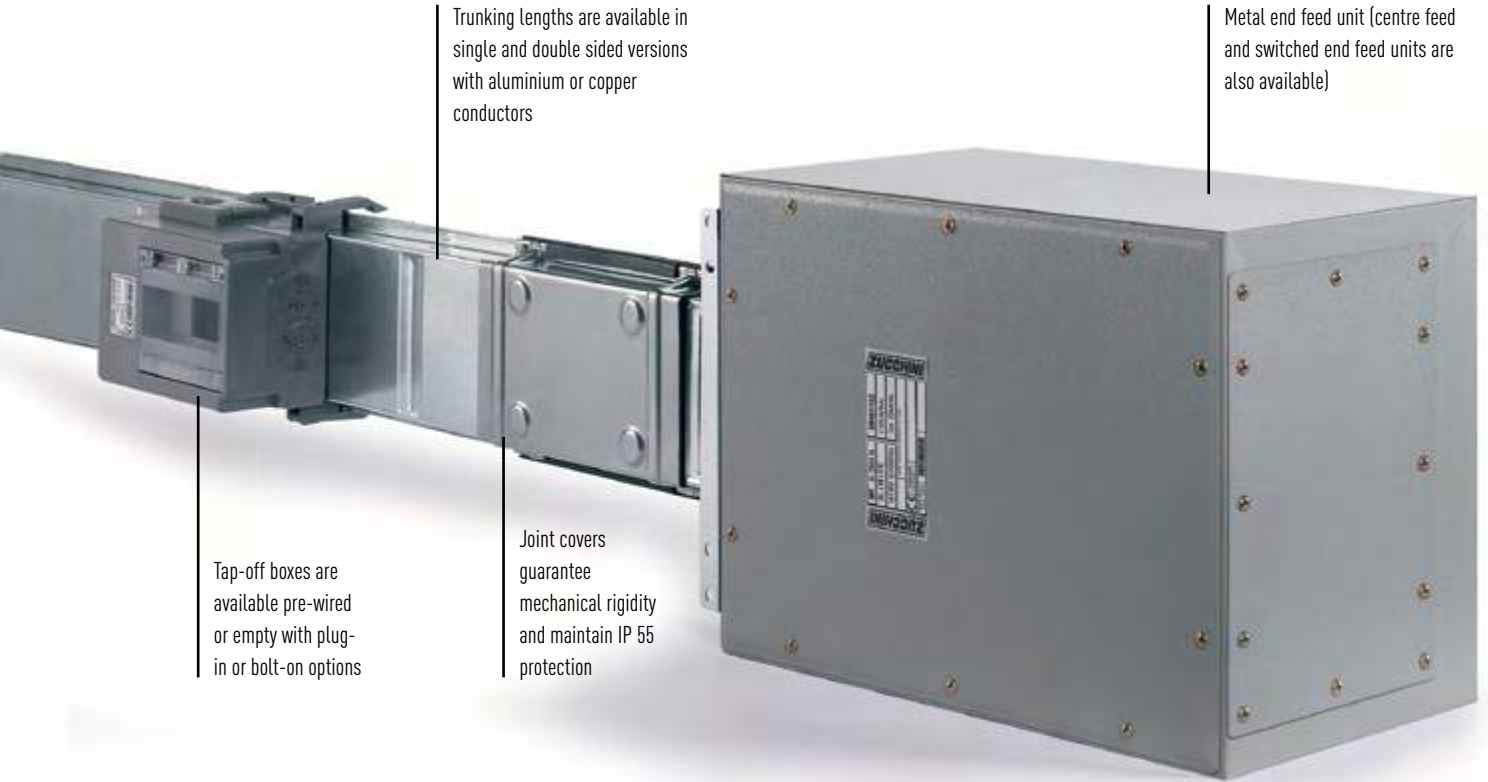
Multiplier coefficient of nominal rating for room temperature values different from 40°C

ZUCCHINI MR - MEDIUM RATING BUSBAR

Available in sizes from 160 to 1000 A, MR (medium rating) busbar is ideal for power distribution in medium to large installations and rising mains in commercial buildings.

MR is available with aluminium or copper conductors and has a large range of tap-off boxes from 16 to 1000 A, allowing the supply and protection of a wide range of loads using devices such as fuses, MCBs and MCCBs.





SWITCHBOARD -
TRANSFORMER FEED
UNIT



HORIZONTAL ELBOW



VERTICAL ELBOW



TAP-OFF BOXES



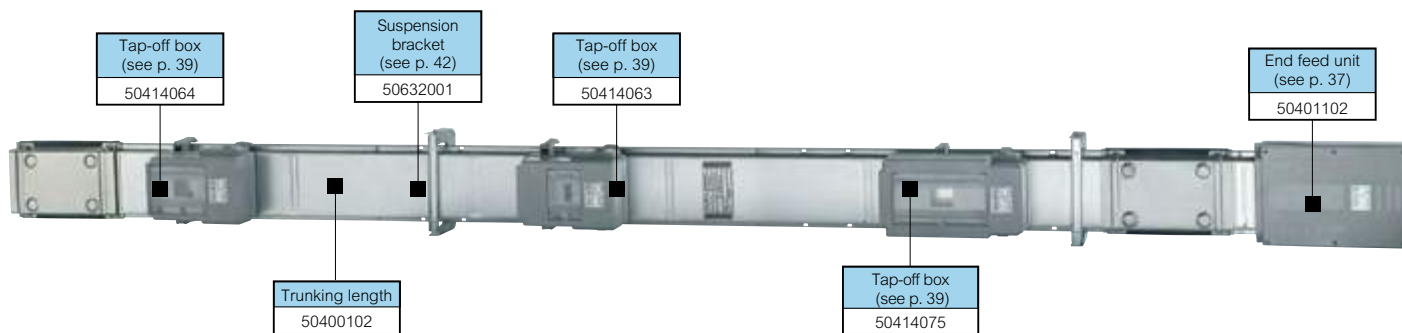
Lowering lifetime installation costs

MR features a monobloc electrical joining system. The shearhead bolt on the monobloc allows for fast assembly of the run and guarantees long-term reliability and safety.

As well as being quick to install, Zucchini MR busbar is easy to upgrade if existing installations need to be modified. The vast choice of elbows, tees and other accessories make any configuration possible, with bespoke solutions also available on request.

MR medium rating busbar

medium power 160 - 1000 A



Dimensions and technical information **p. 43**

Measuring bespoke dimensions **p. 49**

Technical data **p. 52-56**

IP 55 (according to BS EN 60529)

Flame retardant in compliance with IEC 60332-3. Fully compliant with IEC EN 61439-6

Rated currents are at an average ambient temperature of 40° C (over and above the required standard of 35° C)

| Pack | Cat. Nos. | | Trunking lengths – 3 m | | |
|------|-----------------------|----------|--|-------------|--------|
| | | | For vertical runs or riser applications. Special lengths between 400 mm and 3 m are available upon request | | |
| | | | With 3 + 3 outlets | | |
| | | | Tap-off outlets are spaced every 1.0 m on both sides (6 positions per 3 m length) | | |
| | | | | Weight (kg) | |
| | Aluminium | Copper | Rating (A) | Aluminium | Copper |
| 1 | 50400101 | | 160 | 19.9 | – |
| 1 | 50400102 | 55400102 | 250 | 20.9 | 25.7 |
| 1 | 50400103 | 55400103 | 315 | 22.8 | 28.1 |
| 1 | 50400104 | 55400104 | 400 | 33.8 | 36.9 |
| 1 | 50400108 | | 500 | 37.5 | – |
| 1 | 50400105 | 55400105 | 630 | 41.7 | 56.0 |
| 1 | 50400106 | 55400106 | 800 | 44.3 | 72.1 |
| 1 | 50400107 ¹ | 55400107 | 1000 | 46.8 | 83.7 |
| | | | With 5 outlets on one side | | |
| | | | Suitable for rising mains (see p. 50) | | |
| | | | | Weight (kg) | |
| | | | Rating (A) | Aluminium | Copper |
| 1 | 50400251 | | 160 | 19.9 | – |
| 1 | 50400252 | 55400252 | 250 | 20.9 | 25.7 |
| 1 | 50400253 | 55400253 | 315 | 22.8 | 28.1 |
| 1 | 50400254 | 55400254 | 400 | 33.8 | 36.9 |
| 1 | 50400258 | | 500 | 37.5 | – |
| 1 | 50400255 | 55400255 | 630 | 41.7 | 56.0 |
| 1 | 50400256 | 55400256 | 800 | 44.3 | 72.1 |
| 1 | 50400257 ¹ | 55400257 | 1000 | 46.8 | 83.7 |
| | | | Without outlets | | |
| | | | Feeder lengths. A tap-off point is only possible on the junction between two lengths (see bolt-on tap-off boxes p. 41) | | |
| | | | | Weight (kg) | |
| | | | Rating (A) | Aluminium | Copper |
| 1 | 50400241 | | 160 | 19.9 | – |
| 1 | 50400242 | 55400242 | 250 | 20.9 | 25.7 |
| 1 | 50400243 | 55400243 | 315 | 22.8 | 28.1 |
| 1 | 50400244 | 55400244 | 400 | 33.8 | 36.9 |
| 1 | 50400248 | | 500 | 37.5 | – |
| 1 | 50400245 | 55400245 | 630 | 41.7 | 56.1 |
| 1 | 50400246 | 55400246 | 800 | 44.3 | 72.1 |
| 1 | 50400247 ¹ | 55400247 | 1000 | 46.8 | 83.7 |

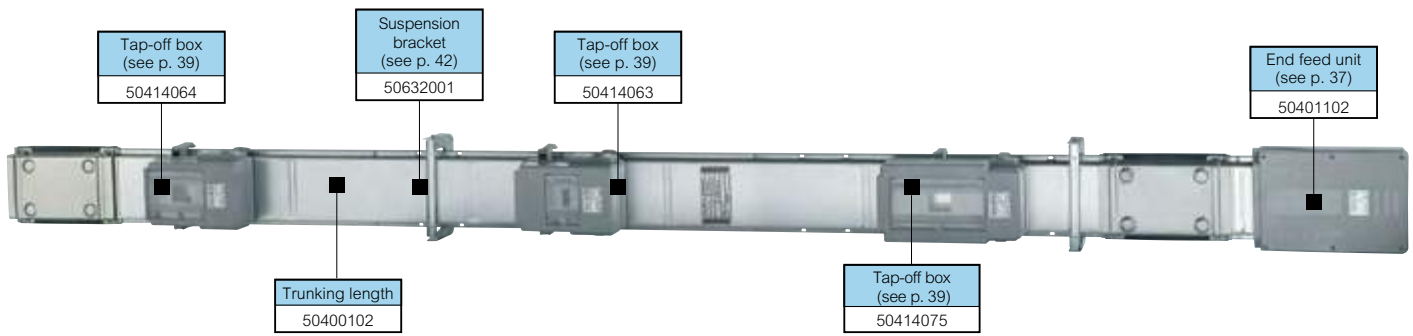
| Pack | Cat. Nos. | | Trunking lengths – bespoke dimensions | |
|------|-----------------------|----------|--|------------|
| | | | Please specify required length when ordering (see p. 49 – how to measure bespoke dimensions) | |
| | | | 1501 to 2999 mm lengths with 2 + 2 outlets | |
| | | | Tap-off outlets in fixed position on both sides | |
| | | | | Rating (A) |
| 1 | Aluminium | Copper | 50400151 | 160 |
| 1 | 50400152 | 55400152 | 50400153 | 250 |
| 1 | 50400153 | 55400153 | 50400154 | 315 |
| 1 | 50400154 | 55400154 | 50400158 | 400 |
| 1 | 50400158 | | 50400155 | 500 |
| 1 | 50400155 | 55400155 | 50400156 | 630 |
| 1 | 50400156 | 55400156 | 50400157 ¹ | 800 |
| 1 | 50400157 ¹ | 55400157 | | 1000 |
| | | | 1501 to 2999 mm lengths without outlets | |
| | | | Feeder lengths. A tap-off point is only possible on the junction between two lengths (see bolt-on tap-off boxes p. 41) | |
| | | | | Rating (A) |
| 1 | 50400121 | | 50400122 | 160 |
| 1 | 50400122 | 55400122 | 50400123 | 250 |
| 1 | 50400123 | 55400123 | 50400124 | 315 |
| 1 | 50400124 | 55400124 | 50400128 | 400 |
| 1 | 50400128 | | 50400125 | 500 |
| 1 | 50400125 | 55400125 | 50400126 | 630 |
| 1 | 50400126 | 55400126 | 50400127 ¹ | 800 |
| 1 | 50400127 ¹ | 55400127 | | 1000 |

Key : How to select the correct configuration and finish
 All examples on this page show 4 conductor galvanised lengths
 No. of conductors and finish is dictated by the red number
 0 = 4 conductors. Galvanised 2 = 4 conductors. Painted
 1 = 5 conductors. Galvanised 3 = 5 conductors. Painted
 Replace 0 with 1, 2, or 3 if required

1 : The 1000 A aluminium is supplied painted as standard

MR medium rating busbar

medium power 160 - 1000 A



Dimensions and technical information **p. 43-44**
 Measuring bespoke dimensions **p. 49**
 Technical data **p. 52-56**

IP 55 (according to BS EN 60529)

Flame retardant in compliance with IEC 60332-3. Fully compliant with IEC EN 61439-6

Rated currents are at an average ambient temperature of 40° C (over and above the required standard of 35° C)

| Pack | Cat. Nos. | | Rating (A) |
|---|-----------------------|----------|------------|
| Trunking lengths – bespoke dimensions (continued) | | | |
| Please specify required length when ordering (see p. 49 – how to measure bespoke dimensions) | | | |
| 1 000 to 1 500 mm lengths with 1 + 1 outlets | | | |
| Tap-off outlets in fixed position on both sides | | | |
| | Aluminium | Copper | Rating (A) |
| 1 | 50400141 | | 160 |
| 1 | 50400142 | 55400142 | 250 |
| 1 | 50400143 | 55400143 | 315 |
| 1 | 50400144 | 55400144 | 400 |
| 1 | 50400148 | | 500 |
| 1 | 50400145 | 55400145 | 630 |
| 1 | 50400146 | 55400146 | 800 |
| 1 | 50400147 ¹ | 55400147 | 1000 |
| 600 to 1 500 mm lengths without outlets | | | |
| Feeder length. A tap-off point is only possible on the junction between two lengths (see bolt-on tap-off boxes p. 41) | | | |
| | | | Rating (A) |
| 1 | 50400111 | | 160 |
| 1 | 50400112 | 55400112 | 250 |
| 1 | 50400113 | 55400113 | 315 |
| 1 | 50400114 | 55400114 | 400 |
| 1 | 50400118 | | 500 |
| 1 | 50400115 | 55400115 | 630 |
| 1 | 50400116 | 55400116 | 800 |
| 1 | 50400117 ¹ | 55400117 | 1000 |

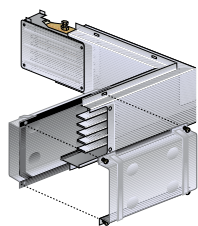
| Pack | Cat. Nos. | | Rating (A) |
|---|-----------|----------|---|
| Trunking lengths with fire barriers | | | |
| With external fire barriers | | | |
| Please specify the required position of the external fire barrier when ordering (see p. 44) | | | |
| | Aluminium | Copper | Rating (A) |
| 1 | 554EFB01 | | 160 |
| 1 | 554EFB01 | 554EFB01 | 250 |
| 1 | 554EFB01 | 554EFB01 | 315 |
| 1 | 554EFB02 | 554EFB01 | 400 |
| 1 | 554EFB02 | | 500 |
| 1 | 554EFB02 | 554EFB02 | 630 |
| 1 | 554EFB02 | 554EFB02 | 800 |
| 1 | 554EFB02 | 554EFB02 | 1000 |
| With internal fire barriers | | | |
| Please specify the required position of the internal fire barrier when ordering (see p. 44) | | | |
| | | | Rating (A) |
| 1 | 554IFB01 | | 160 |
| 1 | 554IFB02 | 554IFB01 | 250 |
| 1 | 554IFB03 | 554IFB02 | 315 |
| 1 | 554IFB04 | 554IFB05 | 400 |
| 1 | 554IFB06 | | 500 |
| 1 | 554IFB07 | 554IFB04 | 630 |
| 1 | 554IFB08 | 554IFB06 | 800 |
| 1 | 554IFB09 | 554IFB07 | 1000 |
| Tap-off outlet cover IP 55 | | | |
| 1 | 50403601 | | Suitable for all MR versions 6 for each length Weight : 0.10 kg |

1 : The 1000 A aluminium is supplied painted as standard

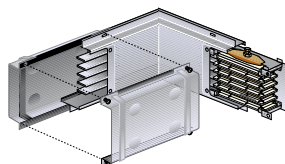
Key : How to select the correct configuration and finish
 All examples on this page show 4 conductor galvanised lengths
 No. of conductors and finish is dictated by the red number
 0 = 4 conductors. Galvanised 2 = 4 conductors. Painted
 1 = 5 conductors. Galvanised 3 = 5 conductors. Painted
 Replace 0 with 1, 2, or 3 if required

MR medium rating busbar

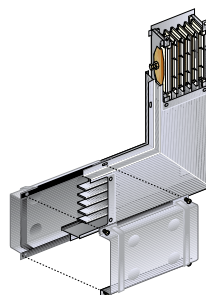
single elbows



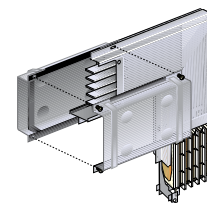
Horizontal elbow – right hand



Horizontal elbow – left hand



Vertical elbow – right hand







Vertical elbow – left hand

 **Dimensions and technical information p. 44**
Measuring bespoke dimensions p. 49

MR is fully compliant with IEC EN 61439-6
 Rated currents are at an average ambient temperature of 40° C (over and above the required standard of 35° C)
 Angles are 90° as standard. Other angles available on request. IP 55 (according to BS EN 60529)

| Pack | Cat. Nos. | | Single elbows – standard dimensions (300 + 300 mm) | | |
|------|-----------------------|----------|--|-------------|--------|
| | Aluminium | Copper | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50400301 | | 160 | 8-1 | – |
| 1 | 50400302 | 55400302 | 250 | 8-2 | 9-2 |
| 1 | 50400303 | 55400303 | 315 | 8-4 | 9-6 |
| 1 | 50400304 | 55400304 | 400 | 14-5 | 11-0 |
| 1 | 50400308 | | 500 | 14-9 | – |
| 1 | 50400305 | 55400305 | 630 | 15-4 | 18-7 |
| 1 | 50400306 | 55400306 | 800 | 15-7 | 21-4 |
| 1 | 50400307 ¹ | 55400307 | 1 000 | 16-0 | 23-3 |
| | | | Horizontal elbow – left hand | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50400311 | | 160 | 8-1 | – |
| 1 | 50400312 | 55400312 | 250 | 8-2 | 9-2 |
| 1 | 50400313 | 55400313 | 315 | 8-4 | 9-6 |
| 1 | 50400314 | 55400314 | 400 | 14-5 | 11-0 |
| 1 | 50400318 | | 500 | 14-9 | – |
| 1 | 50400315 | 55400315 | 630 | 15-4 | 18-7 |
| 1 | 50400316 | 55400316 | 800 | 15-7 | 21-4 |
| 1 | 50400317 ¹ | 55400317 | 1 000 | 16-0 | 23-3 |
| | | | Vertical elbow – right hand | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50400401 | | 160 | 8-1 | – |
| 1 | 50400402 | 55400402 | 250 | 8-2 | 9-2 |
| 1 | 50400403 | 55400403 | 315 | 8-4 | 9-6 |
| 1 | 50400404 | 55400404 | 400 | 14-5 | 11-0 |
| 1 | 50400408 | | 500 | 14-9 | – |
| 1 | 50400405 | 55400405 | 630 | 15-4 | 18-7 |
| 1 | 50400406 | 55400406 | 800 | 15-7 | 21-4 |
| 1 | 50400407 ¹ | 55400407 | 1 000 | 16-0 | 23-3 |
| | | | Vertical elbow – left hand | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50400411 | | 160 | 8-1 | – |
| 1 | 50400412 | 55400412 | 250 | 8-2 | 9-2 |
| 1 | 50400413 | 55400413 | 315 | 8-4 | 9-6 |
| 1 | 50400414 | 55400414 | 400 | 14-5 | 11-0 |
| 1 | 50400418 | | 500 | 14-9 | – |
| 1 | 50400415 | 55400415 | 630 | 15-4 | 18-7 |
| 1 | 50400416 | 55400416 | 800 | 15-7 | 21-4 |
| 1 | 50400417 ¹ | 55400417 | 1 000 | 16-0 | 23-3 |

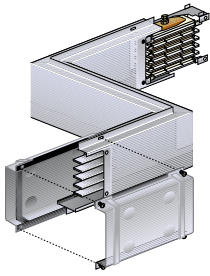
| Pack | Cat. Nos. | | Single elbows – bespoke dimensions |
|------|-----------------------|----------|--|
| | Aluminium | Copper | Please specify required length when ordering |
| | | | Horizontal elbow – right hand |
| | | | 250 to 900 mm per arm |
| | | | Rating (A) |
| 1 | 50400321 | | 160 |
| 1 | 50400322 | 55400322 | 250 |
| 1 | 50400323 | 55400323 | 315 |
| 1 | 50400324 | 55400324 | 400 |
| 1 | 50400328 | | 500 |
| 1 | 50400325 | 55400325 | 630 |
| 1 | 50400326 | 55400326 | 800 |
| 1 | 50400327 ¹ | 55400327 | 1 000 |
| | | | Horizontal elbow – left hand |
| | | | 250 to 900 mm per arm |
| | | | Rating (A) |
| 1 | 50400331 | | 160 |
| 1 | 50400332 | 55400332 | 250 |
| 1 | 50400333 | 55400333 | 315 |
| 1 | 50400334 | 55400334 | 400 |
| 1 | 50400338 | | 500 |
| 1 | 50400335 | 55400335 | 630 |
| 1 | 50400336 | 55400336 | 800 |
| 1 | 50400337 ¹ | 55400337 | 1 000 |
| | | | Vertical elbow – right hand |
| | | | 300 to 900 mm per arm |
| | | | Rating (A) |
| 1 | 50400421 | | 160 |
| 1 | 50400422 | 55400422 | 250 |
| 1 | 50400423 | 55400423 | 315 |
| 1 | 50400424 | 55400424 | 400 |
| 1 | 50400428 | | 500 |
| 1 | 50400425 | 55400425 | 630 |
| 1 | 50400426 | 55400426 | 800 |
| 1 | 50400427 ¹ | 55400427 | 1 000 |
| | | | Vertical elbow – left hand |
| | | | 300 to 900 mm per arm |
| | | | Rating (A) |
| 1 | 50400431 | | 160 |
| 1 | 50400432 | 55400432 | 250 |
| 1 | 50400433 | 55400433 | 315 |
| 1 | 50400434 | 55400434 | 400 |
| 1 | 50400438 | | 500 |
| 1 | 50400435 | 55400435 | 630 |
| 1 | 50400436 | 55400436 | 800 |
| 1 | 50400437 ¹ | 55400437 | 1 000 |

Key : How to select the correct configuration and finish
 All examples on this page show 4 conductor galvanised lengths
 No. of conductors and finish is dictated by the red number
 0 =  4 conductors. Galvanised 2 =  4 conductors. Painted
 1 =  5 conductors. Galvanised 3 =  5 conductors. Painted
 Replace 0 with 1, 2, or 3 if required

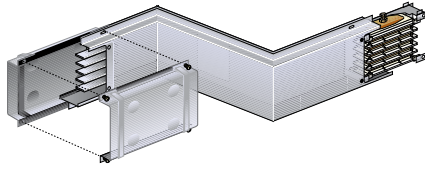
1 : The 1000 A aluminium is supplied painted as standard

MR medium rating busbar

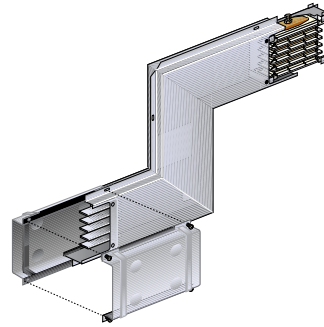
double elbows



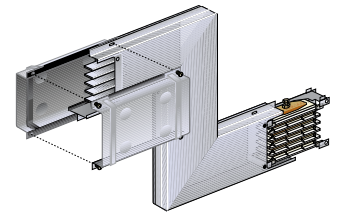
Horizontal elbow – right + left hand



Horizontal elbow – left + right hand



Vertical elbow – right + left hand







Vertical elbow – left + right hand

 **Dimensions and technical information p. 44**
Measuring bespoke dimensions p. 49

MR is fully compliant with IEC EN 61439-6
Rated currents are at an average ambient temperature of 40° C (over and above the required standard of 35° C)
Angles are 90° as standard. Other angles available on request. IP 55 (according to BS EN 60529)

| Pack | Cat. Nos. | | Double elbows – standard dimensions (300 + 300 + 300 mm) | | |
|------|-----------------------|----------|---|-------------|--------|
| | Aluminium | Copper | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50400341 | | 160 | 10-29 | – |
| 1 | 50400342 | 55400342 | 250 | 10-55 | 12-23 |
| 1 | 50400343 | 55400343 | 315 | 11-06 | 12-97 |
| 1 | 50400344 | 55400344 | 400 | 18-37 | 15-72 |
| 1 | 50400348 | | 500 | 19-50 | – |
| 1 | 50400345 | 55400345 | 630 | 20-55 | 25-77 |
| 1 | 50400346 | 55400346 | 800 | 21-20 | 30-88 |
| 1 | 50400347 ¹ | 55400347 | 1000 | 21-80 | 34-55 |
| | | | Horizontal elbow – right + left hand | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50400351 | | 160 | 10-29 | – |
| 1 | 50400352 | 55400352 | 250 | 10-55 | 12-23 |
| 1 | 50400353 | 55400353 | 315 | 11-06 | 12-97 |
| 1 | 50400354 | 55400354 | 400 | 18-37 | 15-72 |
| 1 | 50400358 | | 500 | 19-50 | – |
| 1 | 50400355 | 55400355 | 630 | 20-55 | 25-77 |
| 1 | 50400356 | 55400356 | 800 | 21-20 | 30-88 |
| 1 | 50400357 ¹ | 55400357 | 1000 | 21-80 | 34-55 |
| | | | Horizontal elbow – left + right hand | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50400441 | | 160 | 10-29 | – |
| 1 | 50400442 | 55400442 | 250 | 10-55 | 12-23 |
| 1 | 50400443 | 55400443 | 315 | 11-06 | 12-97 |
| 1 | 50400444 | 55400444 | 400 | 18-37 | 15-72 |
| 1 | 50400448 | | 500 | 19-50 | – |
| 1 | 50400445 | 55400445 | 630 | 20-55 | 25-77 |
| 1 | 50400446 | 55400446 | 800 | 21-20 | 30-88 |
| 1 | 50400447 ¹ | 55400447 | 1000 | 21-80 | 34-55 |
| | | | Vertical elbow – right + left hand | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50400461 | | 160 | 10-29 | – |
| 1 | 50400462 | 55400462 | 250 | 10-55 | 12-23 |
| 1 | 50400463 | 55400463 | 315 | 11-06 | 12-97 |
| 1 | 50400464 | 55400464 | 400 | 18-37 | 15-72 |
| 1 | 50400468 | | 500 | 19-50 | – |
| 1 | 50400465 | 55400465 | 630 | 20-55 | 25-77 |
| 1 | 50400466 | 55400466 | 800 | 21-20 | 30-88 |
| 1 | 50400467 ¹ | 55400467 | 1000 | 21-80 | 34-55 |
| | | | Vertical elbow – left + right hand | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50400451 | | 160 | 10-29 | – |
| 1 | 50400452 | 55400452 | 250 | 10-55 | 12-23 |
| 1 | 50400453 | 55400453 | 315 | 11-06 | 12-97 |
| 1 | 50400454 | 55400454 | 400 | 18-37 | 15-72 |
| 1 | 50400458 | | 500 | 19-50 | – |
| 1 | 50400455 | 55400455 | 630 | 20-55 | 25-77 |
| 1 | 50400456 | 55400456 | 800 | 21-20 | 30-88 |
| 1 | 50400457 ¹ | 55400457 | 1000 | 21-80 | 34-55 |

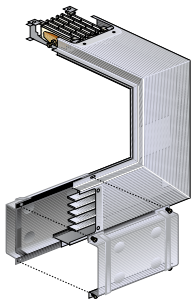
| Pack | Cat. Nos. | | Double elbows – bespoke dimensions | | |
|------|-----------------------|----------|--|--|--|
| | Aluminium | Copper | Please specify required length when ordering | | |
| | | | Horizontal elbow – right + left hand | | |
| | | | 250 to 900 mm per arm | | |
| | | | Rating (A) | | |
| 1 | 50400361 | | 160 | | |
| 1 | 50400362 | 55400362 | 250 | | |
| 1 | 50400363 | 55400363 | 315 | | |
| 1 | 50400364 | 55400364 | 400 | | |
| 1 | 50400368 | | 500 | | |
| 1 | 50400365 | 55400365 | 630 | | |
| 1 | 50400366 | 55400366 | 800 | | |
| 1 | 50400367 ¹ | 55400367 | 1000 | | |
| | | | Horizontal elbow – left + right hand | | |
| | | | 250 to 900 mm per arm | | |
| | | | Rating (A) | | |
| 1 | 50400371 | | 160 | | |
| 1 | 50400372 | 55400372 | 250 | | |
| 1 | 50400373 | 55400373 | 315 | | |
| 1 | 50400374 | 55400374 | 400 | | |
| 1 | 50400378 | | 500 | | |
| 1 | 50400375 | 55400375 | 630 | | |
| 1 | 50400376 | 55400376 | 800 | | |
| 1 | 50400377 ¹ | 55400377 | 1000 | | |
| | | | Vertical elbow – right + left hand | | |
| | | | 300 to 900 mm per arm | | |
| | | | Rating (A) | | |
| 1 | 50400461 | | 160 | | |
| 1 | 50400462 | 55400462 | 250 | | |
| 1 | 50400463 | 55400463 | 315 | | |
| 1 | 50400464 | 55400464 | 400 | | |
| 1 | 50400468 | | 500 | | |
| 1 | 50400465 | 55400465 | 630 | | |
| 1 | 50400466 | 55400466 | 800 | | |
| 1 | 50400467 ¹ | 55400467 | 1000 | | |
| | | | Vertical elbow – left + right hand | | |
| | | | 300 to 900 mm per arm | | |
| | | | Rating (A) | | |
| 1 | 50400471 | | 160 | | |
| 1 | 50400472 | 55400472 | 250 | | |
| 1 | 50400473 | 55400473 | 315 | | |
| 1 | 50400474 | 55400474 | 400 | | |
| 1 | 50400478 | | 500 | | |
| 1 | 50400475 | 55400475 | 630 | | |
| 1 | 50400476 | 55400476 | 800 | | |
| 1 | 50400477 ¹ | 55400477 | 1000 | | |

Key : How to select the correct configuration and finish
 All examples on this page show 4 conductor galvanised lengths
 No. of conductors and finish is dictated by the red number
 0 =  4 conductors. Galvanised 2 =  4 conductors. Painted
 1 =  5 conductors. Galvanised 3 =  5 conductors. Painted
 Replace 0 with 1, 2, or 3 if required

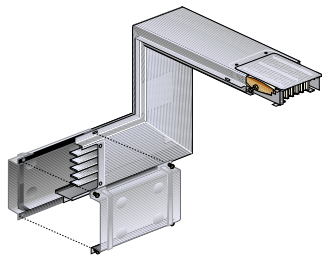
1 : The 1000 A aluminium is supplied painted as standard

MR medium rating busbar

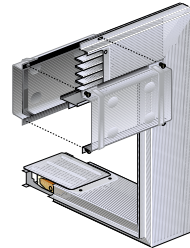
combination vertical + horizontal elbows



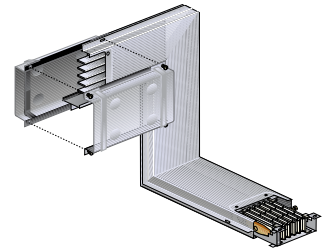
Combination vertical + horizontal elbow right + right hand



Combination vertical + horizontal elbow right + left hand



Combination vertical + horizontal elbow left + right hand



Combination vertical + horizontal elbow left + left hand

Dimensions and technical information p. 44
Measuring bespoke dimensions p. 49

MR is fully compliant with IEC EN 61439-6
Rated currents are at an average ambient temperature of 40° C (over and above the required standard of 35° C)
Angles are 90° as standard. Other angles available on request. IP 55 (according to BS EN 60529)

| Pack | Cat. Nos. | | Combination vertical + horizontal elbows – standard dimensions (300 + 300 + 300 mm) | | |
|------|-----------------------|----------|---|-------------|--------|
| | Aluminium | Copper | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50400501 | | 160 | 10-29 | – |
| 1 | 50400502 | 55400502 | 250 | 10-55 | 12-23 |
| 1 | 50400503 | 55400503 | 315 | 11-06 | 12-97 |
| 1 | 50400504 | 55400504 | 400 | 18-37 | 15-72 |
| 1 | 50400508 | | 500 | 19-50 | – |
| 1 | 50400505 | 55400505 | 630 | 20-55 | 25-77 |
| 1 | 50400506 | 55400506 | 800 | 21-20 | 30-88 |
| 1 | 50400507 ¹ | 55400507 | 1000 | 21-80 | 34-55 |
| | | | Right hand + left hand | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50400511 | | 160 | 10-29 | – |
| 1 | 50400512 | 55400512 | 250 | 10-55 | 12-23 |
| 1 | 50400513 | 55400513 | 315 | 11-06 | 12-97 |
| 1 | 50400514 | 55400514 | 400 | 18-37 | 15-72 |
| 1 | 50400518 | | 500 | 19-50 | – |
| 1 | 50400515 | 55400515 | 630 | 20-55 | 25-77 |
| 1 | 50400516 | 55400516 | 800 | 21-20 | 30-88 |
| 1 | 50400517 ¹ | 55400517 | 1000 | 21-80 | 34-55 |
| | | | Left hand + right hand | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50400521 | | 160 | 10-29 | – |
| 1 | 50400522 | 55400522 | 250 | 10-55 | 12-23 |
| 1 | 50400523 | 55400523 | 315 | 11-06 | 12-97 |
| 1 | 50400524 | 55400524 | 400 | 18-37 | 15-72 |
| 1 | 50400528 | | 500 | 19-50 | – |
| 1 | 50400525 | 55400525 | 630 | 20-55 | 25-77 |
| 1 | 50400526 | 55400526 | 800 | 21-20 | 30-88 |
| 1 | 50400527 ¹ | 55400527 | 1000 | 21-80 | 34-55 |
| | | | Left hand + left hand | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50400531 | | 160 | 10-29 | – |
| 1 | 50400532 | 55400532 | 250 | 10-55 | 12-23 |
| 1 | 50400533 | 55400533 | 315 | 11-06 | 12-97 |
| 1 | 50400534 | 55400534 | 400 | 18-37 | 15-72 |
| 1 | 50400538 | | 500 | 19-50 | – |
| 1 | 50400535 | 55400535 | 630 | 20-55 | 25-77 |
| 1 | 50400536 | 55400536 | 800 | 21-20 | 30-88 |
| 1 | 50400537 ¹ | 55400537 | 1000 | 21-80 | 34-55 |

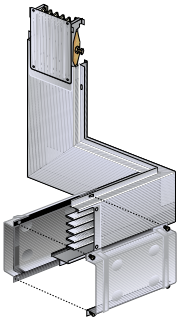
| Pack | Cat. Nos. | | Combination vertical + horizontal elbows – bespoke dimensions | | |
|------|-----------------------|----------|---|-------------|--------|
| | Aluminium | Copper | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50400541 | | 160 | 10-29 | – |
| 1 | 50400542 | 55400542 | 250 | 10-55 | 12-23 |
| 1 | 50400543 | 55400543 | 315 | 11-06 | 12-97 |
| 1 | 50400544 | 55400544 | 400 | 18-37 | 15-72 |
| 1 | 50400548 | | 500 | 19-50 | – |
| 1 | 50400545 | 55400545 | 630 | 20-55 | 25-77 |
| 1 | 50400546 | 55400546 | 800 | 21-20 | 30-88 |
| 1 | 50400547 ¹ | 55400547 | 1000 | 21-80 | 34-55 |
| | | | Right hand + left hand | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50400551 | | 160 | 10-29 | – |
| 1 | 50400552 | 55400552 | 250 | 10-55 | 12-23 |
| 1 | 50400553 | 55400553 | 315 | 11-06 | 12-97 |
| 1 | 50400554 | 55400554 | 400 | 18-37 | 15-72 |
| 1 | 50400558 | | 500 | 19-50 | – |
| 1 | 50400555 | 55400555 | 630 | 20-55 | 25-77 |
| 1 | 50400556 | 55400556 | 800 | 21-20 | 30-88 |
| 1 | 50400557 ¹ | 55400557 | 1000 | 21-80 | 34-55 |
| | | | Left hand + right hand | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50400561 | | 160 | 10-29 | – |
| 1 | 50400562 | 55400562 | 250 | 10-55 | 12-23 |
| 1 | 50400563 | 55400563 | 315 | 11-06 | 12-97 |
| 1 | 50400564 | 55400564 | 400 | 18-37 | 15-72 |
| 1 | 50400568 | | 500 | 19-50 | – |
| 1 | 50400565 | 55400565 | 630 | 20-55 | 25-77 |
| 1 | 50400566 | 55400566 | 800 | 21-20 | 30-88 |
| 1 | 50400567 ¹ | 55400567 | 1000 | 21-80 | 34-55 |
| | | | Left hand + left hand | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50400571 | | 160 | 10-29 | – |
| 1 | 50400572 | 55400572 | 250 | 10-55 | 12-23 |
| 1 | 50400573 | 55400573 | 315 | 11-06 | 12-97 |
| 1 | 50400574 | 55400574 | 400 | 18-37 | 15-72 |
| 1 | 50400578 | | 500 | 19-50 | – |
| 1 | 50400575 | 55400575 | 630 | 20-55 | 25-77 |
| 1 | 50400576 | 55400576 | 800 | 21-20 | 30-88 |
| 1 | 50400577 ¹ | 55400577 | 1000 | 21-80 | 34-55 |

Key : How to select the correct configuration and finish
 All examples on this page show 4 conductor galvanised lengths
 No. of conductors and finish is dictated by the red number
 0 = 4 conductors. Galvanised 2 = 4 conductors. Painted
 1 = 5 conductors. Galvanised 3 = 5 conductors. Painted
 Replace 0 with 1, 2, or 3 if required

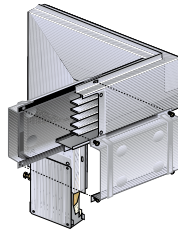
1 : The 1000 A aluminium is supplied painted as standard

MR medium rating busbar

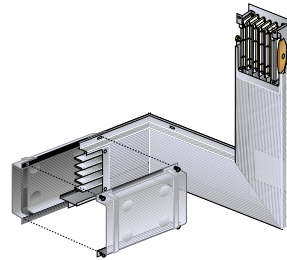
combination horizontal + vertical elbows



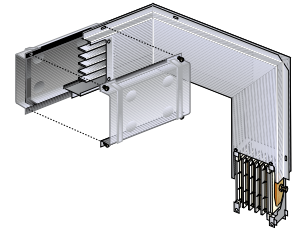
Combination horizontal + vertical elbows right + right hand



Combination horizontal + vertical elbows right + left hand



Combination horizontal + vertical elbows left + right hand



Combination horizontal + vertical elbows left + left hand



Dimensions and technical information **p. 44**
Measuring bespoke dimensions **p. 49**

MR is fully compliant with IEC EN 61439-6
Rated currents are at an average ambient temperature of 40° C (over and above the required standard of 35° C)
Angles are 90° as standard. Other angles available on request. IP 55 (according to BS EN 60529)

| Pack | Cat. Nos. | | Combination horizontal + vertical elbows – standard dimensions (300 + 300 + 300 mm) | | |
|------|-----------------------|----------|--|-------------|--------|
| | Aluminium | Copper | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50400601 | | 160 | 10-29 | – |
| 1 | 50400602 | 55400602 | 250 | 10-55 | 12-23 |
| 1 | 50400603 | 55400603 | 315 | 11-06 | 12-97 |
| 1 | 50400604 | 55400604 | 400 | 18-37 | 15-72 |
| 1 | 50400608 | | 500 | 19-50 | – |
| 1 | 50400605 | 55400605 | 630 | 20-55 | 25-77 |
| 1 | 50400606 | 55400606 | 800 | 21-20 | 30-88 |
| 1 | 50400607 ¹ | 55400607 | 1000 | 21-80 | 34-55 |
| | | | Right hand + left hand | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50400611 | | 160 | 10-29 | – |
| 1 | 50400612 | 55400612 | 250 | 10-55 | 12-23 |
| 1 | 50400613 | 55400613 | 315 | 11-06 | 12-97 |
| 1 | 50400614 | 55400614 | 400 | 18-37 | 15-72 |
| 1 | 50400618 | | 500 | 19-50 | – |
| 1 | 50400615 | 55400615 | 630 | 20-55 | 25-77 |
| 1 | 50400616 | 55400616 | 800 | 21-20 | 30-88 |
| 1 | 50400617 ¹ | 55400617 | 1000 | 21-80 | 34-55 |
| | | | Left hand + right hand | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50400621 | | 160 | 10-29 | – |
| 1 | 50400622 | 55400622 | 250 | 10-55 | 12-23 |
| 1 | 50400623 | 55400623 | 315 | 11-06 | 12-97 |
| 1 | 50400624 | 55400624 | 400 | 18-37 | 15-72 |
| 1 | 50400628 | | 500 | 19-50 | – |
| 1 | 50400625 | 55400625 | 630 | 20-55 | 25-77 |
| 1 | 50400626 | 55400626 | 800 | 21-20 | 30-88 |
| 1 | 50400627 ¹ | 55400627 | 1000 | 21-80 | 34-55 |
| | | | Left hand + left hand | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50400631 | | 160 | 10-29 | – |
| 1 | 50400632 | 55400632 | 250 | 10-55 | 12-23 |
| 1 | 50400633 | 55400633 | 315 | 11-06 | 12-97 |
| 1 | 50400634 | 55400634 | 400 | 18-37 | 15-72 |
| 1 | 50400638 | | 500 | 19-50 | – |
| 1 | 50400635 | 55400635 | 630 | 20-55 | 25-77 |
| 1 | 50400636 | 55400636 | 800 | 21-20 | 30-88 |
| 1 | 50400637 ¹ | 55400637 | 1000 | 21-80 | 34-55 |

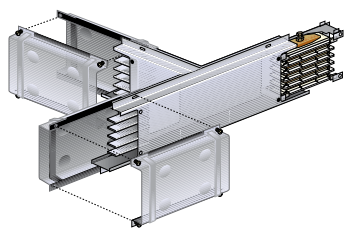
| Pack | Cat. Nos. | | Combination horizontal + vertical elbows – bespoke dimensions | | |
|------|-----------------------|----------|--|-------------|--------|
| | Aluminium | Copper | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50400641 | | 160 | – | – |
| 1 | 50400642 | 55400642 | 250 | – | – |
| 1 | 50400643 | 55400643 | 315 | – | – |
| 1 | 50400644 | 55400644 | 400 | – | – |
| 1 | 50400648 | | 500 | – | – |
| 1 | 50400645 | 55400645 | 630 | – | – |
| 1 | 50400646 | 55400646 | 800 | – | – |
| 1 | 50400647 ¹ | 55400647 | 1000 | – | – |
| | | | Right hand + left hand | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50400651 | | 160 | – | – |
| 1 | 50400652 | 55400652 | 250 | – | – |
| 1 | 50400653 | 55400653 | 315 | – | – |
| 1 | 50400654 | 55400654 | 400 | – | – |
| 1 | 50400658 | | 500 | – | – |
| 1 | 50400655 | 55400655 | 630 | – | – |
| 1 | 50400656 | 55400656 | 800 | – | – |
| 1 | 50400657 ¹ | 55400657 | 1000 | – | – |
| | | | Left hand + right hand | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50400661 | | 160 | – | – |
| 1 | 50400662 | 55400662 | 250 | – | – |
| 1 | 50400663 | 55400663 | 315 | – | – |
| 1 | 50400664 | 55400664 | 400 | – | – |
| 1 | 50400668 | | 500 | – | – |
| 1 | 50400665 | 55400665 | 630 | – | – |
| 1 | 50400666 | 55400666 | 800 | – | – |
| 1 | 50400667 ¹ | 55400667 | 1000 | – | – |
| | | | Left hand + left hand | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50400671 | | 160 | – | – |
| 1 | 50400672 | 55400672 | 250 | – | – |
| 1 | 50400673 | 55400673 | 315 | – | – |
| 1 | 50400674 | 55400674 | 400 | – | – |
| 1 | 50400678 | | 500 | – | – |
| 1 | 50400675 | 55400675 | 630 | – | – |
| 1 | 50400676 | 55400676 | 800 | – | – |
| 1 | 50400677 ¹ | 55400677 | 1000 | – | – |

Key : How to select the correct configuration and finish
All examples on this page show 4 conductor galvanised lengths
No. of conductors and finish is dictated by the red number
0 = 4 conductors. Galvanised 2 = 4 conductors. Painted
1 = 5 conductors. Galvanised 3 = 5 conductors. Painted
Replace 0 with 1, 2, or 3 if required

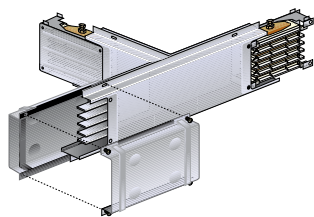
1 : The 1000 A aluminium is supplied painted as standard

MR medium rating busbar

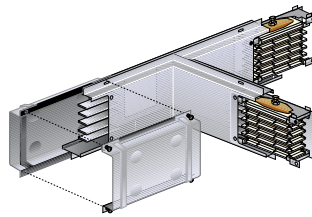
horizontal tees and crossovers



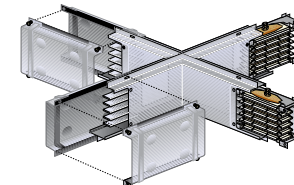
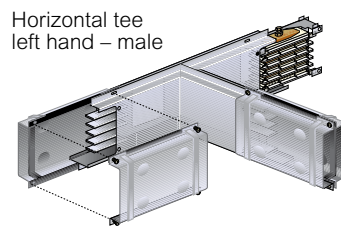
Horizontal tee right hand – female



Horizontal tee right hand – male



Horizontal tee left hand – female



Crossover

 **Dimensions and technical information p. 45**
Measuring bespoke dimensions p. 49

MR is fully compliant with IEC EN 61439-6
 Rated currents are at an average ambient temperature of 40° C (over and above the required standard of 35° C)
 Angles are 90° as standard. Other angles available on request
 IP 55 (according to BS EN 60529)

| Pack | Cat. Nos. | | Horizontal tees – standard dimension (300 + 300 + 300 mm) | | |
|---------------------------|-----------------------|----------|---|-------------|--------|
| | Aluminium | Copper | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50400701 | | 160 | 11-2 | – |
| 1 | 50400702 | 55400702 | 250 | 11-4 | 12-8 |
| 1 | 50400703 | 55400703 | 315 | 11-8 | 13-4 |
| 1 | 50400704 | 55400704 | 400 | 18-4 | 15-7 |
| 1 | 50400708 | | 500 | 19-5 | – |
| 1 | 50400705 | 55400705 | 630 | 20-0 | 24-4 |
| 1 | 50400706 | 55400706 | 800 | 20-5 | 28-5 |
| 1 | 50400707 ¹ | 55400707 | 1000 | 21-0 | 31-3 |
| Right hand – male | | | | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50400711 | | 160 | 11-2 | – |
| 1 | 50400712 | 55400712 | 250 | 11-4 | 12-8 |
| 1 | 50400713 | 55400713 | 315 | 11-8 | 13-4 |
| 1 | 50400714 | 55400714 | 400 | 18-4 | 15-7 |
| 1 | 50400718 | | 500 | 19-5 | – |
| 1 | 50400715 | 55400715 | 630 | 20-0 | 24-4 |
| 1 | 50400716 | 55400716 | 800 | 20-5 | 28-5 |
| 1 | 50400717 ¹ | 55400717 | 1000 | 21-0 | 31-3 |
| Left hand – female | | | | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50400721 | | 160 | 11-2 | – |
| 1 | 50400722 | 55400722 | 250 | 11-4 | 12-8 |
| 1 | 50400723 | 55400723 | 315 | 11-8 | 13-4 |
| 1 | 50400724 | 55400724 | 400 | 18-4 | 15-7 |
| 1 | 50400728 | | 500 | 19-5 | – |
| 1 | 50400725 | 55400725 | 630 | 20-0 | 24-4 |
| 1 | 50400726 | 55400726 | 800 | 20-5 | 28-5 |
| 1 | 50400727 ¹ | 55400727 | 1000 | 21-0 | 31-3 |
| Left hand – male | | | | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50400731 | | 160 | 11-2 | – |
| 1 | 50400732 | 55400732 | 250 | 11-4 | 12-8 |
| 1 | 50400733 | 55400733 | 315 | 11-8 | 13-4 |
| 1 | 50400734 | 55400734 | 400 | 18-4 | 15-7 |
| 1 | 50400738 | | 500 | 19-5 | – |
| 1 | 50400735 | 55400735 | 630 | 20-0 | 24-4 |
| 1 | 50400736 | 55400736 | 800 | 20-5 | 28-5 |
| 1 | 50400737 ¹ | 55400737 | 1000 | 21-0 | 31-3 |

| Pack | Cat. Nos. | |
|------|-----------------------|----------|
| | Aluminium | Copper |
| 1 | 50400741 | |
| 1 | 50400742 | 55400742 |
| 1 | 50400743 | 55400743 |
| 1 | 50400744 | 55400744 |
| 1 | 50400748 | |
| 1 | 50400745 | 55400745 |
| 1 | 50400746 | 55400746 |
| 1 | 50400747 ¹ | 55400747 |
| 1 | 50400751 | |
| 1 | 50400752 | 55400752 |
| 1 | 50400753 | 55400753 |
| 1 | 50400754 | 55400754 |
| 1 | 50400758 | |
| 1 | 50400755 | 55400755 |
| 1 | 50400756 | 55400756 |
| 1 | 50400757 ¹ | 55400757 |
| 1 | 50400761 | |
| 1 | 50400762 | 55400762 |
| 1 | 50400763 | 55400763 |
| 1 | 50400764 | 55400764 |
| 1 | 50400768 | |
| 1 | 50400765 | 55400765 |
| 1 | 50400766 | 55400766 |
| 1 | 50400767 ¹ | 55400767 |
| 1 | 50400771 | |
| 1 | 50400772 | 55400772 |
| 1 | 50400773 | 55400773 |
| 1 | 50400774 | 55400774 |
| 1 | 50400778 | |
| 1 | 50400775 | 55400775 |
| 1 | 50400776 | 55400776 |
| 1 | 50400777 ¹ | 55400777 |

Horizontal tees – bespoke dimensions

Please specify required length when ordering
 Arms can be 250 to 900 mm

Right hand – female

| Rating (A) |
|------------|
| 160 |
| 250 |
| 315 |
| 400 |
| 500 |
| 630 |
| 800 |
| 1000 |

Right hand – male

| Rating (A) |
|------------|
| 160 |
| 250 |
| 315 |
| 400 |
| 500 |
| 630 |
| 800 |
| 1000 |

Left hand – female

| Rating (A) |
|------------|
| 160 |
| 250 |
| 315 |
| 400 |
| 500 |
| 630 |
| 800 |
| 1000 |





Left hand – male

| Rating (A) |
|------------|
| 160 |
| 250 |
| 315 |
| 400 |
| 500 |
| 630 |
| 800 |
| 1000 |

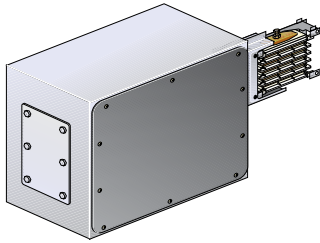
Crossovers – standard dimension (300 + 300 + 300 + 300 mm)

| Pack | Cat. Nos. | | Rating (A) | Weight (kg) | |
|------|-----------------------|----------|------------|-------------|--------|
| | Aluminium | Copper | | Aluminium | Copper |
| 1 | 50403001 | | 160 | 15-5 | – |
| 1 | 50403002 | 55403002 | 250 | 15-7 | 17-6 |
| 1 | 50403003 | 55403003 | 315 | 16-1 | 18-4 |
| 1 | 50403004 | 55403004 | 400 | 27-5 | 21-1 |
| 1 | 50403008 | | 500 | 29-3 | – |
| 1 | 50403005 | 55403005 | 630 | 29-1 | 35-2 |
| 1 | 50403006 | 55403006 | 800 | 29-5 | 40-2 |
| 1 | 50403007 ¹ | 55403007 | 1000 | 29-9 | 43-7 |

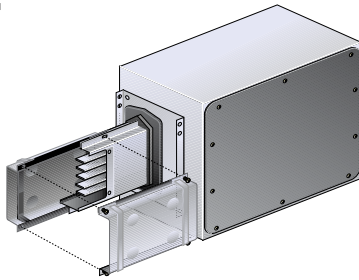
1 : The 1000 A aluminium is supplied painted as standard

Key : How to select the correct configuration and finish
 All examples on this page show 4 conductor galvanised lengths
 No. of conductors and finish is dictated by the red number
0 =  4 conductors. Galvanised **2** =  4 conductors. Painted
1 =  5 conductors. Galvanised **3** =  5 conductors. Painted
 Replace 0 with 1, 2, or 3 if required

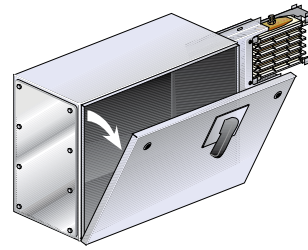
MR medium rating busbar feed units



Feed unit left end



Feed unit right end



Right end up feed unit with AC23 switch disconnecter



End stop

Dimensions and technical information p. 45
Measuring bespoke dimensions p. 49

MR is fully compliant with IEC EN 61439-6
 Rated currents are at an average ambient temperature of 40° C (over and above the required standard of 35° C)
 IP 55 (according to BS EN 60529)

| Pack | Cat. Nos. | | Feed units | | |
|--|-----------|----------|------------|-------------|--------|
| Metal end feed units | | | | | |
| For plates and hole dimensions refer to switchboard-transformer feed units with same rating (p. 38) | | | | | |
| Left end | | | | | |
| | Aluminium | Copper | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50401131 | | 160 | 17-74 | — |
| 1 | 50401132 | 55401132 | 250 | 17-76 | 18-47 |
| 1 | 50401133 | 55401133 | 315 | 17-83 | 18-70 |
| 1 | 50401134 | 55401134 | 400 | 23-22 | 19-58 |
| 1 | 50401138 | | 500 | 23-20 | — |
| 1 | 50401135 | 55401135 | 630 | 23-63 | 26-07 |
| 1 | 50401136 | 55401136 | 800 | 23-70 | 27-80 |
| 1 | 50401137 | 55401137 | 1 000 | 24-00 | 29-03 |
| Right end | | | | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50401121 | | 160 | 16-64 | — |
| 1 | 50401122 | 55401122 | 250 | 16-76 | 17-37 |
| 1 | 50401123 | 55401123 | 315 | 17-03 | 17-70 |
| 1 | 50401124 | 55401124 | 400 | 18-32 | 18-88 |
| 1 | 50401128 | | 500 | 20-00 | — |
| 1 | 50401125 | 55401125 | 630 | 19-43 | 21-17 |
| 1 | 50401126 | 55401126 | 800 | 19-80 | 23-30 |
| 1 | 50401127 | 55401127 | 1 000 | 20-20 | 24-83 |
| Plastic end feed units | | | | | |
| Terminals accept cables up to 150 mm ² . For higher ratings attach cable lugs to spreaders provided | | | | | |
| Left end | | | | | |
| | Aluminium | Copper | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50401111 | | 160 | 6-80 | — |
| 1 | 50401112 | 55401112 | 250 | 6-85 | 7-20 |
| Right end | | | | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50401101 | | 160 | 5-70 | — |
| 1 | 50401102 | 55401102 | 250 | 5-85 | 6-10 |

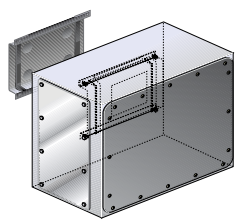
| Pack | Cat. Nos. | | Feed units (continued) | | |
|---|-----------|----------|------------------------|-------------|--------|
| End feed unit with AC23 switch disconnecter | | | | | |
| This feed unit allows isolation of the line for maintenance | | | | | |
| Right end up | | | | | |
| | Aluminium | Copper | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50403401 | | 160 | 17-94 | — |
| 1 | 50403402 | 55403402 | 250 | 18-10 | 19-12 |
| 1 | 50403403 | 55403403 | 315 | 18-86 | 19-40 |
| 1 | 50403404 | 55403404 | 400 | 21-79 | 20-34 |
| 1 | 50403408 | | 500 | 22-42 | — |
| 1 | 50403405 | 55403405 | 630 | 23-64 | 26-88 |
| 1 | 50403406 | 55403406 | 800 | 24-95 | 28-67 |
| 1 | 50403407 | 55403407 | 1 000 | 26-50 | 29-95 |
| Right end down | | | | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50403411 | | 160 | 17-94 | — |
| 1 | 50403412 | 55403412 | 250 | 18-10 | 19-12 |
| 1 | 50403413 | 55403413 | 315 | 18-86 | 19-40 |
| 1 | 50403414 | 55403414 | 400 | 21-79 | 20-34 |
| 1 | 50403418 | | 500 | 22-42 | — |
| 1 | 50403415 | 55403415 | 630 | 23-64 | 26-88 |
| 1 | 50403416 | 55403416 | 800 | 24-95 | 28-67 |
| 1 | 50403417 | 55403417 | 1 000 | 26-50 | 29-95 |
| Left end up | | | | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50403421 | | 160 | 17-94 | — |
| 1 | 50403422 | 55403422 | 250 | 18-10 | 19-12 |
| 1 | 50403423 | 55403423 | 315 | 18-86 | 19-40 |
| 1 | 50403424 | 55403424 | 400 | 21-79 | 20-34 |
| 1 | 50403428 | | 500 | 22-42 | — |
| 1 | 50403425 | 55403425 | 630 | 23-64 | 26-88 |
| 1 | 50403426 | 55403426 | 800 | 24-95 | 28-67 |
| 1 | 50403427 | 55403427 | 1 000 | 26-50 | 29-95 |
| Left end down | | | | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50403431 | | 160 | 17-94 | — |
| 1 | 50403432 | 55403432 | 250 | 18-10 | 19-12 |
| 1 | 50403433 | 55403433 | 315 | 18-86 | 19-40 |
| 1 | 50403434 | 55403434 | 400 | 21-79 | 20-34 |
| 1 | 50403438 | | 500 | 22-42 | — |
| 1 | 50403435 | 55403435 | 630 | 23-64 | 26-88 |
| 1 | 50403436 | 55403436 | 800 | 24-95 | 28-67 |
| 1 | 50403437 | 55403437 | 1 000 | 26-50 | 29-95 |

Key : How to select the correct configuration and finish
 All examples on this page show 4 conductor galvanised lengths
 No. of conductors and finish is dictated by the red number
 0 = 4 conductors. Galvanised 2 = 4 conductors. Painted
 1 = 5 conductors. Galvanised 3 = 5 conductors. Painted
 Replace 0 with 1, 2, or 3 if required

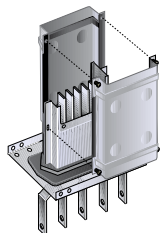
| Pack | Cat. Nos. | End stops |
|------|-----------|---|
| 1 | 50403101 | Ensure IP 55 protection at the end of the run For right and left feed units 160 – 315 A - for aluminium 250 – 400 A - for copper |
| 1 | 50403102 | 400 – 1 000 A - for aluminium 630 – 1 000 A - for copper |

MR medium rating busbar

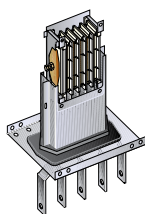
feed units (continued), in-line bus switcher and reducers



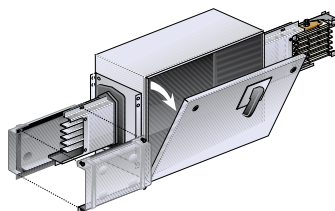
Centre feed unit



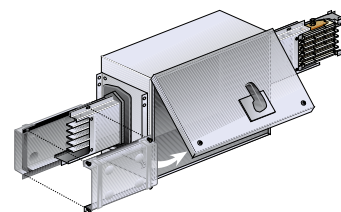
Switchboard-transformer feed units



Switchboard-transformer feed units



In-line bus switch right hand



In-line bus switch left hand



Dimensions and technical information p. 45-46

MR is fully compliant with IEC EN 61439-6

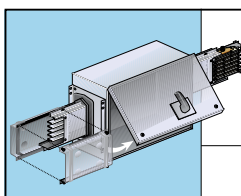
Rated currents are at an average ambient temperature of 40° C (over and above the required standard of 35° C)

IP 55 (according to BS EN 60529)

| Pack | Cat. Nos. | | Feed units (continued) | | |
|------|-----------|----------|--|-------------|--------|
| | | | Centre feed units | | |
| | | | Feeds a trunking system from an intermediate position along the run. Also used to reduce the volt drop of the line | | |
| | Aluminium | Copper | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50401201 | | 160 | 17-27 | — |
| 1 | 50401202 | 55401202 | 250 | 18-13 | 19-12 |
| 1 | 50401203 | 55401203 | 315 | 18-88 | 19-40 |
| 1 | 50401204 | 55401204 | 400 | 22-06 | 20-34 |
| 1 | 50401208 | | 500 | 22-65 | — |
| 1 | 50401205 | 55401205 | 630 | 23-24 | 26-88 |
| 1 | 50401206 | 55401206 | 800 | 24-02 | 28-67 |
| 1 | 50401207 | 55401207 | 1000 | 25-70 | 29-95 |
| | | | Switchboard-transformer feed units | | |
| | | | Feed unit for direct connection of the busbar to a switchboard or to the low voltage terminals of a distribution transformer | | |
| | | | Right hand | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50401001 | | 160 | 4-9 | — |
| 1 | 50401002 | 55401002 | 250 | 5-1 | 5-7 |
| 1 | 50401003 | 55401003 | 315 | 5-3 | 6-0 |
| 1 | 50401004 | 55401004 | 400 | 6-4 | 9-2 |
| 1 | 50401008 | | 500 | 6-9 | — |
| 1 | 50401005 | 55401005 | 630 | 7-5 | 9-3 |
| 1 | 50401006 | 55401006 | 800 | 7-9 | 11-4 |
| 1 | 50401007 | 55401007 | 1000 | 8-3 | 12-9 |
| | | | Left hand | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50401011 | | 160 | 6-0 | — |
| 1 | 50401012 | 55401012 | 250 | 6-1 | 6-7 |
| 1 | 50401013 | 55401013 | 315 | 6-2 | 7-0 |
| 1 | 50401014 | 55401014 | 400 | 11-3 | 7-8 |
| 1 | 50401018 | | 500 | 11-4 | — |
| 1 | 50401015 | 55401015 | 630 | 11-7 | 14-2 |
| 1 | 50401016 | 55401016 | 800 | 11-8 | 15-9 |
| 1 | 50401017 | 55401017 | 1000 | 12-5 | 17-1 |

| Pack | Cat. Nos. | | In-line bus switches | | |
|------|-----------|----------|---|-------------|--------|
| | | | Allows disconnection of part of a line, while the other is live | | |
| | | | Right hand | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | Aluminium | Copper | 160 | 23-54 | — |
| 1 | 50401701 | | 250 | 23-56 | 24-27 |
| 1 | 50401702 | 55401702 | 315 | 23-63 | 24-50 |
| 1 | 50401703 | 55401703 | 400 | 29-32 | 25-38 |
| 1 | 50401704 | 55401704 | 500 | 29-50 | — |
| 1 | 50401708 | | 630 | 29-73 | 32-17 |
| 1 | 50401705 | 55401705 | 800 | 29-80 | 33-90 |
| 1 | 50401706 | 55401706 | 1000 | 32-11 | 35-13 |
| 1 | 50401707 | 55401707 | | | |
| | | | Left hand | | |
| | | | Rating (A) | Weight (kg) | |
| | | | | Aluminium | Copper |
| 1 | 50401721 | | 160 | 23-54 | — |
| 1 | 50401722 | 55401722 | 250 | 23-56 | 24-27 |
| 1 | 50401723 | 55401723 | 315 | 23-63 | 24-50 |
| 1 | 50401724 | 55401724 | 400 | 29-32 | 25-38 |
| 1 | 50401728 | | 500 | 29-50 | — |
| 1 | 50401725 | 55401725 | 630 | 29-73 | 32-17 |
| 1 | 50401726 | 55401726 | 800 | 29-80 | 33-90 |
| 1 | 50401727 | 55401727 | 1000 | 32-11 | 35-13 |

Key : How to select the correct configuration and finish
 All examples on this page show 4 conductor galvanised lengths
 No. of conductors and finish is dictated by the red number
 0 = 4 conductors. Galvanised 2 = 4 conductors. Painted
 1 = 5 conductors. Galvanised 3 = 5 conductors. Painted
 Replace 0 with 1, 2, or 3 if required



Rating reducers with disconnecter and fuse holder also available

Contact us on +44 (0) 370 608 9020







MR tap-off boxes : plug-in type up to 32 A

32 A plug-in tap-offs – Empty

Energy withstand $400 \cdot 10^3 \text{ A}^2\text{s}$


Type 1 – Max. power losses 16 W

Type 2 – Max. power losses 20 W

| | | | | | | |
|--------------------|---|---|---|--|---|---|
| |  |  |  |  |  |  |
| | Complete with 3 x CH10 fuse holders | Transparent hinged door and 4 mod. DIN rail | With 8 mod. DIN rail | Transparent hinged door and 8 mod. DIN rail | With 12 mod. DIN rail | Transparent hinged door and 12 mod. DIN rail |
| Cat. Nos. | 50414062 | 50414063 | 50414061 | 50414064 | 50414071 | 50414075 |
| Weight (kg) | 1.75 | 1.7 | 1.6 | 1.7 | 1.9 | 2.05 |





32 A plug-in tap-offs – fitted complete with TYPE B MCBs

Energy withstand $400 \cdot 10^3 \text{ A}^2\text{s}$

| Type 1 – Max. power losses 16 W | Rating | | 3 x 1P | 3 x (1P + N) | 4P | |
|--|---|------|--------------------|--------------|----|----------|
|  | Transparent hinged door and 4 mod. DIN rail | 16 A | Cat. Nos. | – | – | 50414130 |
| | | | Weight (kg) | – | – | 2.29 |

32 A plug-in tap-offs – fitted complete with TYPE C MCBs

Energy withstand $400 \cdot 10^3 \text{ A}^2\text{s}$

| Type 1 – Max. power losses 16 W | Rating | | 3 x 1P | 4P | Ready for MCB | |
|--|---|------|--------------------|----------|---------------|----------|
|  | Transparent hinged door and 4 mod. DIN rail | 16 A | Cat. Nos. | – | 50414128 | – |
| | | | Weight (kg) | – | 2.29 | – |
| | | 32 A | Cat. Nos. | – | 50414144 | – |
| | | | Weight (kg) | – | 2.36 | – |
| Type 2 – Max. power losses 20 W | | | | | | |
|  | Transparent hinged door and 8 mod. DIN rail, Plus 1 x 32 A 3P socket | 32 A | Cat. Nos. | – | 50414192 | – |
| | | | Weight (kg) | – | 3.06 | – |
|  | Transparent hinged door and 8 mod. DIN rail, Plus 2 x 16 A 3P sockets | 16 A | Cat. Nos. | – | 50414185 | 50414282 |
| | | | Weight (kg) | – | 3.23 | 2.49 |
| | Transparent hinged door and 8 mod. DIN rail, Plus 2 x 32 A 3P sockets | 32 A | Cat. Nos. | – | – | 50414291 |
| | | | Weight (kg) | – | – | 2.59 |
|  | Transparent hinged door and 8 mod. DIN rail, Plus 2P + E sockets | 16 A | Cat. Nos. | 50414181 | – | 50414281 |
| | | | Weight (kg) | 3.05 | – | 2.55 |



For dimensions, technical information and mounting instructions see p. 47-48

MR tap-off boxes : plug-in type 32-630 A

MR tap-off boxes from 10 to 1 000 A can accommodate different protection devices, including fuses, MCBs or MCCBs. Can be operated when energised and under load conditions up to a rating of 32 A due to the integration of an isolating device within the cover. All insulating plastic components comply with the incandescent wire test (EN 60695-2-1) and have a V2 self extinguishing degree (UL94). Standard degree of protection is IP 55 without using additional protection kits. For dimensions, technical information and mounting instructions **see p. 47-48**

Plug-in tap-offs with fuse carriers (or empty) 63-400 A

| | TYPE 3 | | TYPE 4 | | | | | TYPE 5 | | |
|---------------------|----------------------|-----------|----------|----------|----------|----------|----------|----------|-----------------------|----------|
| | | | | | | | | | | |
| Rating | 32 A | 63 A | 100 A | 125 A | | 160 A | 250 A | 400 A | | |
| Fuse Carrier | CH10 (Ø10·3 x 38) | TIA / TIS | TCP | Empty | NH 0 | NH 00 | NH 0 | NH 1 | (Neutral section 50%) | |
| | | | | | | | | Empty | NH 2 | |
| Cat. Nos. | 55655051 | 55055062 | 55055063 | 55055055 | 55055053 | 55055057 | 50404004 | 55655057 | 55655059 | 55655058 |
| Weight (kg) | 0·85 | 3·2 | 3·3 | 2·9 | 3·35 | 3·35 | 3·6 | 14·9 | 14·3 | 15·8 |

Plug-in tap-offs fitted with DIN rail and transparent hinged window 63-400 A

| | | TYPE 4 | | | | TYPE 5 | |
|---------------|--------------------|--------------------|-----------------|------------------------|------------------|-----------------|-----------------------|
| | | | | | | | |
| | | Can fit some MCCBs | | Not suitable for MCCBs | | | |
| Rating | | 4 mod. DIN rail | 8 mod. DIN rail | 8 mod. DIN rail | 11 mod. DIN rail | 7 mod. DIN rail | 11 + 11 mod. DIN rail |
| 63 A | Cat. Nos. | – | – | 55055086 | 55055088 | – | – |
| | Weight (kg) | – | – | 3·2 | 3·6 | – | – |
| 125 A | Cat. Nos. | – | 55055077 | 55055056 | 55055068 | – | – |
| | Weight (kg) | – | 3·0 | 3·2 | 3·6 | – | – |
| 160 A | Cat. Nos. | 50404024 | – | – | – | – | – |
| | Weight (kg) | 3·6 | – | – | – | – | – |
| 400 A | Cat. Nos. | – | – | – | – | 55055070 | 55055071 |
| | Weight (kg) | – | – | – | – | 13·4 | 15·3 |

Plug-in heavy duty metal tap-offs 63-630 A

| | | TYPE 6 | | | TYPE 7 | TYPE 8 | |
|--|--------------------|-----------------------------|-------------------|-------------------|------------------|------------------|------------------|
| | | | | | | | |
| These PE + FE tap-off boxes have separate terminals for the two parallel earths (casing and conductor) PE = protection earth FE = functional earth | | | | | | | |
| | Rating | 63 A | 125 A | 160 A | 250 A | 400 A | 630 A |
| Empty version | Cat. Nos. | 50414001 | 50414002 | 50414003 | 50414004 | – | 50414005 |
| | Weight (kg) | 8·60 | 8·80 | 8·80 | 23 | – | 25 |
| With fuse holder | Cat. Nos. | 50414021 CH22 (Ø22 x 58) | 50414022 NH 00 | 50414023 NH 00 | 50414024 NH 2 | 50414026 NH 2 | 50414025 NH 3 |
| | Weight (kg) | 8·75 | 8·90 | 9·10 | 25 | 33 | 33 |
| With switch disconnecter and fuseholder (AC23) | Cat. Nos. | 50411601 NH 00 | 50411622 NH 00 | 50411623 NH 0 | 50411624 NH 1 | 50411625 NH 2 | 50411646 NH 3 |
| | Weight (kg) | 9·50 | 9·70 | 9·70 | 30 | 38 | 38 |



For dimensions, technical information and mounting instructions **see p. 47-48**

MR tap-off boxes : plug-in type 125-630 A - fully equipped

bolt-on type 630-1 000 A

Plug-in type

Fully equipped tap-offs – toggle handle MCCBs : 25-125 A

| Tap-off rating | Breaker rating | 3 pole MCCB with toggle handle | 4 pole MCCB with toggle handle |
|----------------|----------------|--------------------------------|--------------------------------|
| 125 A | 16 A | 55055077M3TF | 55055077M4TF |
| | 25 A | 55055077M3TA | 55055077M4TA |
| | 40 A | 55055077M3TB | 55055077M4TB |
| | 63 A | 55055077M3TC | 55055077M4TC |
| | 100 A | 55055077M3TD | 55055077M4TD |
| | 125 A | 55055077M3TE | 55055077M4TE |

MCCBs, R type and J type fuse carriers that meet EDF regulations are also available
Contact us on +44 (0) 370 608 9020

Tap-off boxes can be supplied with Castel locks
Contact us on +44 (0) 370 608 9020

Fully equipped tap-offs – rotary handle MCCBs : 25-630 A¹

| Tap-off rating | Breaker rating | 3 pole MCCB with rotary handle | 4 pole MCCB with rotary handle | With free issue MCCB |
|----------------|----------------|--------------------------------|--------------------------------|----------------------|
| 160 A | 25 A | 50414003M3RA | 50414003M4RA | 50414003MFA |
| | 40 A | 50414003M3RB | 50414003M4RB | 50414003MFB |
| | 63 A | 50414003M3RC | 50414003M4RC | 50414003MFC |
| | 100 A | 50414003M3RD | 50414003M4RD | 50414003MFD |
| | 125 A | 50414003M3RE | 50414003M4RE | 50414003MFE |
| 250 A | 160 A | 50414003M3RF | 50414003M4RF | 50414003MFF |
| | 200 A | 50414004M3RG | 50414004M4RG | 50414004MFG |
| 630 A | 250 A | 50414004M3RH | 50414004M4RH | 50414004MFH |
| | 400 A | 50414005M3RI | 50414005M4RI | 50414005MFI |
| | 630 A | 50414005M3RJ | 50414005M4RJ | 50414005MFJ |

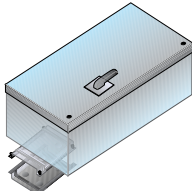
Fully equipped tap-offs – with protection and multifunction meters : 63-160 A¹

| Tap-off rating | Breaker rating | 3 pole MCCB with multifunction meter | Fusible tap-off with multifunction meter |
|----------------|----------------|--------------------------------------|--|
| 160 A | 63 A | 50414003M3MC | 50414023FMC |
| | 100 A | 50414003M3MD | 50414023FMD |
| | 125 A | 50414003M3ME | 50414023FME |
| | 160 A | 50414003M3MF | 50414023FMF |

¹ : For MCCB technical data, see p. 118-125

Bolt-on type

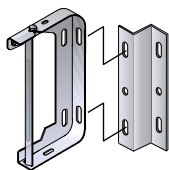
Bolt-on tap-offs – with switch disconnecter and fuse holder (AC23)

| | | | | | | | |
|--|--|-----------|---------------|--------------|---------------------|----------------------|-----------------------|
|  | Positioned in the joint between straight lengths As this connection affects live conductors, it cannot be carried out when the line is live – the line must be isolated | | Busbar rating | Tap-off size | | | |
| | | | | | 630 A – NH 3 TYPE 9 | 800 A – NH 4 TYPE 10 | 1000 A – NH 4 TYPE 10 |
| | Busbar system | Aluminium | 630 A | Cat. Nos. | 50401801 | – | – |
| | | | | Weight (kg) | 59 | – | – |
| | | | 800 A | Cat. Nos. | 50401802 | 50401804 | – |
| | | | Weight (kg) | 59 | 89 | – | |
| | | 1000 A | Cat. Nos. | 50401803 | 50401805 | 50401806 | |
| | | | Weight (kg) | 59 | 89 | 89 | |
| | Copper | 630 A | Cat. Nos. | 55401801 | – | – | |
| | | | Weight (kg) | 59 | – | – | |
| 800 A | | Cat. Nos. | 55401802 | 55401804 | – | | |
| | Weight (kg) | 59 | 89 | – | | | |
| 1000 A | Cat. Nos. | 55401803 | 55401805 | 55401806 | | | |
| | Weight (kg) | 59 | 89 | 89 | | | |

 For dimensions, technical information and mounting instructions see p. 47-48

MR medium rating busbar

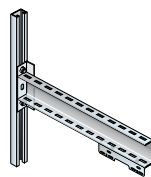
fixing accessories



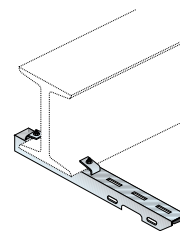
50632001 +
50632205



50403711



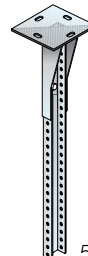
50632212



50632210 +
50632211



50403712



50632201 + 50632202



Dimensions and technical information p. 49
Measuring special dimensions p. 49

The MR series offers a wide range of brackets and fixing accessories that enable quick and simple installation for a wide range of applications. The MR series can be mounted on horizontal or vertical surfaces or mounted directly on to beams. Various spacers, spring suspension hangers and adjustable arms are available to meet the requirements of complex installations

| Pack | Cat. Nos. | Fixing accessories for general and rising mains applications | Pack | Cat. Nos. | Fixing accessories for other applications |
|------|-----------|--|------|-----------|---|
| | | Suspension brackets | | | Wall fixing bracket |
| | | Use 1 bracket every 2 m | | | Adjustable height and depth arm. Bracket holder can be coupled with MS and MR brackets |
| 1 | 50632001 | Weight : 0.55 kg For use with aluminium rated 160, 250, 315 A and copper rated 250, 315, 400 A | 1 | 50632212 | Length (m) Weight (kg) Load on end point |
| 1 | 50632003 | Weight : 0.60 kg For use with aluminium rated 400, 500, 630, 800 A and copper rated 630, 800, 1 000 A | 1 | 50632213 | 0.45 2.80 pmax=80 kg |
| | | Wall spacer | 1 | 50632214 | 0.55 3.00 pmax=68 kg |
| | | Used when suspension bracket is fixed directly to the wall | | | 0.75 3.50 pmax=50 kg |
| 1 | 50632205 | Weight : 0.05 kg | | | Ceiling fixing bracket kit |
| | | Suspension hanger for rising main | 1 | 50632201 | Comprises a base to be fixed to the ceiling and various length struts that accept MR brackets |
| | | For vertical trunking lengths. Suitable for rising mains up to 4 m and for weights up to 300 kg | | | Base |
| | | Must be used in conjunction with Cat. Nos. 50632001 or 50632003 | | | Length (m) Weight (kg) |
| | | 1 bracket at the base of the rising main | | | - 2.80 |
| 1 | 50403711 | Maximum use distance 4 m Weight : 1.05 kg | 1 | 50632202 | Strut |
| | | Spring suspension hanger for rising main | 1 | 50632203 | Length (m) Weight (kg) |
| | | Use 1 hanger every 300 kg (see weight table, p. 52-55) | 1 | 50632204 | 0.50 3.00 |
| | | Minimum use distance 4 m | 1 | | 1.00 3.50 |
| 1 | 50403712 | Weight : 1.20 kg | 1 | | 2.00 3.50 |
| | | | | | Beam fixing bracket |
| | | | | | Comprises a beam shelf base and two beam clamps |
| | | | | | Beam shelf base |
| | | | | | Length (m) Weight (kg) Load on end point |
| | | | 1 | 50632210 | 0.54 0.90 pmax=65 kg |
| | | | 1 | 50632211 | Beam clamp |

MR medium rating busbar

technical information

■ General features

MR is fully compliant with IEC EN 61439-6, specifically, the rated current of Zucchini busbar trunking systems is always rated at the average ambient temperature of 40°C (the Standard requires 35°C), thus offering the market suitably oversized products

The busbar casing is made from hot-dipped galvanised sheet steel and forms a high strength outer structure, which also serves as the protective conductor (PE) for the MR version

NOTE : 1000 A is supplied painted as standard

The individual conductors are made from either electrolytic copper or electro tin-plated aluminium. Standard MR trunking is supplied with four equal size conductors (TP and N +PE) whereas the optional 5 conductor version includes an additional integral 100% earth bar (TP and N +E)

The degree of protection is IP 55 throughout the system

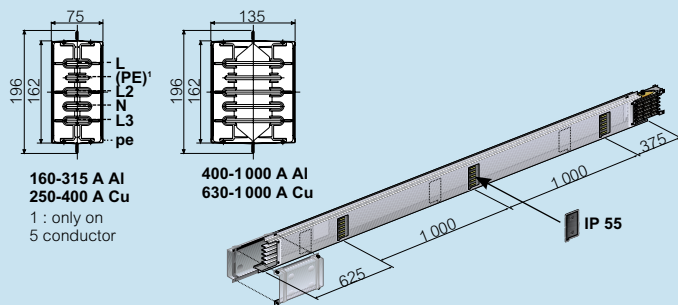
The normal recommended fixing centres for the MR range is 2.0 m

The jointing of MR lengths is done by overlapping two lengths and fastening the special locating screws. The 'monobloc' joint is then tightened by a double headed shear bolt to complete the electrical connection. A joint cover is then positioned to complete the joint

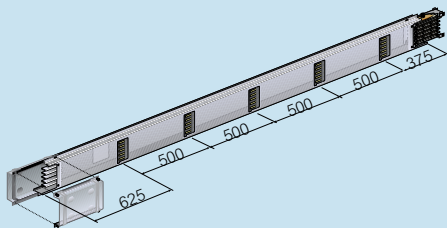
■ Trunking lengths – 3 m

The components and features of MR straight lengths are :

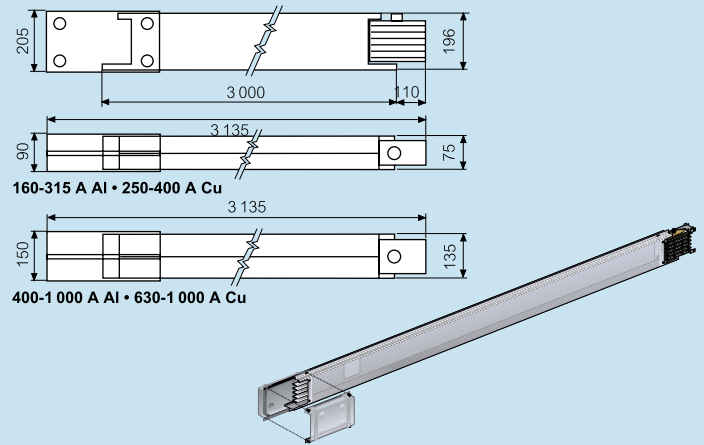
- a casing made of Senzimir quality galvanised steel used as protective earth (PE). NOTE : 1000 A is supplied painted as standard
- overall dimensions : 75 to 135 x 196 mm
- painted casing available on request (contact us on +44 (0) 370 608 9020)
- number of conductors : 4 with the same section (3P + N) with PE made from the casing or 5 when using MR full (3P + N + PE), available in the aluminium or electrolytic copper version with 99.9% purity
- conductors insulators are made of fiberglass reinforced plastic material, ensuring a V1 self-extinguishing degree (according to UL 94), in compliance with the glow-wire test according to IEC 60695-2-10
- tap-off outlets with a constant centre distance of 1 m on both sides of the busbar (3 + 3 outlets every 3 m), set up for being connected to plug-in type tap-off boxes. These outlets open and close automatically when inserting or pulling out a tap-off box
- 'monobloc' electric junction system to connect conductors and PE in a fast and reliable way. The 'monobloc' has shear-head bolts with a preset torque setting which ensure good, long-lasting electrical continuity
- all components and accessories in the MR range are IP 55
- the whole busbar is flame retardant in compliance with the IEC 60332-3 standard



■ Trunking lengths – 3 m with 5 outlets on one side only



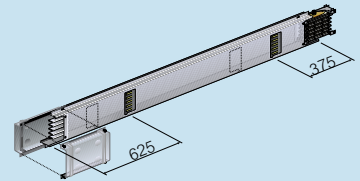
■ Trunking length – 3 m without outlets



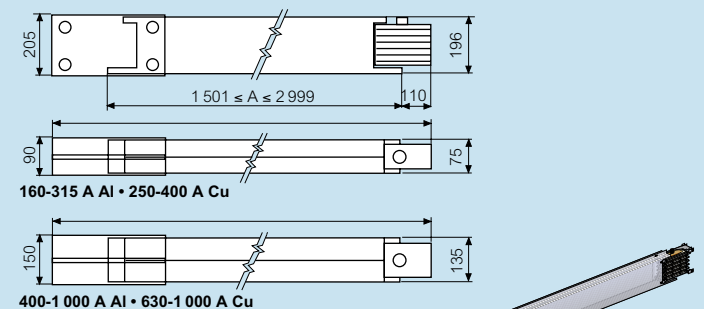
■ Tap-off outlet cover – IP 55



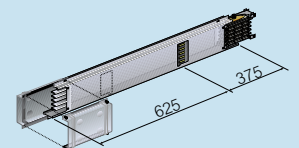
■ Trunking lengths – 1501 to 2999 mm with 2 + 2 outlets



■ Trunking lengths – 1501 to 2999 mm without outlets



■ Trunking lengths – 1000 to 1500 mm with 1 + 1 outlets

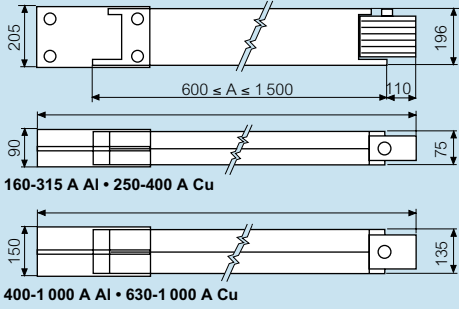


All dimensions (mm) are nominal

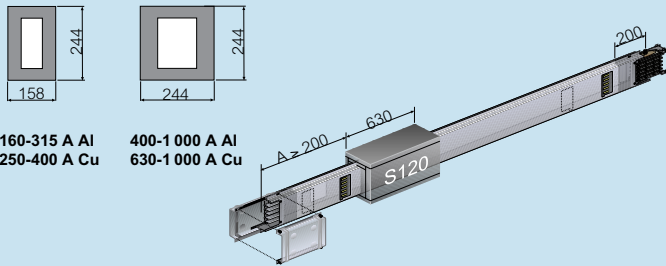
MR medium rating busbar

technical information (continued)

Trunking lengths – 600 to 1500 mm without outlets



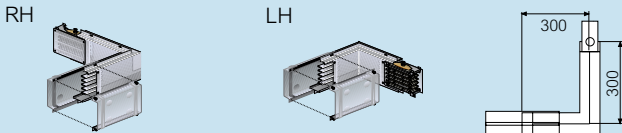
Trunking lengths with S120 fire barrier



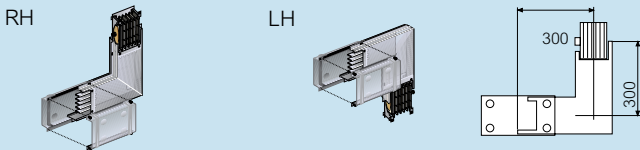
Single elbows – standard dimensions (300 + 300 mm)

90° as standard. Other angles available on request. IP 55 quick connection

Horizontal elbow



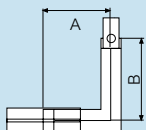
Vertical elbow



Bespoke dimensions

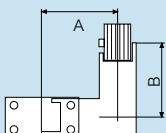
Measure from the long casing to the axis of the elbow (see measuring bespoke dimensions p. 49)

Special horizontal elbow



| Bespoke dimensions (mm) | | |
|-------------------------|---|-------|
| Min | | Max |
| 250 ≤ | A | ≤ 900 |
| 250 ≤ | B | ≤ 900 |

Special vertical elbow



| Bespoke dimensions (mm) | | |
|-------------------------|---|-------|
| Min | | Max |
| 300 ≤ | A | ≤ 900 |
| 300 ≤ | B | ≤ 900 |

All dimensions (mm) are nominal

Double elbows

Standard dimensions (300 + 300 + 300 mm)

90° as standard. Other angles available on request. IP 55 quick connection

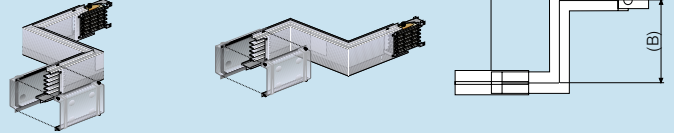
Bespoke dimensions

Measure from the long casing to the axis of the elbow

Double horizontal elbow

Right + left

Left + right



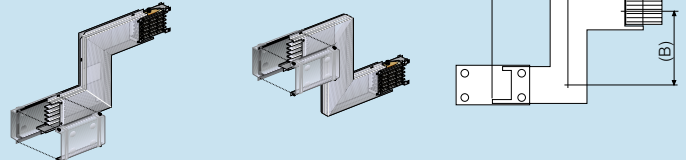
Bespoke dimensions (mm)

| Min | | Max |
|-------|---------|-------|
| 250 ≤ | A, B, C | ≤ 900 |

Double vertical elbow

Right + left

Left + right



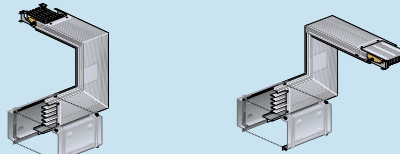
Bespoke dimensions (mm)

| Min | | Max |
|-------|---------|-------|
| 300 ≤ | A, B, C | ≤ 900 |

Vertical + horizontal elbows

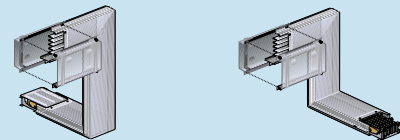
RH + RH

RH + LH



LH + RH

LH + LH



Bespoke dimensions (mm)

| Min | | Max |
|-------|---------|-------|
| 300 ≤ | A, B, C | ≤ 900 |

Horizontal + vertical elbows

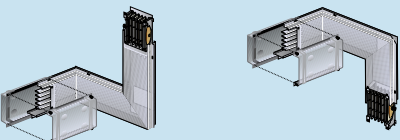
RH + RH

RH + LH



LH + RH

LH + LH



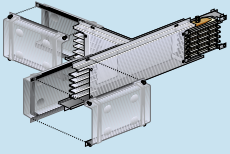
Bespoke dimensions (mm)

| Min | | Max |
|-------|---------|-------|
| 300 ≤ | A, B, C | ≤ 900 |

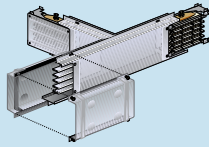
■ **Horizontal tee**

Standard dimensions (300 + 300 + 300 mm)

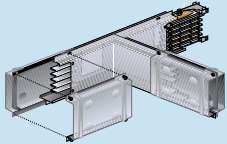
Right hand – female tee



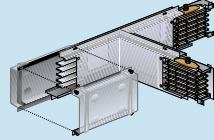
Right hand – male tee



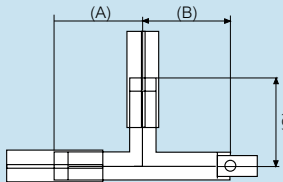
Left hand – female tee



Left hand – male tee

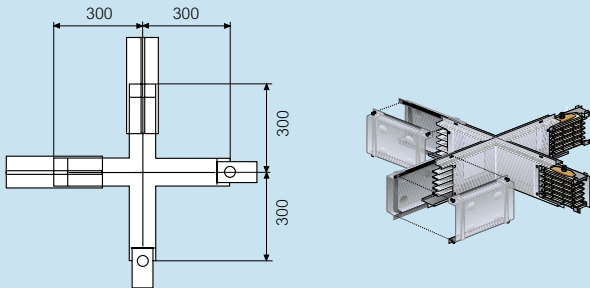


■ **Bespoke dimensions**



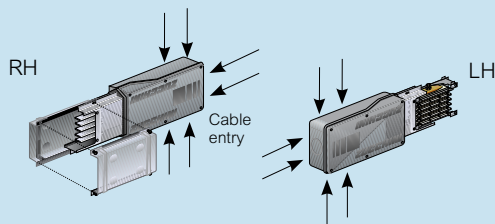
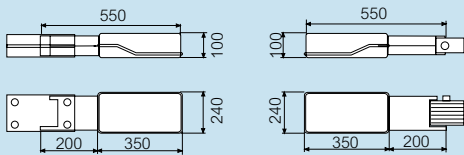
| Bespoke dimensions (mm) | | |
|-------------------------|---------|-------|
| Min | A, B, C | Max |
| 250 ≤ | | ≤ 900 |

■ **Crossover – standard dimensions (300 + 300 + 300 + 300 mm)**



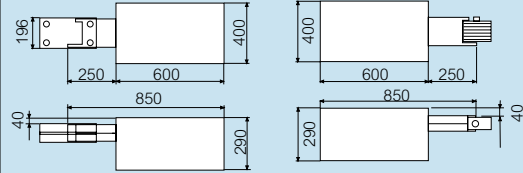
■ **End feed units**

Cable connection : max. sect. (3 x 120 mm² + 1 x 70 mm²) or 3 x 150 mm², max PG 48

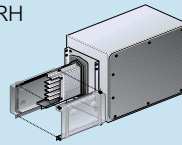


■ **Metal end feed units**

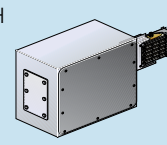
During shipment the stump is positioned in the box to reduce its bulk. Take it out and screw it in the position illustrated here. Opening on the base cable entry : 180 x 290 mm. For plates and holes dimensions, see p. 46 for the switchboard feed unit with the same rating



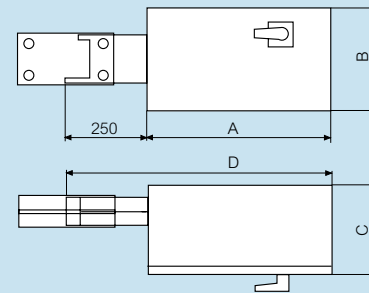
RH



LH

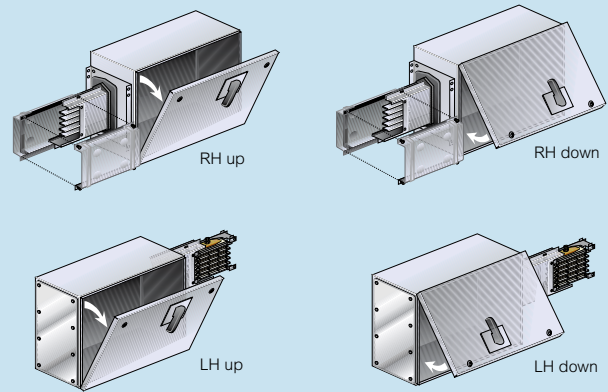


■ **End feed unit with AC23 switch disconnecter**

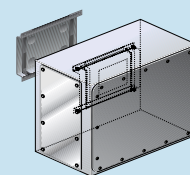
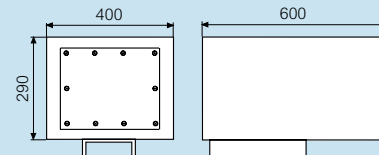


| | Dimensions (mm) | |
|---|-----------------|------|
| | 1 | 2 |
| A | 550 | 1050 |
| B | 350 | 450 |
| C | 280 | 300 |
| D | 800 | 1300 |

| | Cable entry dimensions (mm) | |
|--|-----------------------------|-----------|
| | 1 | 2 |
| | 180 x 270 | 210 x 380 |



■ **Centre feed units**



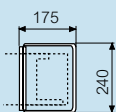
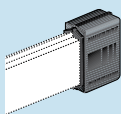
All dimensions (mm) are nominal

MR medium rating busbar

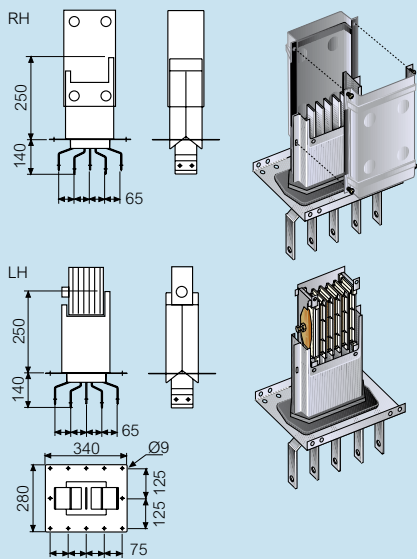
technical information (continued)

■ End stop

Ensures IP 55 protection at the end of the run (EN 60529)

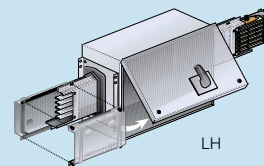
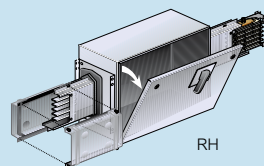
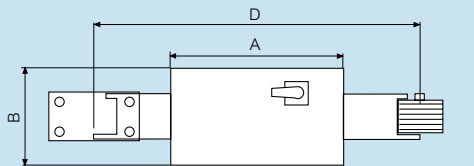


■ Switchboard-transformer feed units



| Dimensions (mm) | | |
|-----------------|---------|---------|
| | Al | Cu |
| Type 1 | 160 A | 250 A |
| | 250 A | 315 A |
| | 315 A | 400 A |
| Type 2 | 400 A | 630 A |
| | 500 A | 800 A |
| | 630 A | 1 000 A |
| | 800 A | – |
| | 1 000 A | – |

■ In-line bus switch

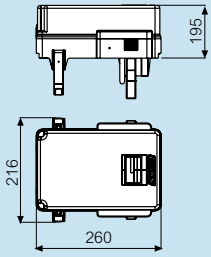


| Dimensions (mm) | | |
|-----------------|---|--------|
| Type 1 | | Type 2 |
| 550 | A | 1 050 |
| 350 | B | 450 |
| 280 | C | 300 |
| 1 050 | D | 1 550 |

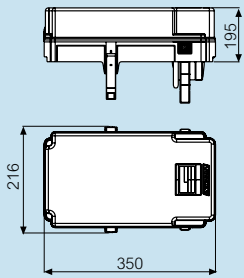
All dimensions (mm) are nominal

■ Tap-off boxes

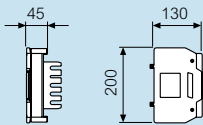
Type 1



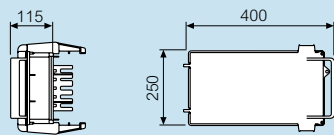
Type 2



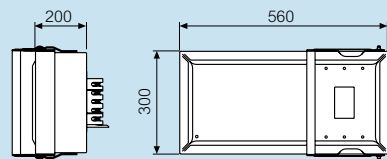
Type 3 32 A



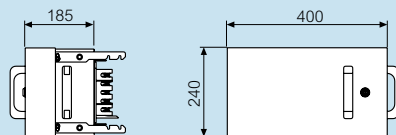
Type 4 63-160 A



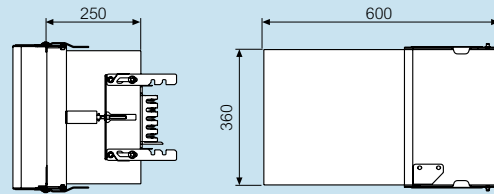
Type 5 250-400 A



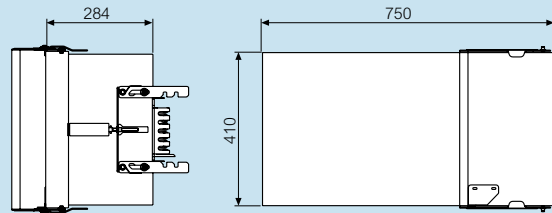
Type 6 63-160 A



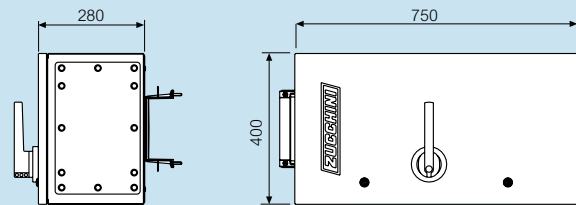
Type 7 250 A



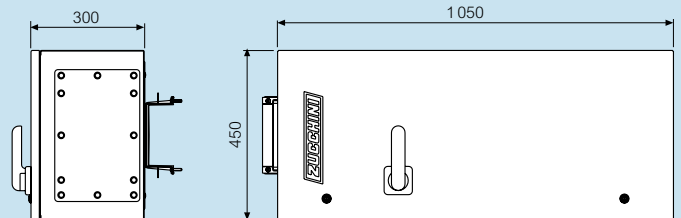
Type 8 400-630 A



Type 9 630 A



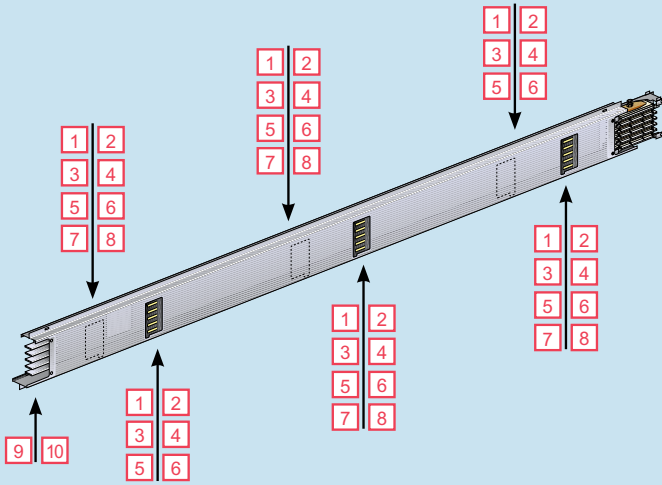
Type 10 800-1000 A



All dimensions (mm) are nominal

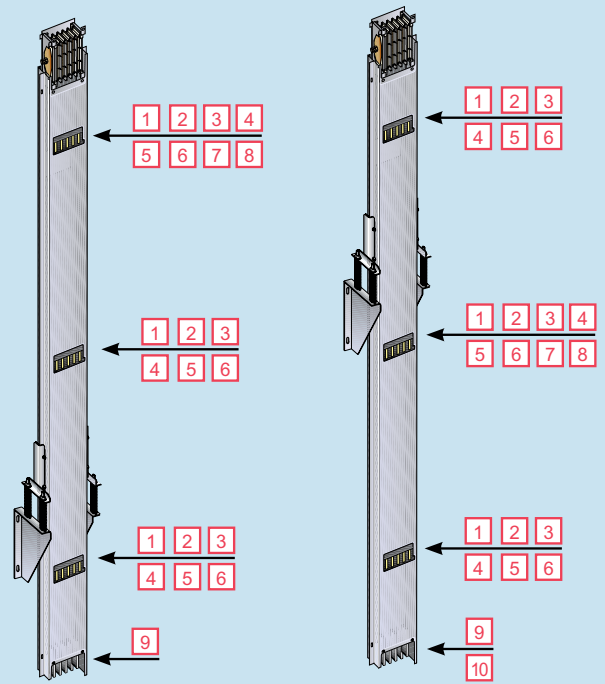
MR medium rating busbar
mounting tap-offs

■ Trunking length with 3 outlets
Edgeways

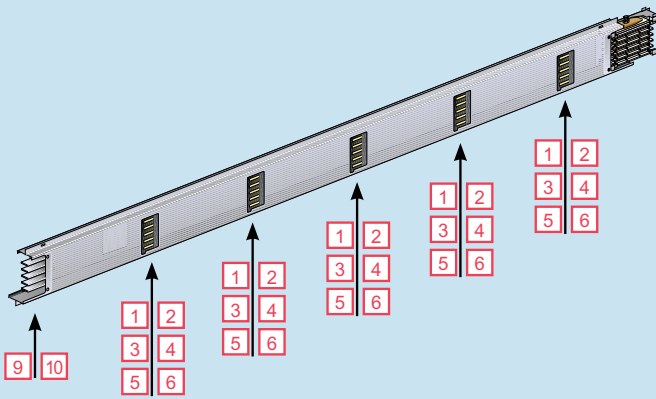


Numbers in squares refer to the tap-off box type

Rising main

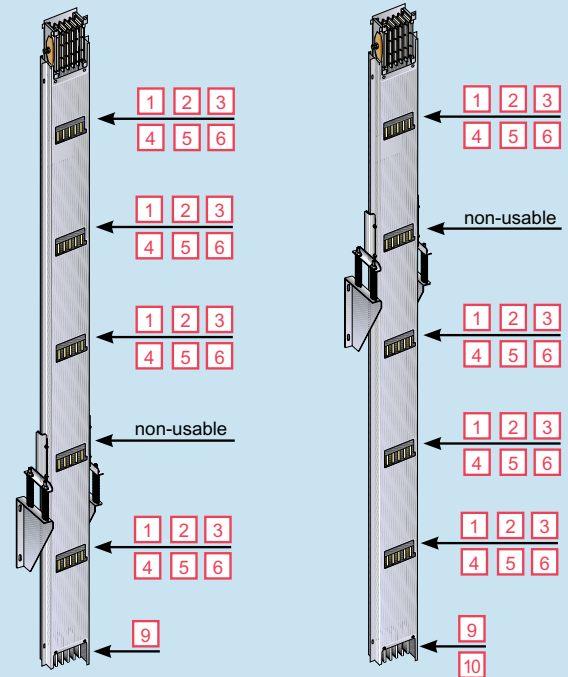


■ Trunking length with 5 outlets
Edgeways



Numbers in squares refer to the tap-off box type

Rising main

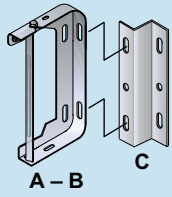
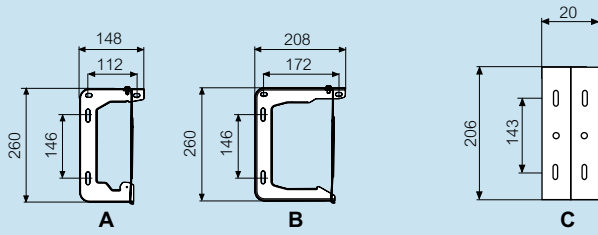


Note : in lengths with 5 outlets, using an outlet excludes the use of the next one

MR medium rating busbar

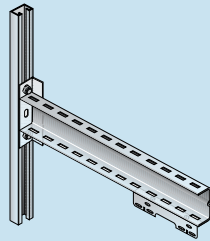
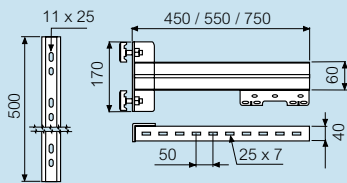
technical information

■ Suspension brackets

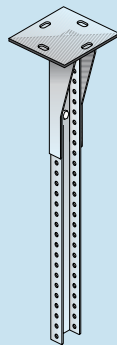
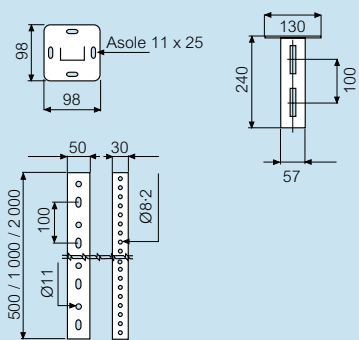


| Cat. Nos. | |
|-----------|----------|
| A | 50632001 |
| B | 50632003 |
| C | 50632205 |

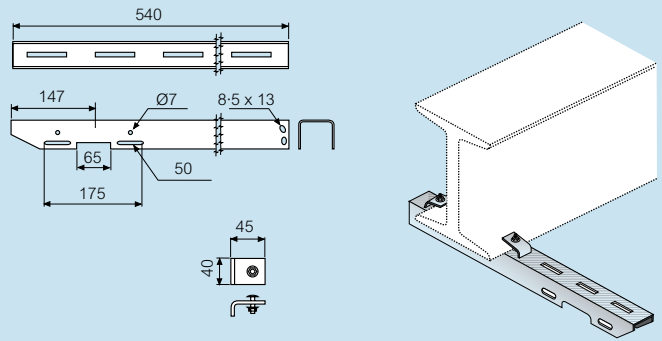
■ Wall fixing bracket



■ Ceiling fixing bracket kit



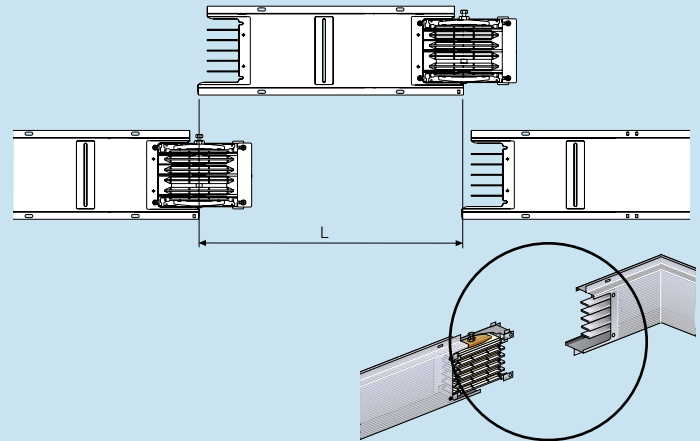
■ Beam fixing bracket



■ Measuring bespoke dimensions

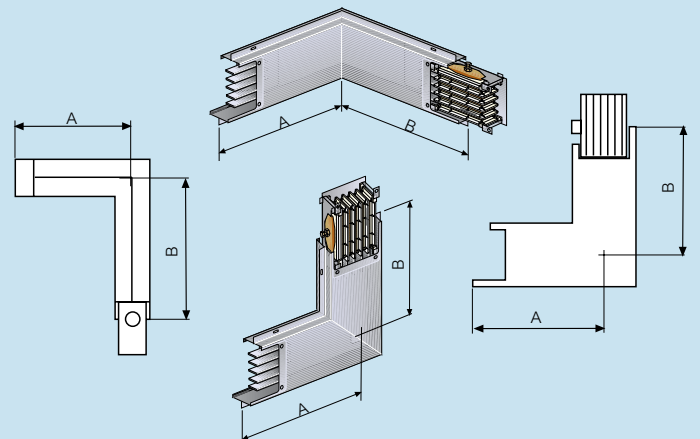
Straight lengths

Always measure from the long side of the casing as illustrated



Elbows

Measure from the long casing to the axis of the elbow



MR medium rating busbar

how to design the system

1 Use end feed unit LH – left hand

This gives the neutral bar positioning on the right of elements and the tap-off box with cable entry at the base

2 Use the vertical hanger for rising main as a function of the run weight

For vertical lengths less than 4 metres fit on the base of the busbar a vertical bracket (Cat. No. 50403711) for longer lengths use vertical suspension hanger (Cat. No. 50403712) every 300 kg of rising main

3 Use standard suspension brackets with spacer 40 mm every 2 m of the rising main

4 Use straight lengths with plug outlets on one side

5 Use the straight length with fire barrier to maintain the fire resistance of the floor

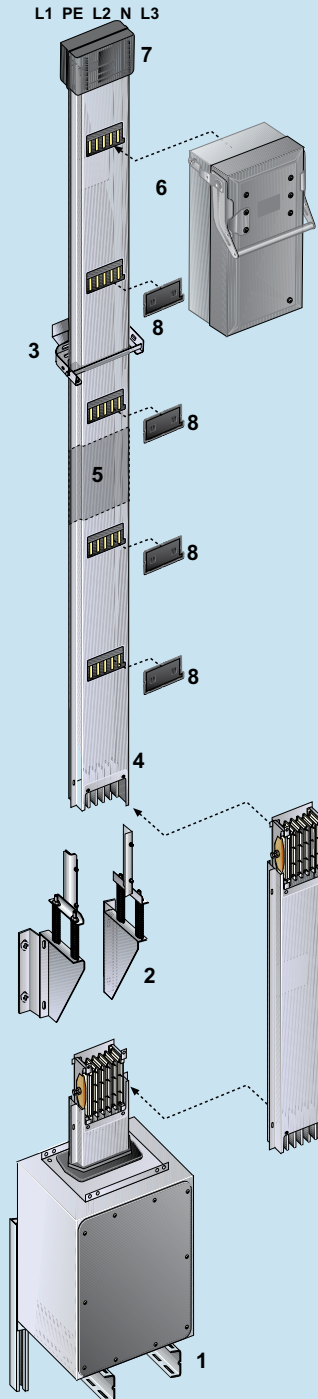
Please specify the position of the internal fire barrier before placing an order (see p. 44)

6 The tap-off box can be installed on the joint between the elements or on the outlets

7 At the end of the rising main use the end cover IP 55

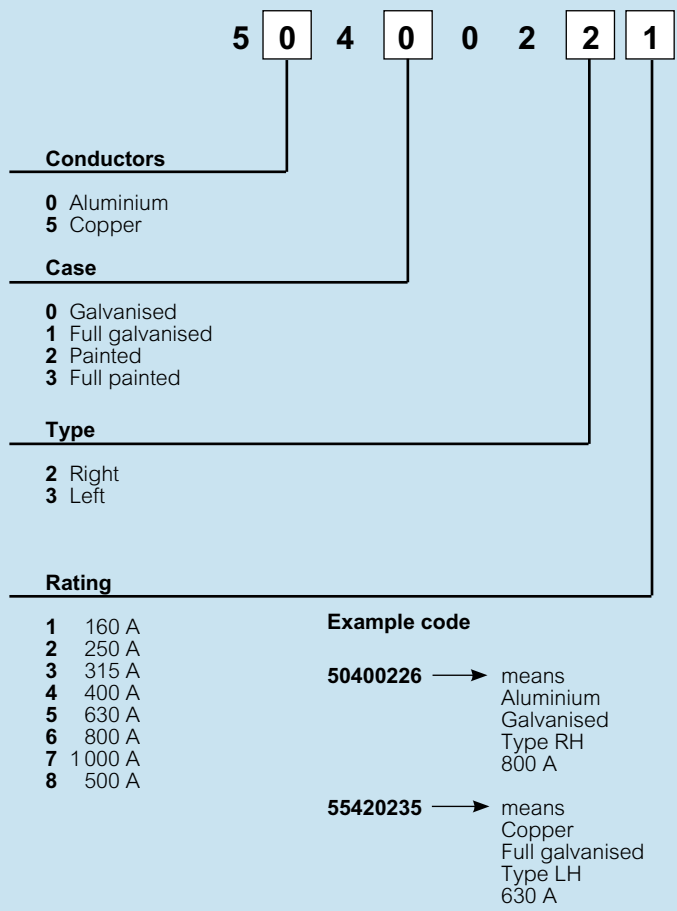
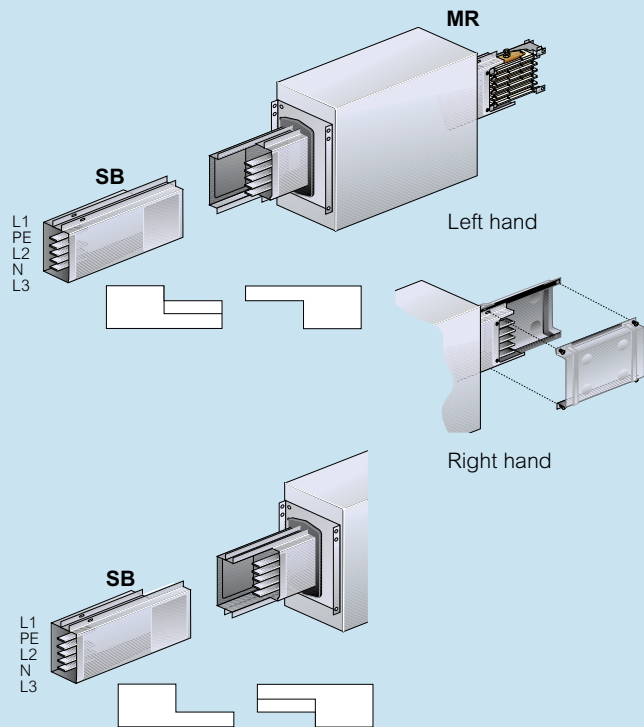
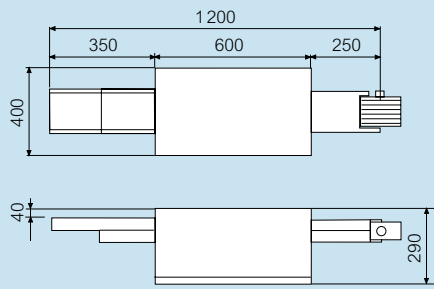
Before mounting the end cover remove the monobloc prefitted on the last element of rising main

8 Maintain the plug outlet covers to guarantee the degree of protection IP 55 to the run



MR medium rating busbar

how to create codes for SB/MR adaptors



NOTE
SB is a previous range of Zucchini medium rating busbar

MR medium rating busbar – 4 conductor (aluminium)

technical data

Complies to :

IEC EN 61439-6

DIN VDE 0660 part 500 and 502

Suitable for the following climates :

Constant humid climate (DIN IEC 68 and 2 – 3)

Cyclical humid climate (DIN IEC 68 and 2 – 30)

3L+N+PE (Aluminium)

| | In (A) | 160 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 |
|--|---|-----------------|-----------------|-----------------|-----------|-----------|-----------|-----------|-----------|
| Rated current | I_n (A) | 160 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 |
| Operational voltage | U_e (V) | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 690 |
| Insulation voltage | U_i (V) | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 690 |
| Frequency | f (Hz) | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 |
| Rated shortcircuit current withstand for 3-phase fault (1 s) | I_{cw} (kA) _{rms} | 15 ¹ | 25 ¹ | 25 ¹ | 25 | 30 | 36 | 36 | 30 |
| Specific Energy withstand for 3-phase fault | I^2t (M A ² s) | 23 | 63 | 63 | 625 | 900 | 1296 | 1296 | 900 |
| Peak current | I_{pk} (kA) | 30 | 53 | 53 | 53 | 63 | 76 | 76 | 63 |
| Rated short-time current for single-phase fault Ph-N(1 s) | I_{cw} (kA) _{rms} | 9 ¹ | 15 ¹ | 15 ¹ | 15 | 18 | 22 | 22 | 18 |
| Peak current for single-phase fault Ph-N | I_{pk} (kA) | 15 | 30 | 30 | 30 | 36 | 45 | 45 | 36 |
| Rated short-time current single-phase fault Ph-PE (1 s) | I_{cw} (kA) _{rms} | 9 ¹ | 15 ¹ | 15 ¹ | 15 | 18 | 22 | 22 | 18 |
| Peak current single-phase fault Ph-PE | I_{pk} (kA) | 15 | 30 | 30 | 30 | 36 | 45 | 45 | 36 |
| Phase resistance at 20°C | R_{20} (mΩ/m) | 0.492 | 0.328 | 0.197 | 0.120 | 0.077 | 0.060 | 0.052 | 0.037 |
| Phase resistance at thermal conditions (I_n ; 40°C) | R_t (mΩ/m) | 0.665 | 0.443 | 0.266 | 0.163 | 0.104 | 0.081 | 0.070 | 0.073 |
| Phase reactance (50 Hz) | X (mΩ/m) | 0.260 | 0.202 | 0.186 | 0.130 | 0.110 | 0.097 | 0.096 | 0.076 |
| Neutral resistance at 20°C | R_{n20} (mΩ/m) | 0.492 | 0.328 | 0.197 | 0.120 | 0.077 | 0.060 | 0.052 | 0.037 |
| Neutral reactance (50 Hz) | X_n (mΩ/m) | 0.260 | 0.202 | 0.186 | 0.130 | 0.110 | 0.097 | 0.096 | 0.076 |
| Resistance of the protective bar | R_{PE} (mΩ/m) | 0.341 | 0.341 | 0.341 | 0.283 | 0.283 | 0.283 | 0.283 | 0.283 |
| Reactance of the protective bar (50 Hz) | X_{PE} (mΩ/m) | 0.220 | 0.220 | 0.220 | 0.180 | 0.180 | 0.180 | 0.180 | 0.180 |
| Resistance of the phase-Pe fault loop | R_{Ph-Pe} fault loop (mΩ/m) | 1.006 | 0.784 | 0.607 | 0.445 | 0.387 | 0.364 | 0.353 | 0.336 |
| Reactance of the phase-Pe fault loop (50 Hz) | $X_{R_{Ph-Pe}}$ fault loop (mΩ/m) | 0.480 | 0.414 | 0.396 | 0.333 | 0.333 | 0.283 | 0.275 | 0.273 |
| Resistance of the phase-neutral fault loop | R_{Ph-N} fault loop (mΩ/m) | 1.157 | 0.771 | 0.463 | 0.283 | 0.181 | 0.141 | 0.121 | 0.093 |
| Reactance of the phase-neutral fault loop (50 Hz) | $X_{R_{Ph-N}}$ fault loop (mΩ/m) | 0.480 | 0.422 | 0.406 | 0.310 | 0.290 | 0.277 | 0.276 | 0.186 |
| Voltage "k" drop coeff. with distributed load (k) | Δv (V/m/A) $10^{-6} \cos\varphi = 0.70$ | 564 | 394 | 276 | 179 | 131 | 109 | 102 | 90 |
| | Δv (V/m/A) $10^{-6} \cos\varphi = 0.75$ | 581 | 404 | 279 | 180 | 130 | 108 | 100 | 88 |
| | Δv (V/m/A) $10^{-6} \cos\varphi = 0.80$ | 596 | 412 | 281 | 180 | 129 | 107 | 98 | 85 |
| | Δv (V/m/A) $10^{-6} \cos\varphi = 0.85$ | 608 | 418 | 281 | 179 | 127 | 104 | 95 | 82 |
| | Δv (V/m/A) $10^{-6} \cos\varphi = 0.90$ | 616 | 422 | 277 | 176 | 122 | 100 | 91 | 77 |
| | Δv (V/m/A) $10^{-6} \cos\varphi = 0.95$ | 617 | 419 | 269 | 169 | 115 | 93 | 83 | 69 |
| | Δv (V/m/A) $10^{-6} \cos\varphi = 1.00$ | 576 | 384 | 230 | 141 | 90 | 70 | 60 | 46 |
| Losses for the Joule effect at nominal current | P (W/m) | 51 | 83 | 79 | 78 | 78 | 97 | 134 | 160 |
| Fire load | (kWh/m) | 1.3 | 1.3 | 1.3 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| Weight | (kg/m) | 7.4 | 7.7 | 8.4 | 10.7 | 12.3 | 13.8 | 14.7 | 15.9 |
| Overall dimensions of the busbar | $L \times H$ (mm) | 75 x 196 | 75 x 196 | 75 x 196 | 135 x 196 | 135 x 196 | 135 x 196 | 135 x 196 | 135 x 196 |
| Degree of protection (CEI EN60529) | IP | 52-55 | 52-55 | 52-55 | 52-55 | 52-55 | 52-55 | 52-55 | 52-55 |
| IK code CEI EN60068-2-62 | IK | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |

1 : Values for 0.1 s

Temperature rating schedule

| Mean room temperature (°C) | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
|----------------------------|------|------|------|------|-------|----|-------|------|------|------|
| K1 factor | 1.15 | 1.12 | 1.08 | 1.05 | 1.025 | 1 | 0.975 | 0.95 | 0.93 | 0.89 |

Multiplier coefficient of nominal rating for room temperature values different from 40°C

MR medium rating busbar – 4 conductor (copper)

technical data

Complies to :
IEC EN 61439-6
DIN VDE 0660 part 500 and 502

Suitable for the following climates :
 Constant humid climate (DIN IEC 68 and 2 – 3)
 Cyclical humid climate (DIN IEC 68 and 2 – 30)

3L+N+PE (Copper)

| | In (A) | 250 | 315 | 400 | 630 | 800 | 1000 |
|--|--|-----------------|-----------------|-----------------|-----------|-----------|-----------|
| Rated current | In (A) | 250 | 315 | 400 | 630 | 800 | 1000 |
| Operational voltage | Ue (V) | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Insulation voltage | Ui (V) | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Frequency | f (Hz) | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 |
| Rated shortcircuit current withstand for 3-phase fault (1 s) | I _{cs} (kA) _{rms} | 25 ¹ | 25 ¹ | 30 ¹ | 36 | 36 | 36 |
| Specific Energy withstand for 3-phase fault | I ² t (M A ² s) | 63 | 63 | 90 | 1296 | 1296 | 1296 |
| Peak current | I _{pk} (kA) | 53 | 53 | 63 | 76 | 76 | 76 |
| Rated short-time current for single-phase fault Ph-N(1 s) | I _{cs} (kA) _{rms} | 15 ¹ | 15 ¹ | 18 ¹ | 22 | 22 | 22 |
| Peak current for single-phase fault Ph-N | I _{pk} (kA) | 30 | 30 | 36 | 45 | 45 | 45 |
| Rated short-time current single-phase fault Ph-PE (1 s) | I _{cs} (kA) _{rms} | 15 ¹ | 15 ¹ | 18 ¹ | 22 | 22 | 22 |
| Peak current single-phase fault Ph-PE | I _{pk} (kA) | 30 | 30 | 36 | 45 | 45 | 45 |
| Phase resistance at 20°C | R ₂₀ (mΩ/m) | 0.237 | 0.180 | 0.096 | 0.061 | 0.040 | 0.032 |
| Phase resistance at thermal conditions (I _n ; 40°C) | R _t (mΩ/m) | 0.320 | 0.243 | 0.129 | 0.082 | 0.053 | 0.043 |
| Phase reactance (50 Hz) | X (mΩ/m) | 0.205 | 0.188 | 0.129 | 0.122 | 0.122 | 0.120 |
| Neutral resistance at 20°C | R _{N20} (mΩ/m) | 0.237 | 0.180 | 0.096 | 0.061 | 0.040 | 0.032 |
| Neutral reactance (50 Hz) | X _n (mΩ/m) | 0.205 | 0.188 | 0.129 | 0.122 | 0.122 | 0.120 |
| Resistance of the protective bar | R _{PE} (mΩ/m) | 0.336 | 0.336 | 0.336 | 0.279 | 0.279 | 0.279 |
| Reactance of the protective bar (50 Hz) | X _{PE} (mΩ/m) | 0.220 | 0.220 | 0.220 | 0.180 | 0.180 | 0.180 |
| Resistance of the phase-Pe fault loop | R _{Ph-Pe fault loop} (mΩ/m) | 0.657 | 0.579 | 0.466 | 0.361 | 0.332 | 0.322 |
| Reactance of the phase-Pe fault loop (50 Hz) | X _{RPh-Pe fault loop} (mΩ/m) | 0.425 | 0.408 | 0.349 | 0.302 | 0.302 | 0.300 |
| Resistance of the phase-neutral fault loop | R _{Ph-N fault loop} (mΩ/m) | 0.558 | 0.423 | 0.225 | 0.143 | 0.093 | 0.074 |
| Reactance of the phase-neutral fault loop (50 Hz) | X _{RPh-N fault loop} (mΩ/m) | 0.425 | 0.408 | 0.349 | 0.302 | 0.302 | 0.300 |
| Voltage "k" drop coeff. with distributed load (k) | Δv (V/m/A)10 ⁻⁶ cosφ = 0.70 | 321 | 263 | 158 | 125 | 108 | 100 |
| | Δv (V/m/A)10 ⁻⁶ cosφ = 0.75 | 326 | 265 | 158 | 123 | 105 | 96 |
| | Δv (V/m/A)10 ⁻⁶ cosφ = 0.80 | 329 | 266 | 157 | 120 | 100 | 92 |
| | Δv (V/m/A)10 ⁻⁶ cosφ = 0.85 | 329 | 264 | 154 | 116 | 95 | 86 |
| | Δv (V/m/A)10 ⁻⁶ cosφ = 0.90 | 327 | 260 | 149 | 110 | 88 | 79 |
| | Δv (V/m/A)10 ⁻⁶ cosφ = 0.95 | 319 | 251 | 141 | 101 | 77 | 68 |
| | Δv (V/m/A)10 ⁻⁶ cosφ = 1.00 | 277 | 210 | 112 | 71 | 46 | 37 |
| Losses for the Joule effect at nominal current | P (W/m) | 60 | 72 | 62 | 98 | 103 | 128 |
| Fire load | (kWh/m) | 1.3 | 1.3 | 1.3 | 1.8 | 1.8 | 1.8 |
| Weight | (kg/m) | 9.3 | 10.2 | 13.3 | 18.2 | 23.9 | 27.9 |
| Overall dimensions of the busbar | L x H (mm) | 75 x 196 | 75 x 196 | 135 x 196 | 135 x 196 | 135 x 196 | 135 x 196 |
| Degree of protection (CEI EN60529) | IP | 52-55 | 52-55 | 52-55 | 52-55 | 52-55 | 52-55 |
| IK code CEI EN60068-2-62 | IK | 10 | 10 | 10 | 10 | 10 | 10 |

1 : Values for 0.1 s

Temperature rating schedule

| Mean room temperature (°C) | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
|----------------------------|------|------|------|------|-------|----|-------|------|------|------|
| K1 factor | 1.15 | 1.12 | 1.08 | 1.05 | 1.025 | 1 | 0.975 | 0.95 | 0.93 | 0.89 |

Multiplier coefficient of nominal rating for room temperature values different from 40°C

MR medium rating busbar – five conductor (aluminium)

technical data

Complies to :
IEC EN 61439-6
DIN VDE 0660 part 500 and 502

Suitable for the following climates :
 Constant humid climate (DIN IEC 68 and 2 – 3)
 Cyclical humid climate (DIN IEC 68 and 2 – 30)

3L+N 100% +PE 100% (Aluminium)

| | In (A) | 160 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 |
|--|---|-----------------|-----------------|-----------------|-----------|-----------|-----------|-----------|-----------|
| Rated current | I_n (A) | 160 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 |
| Operational voltage | U_e (V) | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 690 |
| Insulation voltage | U_i (V) | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 690 |
| Frequency | f (Hz) | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 |
| Rated shortcircuit current withstand for 3-phase fault (1 s) | I_{cw} (kA) _{rms} | 15 ¹ | 25 ¹ | 25 ¹ | 25 | 30 | 36 | 36 | 30 |
| Specific Energy withstand for 3-phase fault | I^2t (M A ² s) | 23 | 63 | 63 | 625 | 900 | 1296 | 1296 | 900 |
| Peak current | I_{pk} (kA) | 30 | 53 | 53 | 53 | 63 | 76 | 76 | 63 |
| Rated short-time current for single-phase fault Ph-N(1 s) | I_{cw} (kA) _{rms} | 9 ¹ | 15 ¹ | 15 ¹ | 15 | 18 | 22 | 22 | 18 |
| Peak current for single-phase fault Ph-N | I_{pk} (kA) | 15 | 30 | 30 | 30 | 36 | 45 | 45 | 36 |
| Rated short-time current single-phase fault Ph-PE (1 s) | I_{cw} (kA) _{rms} | 9 ¹ | 15 ¹ | 15 ¹ | 15 | 18 | 22 | 22 | 22 |
| Peak current single-phase fault Ph-PE | I_{pk} (kA) | 15 | 30 | 30 | 30 | 36 | 45 | 45 | 45 |
| Phase resistance at 20°C | R_{20} (mΩ/m) | 0.492 | 0.328 | 0.197 | 0.120 | 0.077 | 0.060 | 0.052 | 0.039 |
| Phase resistance at thermal conditions (I_n ; 40°C) | R_t (mΩ/m) | 0.665 | 0.443 | 0.266 | 0.163 | 0.104 | 0.081 | 0.070 | 0.053 |
| Phase reactance (50 Hz) | X (mΩ/m) | 0.260 | 0.202 | 0.186 | 0.130 | 0.110 | 0.097 | 0.096 | 0.093 |
| Neutral resistance at 20°C | R_{n20} (mΩ/m) | 0.492 | 0.328 | 0.197 | 0.120 | 0.077 | 0.060 | 0.052 | 0.039 |
| Neutral reactance (50 Hz) | X_n (mΩ/m) | 0.260 | 0.202 | 0.186 | 0.130 | 0.110 | 0.097 | 0.096 | 0.093 |
| Resistance of the protective bar | R_{PE} (mΩ/m) | 0.202 | 0.167 | 0.125 | 0.084 | 0.060 | 0.050 | 0.044 | 0.034 |
| Reactance of the protective bar (50 Hz) | X_{PE} (mΩ/m) | 0.119 | 0.105 | 0.101 | 0.075 | 0.068 | 0.063 | 0.063 | 0.061 |
| Resistance of the phase-Pe fault loop | R_{Ph-Pe} fault loop (mΩ/m) | 0.866 | 0.611 | 0.391 | 0.247 | 0.164 | 0.131 | 0.113 | 0.087 |
| Reactance of the phase-Pe fault loop (50 Hz) | $X_{R_{Ph-Pe}}$ fault loop (mΩ/m) | 0.379 | 0.307 | 0.287 | 0.205 | 0.178 | 0.160 | 0.159 | 0.154 |
| Resistance of the phase-neutral fault loop | R_{Ph-N} fault loop (mΩ/m) | 1.157 | 0.771 | 0.463 | 0.283 | 0.181 | 0.141 | 0.121 | 0.093 |
| Reactance of the phase-neutral fault loop (50 Hz) | $X_{R_{Ph-N}}$ fault loop (mΩ/m) | 0.520 | 0.404 | 0.372 | 0.260 | 0.220 | 0.194 | 0.192 | 0.186 |
| Voltage "k" drop coeff. with distributed load (k) | Δv (V/m/A) $10^{-6} \cos\varphi = 0.70$ | 564 | 394 | 276 | 179 | 131 | 109 | 102 | 90 |
| | Δv (V/m/A) $10^{-6} \cos\varphi = 0.75$ | 581 | 404 | 279 | 180 | 130 | 108 | 100 | 88 |
| | Δv (V/m/A) $10^{-6} \cos\varphi = 0.80$ | 596 | 412 | 281 | 180 | 129 | 107 | 98 | 85 |
| | Δv (V/m/A) $10^{-6} \cos\varphi = 0.85$ | 608 | 418 | 281 | 179 | 127 | 104 | 95 | 82 |
| | Δv (V/m/A) $10^{-6} \cos\varphi = 0.90$ | 616 | 422 | 277 | 176 | 122 | 100 | 91 | 77 |
| | Δv (V/m/A) $10^{-6} \cos\varphi = 0.95$ | 617 | 419 | 269 | 169 | 115 | 93 | 83 | 69 |
| | Δv (V/m/A) $10^{-6} \cos\varphi = 1.00$ | 576 | 384 | 230 | 141 | 90 | 70 | 60 | 46 |
| Losses for the Joule effect at nominal current | P (W/m) | 51 | 83 | 79 | 78 | 78 | 97 | 134 | 160 |
| Fire load | (kWh/m) | 1.3 | 1.3 | 1.3 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| Weight | (kg/m) | 7.6 | 8.0 | 8.9 | 11.4 | 13.5 | 15.2 | 16.4 | 17.9 |
| Overall dimensions of the busbar | $L \times H$ (mm) | 75 x 196 | 75 x 196 | 75 x 196 | 135 x 196 | 135 x 196 | 135 x 196 | 135 x 196 | 135 x 196 |
| Degree of protection (CEI EN60529) | IP | 52-55 | 52-55 | 52-55 | 52-55 | 52-55 | 52-55 | 52-55 | 52-55 |
| IK code CEI EN60068-2-62 | IK | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |

1 : Values for 0.1 s

Temperature rating schedule

| Mean room temperature (°C) | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
|----------------------------|------|------|------|------|-------|----|-------|------|------|------|
| K1 factor | 1.15 | 1.12 | 1.08 | 1.05 | 1.025 | 1 | 0.975 | 0.95 | 0.93 | 0.89 |

Multiplier coefficient of nominal rating for room temperature values different from 40°C

MR medium rating busbar – five conductor (copper)

technical data

Complies to :
IEC EN 61439-6
DIN VDE 0660 part 500 and 502

Suitable for the following climates :
 Constant humid climate (DIN IEC 68 and 2 – 3)
 Cyclical humid climate (DIN IEC 68 and 2 – 30)

3L+N 100% +PE 100% (Copper)

| | In (A) | 250 | 315 | 400 | 630 | 800 | 1000 |
|--|--|-----------------|-----------------|-----------------|-----------|-----------|-----------|
| Rated current | In (A) | 250 | 315 | 400 | 630 | 800 | 1000 |
| Operational voltage | Ue (V) | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Insulation voltage | Ui (V) | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Frequency | f (Hz) | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 |
| Rated shortcircuit current withstand for 3-phase fault (1 s) | I _{cw} (kA) _{rms} | 25 ¹ | 25 ¹ | 30 ¹ | 36 | 36 | 36 |
| Specific Energy withstand for 3-phase fault | I ² t (M A ² s) | 63 | 63 | 90 | 1296 | 1296 | 1296 |
| Peak current | I _{pk} (kA) | 53 | 53 | 63 | 76 | 76 | 76 |
| Rated short-time current for single-phase fault Ph-N(1 s) | I _{cw} (kA) _{rms} | 15 ¹ | 15 ¹ | 18 ¹ | 22 | 22 | 22 |
| Peak current for single-phase fault Ph-N | I _{pk} (kA) | 30 | 30 | 36 | 45 | 45 | 45 |
| Rated short-time current single-phase fault Ph-PE (1 s) | I _{cw} (kA) _{rms} | 15 ¹ | 15 ¹ | 18 ¹ | 22 | 22 | 22 |
| Peak current single-phase fault Ph-PE | I _{pk} (kA) | 30 | 30 | 36 | 45 | 45 | 45 |
| Phase resistance at 20°C | R ₂₀ (mΩ/m) | 0.237 | 0.180 | 0.096 | 0.061 | 0.040 | 0.032 |
| Phase resistance at thermal conditions (I _n ; 40°C) | R _t (mΩ/m) | 0.320 | 0.243 | 0.129 | 0.082 | 0.053 | 0.043 |
| Phase reactance (50 Hz) | X (mΩ/m) | 0.205 | 0.188 | 0.129 | 0.122 | 0.122 | 0.120 |
| Neutral resistance at 20°C | R _{N20} (mΩ/m) | 0.237 | 0.180 | 0.096 | 0.061 | 0.040 | 0.032 |
| Neutral reactance (50 Hz) | X _n (mΩ/m) | 0.205 | 0.188 | 0.129 | 0.122 | 0.122 | 0.120 |
| Resistance of the protective bar | R _{PE} (mΩ/m) | 0.139 | 0.117 | 0.075 | 0.050 | 0.035 | 0.028 |
| Reactance of the protective bar (50 Hz) | X _{PE} (mΩ/m) | 0.106 | 0.101 | 0.081 | 0.073 | 0.073 | 0.072 |
| Resistance of the phase-Pe fault loop | R _{Ph-Pe fault loop} (mΩ/m) | 0.460 | 0.360 | 0.204 | 0.132 | 0.088 | 0.071 |
| Reactance of the phase-Pe fault loop (50 Hz) | X _{RPh-Pe fault loop} (mΩ/m) | 0.311 | 0.289 | 0.210 | 0.195 | 0.195 | 0.192 |
| Resistance of the phase-neutral fault loop | R _{Ph-N fault loop} (mΩ/m) | 0.558 | 0.423 | 0.225 | 0.143 | 0.093 | 0.074 |
| Reactance of the phase-neutral fault loop (50 Hz) | X _{RPh-N fault loop} (mΩ/m) | 0.311 | 0.289 | 0.210 | 0.195 | 0.195 | 0.192 |
| Voltage "k" drop coeff. with distributed load (k) | Δv (V/m/A)10 ⁻⁶ cosφ = 0.70 | 321 | 263 | 158 | 125 | 108 | 100 |
| | Δv (V/m/A)10 ⁻⁶ cosφ = 0.75 | 326 | 265 | 158 | 123 | 105 | 96 |
| | Δv (V/m/A)10 ⁻⁶ cosφ = 0.80 | 329 | 266 | 157 | 120 | 100 | 92 |
| | Δv (V/m/A)10 ⁻⁶ cosφ = 0.85 | 329 | 264 | 154 | 116 | 95 | 86 |
| | Δv (V/m/A)10 ⁻⁶ cosφ = 0.90 | 327 | 260 | 149 | 110 | 88 | 79 |
| | Δv (V/m/A)10 ⁻⁶ cosφ = 0.95 | 319 | 251 | 141 | 101 | 77 | 68 |
| | Δv (V/m/A)10 ⁻⁶ cosφ = 1.00 | 277 | 210 | 112 | 71 | 46 | 37 |
| Losses for the Joule effect at nominal current | P (W/m) | 60 | 72 | 62 | 98 | 103 | 128 |
| Fire load | (kWh/m) | 1.3 | 1.3 | 1.3 | 1.8 | 1.8 | 1.8 |
| Weight | (kg/m) | 10.0 | 11.1 | 14.9 | 20.8 | 27.9 | 32.9 |
| Overall dimensions of the busbar | L x H (mm) | 75 x 196 | 75 x 196 | 135 x 196 | 135 x 196 | 135 x 196 | 135 x 196 |
| Degree of protection (CEI EN60529) | IP | 52-55 | 52-55 | 52-55 | 52-55 | 52-55 | 52-55 |
| IK code CEI EN60068-2-62 | IK | 10 | 10 | 10 | 10 | 10 | 10 |

1 : Values for 0.1 s

Temperature rating schedule

| Mean room temperature (°C) | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
|----------------------------|------|------|------|------|-------|----|-------|------|------|------|
| K1 factor | 1.15 | 1.12 | 1.08 | 1.05 | 1.025 | 1 | 0.975 | 0.95 | 0.93 | 0.89 |

Multiplier coefficient of nominal rating for room temperature values different from 40°C

MR medium rating busbar

determining the operating current of a busbar

In order to determine the correct busbar rating, the current must be established using the following criteria :

- type of load inputs – three phase or single-phase
- type of circuit input – from one end, from both ends, central input, etc.
- nominal input voltage
- number, power and $\cos\varphi$ of loads which are to be fed by the busbar
- load diversity factor
- load use nominal factor
- assumed short circuit current at the input point
- room temperature
- type of busbar installation (edgeways, flat or vertical)

When using a three phase power supply, the operating current is determined by the following formula :

$$I_b = \frac{P_{TOT} \cdot \alpha \cdot \beta \cdot d}{\sqrt{3} \cdot U_e \cdot \cos\varphi_{medium}} \quad (A)$$

Where :

| | |
|------------------------|--|
| I_b | operating current (A) |
| α | load diversity factor (.) |
| β | load use factor (.) |
| d | feed factor (.) |
| P_{TOT} | sum of the total active power of installed loads (W) |
| U_e | operating voltage (V) |
| $\cos\varphi_{medium}$ | average load power factor (.) |

The 'd' input factor has a value of 1 when the busbar is fed from one end only. The value is $1/2$ if fed from the centre or if it is fed from each end

Once the operating current has been determined, choose the busbar with a rated current immediately higher than the one calculated

All Zucchini products have been designed and tested for an average room temperature of 40°C; should they be installed in rooms with average daily temperatures different from 40°C, the rated current of the busbar should be multiplied by a k_1 factor that is greater than the unit for temperatures lower than 40°C, and lower than the unit if the room temperature is higher than 40°C

| | | | | | | | | | | |
|-------------------------------------|------|------|------|------|-------|----|-------|------|------|------|
| Room temperature (°C) | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| k_1 thermal correction factor (.) | 1.15 | 1.12 | 1.08 | 1.05 | 1.025 | 1 | 0.975 | 0.95 | 0.93 | 0.89 |

Finally, the following should be considered for the most appropriate busbar choice :

$$I_{nt} \geq I_b \Leftrightarrow I_{nt} = k_1 \cdot I_n$$

where I_{nt} represents the maximum current loaded by a busbar for an indefinite time at the specified room temperature

Voltage drop

If the length of the line is particularly long (>100m) it is necessary to check the voltage drop (hereinafter specified as v.d.). If the installation is a three phase system and the power factor is not lower than $\cos\varphi = 0.7$ the v.d. may be calculated with the coefficients of the voltage drop specified in the technical data table.

$$\Delta v\% = 2b \cdot \frac{k \cdot I_b \cdot L}{V_n} \cdot 100$$

Defined :

| | |
|--------------|---|
| I_b | = the current that supplies the busbar (A) |
| V_n | = the voltage power supply of the busbar (V) |
| L | = the length of the busbar (m) |
| $\Delta v\%$ | = the voltage drop percentage |
| b | = the distribution factor of the current |
| k | = corresponding voltage drop factor a $\cos\varphi$ (V/m/A) (see technical data table, p. 52-55) |

The current distribution factor "b" depends on how the circuit is fed and on the distribution of the electric loads along the busbar :

| | | |
|-----------|--|--|
| $b = 1$ | Supplies at one end and load at the end of the line | |
| $b = 1/2$ | Supplies at one end and with load evenly distributed | |
| $b = 1/4$ | Supplies at both ends and with load evenly distributed | |
| $b = 1/4$ | Central supply with loads at both ends | |
| $b = 1/8$ | Central supply with load distributed evenly | |

Example : MR 400 A Al for riser mains feed

| | |
|--|--------------------------------------|
| I_b | = 315 A operating current |
| $b = 1$ | = supply from one end |
| $k = 179$ | = see technical data table, p. 52-55 |
| $\cos\varphi$ | = 0.85 |
| L | = 30 m line length |
| V_n | = 400 V operating voltage |
| $\Delta v\% = 1 \times \frac{179 \cdot 10^{-6} \cdot 315 \cdot 30}{400} \times 100 = 0.42\%$ | |

Short circuit current

The short circuit current value I_{cw} that can be supported by Zucchini busbar trunking systems allows for both electrodynamic stress and thermal energy dissipated during the fault

The busbars must be able to sustain the short circuit current for the entire duration of the fault – i.e. for the time required for the protective device (circuit breaker) to start operating, cutting off the metal continuity and extinguishing the electric arc

Joule effect losses

Losses due to the Joule effect are essentially caused by the electrical resistance of the busbar. Lost energy is transformed into heat and contributes to the heating of the conduit

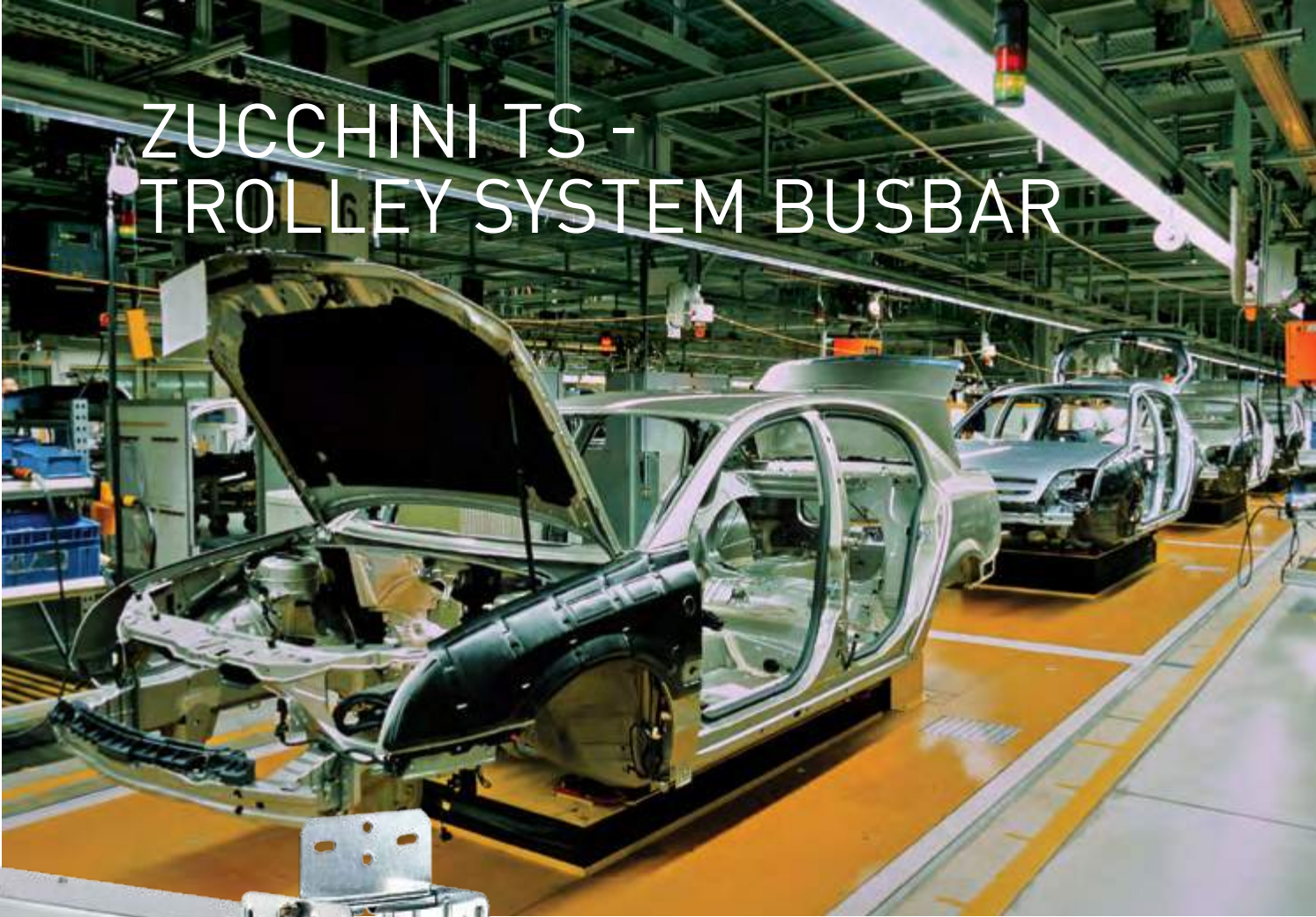
Three phase rating

$$P = 3 \cdot R_t \cdot I_b^2 \cdot 10^{-3} (W/m)$$

Single phase rating

$$P = 2 \cdot R_t \cdot I_b^2 \cdot 10^{-3} (W/m)$$

ZUCCHINI TS - TROLLEY SYSTEM BUSBAR



The Zucchini TS busbar range is ideal for supplying 25 to 160 A three phase loads to moving devices such as overhead cranes, traversing motors, assembly lines, etc.

Suitable for straight and curved sections with horizontal route changes, TS busbar is quick and easy to install using an electrical terminal junction and a wide range of supporting accessories.

Versions include :

- 3L+N+PE (5 conductors)
- 3L+PE (4 conductors)



To find out more call our technical support team on
+44 (0) 370 608 9020

ZUCCHINI SCP

Offering maximum versatility in demanding commercial and industrial environments, SCP busbar is used to transport and distribute high power from 630 to 6300 A and is a popular choice for rising mains.

Compact design combined with powerful performance makes Zucchini SCP the intelligent choice for demanding installations

super compact high power busbar

Zucchini SCP busbar trunking systems are ideal for the distribution of high power in industrial, commercial and service sector installations. Flexible and safe, SCP is continually developed to offer maximum versatility for all power applications, in any type of environment.

The high power, super compact Zucchini busbar range provides a complete solution whether connecting power supply stations or transformers to the main panel board, or transporting and distributing power around the building, including rising mains applications.



SAFETY

Compact dimensions enhance SCP's resistance to short circuit stresses. Voltage drops can be controlled to reduce the impedance of the circuit and enable installation of high power electrical systems in confined spaces.

MAINTENANCE FREE

The range is designed to be maintenance free with the exception of the compulsory periodic inspections required by Standard IEC 60364. The tightening torque inspection can be carried out when the busbar is energised.

FLEXIBILITY

Plug-in tap-off boxes provide connection and power supply of three phase loads from 63 to 1250 A. Thanks to the galvanised metal sheet construction, the boxes are suitable for heavy loads and for shielding the electromagnetic fields generated by the passage of current.



ZUCCHINI SCP

fast, simple installation saves time and money on site

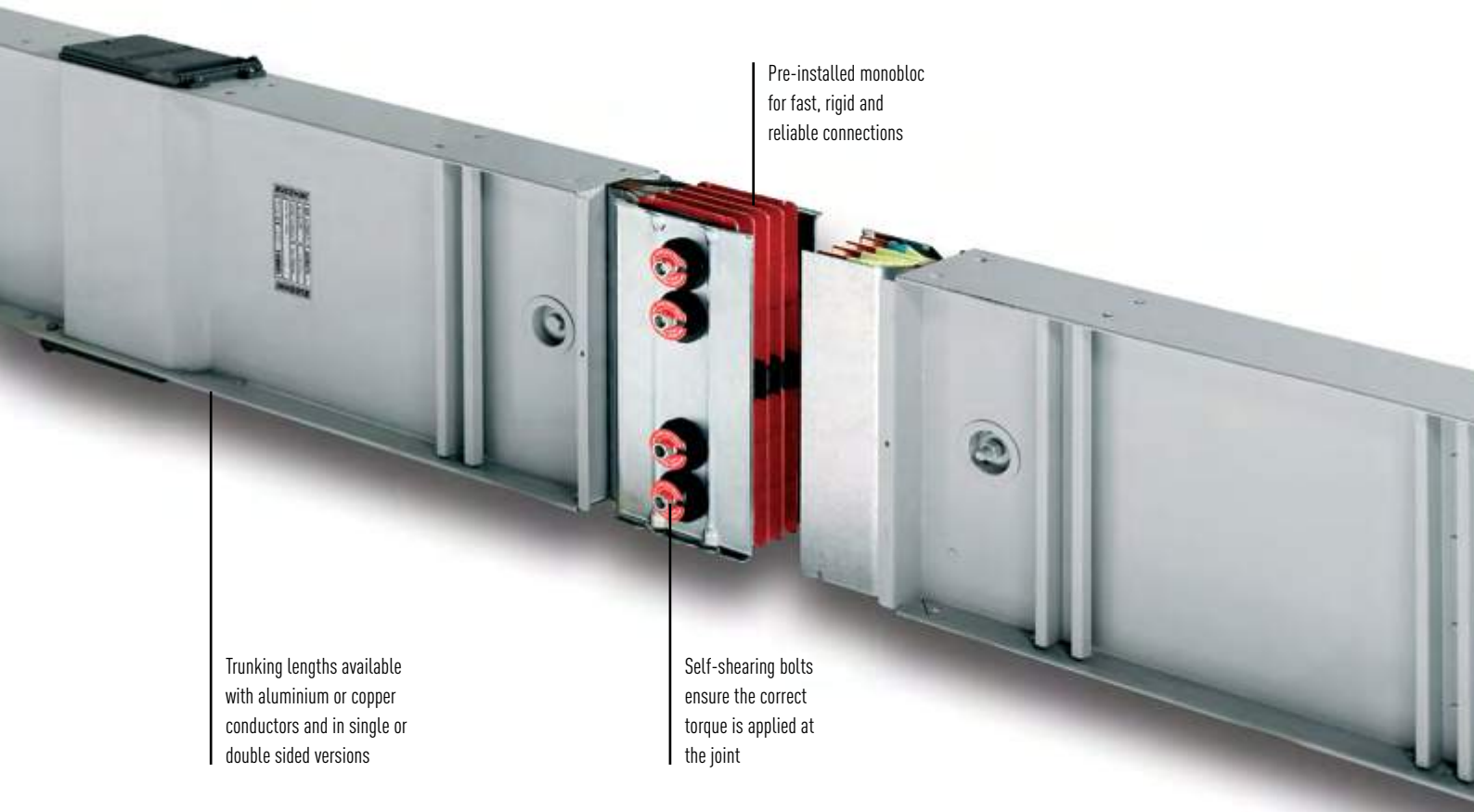


INSTALLATION SIMPLICITY

Designed to work perfectly in conjunction with Zucchini EdM cast resin transformers, the SCP busbar range offers quick, reliable assembly with a vast combination of accessories for maximum flexibility. Conductors are available in a choice of copper or aluminium.

PLANNING SIMPLICITY

A comprehensive range of standard products is further enhanced by Legrand's technical expertise and ability to create bespoke solutions tailored to any requirement. The SCP range can be manufactured in standard, clean earth or 200% neutral versions.



Pre-installed monobloc for fast, rigid and reliable connections

Trunking lengths available with aluminium or copper conductors and in single or double sided versions

Self-shearing bolts ensure the correct torque is applied at the joint



SWITCHBOARD - TRANSFORMER FEED UNIT



HORIZONTAL ELBOW



VERTICAL ELBOW



JOINT

TRUSTED BY WORLD LEADING DEVELOPERS

Zucchini SCP has been selected by Land Securities as an approved high power busbar system. Being one of the few manufacturers selected, this demonstrates Legrand's ability to provide solutions that meet the quality and specification requirements of world leading property developers.

Land Securities is the UK's largest commercial property company and a member of the FTSE 100. The company owns and manages more than 29 million ft² of property, including shopping centres and offices.

For more information visit www.landsecurities.com



SCP super compact busbar

aluminium conductors

TRUNKING LENGTHS

| Rating (A) | Feeder lengths | | | | |
|------------|----------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| | Standard 3 m | Bespoke dimensions 1 to 1.5 m | Bespoke dimensions 1.5 to 2 m | Bespoke dimensions 2 to 2.5 m | Bespoke dimensions 2.5 to 3 m |
| 630 | 60280100P | 60280170P | 60280120P | 60280180P | 60280150P |
| 800 | 60280101P | 60280171P | 60280121P | 60280181P | 60280151P |
| 1000 | 60280102P | 60280172P | 60280122P | 60280182P | 60280152P |
| 1250 | 60280104P | 60280174P | 60280124P | 60280184P | 60280154P |
| 1600 | 60280106P | 60280176P | 60280126P | 60280186P | 60280156P |
| 2000 | 60280107P | 60280177P | 60280127P | 60280187P | 60280157P |
| 2500 | 60390104P | 60390174P | 60390124P | 60390184P | 60390154P |
| 3200 | 60390106P | 60390176P | 60390126P | 60390186P | 60390156P |
| 4000 | 60390107P | 60390177P | 60390127P | 60390187P | 60390157P |

ELBOWS AND TEES

| Rating (A) | Horizontal elbows | | | | Vertical elbows | | | | Double horizontal elbows | |
|------------|---------------------|-----------|--------------------|-----------|---------------------|-----------|--------------------|-----------|--------------------------|-------------------|
| | Standard dimensions | | Bespoke dimensions | | Standard dimensions | | Bespoke dimensions | | Bespoke dimensions | |
| | Right hand | Left hand | Right hand | Left hand | Right hand | Left hand | Right hand | Left hand | Left + right hand | Right + left hand |
| 630 | 60280300P | 60280310P | 60280320P | 60280330P | 60280400P | 60280410P | 60280420P | 60280430P | 60280350P | 60280340P |
| 800 | 60280301P | 60280311P | 60280321P | 60280331P | 60280401P | 60280411P | 60280421P | 60280431P | 60280351P | 60280341P |
| 1000 | 60280302P | 60280312P | 60280322P | 60280332P | 60280402P | 60280412P | 60280422P | 60280432P | 60280352P | 60280342P |
| 1250 | 60280304P | 60280314P | 60280324P | 60280334P | 60280404P | 60280414P | 60280424P | 60280434P | 60280354P | 60280344P |
| 1600 | 60280306P | 60280316P | 60280326P | 60280336P | 60280406P | 60280416P | 60280426P | 60280436P | 60280356P | 60280346P |
| 2000 | 60280307P | 60280317P | 60280327P | 60280337P | 60280407P | 60280417P | 60280427P | 60280437P | 60280357P | 60280347P |
| 2500 | 60390304P | 60390314P | 60390324P | 60390334P | 60390404P | 60390414P | 60390424P | 60390434P | 60390354P | 60390344P |
| 3200 | 60390306P | 60390316P | 60390326P | 60390336P | 60390406P | 60390416P | 60390426P | 60390436P | 60390356P | 60390346P |
| 4000 | 60390307P | 60390317P | 60390327P | 60390337P | 60390407P | 60390417P | 60390427P | 60390437P | 60390357P | 60390347P |

CONNECTION INTERFACES

| Rating (A) | Connection interfaces | | | | Connection interfaces + horizontal elbows | | | |
|------------|-----------------------|---------------|--------------------|---------------|---|---------------|-------------|-------------|
| | Standard dimensions | | Bespoke dimensions | | Bespoke dimensions | | | |
| | Type 1 male | Type 2 female | Type 1 male | Type 2 female | Type 1 female | Type 2 female | Type 3 male | Type 4 male |
| 630 | 60281010P | 60281000P | 60281030P | 60281020P | 60281300P | 60281310P | 60281320P | 60281330P |
| 800 | 60281011P | 60281001P | 60281031P | 60281021P | 60281301P | 60281311P | 60281321P | 60281331P |
| 1000 | 60281012P | 60281002P | 60281032P | 60281022P | 60281302P | 60281312P | 60281322P | 60281332P |
| 1250 | 60281014P | 60281004P | 60281034P | 60281024P | 60281304P | 60281314P | 60281324P | 60281334P |
| 1600 | 60281016P | 60281006P | 60281036P | 60281026P | 60281306P | 60281316P | 60281326P | 60281336P |
| 2000 | 60281017P | 60281007P | 60281037P | 60281027P | 60281307P | 60281317P | 60281327P | 60281337P |
| 2500 | 60391014P | 60391004P | 60391034P | 60391024P | 60391304P | 60391314P | 60391324P | 60391334P |
| 3200 | 60391016P | 60391006P | 60391036P | 60391026P | 60391306P | 60391316P | 60391326P | 60391336P |
| 4000 | 60391017P | 60391007P | 60391037P | 60391027P | 60391307P | 60391317P | 60391327P | 60391337P |

Key : How to select the correct configuration of bar
 The 4th digit of an SCP Cat. No. determines the busbar configuration
 All examples on this page show 4 conductor versions, ie. 8 or 9;
 5 conductor and 200% neutral versions are available by substituting
 the 4th digit with 4, 5, 6 or 7, as shown opposite

| | | | |
|------------|-------------|-----------------|--------------|
| | 3L + N + PE | 3L + N + FE+ PE | 3L + 2N + PE |
| Single bar | 8 | 4 | 5 |
| Double bar | 9 | 6 | 7 |

TRUNKING LENGTHS

| Distribution lengths | | | Expansion lengths | Transposition lengths | | Fire barriers | |
|----------------------|---------------------|---------------------|-------------------|-----------------------|------------------|---------------|----------|
| 3 m – 3 + 3 outlets | 2 m – 2 + 2 outlets | 1 m – 1 + 1 outlets | | Phase transposition | Neutral rotation | Internal | External |
| 60280130P | 60280260P | 60280280P | 60280290P | 60287100P | 60287140P | 6531FB01 | 652EFB01 |
| 60280131P | 60280261P | 60280281P | 60280291P | 60287101P | 60287141P | – | 652EFB01 |
| 60280132P | 60280262P | 60280282P | 60280292P | 60287102P | 60287142P | – | 652EFB01 |
| 60280134P | 60280264P | 60280284P | 60280294P | 60287104P | 60287144P | – | 652EFB01 |
| 60280136P | 60280266P | 60280286P | 60280296P | 60287106P | 60287146P | – | 652EFB02 |
| 60280137P | 60280267P | 60280287P | 60280297P | 60287107P | 60287147P | – | 652EFB03 |
| 60390134P | 60390264P | 60390284P | 60390294P | 60397104P | 60397144P | 6531FB01 | 653EFB02 |
| 60390136P | 60390266P | 60390286P | 60390296P | 60397106P | 60397146P | 6531FB01 | 653EFB03 |
| 60390137P | 60390267P | 60390287P | 60390297P | 60397107P | 60397147P | 6531FB01 | 653EFB04 |

ELBOWS AND TEES

| Double vertical elbows | | Vertical tees | | | | Horizontal tees | | | |
|------------------------|-------------------|--------------------------------------|------------------------------------|-----------------------------------|-------------------------------------|--------------------------------------|------------------------------------|-----------------------------------|-------------------------------------|
| Bespoke dimensions | | Bespoke dimensions | | | | Bespoke dimensions | | | |
| Left + right hand | Right + left hand | Right hand female 300 to 1 499 mm | Right hand male 300 to 1 499 mm | Left hand male 300 to 1 499 mm | Left hand female 300 to 1 499 mm | Right hand female 550 to 1 049 mm | Right hand male 550 to 1 049 mm | Left hand male 550 to 1 049 mm | Left hand female 550 to 1 049 mm |
| 60280450P | 60280440P | 60280800P | 60280810P | 60280820P | 60280830P | 60280700P | 60280710P | 60280720P | 60280730P |
| 60280451P | 60280441P | 60280801P | 60280811P | 60280821P | 60280831P | 60280701P | 60280711P | 60280721P | 60280731P |
| 60280452P | 60280442P | 60280802P | 60280812P | 60280822P | 60280832P | 60280702P | 60280712P | 60280722P | 60280732P |
| 60280454P | 60280444P | 60280804P | 60280814P | 60280824P | 60280834P | 60280704P | 60280714P | 60280724P | 60280734P |
| 60280456P | 60280446P | 60280806P | 60280816P | 60280826P | 60280836P | 60280706P | 60280716P | 60280726P | 60280736P |
| 60280457P | 60280447P | 60280807P | 60280817P | 60280827P | 60280837P | 60280707P | 60280717P | 60280727P | 60280737P |
| 60390454P | 60390444P | 60390804P | 60390814P | 60390824P | 60390834P | 60390704P | 60390714P | 60390724P | 60390734P |
| 60390456P | 60390446P | 60390806P | 60390816P | 60390826P | 60390836P | 60390706P | 60390716P | 60390726P | 60390736P |
| 60390457P | 60390447P | 60390807P | 60390817P | 60390827P | 60390837P | 60390707P | 60390717P | 60390727P | 60390737P |

CONNECTION INTERFACES

FEED UNITS AND END STOPS

| Connection interfaces + vertical elbows | | | | End feed units | | End stops |
|---|---------------|-------------|-------------|----------------|---------------|-----------|
| Bespoke dimensions | | | | | | |
| Type 1 female | Type 2 female | Type 3 male | Type 4 male | Type 1 male | Type 2 female | |
| 60281400P | 60281410P | 60281420P | 60281430P | 60281110P | 60281100P | 65283101P |
| 60281401P | 60281411P | 60281421P | 60281431P | 60281111P | 60281101P | 65283101P |
| 60281402P | 60281412P | 60281422P | 60281432P | 60281112P | 60281102P | 65283101P |
| 60281404P | 60281414P | 60281424P | 60281434P | 60281114P | 60281104P | 65283101P |
| 60281406P | 60281416P | 60281426P | 60281436P | 60281116P | 60281106P | 65283102P |
| 60281407P | 60281417P | 60281427P | 60281437P | 60281117P | 60281107P | 65283104P |
| 60391404P | 60391414P | 60391424P | 60391434P | 60391114P | 60391104P | 65393102P |
| 60391406P | 60391416P | 60391426P | 60391436P | 60391116P | 60391106P | 65393103P |
| 60391407P | 60391417P | 60391427P | 60391437P | 60391117P | 60391107P | 65393104P |

SCP super compact busbar

copper conductors

TRUNKING LENGTHS

| Rating (A) | Feeder lengths | | | | |
|------------|----------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| | Standard 3 m | Bespoke dimensions 1 to 1.5 m | Bespoke dimensions 1.5 to 2 m | Bespoke dimensions 2 to 2.5 m | Bespoke dimensions 2.5 to 3 m |
| 800 | 65280100P | 65280170P | 65280120P | 65280180P | 65280150P |
| 1000 | 65280101P | 65280171P | 65280121P | 65280181P | 65280151P |
| 1250 | 65280103P | 65280173P | 65280123P | 65280183P | 65280153P |
| 1600 | 65280105P | 65280175P | 65280125P | 65280185P | 65280155P |
| 2000 | 65280106P | 65280176P | 65280126P | 65280186P | 65280156P |
| 2500 | 65280108P | 65280178P | 65280128P | 65280188P | 65280158P |
| 3200 | 65390105P | 65390175P | 65390125P | 65390185P | 65390155P |
| 4000 | 65390106P | 65390176P | 65390126P | 65390186P | 65390156P |
| 5000 | 65390108P | 65390178P | 65390128P | 65390188P | 65390158P |

ELBOWS AND TEES

| Rating (A) | Horizontal elbows | | | | Vertical elbows | | | | Double horizontal elbows | |
|------------|---------------------|-----------|--------------------|-----------|---------------------|-----------|--------------------|-----------|--------------------------|-------------------|
| | Standard dimensions | | Bespoke dimensions | | Standard dimensions | | Bespoke dimensions | | Bespoke dimensions | |
| | Right hand | Left hand | Right hand | Left hand | Right hand | Left hand | Right hand | Left hand | Left + right hand | Right + left hand |
| 800 | 65280300P | 65280310P | 65280320P | 65280330P | 65280400P | 65280410P | 65280420P | 65280430P | 65280350P | 65280340P |
| 1000 | 65280301P | 65280311P | 65280321P | 65280331P | 65280401P | 65280411P | 65280421P | 65280431P | 65280351P | 65280341P |
| 1250 | 65280303P | 65280313P | 65280323P | 65280333P | 65280403P | 65280413P | 65280423P | 65280433P | 65280353P | 65280343P |
| 1600 | 65280305P | 65280315P | 65280325P | 65280335P | 65280405P | 65280415P | 65280425P | 65280435P | 65280355P | 65280345P |
| 2000 | 65280306P | 65280316P | 65280326P | 65280336P | 65280406P | 65280416P | 65280426P | 65280436P | 65280356P | 65280346P |
| 2500 | 65280308P | 65280318P | 65280328P | 65280338P | 65280408P | 65280418P | 65280428P | 65280438P | 65280358P | 65280348P |
| 3200 | 65390305P | 65390315P | 65390325P | 65390335P | 65390405P | 65390415P | 65390425P | 65390435P | 65390355P | 65390345P |
| 4000 | 65390306P | 65390316P | 65390326P | 65390336P | 65390406P | 65390416P | 65390426P | 65390436P | 65390356P | 65390346P |
| 5000 | 65390308P | 65390318P | 65390328P | 65390338P | 65390408P | 65390418P | 65390428P | 65390438P | 65390358P | 65390348P |

CONNECTION INTERFACES

| Rating (A) | Connection interfaces | | | | Connection interfaces + horizontal elbows | | | |
|------------|-----------------------|---------------|--------------------|---------------|---|---------------|-------------|-------------|
| | Standard dimensions | | Bespoke dimensions | | Bespoke dimensions | | | |
| | Type 1 male | Type 2 female | Type 1 male | Type 2 female | Type 1 female | Type 2 female | Type 3 male | Type 4 male |
| 800 | 65281010P | 65281000P | 65281030P | 65281020P | 65281300P | 65281310P | 65281320P | 65281330P |
| 1000 | 65281011P | 65281001P | 65281031P | 65281021P | 65281301P | 65281311P | 65281321P | 65281331P |
| 1250 | 65281013P | 65281003P | 65281033P | 65281023P | 65281303P | 65281313P | 65281323P | 65281333P |
| 1600 | 65281015P | 65281005P | 65281035P | 65281025P | 65281305P | 65281315P | 65281325P | 65281335P |
| 2000 | 65281016P | 65281006P | 65281036P | 65281026P | 65281306P | 65281316P | 65281326P | 65281336P |
| 2500 | 65281018P | 65281008P | 65281038P | 65281028P | 65281308P | 65281318P | 65281328P | 65281338P |
| 3200 | 65391015P | 65391005P | 65391035P | 65391025P | 65391305P | 65391315P | 65391325P | 65391335P |
| 4000 | 65391016P | 65391006P | 65391036P | 65391026P | 65391306P | 65391316P | 65391326P | 65391336P |
| 5000 | 65391018P | 65391008P | 65391038P | 65391028P | 65391308P | 65391318P | 65391328P | 65391338P |

Key : How to select the correct configuration of bar
 The 4th digit of an SCP Cat. No. determines the busbar configuration
 All examples on this page show 4 conductor versions, ie. 8 or 9;
 5 conductor and 200% neutral versions are available by substituting
 the 4th digit with 4, 5, 6 or 7, as shown opposite

| | | | |
|------------|-------------|-----------------|--------------|
| | 3L + N + PE | 3L + N + FE+ PE | 3L + 2N + PE |
| Single bar | 8 | 4 | 5 |
| Double bar | 9 | 6 | 7 |

TRUNKING LENGTHS

| Distribution lengths | | | Expansion lengths | Transposition lengths | | Fire barriers | |
|----------------------|---------------------|---------------------|-------------------|-----------------------|------------------|---------------|----------|
| 3 m – 3 + 3 outlets | 2 m – 2 + 2 outlets | 1 m – 1 + 1 outlets | | Phase transposition | Neutral rotation | Internal | External |
| 65280130P | 65280260P | 65280280P | 65280290P | 65287100P | 65287140P | 6531FB01 | 652EFB01 |
| 65280131P | 65280261P | 65280281P | 65280291P | 65287101P | 65287141P | – | 652EFB01 |
| 65280133P | 65280263P | 65280283P | 65280293P | 65287103P | 65287143P | – | 652EFB01 |
| 65280135P | 65280265P | 65280285P | 65280295P | 65287105P | 65287145P | – | 652EFB02 |
| 65280136P | 65280266P | 65280286P | 65280296P | 65287106P | 65287146P | – | 652EFB02 |
| 65280138P | 65280268P | 65280288P | 65280298P | 65287108P | 65287148P | – | 652EFB03 |
| 65390135P | 65390265P | 65390285P | 65390295P | 65397105P | 65397145P | 6531FB01 | 653EFB02 |
| 65390136P | 65390266P | 65390286P | 65390296P | 65397106P | 65397146P | 6531FB01 | 653EFB03 |
| 65390138P | 65390268P | 65390288P | 65390298P | 65397108P | 65397148P | 6531FB01 | 653EFB04 |

ELBOWS AND TEES

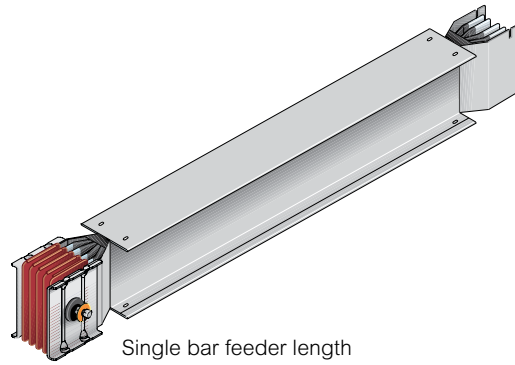
| Double vertical elbows | | Vertical tees | | | | Horizontal tees | | | |
|------------------------|-------------------|--------------------------------------|------------------------------------|-----------------------------------|-------------------------------------|--------------------------------------|------------------------------------|-----------------------------------|-------------------------------------|
| Bespoke dimensions | | Bespoke dimensions | | | | Bespoke dimensions | | | |
| Left + right hand | Right + left hand | Right hand female 300 to 1 499 mm | Right hand male 300 to 1 499 mm | Left hand male 300 to 1 499 mm | Left hand female 300 to 1 499 mm | Right hand female 550 to 1 049 mm | Right hand male 550 to 1 049 mm | Left hand male 550 to 1 049 mm | Left hand female 550 to 1 049 mm |
| 65280450P | 65280440P | 65280800P | 65280810P | 65280820P | 65280830P | 65280700P | 65280710P | 65280720P | 65280730P |
| 65280451P | 65280441P | 65280801P | 65280811P | 65280821P | 65280831P | 65280701P | 65280711P | 65280721P | 65280731P |
| 65280453P | 65280443P | 65280803P | 65280813P | 65280823P | 65280833P | 65280703P | 65280713P | 65280723P | 65280733P |
| 65280455P | 65280445P | 65280805P | 65280815P | 65280825P | 65280835P | 65280705P | 65280715P | 65280725P | 65280735P |
| 65280456P | 65280446P | 65280806P | 65280816P | 65280826P | 65280836P | 65280706P | 65280716P | 65280726P | 65280736P |
| 65280458P | 65280448P | 65280808P | 65280818P | 65280828P | 65280838P | 65280708P | 65280718P | 65280728P | 65280738P |
| 65390455P | 65390445P | 65390805P | 65390815P | 65390825P | 65390835P | 65390705P | 65390715P | 65390725P | 65390735P |
| 65390456P | 65390446P | 65390806P | 65390816P | 65390826P | 65390836P | 65390706P | 65390716P | 65390726P | 65390736P |
| 65390458P | 65390448P | 65390808P | 65390818P | 65390828P | 65390838P | 65390708P | 65390718P | 65390728P | 65390738P |

CONNECTION INTERFACES

FEED UNITS AND END STOPS

| Connection interfaces + vertical elbows | | | | End feed units | | End stops |
|---|---------------|-------------|-------------|----------------|---------------|-----------|
| Bespoke dimensions | | | | | | |
| Type 1 female | Type 2 female | Type 3 male | Type 4 male | Type 1 male | Type 2 female | |
| 65281400P | 65281410P | 65281420P | 65281430P | 65281110P | 65281100P | 65283101P |
| 65281401P | 65281411P | 65281421P | 65281431P | 65281111P | 65281101P | 65283101P |
| 65281403P | 65281413P | 65281423P | 65281433P | 65281113P | 65281103P | 65283101P |
| 65281405P | 65281415P | 65281425P | 65281435P | 65281115P | 65281105P | 65283102P |
| 65281406P | 65281416P | 65281426P | 65281436P | 65281116P | 65281106P | 65283102P |
| 65281408P | 65281418P | 65281428P | 65281438P | 65281118P | 65281108P | 65283104P |
| 65391405P | 65391415P | 65391425P | 65391435P | 65391115P | 65391105P | 65393102P |
| 65391406P | 65391416P | 65391426P | 65391436P | 65391116P | 65391106P | 65393103P |
| 65391408P | 65391418P | 65391428P | 65391438P | 65391118P | 65391108P | 65393104P |

SCP super compact busbar feeder lengths



Single bar feeder length



The SCP system is also available in 5 conductor versions and up to 6300 A (copper)

**Contact us on
+44 (0) 370 608 9020**

Selection charts p. 62-65
Dimensions and technical information p. 95
Technical data p. 112-117

High power busbar from 630 A to 4000 A with aluminium alloy conductors and from 800 A to 5000 A with copper conductors
SCP complies with IEC EN 61439-6
Designed to be maintenance-free, except for the periodic and compulsory inspections required by the Standard IEC 60364
Supplied with electrical junction monobloc system pre-installed

| Pack | Cat. Nos. | | Feeder lengths – standard 3 m |
|------|-----------|-----------|--|
| | Aluminium | Copper | |
| | | | For runs exceeding 40 m an expansion length should be included (see p. 68) |
| | | | 3 000 mm single bar |
| | | | Rating (A) |
| 1 | 60280100P | | 630 |
| 1 | 60280101P | 65280100P | 800 |
| 1 | 60280102P | 65280101P | 1000 |
| 1 | 60280104P | 65280103P | 1250 |
| 1 | 60280106P | 65280105P | 1600 |
| 1 | 60280107P | 65280106P | 2000 |
| 1 | | 65280108P | 2500 |
| | | | 3 000 mm double bar |
| | | | Rating (A) |
| 1 | 60390104P | | 2500 |
| 1 | 60390106P | 65390105P | 3200 |
| 1 | 60390107P | 65390106P | 4000 |
| 1 | | 65390108P | 5000 |

| Pack | Cat. Nos. | | Feeder lengths – bespoke dimensions |
|------|-----------|-----------|--|
| | Aluminium | Copper | |
| | | | Please specify required length when ordering |
| | | | 1 000 - 1 500 mm single bar |
| | | | Rating (A) |
| 1 | 60280170P | | 630 |
| 1 | 60280171P | 65280170P | 800 |
| 1 | 60280172P | 65280171P | 1000 |
| 1 | 60280174P | 65280173P | 1250 |
| 1 | 60280176P | 65280175P | 1600 |
| 1 | 60280177P | 65280176P | 2000 |
| 1 | | 65280178P | 2500 |
| | | | 1 000 - 1 500 mm double bar |
| | | | Rating (A) |
| 1 | 60390174P | | 2500 |
| 1 | 60390176P | 65390175P | 3200 |
| 1 | 60390177P | 65390176P | 4000 |
| 1 | | 65390178P | 5000 |
| | | | 1 501 - 2 000 mm single bar |
| | | | Rating (A) |
| 1 | 60280120P | | 630 |
| 1 | 60280121P | 65280120P | 800 |
| 1 | 60280122P | 65280121P | 1000 |
| 1 | 60280124P | 65280123P | 1250 |
| 1 | 60280126P | 65280125P | 1600 |
| 1 | 60280127P | 65280126P | 2000 |
| 1 | | 65280128P | 2500 |

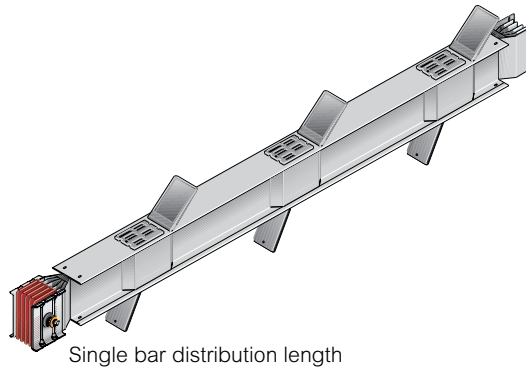
| Pack | Cat. Nos. | | Feeder lengths – bespoke dimensions (continued) |
|------|-----------|-----------|---|
| | Aluminium | Copper | |
| | | | Please specify required length when ordering |
| | | | 1 501 - 2 000 mm double bar |
| | | | Rating (A) |
| 1 | 60390124P | | 2500 |
| 1 | 60390126P | 65390125P | 3200 |
| 1 | 60390127P | 65390126P | 4000 |
| 1 | | 65390128P | 5000 |
| | | | 2 001 - 2 500 mm single bar |
| | | | Rating (A) |
| 1 | 60280180P | | 630 |
| 1 | 60280181P | 65280180P | 800 |
| 1 | 60280182P | 65280181P | 1000 |
| 1 | 60280184P | 65280183P | 1250 |
| 1 | 60280186P | 65280185P | 1600 |
| 1 | 60280187P | 65280186P | 2000 |
| 1 | | 65280188P | 2500 |
| | | | 2 001 - 2 500 mm double bar |
| | | | Rating (A) |
| 1 | 60390184P | | 2500 |
| 1 | 60390186P | 65390185P | 3200 |
| 1 | 60390187P | 65390186P | 4000 |
| 1 | | 65390188P | 5000 |
| | | | 2 501 - 2 999 mm single bar |
| | | | Rating (A) |
| 1 | 60280150P | | 630 |
| 1 | 60280151P | 65280150P | 800 |
| 1 | 60280152P | 65280151P | 1000 |
| 1 | 60280154P | 65280153P | 1250 |
| 1 | 60280156P | 65280155P | 1600 |
| 1 | 60280157P | 65280156P | 2000 |
| 1 | | 65280158P | 2500 |
| | | | 2 501 - 2 999 mm double bar |
| | | | Rating (A) |
| 1 | 60390154P | | 2500 |
| 1 | 60390156P | 65390155P | 3200 |
| 1 | 60390157P | 65390156P | 4000 |
| 1 | | 65390158P | 5000 |

Key : How to select the correct configuration of bar
The 4th digit of an SCP Cat. No. determines the busbar configuration
All examples on this page show 4 conductor versions, ie. 8 or 9;
5 conductor and 200% neutral versions are available by substituting the 4th digit with 4, 5, 6 or 7, as shown below

| | 3L + N + PE | 3L + N + FE+ PE | 3L + 2N + PE |
|------------|-------------|-----------------|--------------|
| Single bar | 8 | 4 | 5 |
| Double bar | 9 | 6 | 7 |

SCP super compact busbar

distribution lengths



Single bar distribution length



Selection charts **p. 62-65**
 Dimensions and technical information **p. 95**
 Technical data **p. 112-117**

High power busbar from 630 A to 4000 A with aluminium alloy conductors and from 800 A to 5000 A with copper conductors
 SCP complies with IEC EN 61439-6
 Designed to be maintenance-free, except for the periodic and compulsory inspections required by the Standard IEC 60364
 Supplied with electrical junction monobloc system pre-installed

| Pack | Cat. Nos. | | Distribution lengths |
|------|------------------------|------------------------|---|
| | | | For plug-in type tap-off boxes |
| | | | For runs exceeding 40 m an expansion length should be included Tap-off outlets are spaced at 850 mm intervals on both sides and are provided with hinged covers to ensure maximum safety and maintain IP 55 protection |
| | | | 3 m single bar – 3 + 3 outlets |
| | Aluminium | Copper | Rating (A) |
| 1 | 60280130P ¹ | | 630 |
| 1 | 60280131P | 65280130P ¹ | 800 |
| 1 | 60280132P | 65280131P | 1000 |
| 1 | 60280134P | 65280133P | 1250 |
| 1 | 60280136P | 65280135P | 1600 |
| 1 | 60280137P | 65280136P | 2000 |
| 1 | | 65280138P | 2500 |
| | | | 3 m double bar – 3 + 3 outlets |
| | | | Rating (A) |
| 1 | 60390134P | | 2500 |
| 1 | 60390136P | 65390135P | 3200 |
| 1 | 60390137P | 65390136P | 4000 |
| 1 | | 65390138P | 5000 |
| | | | 2 m single bar – 2 + 2 outlets |
| | | | Rating (A) |
| 1 | 60280260P ¹ | | 630 |
| 1 | 60280261P | 65280260P ¹ | 800 |
| 1 | 60280262P | 65280261P | 1000 |
| 1 | 60280264P | 65280263P | 1250 |
| 1 | 60280266P | 65280265P | 1600 |
| 1 | 60280267P | 65280266P | 2000 |
| 1 | | 65280268P | 2500 |
| | | | 2 m double bar – 2 + 2 outlets |
| | | | Rating (A) |
| 1 | 60390264P | | 2500 |
| 1 | 60390266P | 65390265P | 3200 |
| 1 | 60390267P | 65390266P | 4000 |
| 1 | | 65390268P | 5000 |

| Pack | Cat. Nos. | | Distribution lengths (continued) |
|------|------------------------|------------------------|---------------------------------------|
| | | | 1 m single bar – 1 + 1 outlets |
| | Aluminium | Copper | Rating (A) |
| 1 | 60280280P ¹ | | 630 |
| 1 | 60280281P | 65280280P ¹ | 800 |
| 1 | 60280282P | 65280281P | 1000 |
| 1 | 60280284P | 65280283P | 1250 |
| 1 | 60280286P | 65280285P | 1600 |
| 1 | 60280287P | 65280286P | 2000 |
| 1 | | 65280288P | 2500 |
| | | | 1 m double bar – 1 + 1 outlets |
| | | | Rating (A) |
| 1 | 60390284P | | 2500 |
| 1 | 60390286P | 65390285P | 3200 |
| 1 | 60390287P | 65390286P | 4000 |
| 1 | | 65390288P | 5000 |

For feed units and tap-off boxes p. 77, 78-79

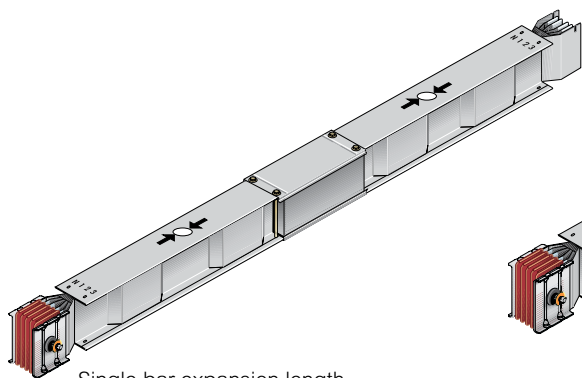
Key : How to select the correct configuration of bar
 The 4th digit of an SCP Cat. No. determines the busbar configuration
 All examples on this page show 4 conductor versions, ie. 8 or 9;
 5 conductor and 200% neutral versions are available by substituting the 4th digit with 4, 5, 6 or 7, as shown below

| | 3L + N + PE | 3L + N + FE+ PE | 3L + 2N + PE |
|------------|-------------|-----------------|--------------|
| Single bar | 8 | 4 | 5 |
| Double bar | 9 | 6 | 7 |

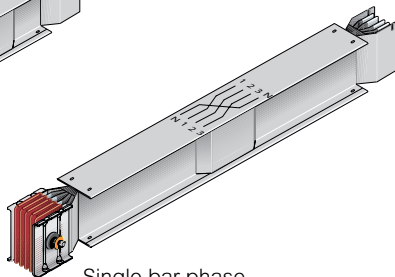
1 : Lengths with tap-off outlets on top side only (3, 2 or 1 + 0)

SCP super compact busbar

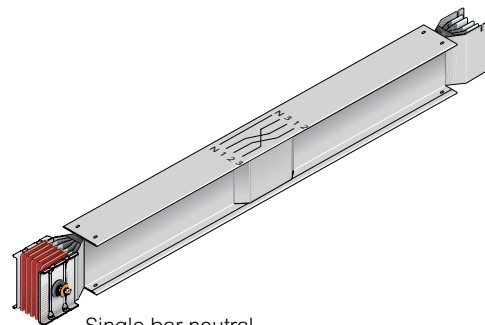
expansion and transposition lengths



Single bar expansion length



Single bar phase transposition length



Single bar neutral rotation length



Selection charts **p. 62-65**
 Dimensions and technical information **p. 95**
 Technical data **p. 112-117**

High power busbar from 630 A to 4000 A with aluminium alloy conductors and from 800 A to 5000 A with copper conductors
 SCP complies with IEC EN 61439-6
 Designed to be maintenance-free, except for the periodic and compulsory inspections required by the Standard IEC 60364
 Supplied with electrical junction monobloc system pre-installed

| Pack | Cat. Nos. | | Expansion lengths |
|------|-----------|-----------|--|
| | | | Standard – 3 m |
| | | | Absorb the thermal expansion during normal use that, on long runs, would otherwise cumulate and put abnormal force on the connection points Expansion length is to be placed in straight runs of more than 40 m and repeated every 40 m |
| | | | Single bar |
| | Aluminium | Copper | Rating (A) |
| 1 | 60280290P | | 630 |
| 1 | 60280291P | 65280290P | 800 |
| 1 | 60280292P | 65280291P | 1000 |
| 1 | 60280294P | 65280293P | 1250 |
| 1 | 60280296P | 65280295P | 1600 |
| 1 | 60280297P | 65280296P | 2000 |
| 1 | | 65280298P | 2500 |
| | | | Double bar |
| | | | Rating (A) |
| 1 | 60390294P | | 2500 |
| 1 | 60390296P | 65390295P | 3200 |
| 1 | 60390297P | 65390296P | 4000 |
| 1 | | 65390298P | 5000 |

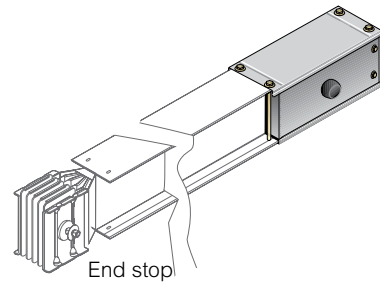
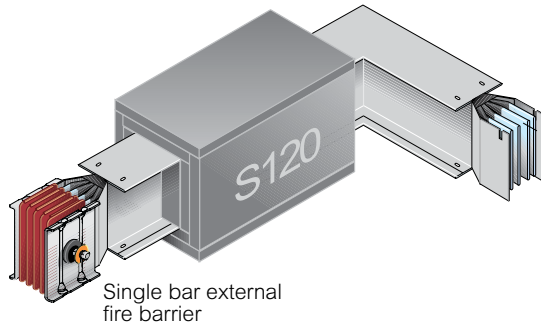
| Pack | Cat. Nos. | | Transposition lengths |
|------|-----------|-----------|---|
| | | | Phase transposition – 1.2 m |
| | | | In runs exceeding 100 m it is recommended to include two transposition lengths to balance mutual phase reactance and electric impedance (one at 1/3 and one at 2/3 distance of the run) |
| | | | Single bar |
| | Aluminium | Copper | Rating (A) |
| 1 | 60287100P | | 630 |
| 1 | 60287101P | 65287100P | 800 |
| 1 | 60287102P | 65287101P | 1000 |
| 1 | 60287104P | 65287103P | 1250 |
| 1 | 60287106P | 65287105P | 1600 |
| 1 | 60287107P | 65287106P | 2000 |
| 1 | | 65287108P | 2500 |
| | | | Double bar |
| | | | Rating (A) |
| 1 | 60397104P | | 2500 |
| 1 | 60397106P | 65397105P | 3200 |
| 1 | 60397107P | 65397106P | 4000 |
| 1 | | 65397108P | 5000 |
| | | | Neutral rotation – 1.0 m |
| | | | When the sequence of the distribution board phases is different to that of the transformer |
| | | | Single bar |
| | | | Rating (A) |
| 1 | 60287140P | | 630 |
| 1 | 60287141P | 65287140P | 800 |
| 1 | 60287142P | 65287141P | 1000 |
| 1 | 60287144P | 65287143P | 1250 |
| 1 | 60287146P | 65287145P | 1600 |
| 1 | 60287147P | 65287146P | 2000 |
| 1 | | 65287148P | 2500 |
| | | | Double bar |
| | | | Rating (A) |
| 1 | 60397144P | | 2500 |
| 1 | 60397146P | 65397145P | 3200 |
| 1 | 60397147P | 65397146P | 4000 |
| 1 | | 65397148P | 5000 |


Key : How to select the correct configuration of bar
 The 4th digit of an SCP Cat. No. determines the busbar configuration
 All examples on this page show 4 conductor versions, ie. 8 or 9;
 5 conductor and 200% neutral versions are available by substituting the 4th digit with 4, 5, 6 or 7, as shown below

| | 3L + N + PE | 3L + N + FE+ PE | 3L + 2N + PE |
|------------|-------------|-----------------|--------------|
| Single bar | 8 | 4 | 5 |
| Double bar | 9 | 6 | 7 |

SCP super compact busbar

fire barriers and end stops



 **Selection charts p. 62-65**
Dimensions and technical information p. 96
Technical data p. 112-117

High power busbar from 630 A to 4 000 A with aluminium alloy conductors and from 800 A to 5 000 A with copper conductors
 SCP complies with IEC EN 61439-6
 Designed to be maintenance-free, except for the periodic and compulsory inspections required by the Standard IEC 60364
 Supplied with electrical junction monobloc system pre-installed

| Pack | Cat. Nos. | Internal fire barrier |
|------|-----------|--|
| 1 | 6531FB01 | Meets class S120 (EN 1366-3, DIN 4102-09) Internal fire barriers are not required for 800 to 2 000 A aluminium systems, or 1 000 to 2 500 A copper systems but can be supplied with all other trunking components Internal fire barrier |

| Pack | External fire barriers | | Rating (A) |
|----------------------------|------------------------|----------|------------------------|
| | Aluminium | Copper | |
| 1 | 652EFB01 | | 630, 800, 1 000, 1 250 |
| 1 | 652EFB02 | | 1 600 |
| 1 | 652EFB03 | | 2 000 |
| 1 | | 652EFB01 | 800, 1 000, 1 250 |
| 1 | | 652EFB02 | 1 600, 2 000 |
| 1 | | 652EFB03 | 2 500 |
| External single bar | | | |
| Rating (A) | | | |
| 1 | 653EFB02 | | 2 500 |
| 1 | 653EFB03 | | 3 200 |
| 1 | 653EFB04 | | 4 000 |
| 1 | | 653EFB02 | 3 200 |
| 1 | | 653EFB03 | 4 000 |
| 1 | | 653EFB04 | 5 000 |
| External double bar | | | |
| Rating (A) | | | |
| 1 | 653EFB02 | | 2 500 |
| 1 | 653EFB03 | | 3 200 |
| 1 | 653EFB04 | | 4 000 |
| 1 | | 653EFB02 | 3 200 |
| 1 | | 653EFB03 | 4 000 |
| 1 | | 653EFB04 | 5 000 |

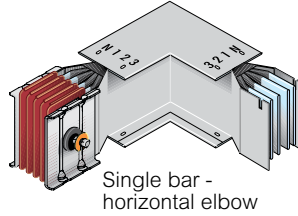
| Pack | Cat. Nos. | | End stops |
|------|-----------|-----------|---|
| | | | Maintain IP 55 protection at the end of the run |
| | | | Single bar |
| | | | Rating (A) |
| 1 | Aluminium | Copper | 630 to 1 250 |
| 1 | 65283101P | 65283101P | 800 to 1 250 |
| 1 | 65283102P | 65283102P | 1 600 |
| 1 | 65283102P | 65283102P | 1 600 to 2 000 |
| 1 | 65283104P | 65283104P | 2 000 |
| 1 | 65283104P | 65283104P | 2 500 |
| | | | Double bar |
| | | | Rating (A) |
| 1 | 65393102P | 65393102P | 2 500 |
| 1 | 65393103P | 65393103P | 3 200 |
| 1 | 65393103P | 65393103P | 3 200 |
| 1 | 65393104P | 65393104P | 4 000 |
| 1 | 65393104P | 65393104P | 4 000 |
| 1 | 65393104P | 65393104P | 5 000 |

Key : How to select the correct configuration of bar
 The 4th digit of an SCP Cat. No. determines the busbar configuration
 All examples on this page show 4 conductor versions, ie. 8 or 9;
 5 conductor and 200% neutral versions are available by substituting the 4th digit with 4, 5, 6 or 7, as shown below

| | 3L + N + PE | 3L + N + FE+ PE | 3L + 2N + PE |
|------------|-------------|-----------------|--------------|
| Single bar | 8 | 4 | 5 |
| Double bar | 9 | 6 | 7 |

SCP super compact busbar

horizontal elbows



Selection charts **p. 62-65**
 Dimensions and technical information **p. 96**
 Technical data **p. 112-117**

High power busbar from 630 A to 4000 A with aluminium alloy conductors and from 800 A to 5000 A with copper conductors
 SCP complies with IEC EN 61439-6
 Designed to be maintenance-free, except for the periodic and compulsory inspections required by the Standard IEC 60364
 Elbows are supplied with pre-installed monobloc and are able to change direction with standard or bespoke dimensions

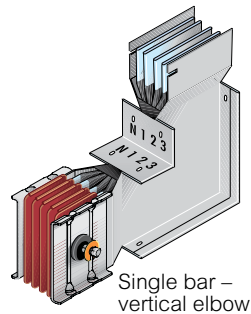
| Pack | Cat. Nos. | | Horizontal elbows – standard 300 x 300 mm |
|------|-----------|-----------|---|
| | Aluminium | Copper | Right hand – single bar |
| | | | Rating (A) |
| 1 | 60280300P | | 630 |
| 1 | 60280301P | 65280300P | 800 |
| 1 | 60280302P | 65280301P | 1000 |
| 1 | 60280304P | 65280303P | 1250 |
| 1 | 60280306P | 65280305P | 1600 |
| 1 | 60280307P | 65280306P | 2000 |
| 1 | | 65280308P | 2500 |
| | | | Right hand – double bar |
| | | | Rating (A) |
| 1 | 60390304P | | 2500 |
| 1 | 60390306P | 65390305P | 3200 |
| 1 | 60390307P | 65390306P | 4000 |
| 1 | | 65390308P | 5000 |
| | | | Left hand – single bar |
| | | | Rating (A) |
| 1 | 60280310P | | 630 |
| 1 | 60280311P | 65280310P | 800 |
| 1 | 60280312P | 65280311P | 1000 |
| 1 | 60280314P | 65280313P | 1250 |
| 1 | 60280316P | 65280315P | 1600 |
| 1 | 60280317P | 65280316P | 2000 |
| 1 | | 65280318P | 2500 |
| | | | Left hand – double bar |
| | | | Rating (A) |
| 1 | 60390314P | | 2500 |
| 1 | 60390316P | 65390315P | 3200 |
| 1 | 60390317P | 65390316P | 4000 |
| 1 | | 65390318P | 5000 |

| Pack | Cat. Nos. | | Horizontal elbows – bespoke dimensions |
|------|-----------|-----------|--|
| | Aluminium | Copper | Please specify required length when ordering (see p. 96 for configuration) |
| | | | Right hand – single bar 250 to 1299 mm |
| | | | Rating (A) |
| 1 | 60280320P | | 630 |
| 1 | 60280321P | 65280320P | 800 |
| 1 | 60280322P | 65280321P | 1000 |
| 1 | 60280324P | 65280323P | 1250 |
| 1 | 60280326P | 65280325P | 1600 |
| 1 | 60280327P | 65280326P | 2000 |
| 1 | | 65280328P | 2500 |
| | | | Right hand – double bar 250 to 1449 mm |
| | | | Rating (A) |
| 1 | 60390324P | | 2500 |
| 1 | 60390326P | 65390325P | 3200 |
| 1 | 60390327P | 65390326P | 4000 |
| 1 | | 65390328P | 5000 |
| | | | Left hand – single bar 250 to 1299 mm |
| | | | Rating (A) |
| 1 | 60280330P | | 630 |
| 1 | 60280331P | 65280330P | 800 |
| 1 | 60280332P | 65280331P | 1000 |
| 1 | 60280334P | 65280333P | 1250 |
| 1 | 60280336P | 65280335P | 1600 |
| 1 | 60280337P | 65280336P | 2000 |
| 1 | | 65280338P | 2500 |
| | | | Left hand – double bar 250 to 1449 mm |
| | | | Rating (A) |
| 1 | 60390334P | | 2500 |
| 1 | 60390336P | 65390335P | 3200 |
| 1 | 60390337P | 65390336P | 4000 |
| 1 | | 65390338P | 5000 |

Key : How to select the correct configuration of bar
 The 4th digit of an SCP Cat. No. determines the busbar configuration
 All examples on this page show 4 conductor versions, ie. 8 or 9;
 5 conductor and 200% neutral versions are available by substituting the 4th digit with 4, 5, 6 or 7, as shown below

| | 3L + N + PE | 3L + N + FE+ PE | 3L + 2N + PE |
|------------|-------------|-----------------|--------------|
| Single bar | 8 | 4 | 5 |
| Double bar | 9 | 6 | 7 |

SCP super compact busbar vertical elbows



Single bar – vertical elbow

Selection charts p. 62-65
Dimensions and technical information p. 96
Technical data p. 112-117

High power busbar from 630 A to 4000 A with aluminium alloy conductors and from 800 A to 5000 A with copper conductors
SCP complies with IEC EN 61439-6
Designed to be maintenance-free, except for the periodic and compulsory inspections required by the Standard IEC 60364
Elbows are supplied with pre-installed monobloc and are able to change direction with standard or bespoke dimensions

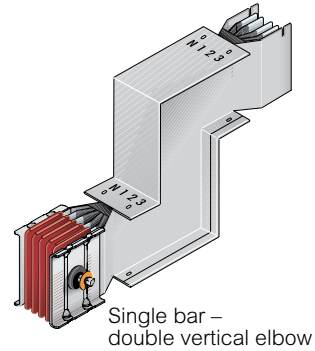
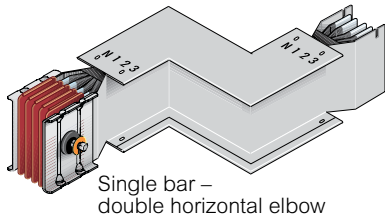
| Pack | Cat. Nos. | | Vertical elbows – standard | Pack | Cat. Nos. | | Vertical elbows – bespoke dimensions |
|------|-----------|-----------|---|------|-----------|-----------|--|
| | Aluminium | Copper | Left hand – single bar 300 x 300 mm | | | | Please specify required length when ordering (see p. 96 for configuration) |
| | | | Rating (A) | | | | Left hand – single bar 300 to 1299 mm |
| 1 | 60280410P | | 630 | | | | Rating (A) |
| 1 | 60280411P | 65280410P | 800 | 1 | 60280430P | 65280430P | 630 |
| 1 | 60280412P | 65280411P | 1000 | 1 | 60280431P | 65280431P | 800 |
| 1 | 60280414P | 65280413P | 1250 | 1 | 60280432P | 65280431P | 1000 |
| 1 | 60280416P | 65280415P | 1600 | 1 | 60280434P | 65280433P | 1250 |
| 1 | 60280417P | 65280416P | 2000 | 1 | 60280436P | 65280435P | 1600 |
| 1 | | 65280418P | 2500 | 1 | 60280437P | 65280436P | 2000 |
| | | | Left hand – double bar 450 x 450 mm | 1 | | 65280438P | 2500 |
| | | | Rating (A) | | | | Left hand – double bar 450 to 1449 mm |
| 1 | 60390414P | | 2500 | 1 | 60390434P | | Rating (A) |
| 1 | 60390416P | 65390415P | 3200 | 1 | 60390436P | 65390435P | 2500 |
| 1 | 60390417P | 65390416P | 4000 | 1 | 60390437P | 65390436P | 3200 |
| 1 | | 65390418P | 5000 | 1 | | 65390438P | 4000 |
| | | | Right hand – single bar 300 x 300 mm | | | | 5000 |
| | | | Rating (A) | | | | Right hand – single bar 300 to 1299 mm |
| 1 | 60280400P | | 630 | 1 | 60280420P | | Rating (A) |
| 1 | 60280401P | 65280400P | 800 | 1 | 60280421P | 65280420P | 630 |
| 1 | 60280402P | 65280401P | 1000 | 1 | 60280422P | 65280421P | 800 |
| 1 | 60280404P | 65280403P | 1250 | 1 | 60280424P | 65280423P | 1000 |
| 1 | 60280406P | 65280405P | 1600 | 1 | 60280426P | 65280425P | 1250 |
| 1 | 60280407P | 65280406P | 2000 | 1 | 60280427P | 65280426P | 1600 |
| 1 | | 65280408P | 2500 | 1 | | 65280428P | 2000 |
| | | | Right hand – double bar 450 x 450 mm | 1 | | | 2500 |
| | | | Rating (A) | | | | Right hand – double bar 450 to 1449 mm |
| 1 | 60390404P | | 2500 | 1 | 60390424P | | Rating (A) |
| 1 | 60390406P | 65390405P | 3200 | 1 | 60390426P | 65390425P | 2500 |
| 1 | 60390407P | 65390406P | 4000 | 1 | | 65390428P | 3200 |
| 1 | | 65390408P | 5000 | 1 | | | 4000 |

Key : How to select the correct configuration of bar
The 4th digit of an SCP Cat. No. determines the busbar configuration
All examples on this page show 4 conductor versions, ie. 8 or 9;
5 conductor and 200% neutral versions are available by substituting the 4th digit with 4, 5, 6 or 7, as shown below

| | 3L + N + PE | 3L + N + FE+ PE | 3L + 2N + PE |
|------------|-------------|-----------------|--------------|
| Single bar | 8 | 4 | 5 |
| Double bar | 9 | 6 | 7 |

SCP super compact busbar

double elbows



Selection charts **p. 62-65**
 Dimensions and technical information **p. 96-97**
 Technical data **p. 112-117**

High power busbar from 630 A to 4000 A with aluminium alloy conductors and from 800 A to 5000 A with copper conductors
 SCP complies with IEC EN 61439-6
 Designed to be maintenance-free, except for the periodic and compulsory inspections required by the Standard IEC 60364
 Elbows are supplied with pre-installed monobloc and are able to change direction with standard or bespoke dimensions

| Pack | Cat. Nos. | | Double horizontal elbows – bespoke dimensions ¹ |
|------|-----------|-----------|--|
| | Aluminium | Copper | Please specify required length when ordering (see p. 96 for configuration) |
| | | | Left + right hand – single bar |
| | | | Rating (A) |
| 1 | 60280350P | | 630 |
| 1 | 60280351P | 65280350P | 800 |
| 1 | 60280352P | 65280351P | 1000 |
| 1 | 60280354P | 65280353P | 1250 |
| 1 | 60280356P | 65280355P | 1600 |
| 1 | 60280357P | 65280356P | 2000 |
| 1 | | 65280358P | 2500 |
| | | | Left + right hand – double bar |
| | | | Rating (A) |
| 1 | 60390354P | | 2500 |
| 1 | 60390356P | 65390355P | 3200 |
| 1 | 60390357P | 65390356P | 4000 |
| 1 | | 65390358P | 5000 |
| | | | Right + left hand – single bar |
| | | | Rating (A) |
| 1 | 60280340P | | 630 |
| 1 | 60280341P | 65280340P | 800 |
| 1 | 60280342P | 65280341P | 1000 |
| 1 | 60280344P | 65280343P | 1250 |
| 1 | 60280346P | 65280345P | 1600 |
| 1 | 60280347P | 65280346P | 2000 |
| 1 | | 65280348P | 2500 |
| | | | Right + left hand – double bar |
| | | | Rating (A) |
| 1 | 60390344P | | 2500 |
| 1 | 60390346P | 65390345P | 3200 |
| 1 | 60390347P | 65390346P | 4000 |
| 1 | | 65390348P | 5000 |

| Pack | Cat. Nos. | | Double vertical elbows – bespoke dimensions ² |
|------|-----------|-----------|--|
| | Aluminium | Copper | Please specify required length when ordering (see p. 97 for configuration) |
| | | | Left + right hand – single bar |
| | | | Rating (A) |
| 1 | 60280450P | | 630 |
| 1 | 60280451P | 65280450P | 800 |
| 1 | 60280452P | 65280451P | 1000 |
| 1 | 60280454P | 65280453P | 1250 |
| 1 | 60280456P | 65280455P | 1600 |
| 1 | 60280457P | 65280456P | 2000 |
| 1 | | 65280458P | 2500 |
| | | | Left + right hand – double bar |
| | | | Rating (A) |
| 1 | 60390454P | | 2500 |
| 1 | 60390456P | 65390455P | 3200 |
| 1 | 60390457P | 65390456P | 4000 |
| 1 | | 65390458P | 5000 |
| | | | Right + left hand – single bar |
| | | | Rating (A) |
| 1 | 60280440P | | 630 |
| 1 | 60280441P | 65280440P | 800 |
| 1 | 60280442P | 65280441P | 1000 |
| 1 | 60280444P | 65280443P | 1250 |
| 1 | 60280446P | 65280445P | 1600 |
| 1 | 60280447P | 65280446P | 2000 |
| 1 | | 65280448P | 2500 |
| | | | Right + left hand – double bar |
| | | | Rating (A) |
| 1 | 60390444P | | 2500 |
| 1 | 60390446P | 65390445P | 3200 |
| 1 | 60390447P | 65390446P | 4000 |
| 1 | | 65390448P | 5000 |

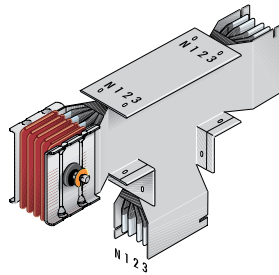
2 : Standard dimensions 300 + 300 + 300 mm single bar and 450 + 450 + 450 mm double bar

Key : How to select the correct configuration of bar
 The 4th digit of an SCP Cat. No. determines the busbar configuration
 All examples on this page show 4 conductor versions, ie. 8 or 9;
 5 conductor and 200% neutral versions are available by substituting the 4th digit with 4, 5, 6 or 7, as shown below

| | 3L + N + PE | 3L + N + FE+ PE | 3L + 2N + PE |
|------------|-------------|-----------------|--------------|
| Single bar | 8 | 4 | 5 |
| Double bar | 9 | 6 | 7 |

1 : Standard dimensions 300 + 300 + 300 mm

SCP super compact busbar vertical tees



Single bar -
vertical tee



Selection charts **p. 62-65**
Dimensions and technical information **p. 97**
Technical data **p. 112-117**

High power busbar from 630 A to 4000 A with aluminium alloy conductors and from 800 A to 5000 A with copper conductors
SCP complies with IEC EN 61439-6
Designed to be maintenance-free, except for the periodic and compulsory inspections required by the Standard IEC 60364
Tees are supplied with pre-installed monobloc and are able to change direction with standard or bespoke dimensions

| Pack | Cat. Nos. | | Vertical tees – bespoke dimensions ¹ |
|------|-----------|-----------|--|
| | Aluminium | Copper | Please specify required length when ordering (see p. 97 for configuration) |
| | | | Right hand female – single bar 300 to 1299 mm |
| | | | Rating (A) |
| 1 | 60280800P | | 630 |
| 1 | 60280801P | 65280800P | 800 |
| 1 | 60280802P | 65280801P | 1000 |
| 1 | 60280804P | 65280803P | 1250 |
| 1 | 60280806P | 65280805P | 1600 |
| 1 | 60280807P | 65280806P | 2000 |
| 1 | | 65280808P | 2500 |
| | | | Right hand female – double bar 450 to 1449 mm |
| | | | Rating (A) |
| 1 | 60390804P | | 2500 |
| 1 | 60390806P | 65390805P | 3200 |
| 1 | 60390807P | 65390806P | 4000 |
| 1 | | 65390808P | 5000 |
| | | | Right hand male – single bar 300 to 1299 mm |
| | | | Rating (A) |
| 1 | 60280810P | | 630 |
| 1 | 60280811P | 65280810P | 800 |
| 1 | 60280812P | 65280811P | 1000 |
| 1 | 60280814P | 65280813P | 1250 |
| 1 | 60280816P | 65280815P | 1600 |
| 1 | 60280817P | 65280816P | 2000 |
| 1 | | 65280818P | 2500 |
| | | | Right hand male – double bar 450 to 1449 mm |
| | | | Rating (A) |
| 1 | 60390814P | | 2500 |
| 1 | 60390816P | 65390815P | 3200 |
| 1 | 60390817P | 65390816P | 4000 |
| 1 | | 65390818P | 5000 |

| Pack | Cat. Nos. | | Vertical tees – bespoke dimensions (continued) ¹ |
|------|-----------|-----------|--|
| | Aluminium | Copper | Please specify required length when ordering (see p. 97 for configuration) |
| | | | Left hand male – single bar 300 to 1299 mm |
| | | | Rating (A) |
| 1 | 60280820P | | 630 |
| 1 | 60280821P | 65280820P | 800 |
| 1 | 60280822P | 65280821P | 1000 |
| 1 | 60280824P | 65280823P | 1250 |
| 1 | 60280826P | 65280825P | 1600 |
| 1 | 60280827P | 65280826P | 2000 |
| 1 | | 65280828P | 2500 |
| | | | Left hand male – double bar 450 to 1449 mm |
| | | | Rating (A) |
| 1 | 60390824P | | 2500 |
| 1 | 60390826P | 65390825P | 3200 |
| 1 | 60390827P | 65390826P | 4000 |
| 1 | | 65390828P | 5000 |
| | | | Left hand female – single bar 300 to 1299 mm |
| | | | Rating (A) |
| 1 | 60280830P | | 630 |
| 1 | 60280831P | 65280830P | 800 |
| 1 | 60280832P | 65280831P | 1000 |
| 1 | 60280834P | 65280833P | 1250 |
| 1 | 60280836P | 65280835P | 1600 |
| 1 | 60280837P | 65280836P | 2000 |
| 1 | | 65280838P | 2500 |
| | | | Left hand female – double bar 450 to 1449 mm |
| | | | Rating (A) |
| 1 | 60390834P | | 2500 |
| 1 | 60390836P | 65390835P | 3200 |
| 1 | 60390837P | 65390836P | 4000 |
| 1 | | 65390838P | 5000 |

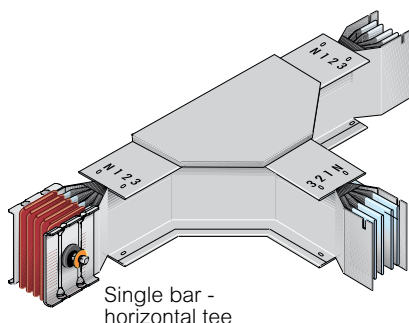
Key : How to select the correct configuration of bar
The 4th digit of an SCP Cat. No. determines the busbar configuration
All examples on this page show 4 conductor versions, ie. 8 or 9;
5 conductor and 200% neutral versions are available by substituting the 4th digit with 4, 5, 6 or 7, as shown below

| | 3L + N + PE | 3L + N + FE+ PE | 3L + 2N + PE |
|------------|-------------|-----------------|--------------|
| Single bar | 8 | 4 | 5 |
| Double bar | 9 | 6 | 7 |

¹ : Standard dimensions 300 + 300 + 300 mm single bar
and 600 + 600 + 600 mm double bar

SCP super compact busbar

horizontal tees



Single bar - horizontal tee



Selection charts **p. 62-65**
 Dimensions and technical information **p. 98**
 Technical data **p. 112-117**

High power busbar from 630 A to 4000 A with aluminium alloy conductors and from 800 A to 5000 A with copper conductors
 SCP complies with IEC EN 61439-6
 Designed to be maintenance-free, except for the periodic and compulsory inspections required by the Standard IEC 60364
 Tees are supplied with pre-installed monobloc and are able to change direction with standard or bespoke dimensions

| Pack | Cat. Nos. | | Horizontal tees – bespoke dimensions ¹ |
|------|-----------|-----------|--|
| | | | Please specify required length when ordering (see p. 98 for configuration) |
| | | | Right hand female – single bar 550 to 1049 mm |
| | Aluminium | Copper | Rating (A) |
| 1 | 60280700P | | 630 |
| 1 | 60280701P | 65280700P | 800 |
| 1 | 60280702P | 65280701P | 1000 |
| 1 | 60280704P | 65280703P | 1250 |
| 1 | 60280706P | 65280705P | 1600 |
| 1 | 60280707P | 65280706P | 2000 |
| 1 | | 65280708P | 2500 |
| | | | Right hand female – double bar 550 to 1049 mm |
| | | | Rating (A) |
| 1 | 60390704P | | 2500 |
| 1 | 60390706P | 65390705P | 3200 |
| 1 | 60390707P | 65390706P | 4000 |
| 1 | | 65390708P | 5000 |
| | | | Right hand male – single bar 550 to 1049 mm |
| | | | Rating (A) |
| 1 | 60280710P | | 630 |
| 1 | 60280711P | 65280710P | 800 |
| 1 | 60280712P | 65280711P | 1000 |
| 1 | 60280714P | 65280713P | 1250 |
| 1 | 60280716P | 65280715P | 1600 |
| 1 | 60280717P | 65280716P | 2000 |
| 1 | | 65280718P | 2500 |
| | | | Right hand male – double bar 550 to 1049 mm |
| | | | Rating (A) |
| 1 | 60390714P | | 2500 |
| 1 | 60390716P | 65390715P | 3200 |
| 1 | 60390717P | 65390716P | 4000 |
| 1 | | 65390718P | 5000 |

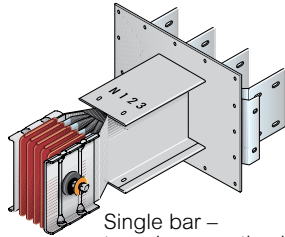
| Pack | Cat. Nos. | | Horizontal tees – bespoke dimensions (continued) ¹ |
|------|-----------|-----------|--|
| | | | Please specify required length when ordering (see p. 98 for configuration) |
| | | | Left hand male – single bar 550 to 1049 mm |
| | Aluminium | Copper | Rating (A) |
| 1 | 60280720P | | 630 |
| 1 | 60280721P | 65280720P | 800 |
| 1 | 60280722P | 65280721P | 1000 |
| 1 | 60280724P | 65280723P | 1250 |
| 1 | 60280726P | 65280725P | 1600 |
| 1 | 60280727P | 65280726P | 2000 |
| 1 | | 65280728P | 2500 |
| | | | Left hand male – double bar 550 to 1049 mm |
| | | | Rating (A) |
| 1 | 60390724P | | 2500 |
| 1 | 60390726P | 65390725P | 3200 |
| 1 | 60390727P | 65390726P | 4000 |
| 1 | | 65390728P | 5000 |
| | | | Left hand female – single bar 550 to 1049 mm |
| | | | Rating (A) |
| 1 | 60280730P | | 630 |
| 1 | 60280731P | 65280730P | 800 |
| 1 | 60280732P | 65280731P | 1000 |
| 1 | 60280734P | 65280733P | 1250 |
| 1 | 60280736P | 65280735P | 1600 |
| 1 | 60280737P | 65280736P | 2000 |
| 1 | | 65280738P | 2500 |
| | | | Left hand female – double bar 550 to 1049 mm |
| | | | Rating (A) |
| 1 | 60390734P | | 2500 |
| 1 | 60390736P | 65390735P | 3200 |
| 1 | 60390737P | 65390736P | 4000 |
| 1 | | 65390738P | 5000 |

Key : How to select the correct configuration of bar
 The 4th digit of an SCP Cat. No. determines the busbar configuration
 All examples on this page show 4 conductor versions, ie. 8 or 9;
 5 conductor and 200% neutral versions are available by substituting the 4th digit with 4, 5, 6 or 7, as shown below

| | 3L + N + PE | 3L + N + FE+ PE | 3L + 2N + PE |
|------------|-------------|-----------------|--------------|
| Single bar | 8 | 4 | 5 |
| Double bar | 9 | 6 | 7 |

¹ : Standard dimensions 600 + 600 + 600 mm

SCP super compact busbar
connection interfaces



Single bar – type 1 connection interface



For EdM cast resin transformers compatibility table **p. 101**



Selection charts **p. 62-65**
Dimensions and technical information **p. 98-99**
Coverplate and bar drilling details **p. 100**
Technical data **p. 112-117**

High power busbar from 630 A to 4000 A with aluminium alloy conductors and from 800 A to 5000 A with copper conductors
SCP complies with IEC EN 61439-6
For connecting the busbar to the cabinet or transformer

| Pack | Cat. Nos. | | Rating (A) | Diagram |
|---|-----------|-----------|------------|---------|
| | Aluminium | Copper | | |
| Connection interfaces – in-line standard dimensions 300 mm | | | | |
| Type 1 male – single bar | | | | |
| | | | 630 | |
| 1 | 60281010P | | 800 | |
| 1 | 60281011P | 65281010P | 1000 | |
| 1 | 60281012P | 65281011P | 1250 | |
| 1 | 60281014P | 65281013P | 1600 | |
| 1 | 60281016P | 65281015P | 2000 | |
| 1 | 60281017P | 65281016P | 2500 | |
| 1 | | 65281018P | | |
| Type 1 male – double bar | | | | |
| | | | 2500 | |
| 1 | 60391014P | | 3200 | |
| 1 | 60391016P | 65391015P | 4000 | |
| 1 | 60391017P | 65391016P | 5000 | |
| | | | 65391018P | |
| Type 2 female – single bar | | | | |
| | | | 630 | |
| 1 | 60281000P | | 800 | |
| 1 | 60281001P | 65281000P | 1000 | |
| 1 | 60281002P | 65281001P | 1250 | |
| 1 | 60281004P | 65281003P | 1600 | |
| 1 | 60281006P | 65281005P | 2000 | |
| 1 | 60281007P | 65281006P | 2500 | |
| 1 | | 65281008P | | |
| Type 2 female – double bar | | | | |
| | | | 2500 | |
| 1 | 60391004P | | 3200 | |
| 1 | 60391006P | 65391005P | 4000 | |
| 1 | 60391007P | 65391006P | 5000 | |
| 1 | | 65391008P | | |

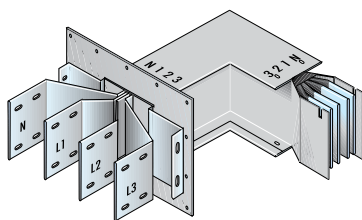
| Pack | Cat. Nos. | | Rating (A) | Diagram |
|---|-----------|-----------|------------|---------|
| | Aluminium | Copper | | |
| Connection interfaces – in-line bespoke dimensions | | | | |
| Please specify required length when ordering (see p.98 for configuration) | | | | |
| Type 1 male - single bar | | | | |
| | | | 630 | |
| 1 | 60281030P | | 800 | |
| 1 | 60281031P | 65281030P | 1000 | |
| 1 | 60281032P | 65281031P | 1250 | |
| 1 | 60281034P | 65281033P | 1600 | |
| 1 | 60281036P | 65281035P | 2000 | |
| 1 | 60281037P | 65281036P | 2500 | |
| 1 | | 65281038P | | |
| Type 1 male - double bar | | | | |
| | | | 2500 | |
| 1 | 60391034P | | 3200 | |
| 1 | 60391036P | 65391035P | 4000 | |
| 1 | 60391037P | 65391036P | 5000 | |
| | | | 65391038P | |
| Type 2 female - single bar | | | | |
| | | | 630 | |
| 1 | 60281020P | | 800 | |
| 1 | 60281021P | 65281020P | 1000 | |
| 1 | 60281022P | 65281021P | 1250 | |
| 1 | 60281024P | 65281023P | 1600 | |
| 1 | 60281026P | 65281025P | 2000 | |
| 1 | 60281027P | 65281026P | 2500 | |
| 1 | | 65281028P | | |
| Type 2 female - double bar | | | | |
| | | | 2500 | |
| 1 | 60391024P | | 3200 | |
| 1 | 60391026P | 65391025P | 4000 | |
| 1 | 60391027P | 65391026P | 5000 | |
| 1 | | 65391028P | | |

Key : How to select the correct configuration of bar
The 4th digit of an SCP Cat. No. determines the busbar configuration
All examples on this page show 4 conductor versions, ie. 8 or 9;
5 conductor and 200% neutral versions are available by substituting the 4th digit with 4, 5, 6 or 7, as shown below

| | 3L + N + PE | 3L + N + FE+ PE | 3L + 2N + PE |
|------------|-------------|-----------------|--------------|
| Single bar | 8 | 4 | 5 |
| Double bar | 9 | 6 | 7 |

SCP super compact busbar

connection interfaces + horizontal elbows



Single bar – type 1 connection interface + horizontal elbow



For EdM cast resin transformers compatibility table **p. 101**

-  Selection charts **p. 62-65**
- Dimensions and technical information **p. 98**
- Coverplate and bar drilling details **p. 100**
- Technical data **p. 112-117**

High power busbar from 630 A to 4000 A with aluminium alloy conductors and from 800 A to 5000 A with copper conductors
 SCP complies with IEC EN 61439-6
 For connecting the busbar to the cabinet or transformer

| Pack | Cat. Nos. | | Rating (A) | Diagram |
|------|-----------|-----------|------------|---------|
| | Aluminium | Copper | | |
| 1 | 60281300P | | 630 | |
| 1 | 60281301P | 65281300P | 800 | |
| 1 | 60281302P | 65281301P | 1000 | |
| 1 | 60281304P | 65281303P | 1250 | |
| 1 | 60281306P | 65281305P | 1600 | |
| 1 | 60281307P | 65281306P | 2000 | |
| 1 | | 65281308P | 2500 | |
| | | | Rating (A) | |
| 1 | 60391304P | | 2500 | |
| 1 | 60391306P | 65391305P | 3200 | |
| 1 | 60391307P | 65391306P | 4000 | |
| 1 | | 65391308P | 5000 | |
| | | | Rating (A) | |
| 1 | 60281310P | | 630 | |
| 1 | 60281311P | 65281310P | 800 | |
| 1 | 60281312P | 65281311P | 1000 | |
| 1 | 60281314P | 65281313P | 1250 | |
| 1 | 60281316P | 65281315P | 1600 | |
| 1 | 60281317P | 65281316P | 2000 | |
| 1 | | 65281318P | 2500 | |
| | | | Rating (A) | |
| 1 | 60391314P | | 2500 | |
| 1 | 60391316P | 65391315P | 3200 | |
| 1 | 60391317P | 65391316P | 4000 | |
| 1 | | 65391318P | 5000 | |

| Pack | Cat. Nos. | | Rating (A) | Diagram |
|------|-----------|-----------|------------|---------|
| | Aluminium | Copper | | |
| 1 | 60281320P | | 630 | |
| 1 | 60281321P | 65281320P | 800 | |
| 1 | 60281322P | 65281321P | 1000 | |
| 1 | 60281324P | 65281323P | 1250 | |
| 1 | 60281326P | 65281325P | 1600 | |
| 1 | 60281327P | 65281326P | 2000 | |
| 1 | | 65281328P | 2500 | |
| | | | Rating (A) | |
| 1 | 60391324P | | 2500 | |
| 1 | 60391326P | 65391325P | 3200 | |
| 1 | 60391327P | 65391326P | 4000 | |
| 1 | | 65391328P | 5000 | |
| | | | Rating (A) | |
| 1 | 60281330P | | 630 | |
| 1 | 60281331P | 65281330P | 800 | |
| 1 | 60281332P | 65281331P | 1000 | |
| 1 | 60281334P | 65281333P | 1250 | |
| 1 | 60281336P | 65281335P | 1600 | |
| 1 | 60281337P | 65281336P | 2000 | |
| 1 | | 65281338P | 2500 | |
| | | | Rating (A) | |
| 1 | 60391334P | | 2500 | |
| 1 | 60391336P | 65391335P | 3200 | |
| 1 | 60391337P | 65391336P | 4000 | |
| 1 | | 65391338P | 5000 | |

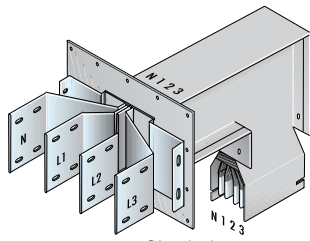
Key : How to select the correct configuration of bar
 The 4th digit of an SCP Cat. No. determines the busbar configuration
 All examples on this page show 4 conductor versions, ie. 8 or 9;
 5 conductor and 200% neutral versions are available by substituting the 4th digit with 4, 5, 6 or 7, as shown below

| | 3L + N + PE | 3L + N + FE+ PE | 3L + 2N + PE |
|------------|-------------|-----------------|--------------|
| Single bar | 8 | 4 | 5 |
| Double bar | 9 | 6 | 7 |

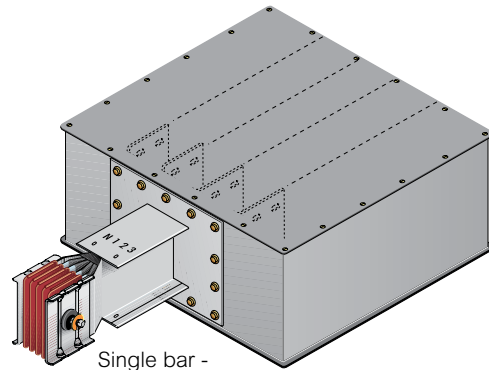
1 : Standard dimensions 300 + 300 mm

SCP super compact busbar

connection interfaces + vertical elbows and feed units



Single bar – type 1 connection interface + vertical elbow



Single bar – type 1 end feed unit



Selection charts **p. 62-65**
 Dimensions and technical information **p. 99**
 Coverplate and bar drilling details **p. 100**
 Technical data **p. 112-117**

High power busbar from 630 A to 4 000 A with aluminium alloy conductors and from 800 A to 5 000 A with copper conductors

SCP complies with IEC EN 61439-6

For connecting the busbar to the cabinet or transformer

End feed units have rear cable input and aluminium gland plate(s) for cable entry – 170 x 410 mm. Single bar 1 plate, double bar 2 plates

| Pack | Cat. Nos. | | Rating (A) | Image |
|---|-----------|-----------|------------|-------|
| | Aluminium | Copper | | |
| Connection interfaces + vertical elbows – bespoke dimensions¹ | | | | |
| Please specify required length when ordering (see p. 99 for configuration) | | | | |
| Type 1 female – single bar | | | | |
| 1 | 60281400P | | 630 | |
| 1 | 60281401P | 65281400P | 800 | |
| 1 | 60281402P | 65281401P | 1000 | |
| 1 | 60281404P | 65281403P | 1250 | |
| 1 | 60281406P | 65281405P | 1600 | |
| 1 | 60281407P | 65281406P | 2000 | |
| 1 | | 65281408P | 2500 | |
| Type 1 female – double bar | | | | |
| 1 | 60391404P | | 2500 | |
| 1 | 60391406P | 65391405P | 3200 | |
| 1 | 60391407P | 65391406P | 4000 | |
| 1 | | 65391408P | 5000 | |
| Type 2 female – single bar | | | | |
| 1 | 60281410P | | 630 | |
| 1 | 60281411P | 65281410P | 800 | |
| 1 | 60281412P | 65281411P | 1000 | |
| 1 | 60281414P | 65281413P | 1250 | |
| 1 | 60281416P | 65281415P | 1600 | |
| 1 | 60281417P | 65281416P | 2000 | |
| 1 | | 65281418P | 2500 | |
| Type 2 female – double bar | | | | |
| 1 | 60391414P | | 2500 | |
| 1 | 60391416P | 65391415P | 3200 | |
| 1 | 60391417P | 65391416P | 4000 | |
| 1 | | 65391418P | 5000 | |
| Type 3 male – single bar | | | | |
| 1 | 60281420P | | 630 | |
| 1 | 60281421P | 65281420P | 800 | |
| 1 | 60281422P | 65281421P | 1000 | |
| 1 | 60281424P | 65281423P | 1250 | |
| 1 | 60281426P | 65281425P | 1600 | |
| 1 | 60281427P | 65281426P | 2000 | |
| 1 | | 65281428P | 2500 | |
| Type 3 male – double bar | | | | |
| 1 | 60391424P | | 2500 | |
| 1 | 60391426P | 65391425P | 3200 | |
| 1 | 60391427P | 65391426P | 4000 | |
| 1 | | 65391428P | 5000 | |

| Pack | Cat. Nos. | | Rating (A) | Image |
|---|-----------|-----------|------------|-------|
| | Aluminium | Copper | | |
| Connection interfaces + vertical elbows – bespoke dimensions (continued)¹ | | | | |
| Please specify required length when ordering (see p. 99 for configuration) | | | | |
| Type 4 male – single bar | | | | |
| 1 | 60281430P | | 630 | |
| 1 | 60281431P | 65281430P | 800 | |
| 1 | 60281432P | 65281431P | 1000 | |
| 1 | 60281434P | 65281433P | 1250 | |
| 1 | 60281436P | 65281435P | 1600 | |
| 1 | 60281437P | 65281436P | 2000 | |
| 1 | | 65281438P | 2500 | |
| Type 4 male – double bar | | | | |
| 1 | 60391434P | | 2500 | |
| 1 | 60391436P | 65391435P | 3200 | |
| 1 | 60391437P | 65391436P | 4000 | |
| 1 | | 65391438P | 5000 | |
| End feed unit – standard 300 mm | | | | |
| Type 1 male – single bar | | | | |
| 1 | 60281110P | | 630 | |
| 1 | 60281111P | 65281110P | 800 | |
| 1 | 60281112P | 65281111P | 1000 | |
| 1 | 60281114P | 65281113P | 1250 | |
| 1 | 60281116P | 65281115P | 1600 | |
| 1 | 60281117P | 65281116P | 2000 | |
| 1 | | 65281118P | 2500 | |
| Type 1 male – double bar | | | | |
| 1 | 60391114P | | 2500 | |
| 1 | 60391116P | 65391115P | 3200 | |
| 1 | 60391117P | 65391116P | 4000 | |
| 1 | | 65391118P | 5000 | |
| Type 2 female – single bar | | | | |
| 1 | 60281100P | | 630 | |
| 1 | 60281101P | 65281100P | 800 | |
| 1 | 60281102P | 65281101P | 1000 | |
| 1 | 60281104P | 65281103P | 1250 | |
| 1 | 60281106P | 65281105P | 1600 | |
| 1 | 60281107P | 65281106P | 2000 | |
| 1 | | 65281108P | 2500 | |
| Type 2 female – double bar | | | | |
| 1 | 60391104P | | 2500 | |
| 1 | 60391106P | 65391105P | 3200 | |
| 1 | 60391107P | 65391106P | 4000 | |
| 1 | | 65391108P | 5000 | |

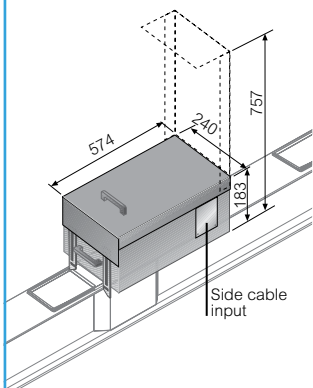
¹ : Standard dimensions 300 + 300 mm single bar and 450 + 450 mm double bar

SCP tap-off boxes : plug-in type 63-630 A

with AC21A disconnection on the door

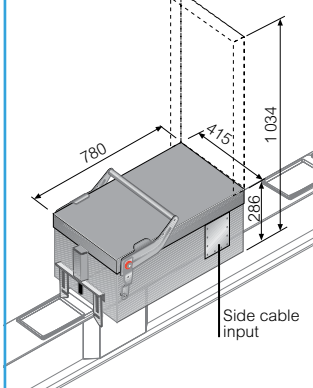
Plug-in boxes can be fitted on any length with tap-off outlets irrespective of rating and conductor material

Cover with AC21A disconnection



From 63 to 160 A

Cover with AC21A disconnection



From 250 to 630 A

With fuse carrier (fuses not included)

| Tap-off rating | Fuse carrier | 3L + N + PE | 3L + N + FE + PE | 3L + 2N + PE |
|----------------|--------------|-------------|------------------|--------------|
| 63 A | CH22 | 65285031P | 65245021P | 65255031P |
| 125 A | NH00 | 65285032P | 65245022P | 65255032P |
| 160 A | NH00 | 65285033P | 65245023P | 65255033P |
| 250 A | NH2 | 65285034P | 65245024P | 65255034P |
| 630 A | NH3 | 65285036P | 65245026P | 65255036P |

With switch disconnector (AC23) and fuse carrier (fuses not included)

| Tap-off rating | Fuse carrier | 3L + N + PE | 3L + N + FE + PE | 3L + 2N + PE |
|----------------|--------------|-------------|------------------|--------------|
| 63 A | NH000 | 65285051P | 65245041P | 65255051P |
| 125 A | NH00 | 65285052P | 65245042P | 65255052P |
| 160 A | NH00 | 65285053P | 65245043P | 65255053P |
| 250 A | NH1 | 65285054P | 65245044P | 65255054P |
| 400 A | NH2 | 65285055P | 65245045P | 65255055P |
| 630 A | NH3 | 65285076P | 65245066P | 65255076P |

Empty version

| Tap-off rating | 3L + N + PE | 3L + N + FE + PE | 3L + 2N + PE |
|----------------|-------------|------------------|--------------|
| 63 A | 65285011P | 65245001P | 65255011P |
| 125 A | 65285012P | 65245002P | 65255012P |
| 160 A | 65285013P | 65245003P | 65255013P |
| 250 A | 65285014P | 65245004P | 65255014P |
| 630 A | 65285016P | 65245006P | 65255016P |

Fully fitted tap-offs c/w 4P Legrand MCCB with rotary handle¹

| Tap-off rating | Breaker rating | 3L + N + PE | 3L + N + FE + PE | 3L + 2N + PE |
|----------------|----------------|---------------|------------------|---------------|
| 63 A | 40 A | 65285013PM4RB | 65245003PM4RB | 65255013PM4RB |
| | 63 A | 65285013PM4RC | 65245003PM4RC | 65255013PM4RC |
| 125 A | 100 A | 65285013PM4RD | 65245003PM4RD | 65255013PM4RD |
| | 125 A | 65285013PM4RE | 65245003PM4RE | 65255013PM4RE |
| 160 A | 160 A | 65285013PM4RF | 65245003PM4RF | 65255013PM4RF |
| 250 A | 200 A | 65285014PM4RG | 65245004PM4RG | 65255014PM4RG |
| | 250 A | 65285014PM4RH | 65245004PM4RH | 65255014PM4RH |
| 630 A | 400 A | 65285016PM4RI | 65245006PM4RI | 65255016PM4RI |
| | 630 A | 65285016PM4RJ | 65245006PM4RJ | 65255016PM4RJ |

Fully fitted tap-offs c/w FREE ISSUE MCCB

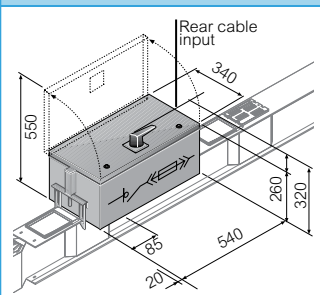
| Tap-off rating | Breaker rating | 3L + N + PE | 3L + N + FE + PE | 3L + 2N + PE |
|----------------|----------------|--------------|------------------|--------------|
| 63 A | 40 A | 65285011PMFB | 65245001PMFB | 65255011PMFB |
| | 63 A | 65285011PMFC | 65245001PMFC | 65255011PMFC |
| 125 A | 100 A | 65285012PMFD | 65245002PMFD | 65255012PMFD |
| | 125 A | 65285012PMFE | 65245002PMFE | 65255012PMFE |
| 160 A | 160 A | 65285013PMFF | 65245003PMFF | 65255013PMFF |
| 250 A | 200 A | 65285014PMFG | 65245004PMFG | 65255014PMFG |
| | 250 A | 65285014PMFH | 65245004PMFH | 65255014PMFH |
| 630 A | 400 A | 65285016PMFI | 65245006PMFI | 65255016PMFI |
| | 630 A | 65285016PMFJ | 65245006PMFJ | 65255016PMFJ |

¹ : For MCCB technical data, see p. 118-125



**SCP tap-off boxes : plug-in type 125-400 A
: bolt-on type 125-1 250 A**

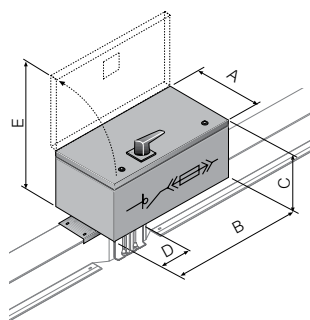
Plug-in tap-offs 125-1250 A (remain live with door open)



| With switch disconnecter (AC23) and fuse carrier (fuses not included) | | | | |
|---|--------------|-------------|------------------|--------------|
| Tap-off rating | Fuse carrier | 3L + N + PE | 3L + N + FE + PE | 3L + 2N + PE |
| 125 A | NH00 | 65282001P | N/A | N/A |
| 250 A | NH1 | 65282002P | N/A | N/A |
| 400 A | NH2 | 65282003P | N/A | N/A |

Bolt-on tap-offs – with switch disconnecter (AC23) and fuse carrier 125 A to 1250 A (fuses not included)

The boxes cannot be installed simultaneously on both sides of the same junction
The bolted boxes are to be installed directly on the junction when the busbar is disconnected and not energised
Dimensions and technical information **p. 103**. Technical data **p. 112-117**



| Busbar system – aluminium | | | | | | |
|---------------------------------|------------------------------------|------------------|-----------|------------|-----------|-----------|
| Tap-off rating/ fuse carrier | Single bar | | | Double bar | | |
| | 630 A 800 A 1000 A 1250 A | 1600 A | 2000 A | 2500 A | 3200 A | 4000 A |
| 125 A NH00 | 65281811P | 65281812P | 65281814P | 65391812P | 65391813P | 65391814P |
| 250 A NH1 | 65281821P | 65281822P | 65281824P | 65391822P | 65391823P | 65291824P |
| 400 A NH2 | 65281831P | 65281832P | 65281834P | 65391832P | 65391833P | 65291834P |
| 630 A NH3 | 65286041P | 65286042P | 65286044P | 65396042P | 65396043P | 65396044P |
| 800 A NH4 | 65281851P | 65281852P | 65281854P | 65391852P | 65391853P | 65291854P |
| 1000 A NH4 | 65281861P | 65281862P | 65281864P | 65391862P | 65391863P | 65291864P |
| 1250 A NH4 | 65281871P | 65281872P | 65281874P | 65391872P | 65391873P | 65291874P |
| Busbar system – copper | | | | | | |
| Tap-off rating/ fuse carrier | Single bar | | | Double bar | | |
| | 800 A 1000 A 1250 A | 1600 A 2000 A | 2500 A | 3200 A | 4000 A | 5000 A |
| 125 A NH00 | 65281811P | 65281812P | 65281814P | 65391812P | 65391813P | 65391814P |
| 250 A NH1 | 65281821P | 65281822P | 65281824P | 65391822P | 65391823P | 65391824P |
| 400 A NH2 | 65281831P | 65281832P | 65281834P | 65391832P | 65391833P | 65391834P |
| 630 A NH3 | 65286041P | 65286042P | 65286044P | 65396042P | 65396043P | 65396044P |
| 800 A NH4 | 65281851P | 65281852P | 65281854P | 65391852P | 65391853P | 65391854P |
| 1000 A NH4 | 65281861P | 65281862P | 65281864P | 65391862P | 65391863P | 65391864P |
| 1250 A NH4 | 65281871P | 65281872P | 65281874P | 65391872P | 65391873P | 65391874P |

Dimensions of the box

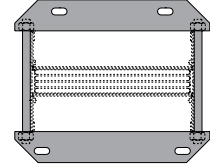
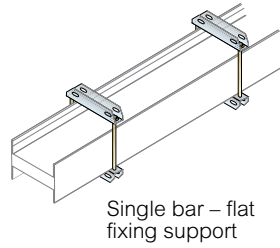
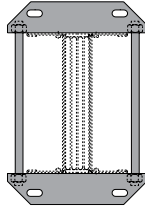
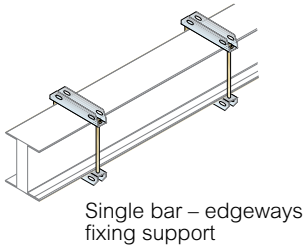
| Box rating | 125-400 A | 630 A | 800-1250 A |
|------------|-----------|-------|------------|
| (A) mm | 365 | 400 | 450 |
| (B) mm | 630 | 750 | 1050 |
| (C) mm | 270 | 280 | 300 |
| (D) mm | 95 | 115 | 115 |
| (E) mm | 635 | 680 | 750 |

| | | |
|---|-----------|-------|
| Rated insulating AC voltage | Ui (V) | 1000 |
| Rated impulse withstand voltage | Uimp (kV) | 12 |
| Type of rated duty | – | AC23A |
| Rated conditional short circuit current | (kA) | 100 |

CEI EN 60947-3

SCP super compact busbar

fixing supports for horizontal installation



Dimensions and technical information p. 104

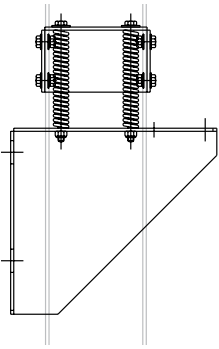
Fixing supports for fixing the busbar to the structure of the building

| Pack | Cat. Nos. | | Suspension brackets for edgeways installation |
|------|------------------|---------------|---|
| | Aluminium busbar | Copper busbar | |
| 1 | 65202001 | 65202001 | Single bar Height : 210 mm Rating (A) 630 to 1250 |
| 1 | | 65202001 | 800 to 1250 |
| 1 | 65202002 | 65202002 | Height : 250 mm Rating (A) 1600 |
| 1 | | 65202002 | 1600 to 2000 |
| 1 | 65202004 | 65202004 | Height : 300 mm Rating (A) 2000 |
| 1 | | 65202004 | 2500 |
| | | | Double bar Height : 460 mm Rating (A) 2500 |
| 1 | 65222002 | 65222002 | 3200 |
| 1 | | 65222002 | Height : 520 mm Rating (A) 3200 |
| 1 | 65222003 | 65222003 | 4000 |
| 1 | | 65222003 | Height : 560 mm Rating (A) 4000 |
| 1 | 65222004 | 65222004 | 5000 |
| 1 | | 65222004 | |

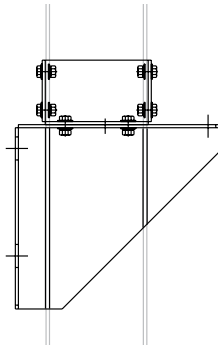
| Pack | Cat. Nos. | | Suspension brackets for flat installation |
|------|------------------|---------------|---|
| | Aluminium busbar | Copper busbar | |
| 1 | 65202001 | 65202001 | Single bar Height : 190 mm Rating (A) 630 to 1250 |
| 1 | | 65202001 | 800 to 1250 |
| 1 | 65202013 | 65202013 | Height : 315 mm Rating (A) 1600 to 2000 |
| 1 | | 65202013 | 1600 to 2500 |
| | | | Double bar Height : 430 mm Rating (A) 2500 |
| 1 | 65202112 | 65202112 | 3200 |
| 1 | | 65202112 | Height : 490 mm Rating (A) 3200 |
| 1 | 65202113 | 65202113 | 4000 |
| 1 | | 65202113 | Height : 530 mm Rating (A) 4000 |
| 1 | 65202114 | 65202114 | 5000 |
| 1 | | 65202114 | |

SCP super compact busbar

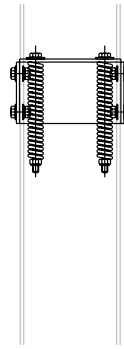
fixing supports for vertical installation



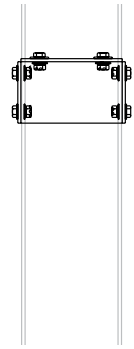
Fixing support with bracket and springs



Fixing support with bracket



Fixing support with springs



Fixing support - bracket only

 **Dimensions and technical information p. 105-106**

Fixing supports for fixing the busbar to the structure of the building
For vertical installations and special applications

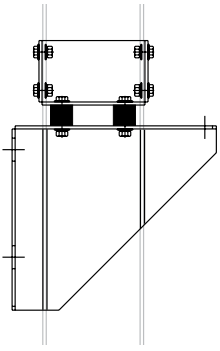
| Pack | Cat. Nos. | | Fixing supports with bracket and springs |
|------|-----------|----------|--|
| | Aluminium | Copper | |
| 1 | 65213711 | | Single bar Rating (A) 630 to 1250 |
| 1 | 65213712 | | |
| 1 | | 65213711 | 1600 |
| 1 | | 65213712 | 800 to 1250 |
| 1 | 65213714 | | 1 600 to 2 000 |
| 1 | | 65213714 | 2 000 |
| 1 | | | 2 500 |
| | | | Double bar Rating (A) |
| 1 | 65213742 | | 2 500 |
| 1 | | 65213742 | 3 200 |
| 1 | 65213743 | | 3 200 |
| 1 | | 65213743 | 4 000 |
| 1 | 65213744 | | 4 000 |
| 1 | | 65213744 | 5 000 |

| Pack | Cat. Nos. | | Fixing supports with springs |
|------|-----------|----------|--|
| | Aluminium | Copper | |
| 1 | 65213701 | | Single bar Rating (A) 630 to 1250 |
| 1 | | 65213701 | |
| 1 | 65213702 | | 800 to 1250 |
| 1 | | 65213702 | 1 600 |
| 1 | 65213704 | | 1 600 to 2 000 |
| 1 | | 65213704 | 2 000 |
| 1 | | | 2 500 |
| | | | Double bar Rating (A) |
| 1 | 65213732 | | 2 500 |
| 1 | | 65213732 | 3 200 |
| 1 | 65213733 | | 3 200 |
| 1 | | 65213733 | 4 000 |
| 1 | 65213734 | | 4 000 |
| 1 | | 65213734 | 5 000 |

| Pack | Cat. Nos. | | Fixing supports with bracket |
|------|-----------|----------|---|
| | Aluminium | Copper | |
| 1 | 65213721 | | Single bar – anti-seismic rated Rating (A) 630 to 1250 |
| 1 | | 65213721 | |
| 1 | 65213722 | | 800 to 1250 |
| 1 | | 65213722 | 1 600 |
| 1 | 65213724 | | 1 600 to 2 000 |
| 1 | | 65213724 | 2 000 |
| 1 | | | 2 500 |
| | | | Double bar – not anti-seismic rated Rating (A) |
| 1 | 65213752 | | 2 500 |
| 1 | | 65213752 | 3 200 |
| 1 | 65213753 | | 3 200 |
| 1 | | 65213753 | 4 000 |
| 1 | 65213754 | | 4 000 |
| 1 | | 65213754 | 5 000 |
| | | | Double bar – anti-seismic rated Rating (A) |
| 1 | 65213792 | | 2 500 |
| 1 | | 65213792 | 3 200 |
| 1 | 65213793 | | 3 200 |
| 1 | | 65213793 | 4 000 |
| 1 | 65213794 | | 4 000 |
| 1 | | 65213794 | 5 000 |

| Pack | Cat. Nos. | | Fixing supports – bracket only |
|------|-----------|----------|--|
| | Aluminium | Copper | |
| 1 | 65213761 | | Single bar Rating (A) 630 to 1250 |
| 1 | | 65213761 | |
| 1 | 65213762 | | 800 to 1250 |
| 1 | | 65213762 | 1 600 |
| 1 | 65213764 | | 1 600 to 2 000 |
| 1 | | 65213764 | 2 000 |
| 1 | | | 2 500 |
| | | | Double bar Rating (A) |
| 1 | 65213772 | | 2 500 |
| 1 | | 65213772 | 3 200 |
| 1 | 65213773 | | 3 200 |
| 1 | | 65213773 | 4 000 |
| 1 | 65213774 | | 4 000 |
| 1 | | 65213774 | 5 000 |

SCP super compact busbar fixing supports for vertical installation (continued)



Fixing support for Naval applications

Dimensions and technical information p. 105-106

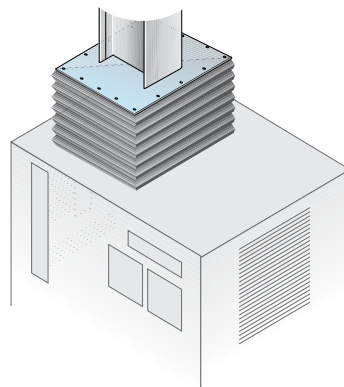
Fixing supports for fixing the busbar to the structure of the building

| Pack | Cat. Nos. | | Rating (A) |
|------|-----------|----------|------------|
| | Aluminium | Copper | |
| 1 | 65213782 | | 2 500 |
| 1 | | 65213782 | 3 200 |
| 1 | 65213783 | | 3 200 |
| 1 | | 65213783 | 4 000 |
| 1 | 65213784 | | 4 000 |
| 1 | | 65213784 | 5 000 |

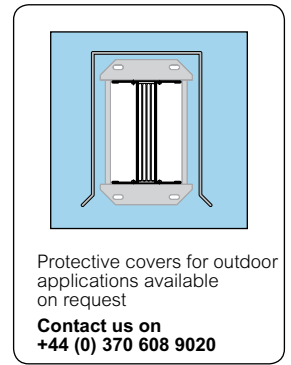
Fixing supports for naval applications

Double bar

SCP super compact busbar protective bellows



Protective bellows – single bar



Protective covers for outdoor applications available on request

**Contact us on
+44 (0) 370 608 9020**

Dimensions and technical information p. 107

High power busbar from 630 A to 4 000 A with aluminium alloy conductors and from 800 A to 5 000 A with copper conductors SCP complies with IEC EN 61439-6

| Pack | Cat. Nos. | | Rating (A) |
|------|-----------|----------|----------------|
| | Aluminium | Copper | |
| 1 | SF766040 | | 630 to 2 000 |
| 1 | | SF766040 | 800 to 2 500 |
| 1 | SF927140 | | 2 500 to 4 000 |
| 1 | | SF927140 | 3 200 to 5 000 |

Protective bellows

Recommended for protection of the interface connection on panel boards, dry-type transformer with enclosure and oil-type transformers. For EdM cast resin transformers, custom-made connections are available upon request (see p. 83)

Single bar

Rating (A)
630 to 2 000
800 to 2 500

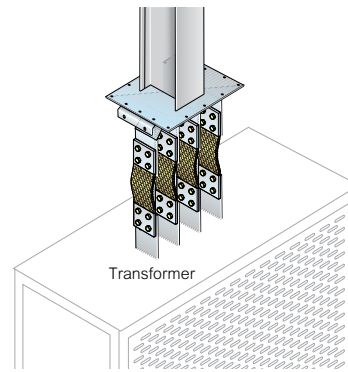
Double bar

Rating (A)
2 500 to 4 000
3 200 to 5 000

SCP super compact busbar transformer connections



Flexible braid connection



Installation example



Dimensions and technical information p. 108

High power busbar from 630 A to 4 000 A with aluminium alloy conductors and from 800 A to 5 000 A with copper conductors
SCP complies with IEC EN 61439-6

| Pack | Cat. Nos. | | Flexible braid connections | |
|------|---|----------|----------------------------|-------------------------|
| | Aluminium | Copper | Rating (A) | No. of braids per phase |
| | Length : 300 - 450 mm | | | |
| 1 | FC100010 | | 630 | 1 |
| 1 | FC100010 | FC100010 | 800 | 1 |
| 1 | FC200010 | FC200010 | 1000 | 1 |
| 1 | FC300010 | FC300010 | 1250 | 1 |
| 1 | FC500010 | FC500010 | 1600 | 1 |
| 1 | FC600010 | FC600010 | 2000 | 1 |
| 1 | FC400010 | FC400010 | 2500 | 2 |
| 1 | FC500010 | FC500010 | 3200 | 2 |
| 1 | FC600010 | FC600010 | 4000 | 2 |
| 1 | | FC700010 | 5000 | 2 |
| | Length : 451 - 600 mm | | | |
| | When ordering, please specify hole dimensions on transformer side (A, B, Ø D) and length L (see p. 108) | | | |
| 1 | FC100020 | | 630 | 1 |
| 1 | FC100020 | FC100020 | 800 | 1 |
| 1 | FC200020 | FC200020 | 1000 | 1 |
| 1 | FC300020 | FC300020 | 1250 | 1 |
| 1 | FC500020 | FC500020 | 1600 | 1 |
| 1 | FC600020 | FC600020 | 2000 | 1 |
| 1 | FC400020 | FC400020 | 2500 | 2 |
| 1 | FC500020 | FC500020 | 3200 | 2 |
| 1 | FC600020 | FC600020 | 4000 | 2 |
| 1 | | FC700020 | 5000 | 2 |

| Pack | Cat. Nos. | | Flexible braid connections (continued) | |
|------|------------------------------|----------|--|-------------------------|
| | Aluminium | Copper | Rating (A) | No. of braids per phase |
| | Length : 601 - 750 mm | | | |
| 1 | FC100030 | | 630 | 1 |
| 1 | FC100030 | FC100030 | 800 | 1 |
| 1 | FC200030 | FC200030 | 1000 | 1 |
| 1 | FC300030 | FC300030 | 1250 | 1 |
| 1 | FC500030 | FC500030 | 1600 | 1 |
| 1 | FC600030 | FC600030 | 2000 | 1 |
| 1 | FC400030 | FC400030 | 2500 | 2 |
| 1 | FC500030 | FC500030 | 3200 | 2 |
| 1 | FC600030 | FC600030 | 4000 | 2 |
| 1 | | FC700030 | 5000 | 2 |
| | Length : over 750 mm | | | |
| 1 | FC100099 | | 630 | 1 |
| 1 | FC100099 | FC100099 | 800 | 1 |
| 1 | FC200099 | FC200099 | 1000 | 1 |
| 1 | FC300099 | FC300099 | 1250 | 1 |
| 1 | FC500099 | FC500099 | 1600 | 1 |
| 1 | FC600099 | FC600099 | 2000 | 1 |
| 1 | FC400099 | FC400099 | 2500 | 2 |
| 1 | FC500099 | FC500099 | 3200 | 2 |
| 1 | FC600099 | FC600099 | 4000 | 2 |
| 1 | | FC700099 | 5000 | 2 |

SCP super compact busbar

technical information

General features

SCP complies with IEC EN 61439-6

The rated current of Zucchini busbar trunking systems is always rated at the average ambient temperature of 40°C against the 35°C required by the standard

The outer casing of the SCP range consists of four C-ribbed section bars, bordered and riveted (thickness 1-5 mm), with excellent mechanical, electric and heat loss efficiency

The sheet metal is manufactured from galvanised steel, treated according to UNI EN 10327 and painted with RAL 7035 resins with a high resistance to chemical agents

The standard degree of protection is IP 55 and with certain accessories (see p. 82), it can be installed outdoors

The busbar conductors have a rectangular cross-section with rounded corners. There are two versions :

- Electrolytic copper ETP 99.9 UNI EN13601

- Aluminum alloy treated over the entire surface with 5 galvanic processes (copper plating + tin plating)

The insulation between bars is ensured by a double sheath made with polyester film (total thickness 0-4 mm) Class B, Class F (155° C) thermal resistance available on request – contact us on +44 (0) 370 608 9020

All plastic components have a V1 self-extinguishing degree (as per UL94), are flame retardant and comply with the glow-wire test according to standards. The SCP range is halogen free

In order to facilitate storage and reduce installation time, the straight lengths and system components of the SCP range are supplied with a pre-installed monobloc for fast, easy and secure connection of the system

The junction contact is ensured by two silver-plated copper plates for each phase, insulated with red Class F thermoset plastic material

The monobloc has shearhead bolts : after tightening the nuts with a standard wrench, the outer head will break at the correct torque value, giving you the certainty that the connection has been made properly to guarantee safety and maximum performance over time

Finally, in order to completely verify the insulation level, every component with a monobloc undergoes an insulation test (phase-phase, phase-PE) at the factory with a test voltage of 5 000 V

Certificates

SCP has been given Type-Approval Certifications by the most prestigious Electro-technical agencies :

- Certificate of Compliance with Standards IEC EN 61439-6 (ACAE - LOVAG)
- RINA Type-Approval (Italian Register of Shipping)
- ABS Type-Approval (American Bureau of Standard)
- GOST Type-Approval (Russia)
- REI120 fire resistance measurements
- Noise measurements (CESI)
- Fire resistance measurements with Fire Barrier
- Electromagnetic emissions measurements
- Mechanical vibration resistance measurements (Dynamic Test - ENEL HYDRO)



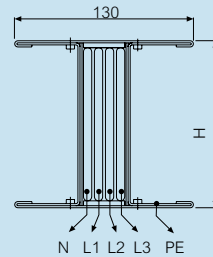
Standard versions

SCP line with 4 conductors 3L + N + PE, 3L + PEN, 3L + FE + PE

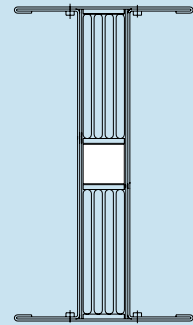
Note : for dimension H, see technical data section p. 112-117

PE : Protection earth

FE : Functional earth (clean earth)



single bar



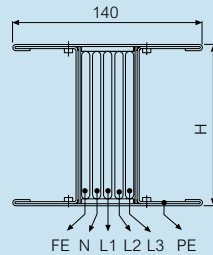
double bar

SCP5 line with 5 conductors 3L + N + FE + PE

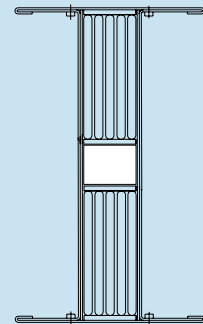
Note : For dimension H, see technical data section p. 112-117

PE : Protection earth

FE : Functional earth (clean earth)



single bar



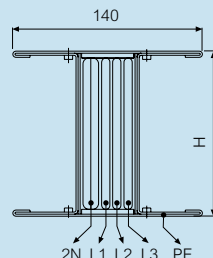
double bar

SCP2N 200% neutral line 3L + 2N + PE

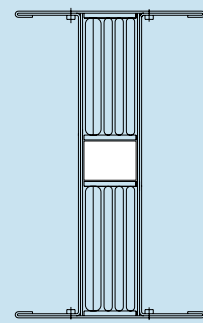
Note : For dimension H, see technical data section p. 112-117

PE : Protection earth

FE : Functional earth (clean earth)



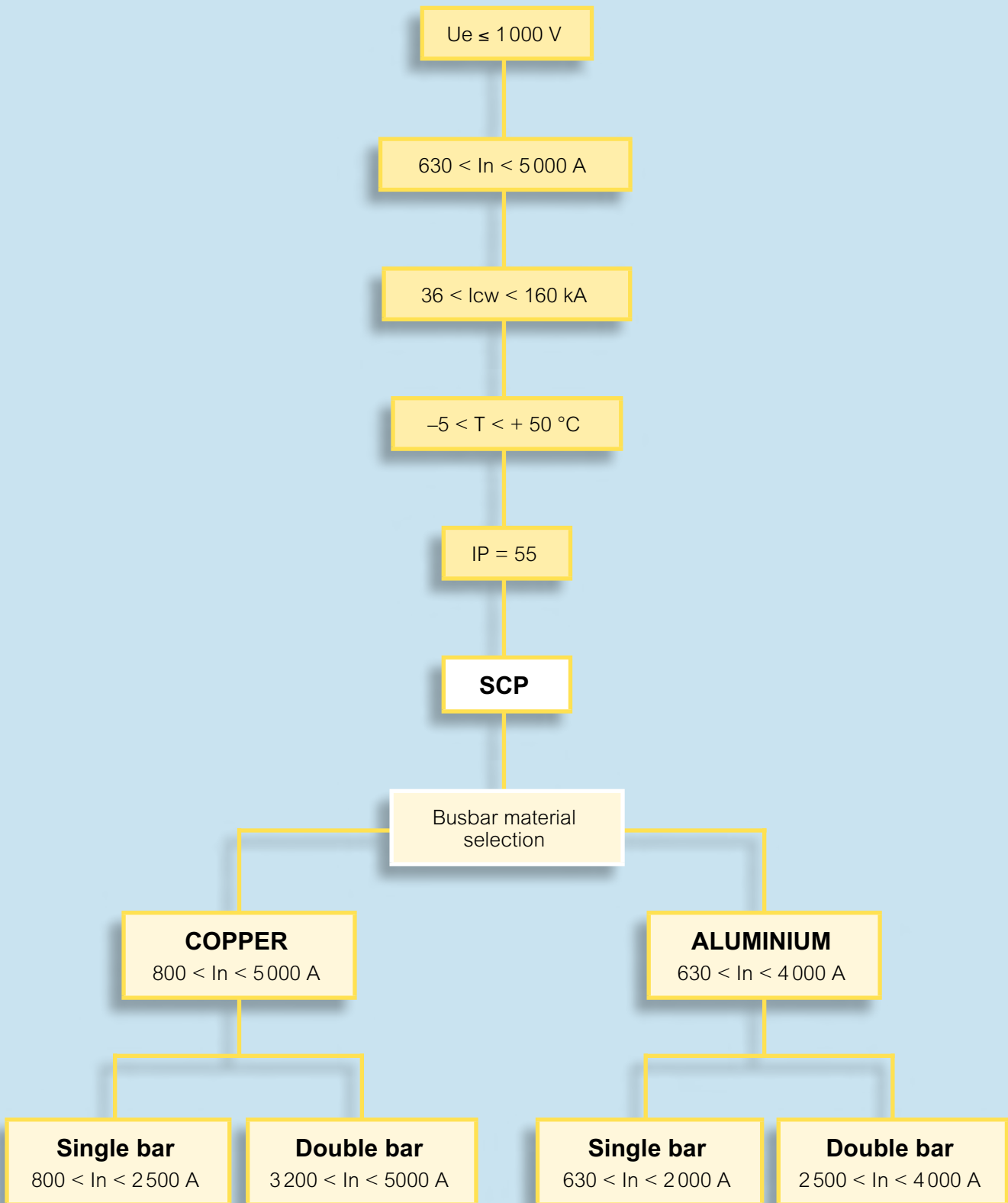
single bar



double bar

Special versions are available on request, contact us on +44 (0) 370 608 9020

■ Electric design criteria



SCP super compact busbar

technical information

■ Joule effect losses in busbars

Losses due to the Joule effect are essentially caused by the electrical resistance of the busbar
 Lost energy is transformed into heat and contributes to the heating of the conduit of the environment
 The calculation of power loss is useful data for correct sizing of the building air conditioning system

Three-phase regime losses are :

$$P_j = \frac{3 \cdot R_t \cdot I_b^2 \cdot L}{1000}$$

In single-phase regime :

$$P_j = \frac{2 \cdot R_t \cdot I_b^2 \cdot L}{1000}$$

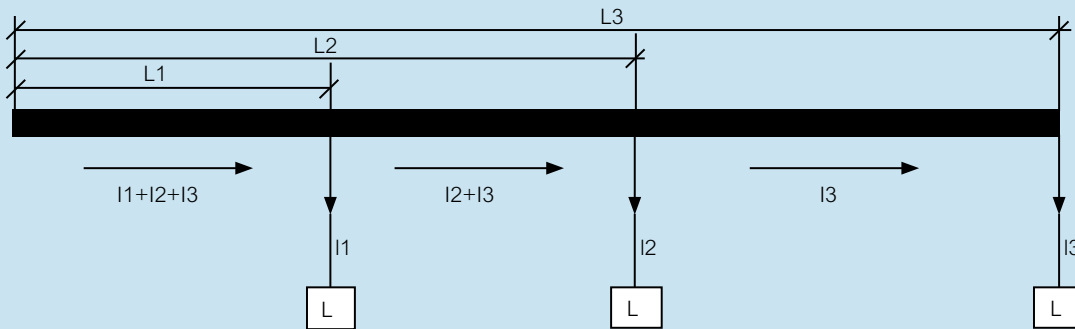
Where :

- I_b = utilisation current (A)
- R_t = phase resistance for unit of length of the busbar trunking system, measured at thermal regime (mΩ/m)
- L = busbar length (m)

For accurate calculation, losses must be assessed trunk by trunk, taking into account the transiting currents ; for example, in the case of the distribution of the loads represented in the table below

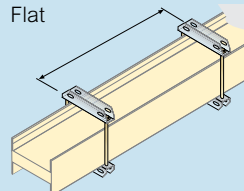
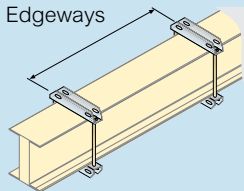
| | Length | Transiting current | Losses |
|-----------|-----------|--------------------|------------------------------------|
| 1st trunk | L1 | $I_1+I_2+I_3$ | $P_1 = 3R_t L_1 (I_1+I_2+I_3)^2$ |
| 2nd trunk | L_2-L_1 | I_2+I_3 | $P_2 = 3R_t (L_2-L_1) (I_2+I_3)^2$ |
| 3rd trunk | L_3-L_2 | I_3 | $P_3 = 3R_t (L_3-L_2) (I_3)^2$ |

Total losses in the busbar trunking system $P_t = P_1 + P_2 + P_3$



■ Losses based on the installation method

Thermal dispersion, rating and IP protection degree are independent from the type of installation (edgeways, flat, vertical)
 This means that it is possible to install the SCP busbar trunking system as preferred, without having to consider a possible system downgrade



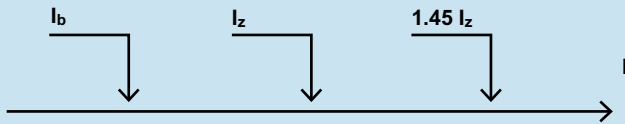
■ Overload protection

Busbar overload protection is ensured following the same criteria used for cables. It will be necessary to check the relationship :

$$I_b \leq I_n \leq I_z$$

Where :

- I_b = circuit utilisation current
- I_n = switch rated current
- I_z = rating at permanent cable regime



The I_b utilisation current in a 3 phase system is calculated based on the following formula :

$$I_b = \frac{P_t \cdot \alpha \cdot \beta \cdot d}{\sqrt{3} \cdot U_e \cdot \cos\varphi_{\text{medium}}} \quad (\text{A})$$

Where :

- P_t = sum of the active powers of the loads installed (W)
- d = power supply factor equal to 1 if the trunking is :
 - only powered from one side
 - powered from the centre or from both ends at the same time
- U_e = operating voltage in (V)
- $\cos\varphi_m$ = average power factor of the loads
- I_b = utilisation current (A)
- α = diversity coefficient of the loads (.)
- β = coefficient of utilisation of the loads (.)

The ambient temperature where the busbar trunking system is installed impacts on its rating

During the design stages, it is necessary to multiply the rating value at the reference temperature by a correction coefficient referred to the final operating temperature

All Zucchini products have been sized and tested for an average ambient temperature of 40 °C. For installation in environments with average daily temperatures lower than 40 °C, the rated current of the busbar must be multiplied by a K_t factor, which is higher than the unit for temperatures lower than 40 °C, and lower than the unit if the ambient temperature is higher than 40 °C

$$I_z = I_{z0} \cdot K_t$$

Where :

- I_{z0} is the current that the busbar trunking system can carry for an indefinite time at its reference temperature (40 °C)
- K_t is the correction coefficient for ambient temperature values other than the reference temperature, as shown in the following table

K_t correction coefficient for ambient temperature other than 40°C

| Ambient temperature (°C) | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
|---------------------------------|------|------|------|------|-------|----|-------|------|------|------|
| k_t thermal correction factor | 1.15 | 1.12 | 1.08 | 1.05 | 1.025 | 1 | 0.975 | 0.95 | 0.93 | 0.89 |

Selection of the busbar trunking system based on voltage drop

If the line is particularly long (> 100 m), it will be necessary to check the value of the voltage drop. For systems with power factor (cosφm) not lower than 0.8 the voltage loss can be calculated using the following formulas :

Three phase system

$$\Delta v = \frac{b \cdot \sqrt{3} \cdot I_b \cdot L \cdot (R_t \cdot \cos\phi_m + x \cdot \sin\phi_m)}{1000}$$

Single phase system

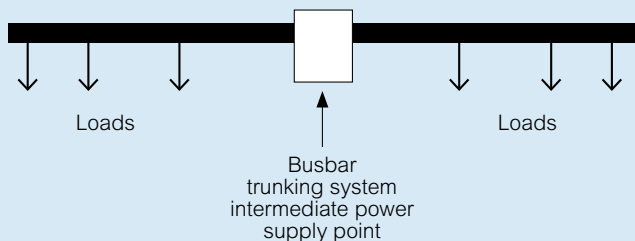
$$\Delta v = \frac{b \cdot 2 \cdot I_b \cdot L \cdot (R_t \cdot \cos\phi_m + x \cdot \sin\phi_m)}{1000}$$

The percentage voltage drop can be obtained from :

$$\Delta v\% = \frac{\Delta v}{V_r} \cdot 100$$

Where Vr is the system rated voltage

In order to limit the voltage drop in very long busbar trunking systems, it is possible to allow for a power supply at an intermediate position, rather than at the terminal point



Calculation of the voltage drop with loads not evenly distributed

If the load cannot be considered evenly distributed, the voltage drop may be determined more accurately using the relationships shown below

For the distribution of three phase loads, the voltage drop is calculated using the following formula, on the assumption (generally verified) that the section of busbar trunking is consistent :

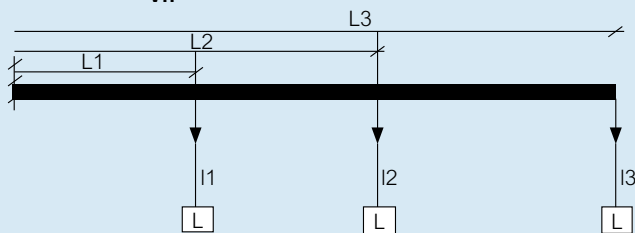
$$\Delta v = \sqrt{3} [R_t (I1L1 \cos\phi1 + I2L2 \cos\phi2 + I3L3 \cos\phi3) + x (I1L1 \sin\phi1 + I2L2 \sin\phi2 + I3L3 \sin\phi3)]$$

In general terms this becomes :

$$\Delta v = \frac{\sqrt{3} (R_t \cdot \sum li \cdot Li \cdot \cos\phi mi + x \cdot \sum li \cdot Li \cdot \sin\phi mi)}{1.000}$$

If the three phase system and the power factor are not lower than cosφ = 0.7, the voltage loss may be calculated using the voltage drop coefficient shown in the table opposite

$$\Delta v\% = 2b \cdot \frac{k \cdot I_b \cdot L}{V_n} \cdot 100$$



Calculation of the voltage drop with loads not evenly distributed (continued)

The current distribution factor 'b' depends on how the circuit is fed and on the distribution of the electric loads along the busbar

The distribution factor of the current 'b'

| | | |
|----------------|--|--|
| b = 1 | Supplies at one end and load at the end of the line | |
| b = 1/2 | Supplies at one end and with load evenly distributed | |
| b = 1/4 | Supplies at both ends and with load evenly distributed | |
| b = 1/4 | Central supply with loads at both ends | |
| b = 1/8 | Central supply with load evenly distributed | |

Example : SCP 2000 A AI for rising main feed

- I_b** = 1600 A operating current
 - b** = 1/2 load evenly distributed
 - k** = 27.3, see technical data table, p. 112-117 (SCP 2000 A AI cosφ = 0.85)
 - cosφ** = 0.85
 - L** = 100 m line length
 - V_n** = 400 V operating voltage
- $$\Delta v\% = 1 \cdot \frac{27.3 \cdot 10^{-6} \cdot 1600 \cdot 100}{400} \cdot 100 = 1.09\%$$

Legend:

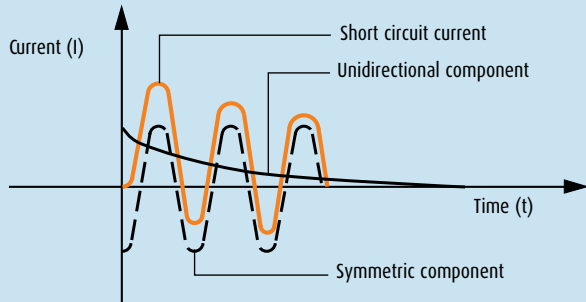
- I_b** = the current that supplies the busbar (A)
- V_n** = the voltage power supply of the busbar (V)
- L** = the length of the busbar (m)
- Δv%** = the voltage drop percentage
- b** = the distribution factor of the current
- k** = corresponding voltage drop factor a cosφ (V/m/A) (see technical data table, p. 112-117)
- cosφ m** = average power factor of the loads
- x** = phase reactance by unit of length of the busbar (mΩ/m)
- R_t** = phase resistance by unit of length of the busbar (mΩ/m)
- cosφ mi** = i-th load average power factor
- li** = i-th load current (A)
- Li** = distance of the i-th load from the origin of the busbar trunking system

Short circuit withstand

The CEI 64-8 standard indicates that, for the protection of the circuits of the system, it is necessary to allow for devices aimed at interrupting short circuit currents before these become dangerous due to the thermal and mechanical effects generated in the conductors and the connections. In order to size the electric system and the protection devices correctly, it is necessary to know the value of the estimated short circuit current at the point where this is to be created. This value enables selection of the correct protection devices based on their own tripping and closing powers, and to check the resistance to electro-dynamic stress of the busbar supports installed in control panels, and/or of the busbar trunking systems

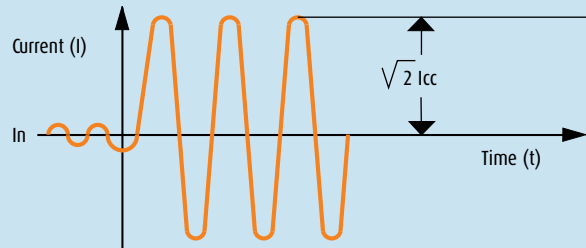
Characterisation of short circuit current

The estimated short circuit current at a point of the user system is the current that would occur if at the considered point a connection of negligible resistance was created between conductors under voltage. The magnitude of this current is an estimated value that represents the worst possible condition (null fault impedance, tripping time long enough to enable the current to reach the maximum theoretical values). In reality, the short circuit always occurs with significantly lower effective current values



The intensity of the estimated short circuit current essentially depends on the following factors :

- power of the cabin TRANSFORMER, meaning that the higher the power, the higher the current
- length of the line upstream the fault, in the sense that the longer the line, the lower the current



In three phase circuits with neutral it is possible to have three different types of short circuit :

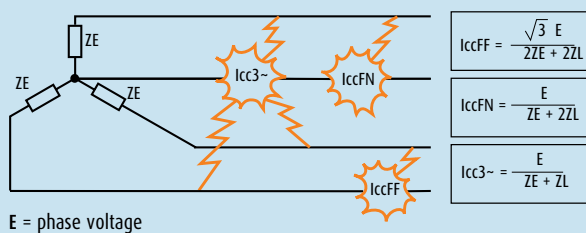
- phase-phase
- phase-neutral
- balanced three phase (most demanding condition)

The formula for the calculation of the symmetric component is :

$$I_{cc} = \frac{E}{Z_E + Z_L}$$

Where :

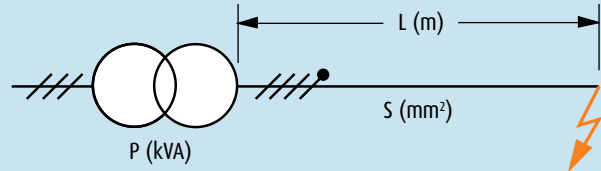
- E = the phase voltage
- Z_E = the secondary equivalent impedance of the TRANSFORMER measured between the phase and the neutral
- Z_L = the impedance of the phase conductor only



Short circuit withstand (continued)

Analytical determination of short circuit currents

In order to calculate the value of the estimated short circuit current at any point of the circuit, it is sufficient to apply the formulas shown below, knowing the impedance calculated at the origin of the system up to the point being assessed. In the formulas shown below, the value of the short circuit power is considered infinite and the short circuit impedance is equal to 0. This makes it possible to define short circuit current values higher than the actual ones, but generally acceptable



| | |
|---|---|
| Line resistance $RL = r \cdot L$ | RL = resistance of the line upstream (m) r = specific line resistance (m/m) L = upstream line length (m) |
| Line reactance $XL = x \cdot L$ | XL = upstream line reactance (m) x = specific line reactance (m/m) |
| TRANSFORMER resistance $RE = \frac{1000 P_{cu}}{3 I_n^2}$ | RE = transformer secondary equivalent resistance (m) P_{cu} = transformer COPPER losses (W) I_n = transformer rated current (A) |
| TRANSFORMER impedance $ZE = \frac{V_{cc}\% V^2c}{100 P}$ | ZE = transformer secondary equivalent impedance (m) V_c = phase voltage (V) V_{cc}% = percentage short circuit voltage P = transformer power (kVA) |
| TRANSFORMER reactance $XE = \sqrt{ZE^2 - RE^2}$ | XE = transformer secondary equivalent reactance (m) |
| Short circuit impedance $Z_{cc} = \sqrt{(RL + RE)^2 + (XL + XE)^2}$ | Z_{cc} = total short circuit impedance (m) |
| Estimated short circuit current $I_{cc} = \frac{V_c}{\sqrt{3} Z_{cc}}$ | I_{cc} = symmetric component of the short circuit current |

| Aluminium | | | | |
|------------|--|----------------------------|--|----------------------------|
| Rating (A) | kA 3 phase I _{ccw} ¹ | kA 3 phase I _{pk} | kA 1 phase I _{ccw} ¹ | kA 1 phase I _{pk} |
| 630 | 36 | 76 | 22 | 48 |
| 800 | 42 | 88 | 25 | 55 |
| 1000 | 50 | 110 | 30 | 66 |
| 1250 | 75 | 165 | 45 | 99 |
| 1600 | 80 | 176 | 48 | 106 |
| 2000 | 80 | 176 | 48 | 106 |
| 2500 | 150 | 330 | 90 | 198 |
| 3200 | 160 | 352 | 96 | 211 |
| 4000 | 160 | 352 | 96 | 211 |

| Copper | | | | |
|------------|--|----------------------------|--|----------------------------|
| Rating (A) | kA 3 phase I _{ccw} ¹ | kA 3 phase I _{pk} | kA 1 phase I _{ccw} ¹ | kA 1 phase I _{pk} |
| 800 | 45 | 95 | 27 | 57 |
| 1000 | 50 | 110 | 30 | 66 |
| 1250 | 60 | 132 | 36 | 79 |
| 1600 | 85 | 187 | 51 | 112 |
| 2000 | 88 | 194 | 53 | 116 |
| 2500 | 88 | 194 | 53 | 116 |
| 3200 | 170 | 374 | 102 | 224 |
| 4000 | 176 | 387 | 106 | 232 |
| 5000 | 176 | 387 | 106 | 232 |

1 : I_{ccw} for 1 second

SCP super compact busbar

technical information

■ Harmonics

In a distribution system, currents and voltages should have a perfectly sinusoidal shape. However, in practice the equipment contains electric devices such as changeover devices or dimmers that make the load not linear

The currents absorbed, although at regular intervals and with frequencies equal to that of the rated voltage, sometimes have a non-sinusoidal wave form, which has the following negative effects :

- worsening of the power factor
- heating of the neutral
- additional losses in electric machinery (transformers and motors)
- instable operation of the protection elements (thermal magnetic and earth leakage circuit breakers)

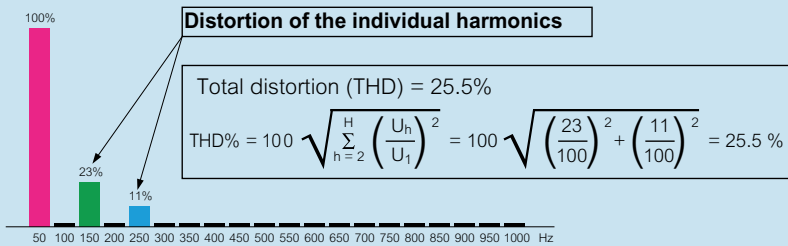
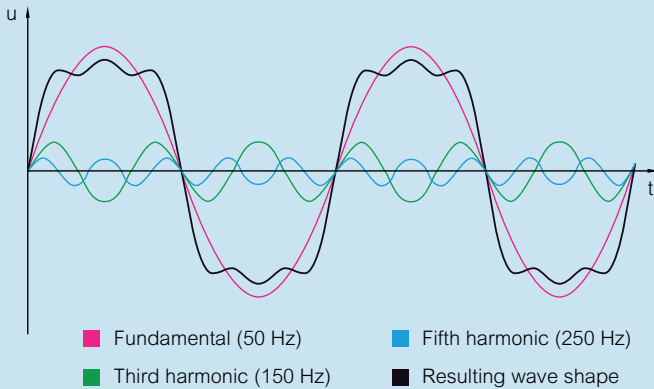
In industrial plants these conditions have been occurring for a long time. However, they are now occurring more and more in service sector distribution systems, where, from backbone distribution (which uses 3 phase lines), single phase loads are often distributed, which contributes to increasing the unbalance of the electric system

Each type of non-sinusoidal periodical wave may be split into a more or less large number of sinusoids (called harmonic components)

A deformed current at a frequency of 50 Hz, like the example represented by the magenta line on the figure, consists of many sinusoidal currents with frequency of 50 Hz (fundamental), 100 Hz (second harmonic component), 150 Hz (third harmonic), and so on

The presence of current harmonics represents an important problem, causing overload conditions both on phase conductors, and on any neutral conductor, and results in the reduction of the conductor's permitted load

Measurement of harmonic distortion carried out with a network analyser



Choice of rating when in the presence of harmonics

When in the presence of harmonics, and when using the chosen I_{nt} rated current, the SCP busbar to be used shall have the rating specified in the table below

| Rated current (A) | 630 A | 800 A | 1000 A | 1250 A | 1600 A | 2000 A | 2500 A | 3200 A | 4000 A | 5000 A |
|------------------------------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| SCP busbar to be used | | | | | | | | | | |
| THD ≤ 15% | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3200 | 4000 | 5000 |
| 15% < THD ≤ 33% | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3200 | 4000 | 5000 | – |
| THD > 33% | 1000 | 1250 | 1600 | 2000 | 2500 | 3200 | 4000 | 5000 | – | – |

Note

200% neutral versions are available for systems with harmonics present on the neutral

■ **Measurement of magnetic induction**

Since 1994, with a study carried out by Chalmers University of Technology of Goteborg, Legrand has taken an interest in the issues linked with the electromagnetic emissions in their Zucchini products, keeping at the forefront of the latest legislative directive, which has only recently imposed the quality standards that were already widely met by Zucchini busbar trunking systems

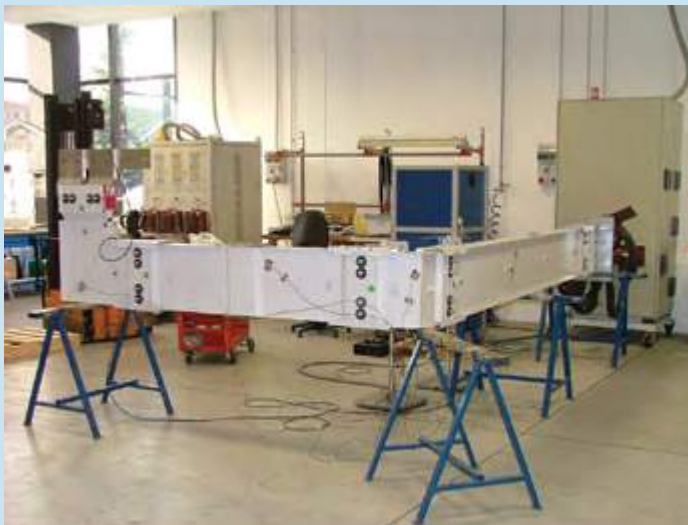
The ACAE (Association for the Certification of Electric and Electronic Equipment) certified internal laboratory is capable of carrying out the measurement of the electromagnetic emissions of busbar trunking systems. This measurement is nowadays one of the tests to which the products are subjected before they reach the market

The busbar trunking system in itself already minimises electromagnetic emissions, which are much lower when compared with those generated by cables with the same current intensity

It is a well-known fact that the electromagnetic field is the result of the superimposition of two fields : the electric and the magnetic field. The first is totally shielded by the equipotential metal casing of the busbar trunking system, while the second is very low due to the intrinsic characteristic of the busbar trunking system. More precisely, due to the fact that busbar conductors are extremely close inside the busbar package, the three busbar conductors, crossed by three balanced currents displaced by 120°, induce fields that tend to overlap, cancelling one another, therefore resulting in an extremely low external impact

However, also in conditions of imperfect current balance, the metal casing of the busbar trunking system is capable of reducing most of the magnetic field, which otherwise would spread through the surrounding environment

Testing at Legrand's laboratory in Italy for the approval certification of Zucchini SCP busbar trunking systems



The laboratory tests carried out show how the magnetic induction emitted by SCP busbar trunking systems, measured at a distance of approximately one metre, is well below the critical value of 3 µT

With Legislative Decree DPCM dated 8/7/2003, Italian law set the first exposure limit at 100 µT

In addition, in locations where attendance is expected for no less than four hours a day, an attention value of 10 µT has been set, to avoid possible long term effects on health

In the decree, the 3 µT threshold is indicated as the 'quality objective'. However, as the product is intended for the European and world market, low magnetic emission is a fundamental point that cannot be disregarded, to ensure a presence in foreign countries : one example of this is Germany, where for over 10 years the regulation has set a cautionary limit of 3 µT as the maximum permitted threshold in certain structures, for example hospitals, so much so that in these types of environments the busbar trunking system has become a mandatory choice, as well as a high quality one

■ **Measurement of magnetic induction (continued)**

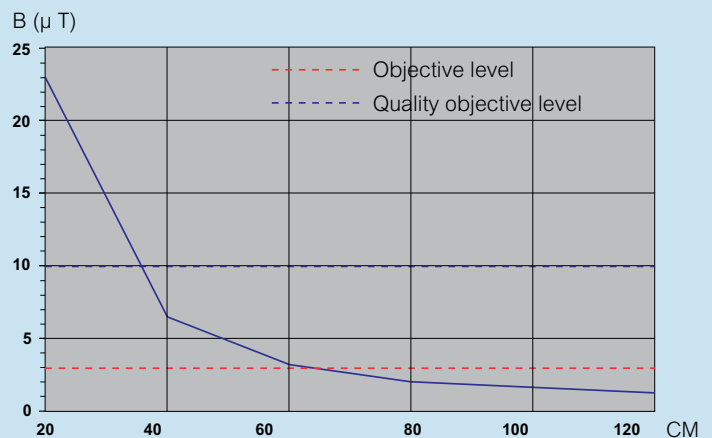
The high quality standard guaranteed by busbar trunking systems can be further appreciated by comparing the emission values measured against those of other commonly used equipment, as taken from table 7.1 of CEI 211-6 standard

The measurements obtained on aluminium SCP busbar trunking systems with ratings of 2500 A (carried out in compliance with the requirements of the technical product standard IEC EN 61439-6), show that the magnetic induction generated by the busbar is in the range of 1.5 - 2 µT at a distance of one metre from the busbar itself. These values also apply near the junction, which is considered the critical point due to the wider distance between the busbar conductors in this position

Levels of exposure to industrial frequency magnetic field sources (table 7.1 from CEI 211-6 standard)

| Source | Magnetic induction (µT) | Distance |
|---------------------------------|-------------------------|-------------------|
| Electric shaver | 150-240 | on the face |
| Hairdryer | 1-13 | 10-20 cm |
| Blender | 0.9 | 40 cm |
| 12 V, 20 W halogen lamp | 0.5 | 30 cm |
| Aerosol therapy equipment | 20-50 | 20-30 cm |
| Electric blanket | 2 | on contact |
| 21 inch television set | 0.3 | 50 cm |
| Washing machine | 3.4 | 50 cm |
| Dishwasher | 0.05 | 50 cm |
| Electric oven | 0.4 | 20 cm |
| 600 W drill | 2 | on the chest |
| 100 W welding machine | 14.5 | on the chest |
| 225 W grinder | 0.8 | 40 cm |
| 1 100 W compressor | 8.2 | 40 cm |
| 2 150 W arc welding machine | 23.2 | 40 cm |
| 75 MW, 55-65 kA, 150 t arc oven | 100-270 | in proximity |
| Electric scalpel | 2.9 | in proximity |
| Battery charger | 22.9 | in proximity |
| Echograph | 0.8 | operator position |
| Projector | 2.3 | 20 cm |

One-dimensional trend of the magnetic induction near the junction. The blue dash shows the 'objective' level and the red dash shows the 'quality objective' required by law



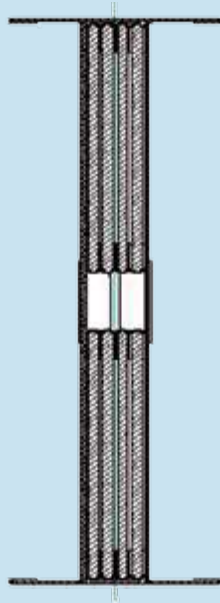
All dimensions (mm) are nominal

SCP super compact busbar

technical information

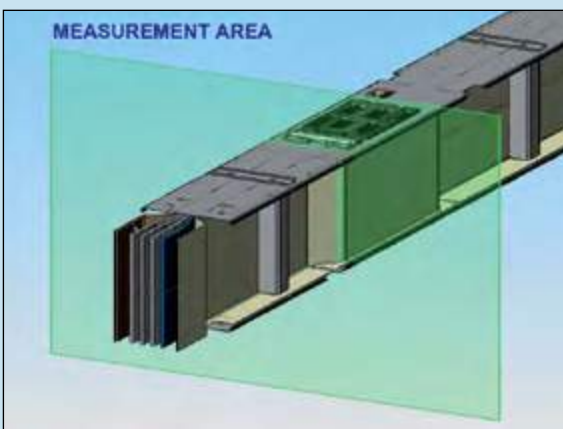
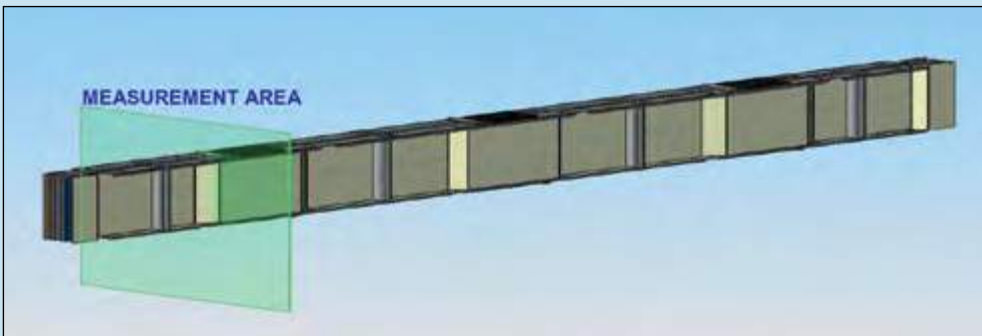
■ Example of measurement of the level of the magnetic field on the busbar

Transversal section (parallel to the measurement plane) of the SCP busbar on which the test is carried out



Graphic representation of an SCP double busbar 3 m straight length

Shown in green is the orthogonal plane of the element on which the magnetic inductions referred to in the following graphs are measured



Detailed view

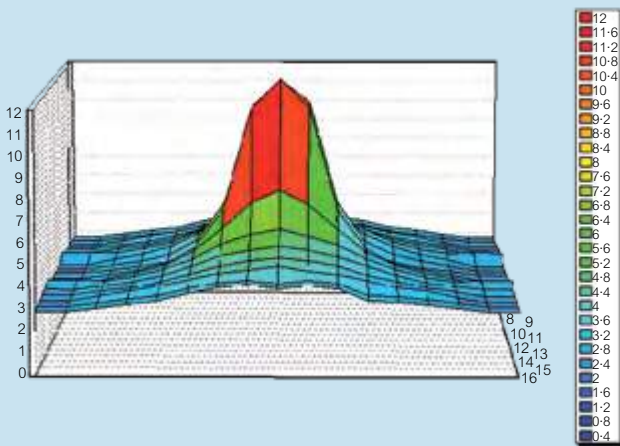
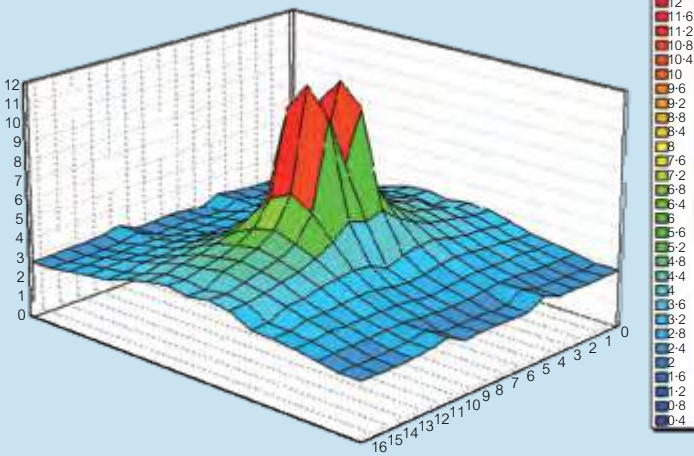
■ **Magnetic induction graphs at 60 cm from the busbar**

The graphs shown refer to the measurements carried out on the aluminium SCP prefabricated electric busbar with rated load of 2500 A, crossed by a 2500 A current

The measurements carried out at 60 cm from the junction are to be considered as higher due to the magnetic induction generated by the busbar power supply :
due to the intrinsic geometry of the measurement laboratory structure, it must be assumed that the measurement area is also affected by a magnetic induction of no less than 1.5 µT generated by the line power supply

In view of this observation, in case of actual operating line the quality objective indicated by Legislative Decree DPCM dated 8/7/2003 is widely met at less than one metre from the axis of the busbar

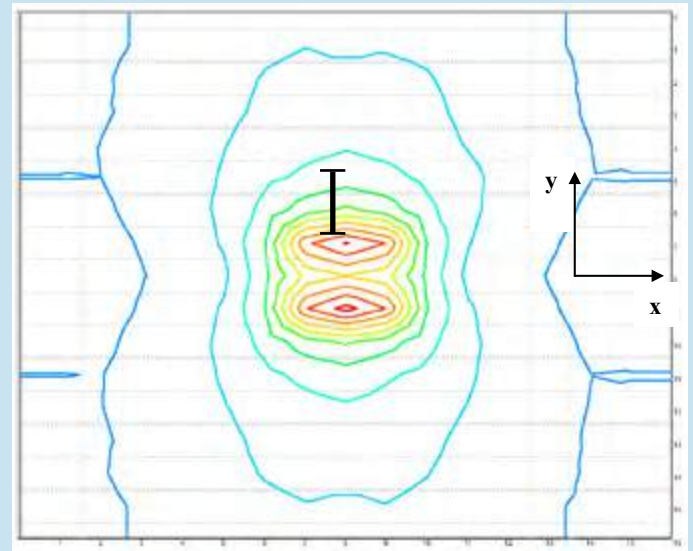
■ **3 dimensional development of magnetic induction around the busbar at 60 cm from the junction**



■ **Magnetic induction graphs at 60 cm from the busbar (continued)**

As it can be seen on the graph below, up to a distance of approximately 40 cm from the axis of the busbar, the field appears generated by two separate sources. This is due to the fact that the busbar being analysed consists of two series of busbar conductors set in parallel at a distance of approximately 5 cm from each other

■ **The cells making up the measurement grid are 20 cm squares**



■ **2 dimensional map of the magnetic induction around the busbar at 60 cm from the junction**
At the centre of the graphic is a schematic representation of the busbar

All dimensions (mm) are nominal

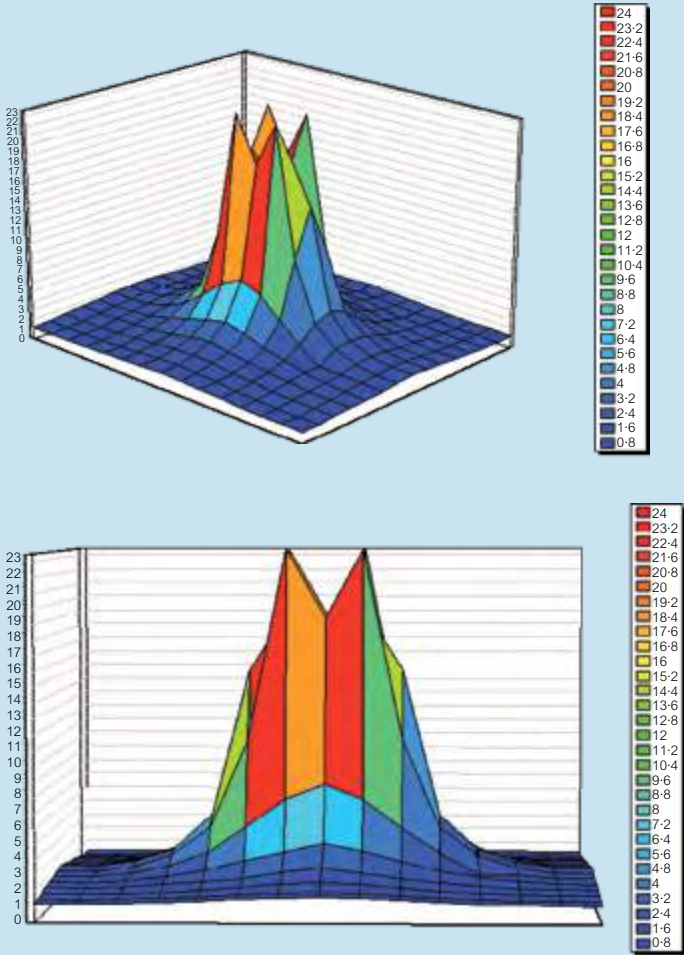
SCP super compact busbar

technical information

■ Graphs showing magnetic induction near the junction

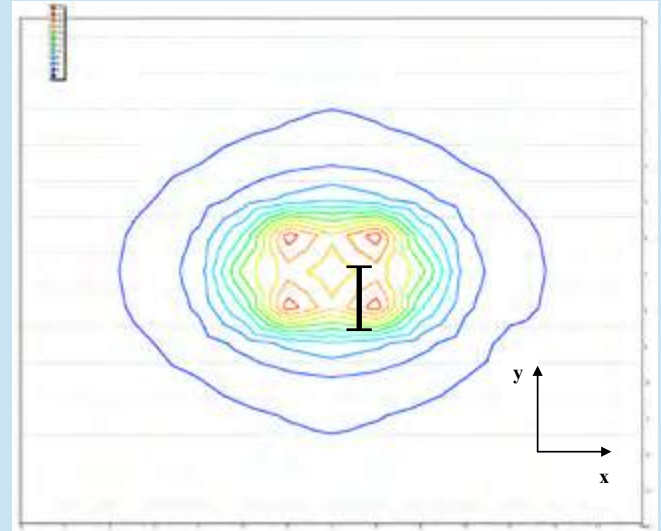
It is considered important to show, side by side with the results relating to straight lengths, the results of the measurement carried nearby the electro-mechanic junction of the busbar length. This location may in fact be considered critical, as here magnetic induction is higher due to the higher distance between the busbar conductors corresponding to the various phases of the line

Tridimensional development of magnetic induction near the joint



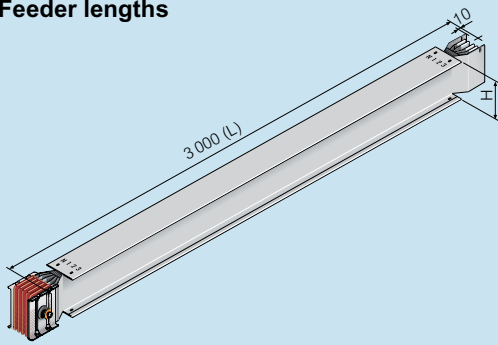
■ Graphs showing magnetic induction near the junction (continued)

2 dimensional map of magnetic induction near the junction
At the centre of the graphic is a schematic representation of the busbar



All dimensions (mm) are nominal

■ Feeder lengths

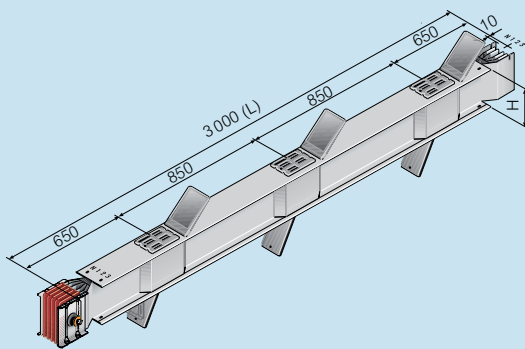


Dimension H changes with the rating, and is specified on p. 112-117

Minimum and maximum dimensions of single and double bars

| | |
|--------------------|------------------|
| Aluminium | 630 A to 4 000 A |
| Copper | 800 A to 5 000 A |
| (L) min./max. (mm) | 1 000 / 3 000 |

■ Distribution lengths



Dimension H changes with the rating, and is specified on p. 112-117

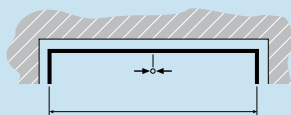
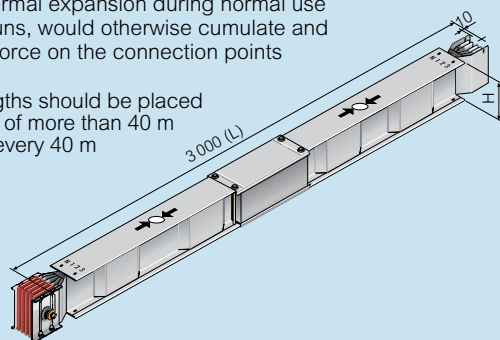
Minimum and maximum dimensions of single and double bars

| | |
|--------------------|------------------|
| Aluminium | 630 A to 4 000 A |
| Copper | 800 A to 5 000 A |
| (L) min./max. (mm) | 1 000 / 3 000 |

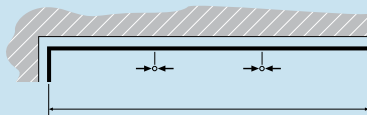
■ Expansion lengths

Absorb the thermal expansion during normal use that, on long runs, would otherwise cumulate and put abnormal force on the connection points

Expansion lengths should be placed in straight runs of more than 40 m and repeated every 40 m



e.g. 70 m straight section should contain 1 expansion length in the middle



e.g. 120 m straight section should contain 2 expansion lengths, spaced every 40 m

All dimensions (mm) are nominal

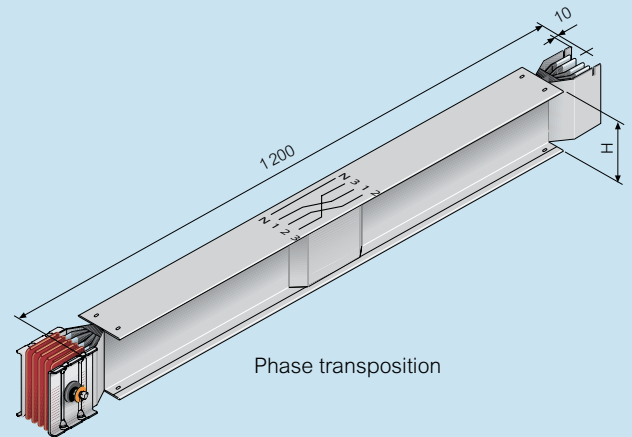
■ Transposition lengths

In runs exceeding 100 m it is recommended to include two transposition lengths to balance mutual phase reactance and electric impedance (one at 1/3 and one at 2/3 distance of the run)

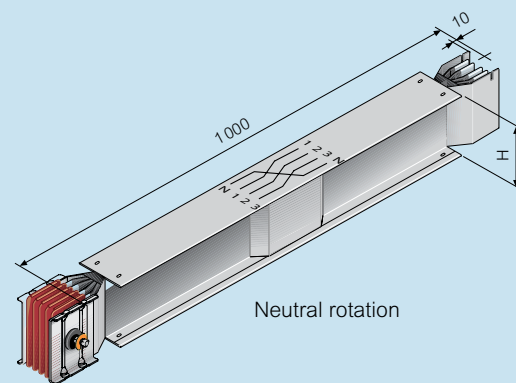
Dimension H changes with the rating and is specified on p. 112-117

Neutral rotation can be used when the sequence of the distribution board phases is different to that of the transformer

For more information please contact us on +44 (0) 370 608 9020



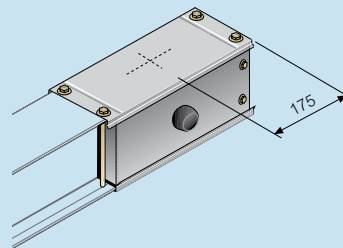
Phase transposition



Neutral rotation

■ End stops

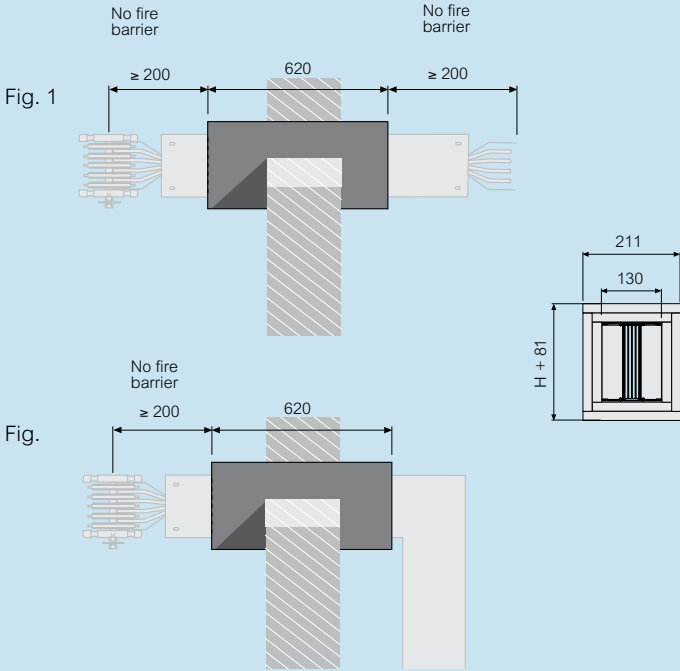
Maintain IP 55 protection at the end of a run



SCP super compact busbar

technical information

Fire barriers

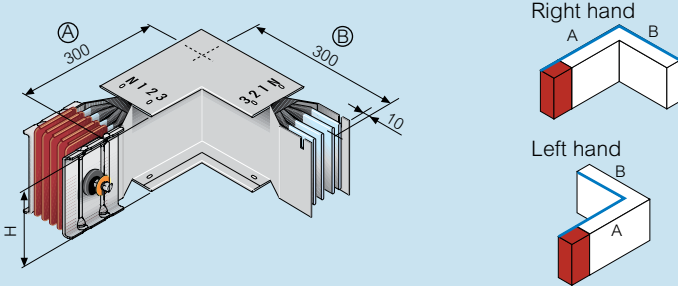


When ordering, please specify the length that will be equipped with an internal fire barrier

Due to the geometry of the models 800 A to 2000 A in aluminium and 1000 A to 2500 A in copper, the internal fire barrier is not needed. The external fire barrier can be used on any trunking component in compliance with the operating instructions specified in figures 1 and 2. Dimension H changes with the rating and is specified on p. 112-117

Direction changes

Horizontal elbow – standard dimensions



Dimension H changes with the rating and is specified on p. 112-117. The dimensions refer to standard elbows.

Horizontal elbow – bespoke dimensions

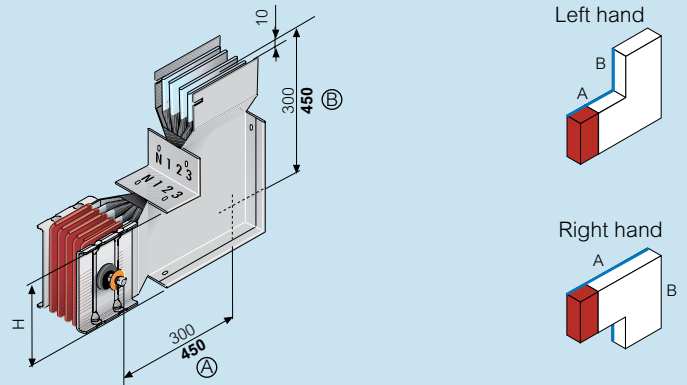
Please specify required dimensions when ordering.

Minimum and maximum dimensions of single and double bars

| | |
|--------------------|-----------------|
| Aluminium | 630 A to 4000 A |
| Copper | 800 A to 5000 A |
| (A) min./max. (mm) | 250 / 1299 |
| (B) min./max. (mm) | 250 / 1299 |

Direction changes

Vertical elbow – standard dimensions



Dimension H changes with the rating, and is specified on p. 112-117. The dimensions refer to standard elbows (bold = double bar).

Vertical elbow – bespoke dimensions

Please specify required dimensions when ordering.

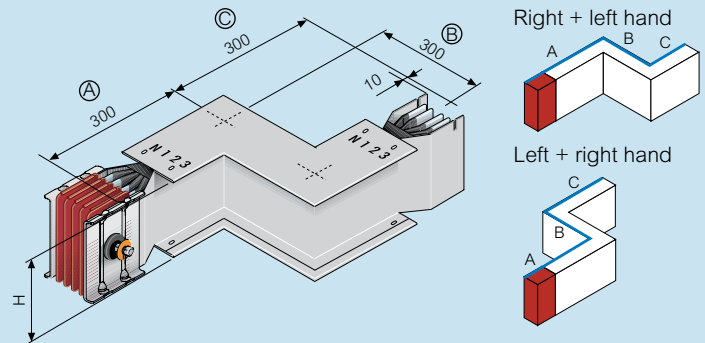
Minimum and maximum dimensions of single bar

| | |
|--------------------|-----------------|
| Aluminium | 630 A to 2000 A |
| Copper | 800 A to 2500 A |
| (A) min./max. (mm) | 300 / 1299 |
| (B) min./max. (mm) | 300 / 1299 |

Minimum and maximum dimensions of double bar

| | |
|--------------------|------------------|
| Aluminium | 2500 A to 4000 A |
| Copper | 3200 A to 5000 A |
| (A) min./max. (mm) | 450 / 1449 |
| (B) min./max. (mm) | 450 / 1449 |

Double horizontal elbow – standard dimensions



Dimension H changes with the rating, and is specified on p. 112-117. The dimensions refer to standard elbows.

Double horizontal elbow – bespoke dimensions

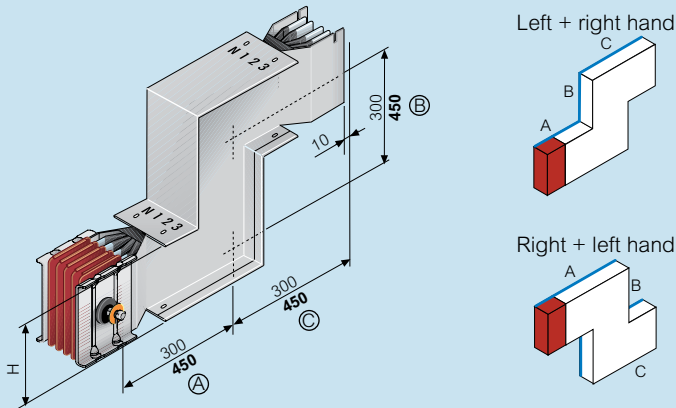
Please specify required dimensions when ordering.

Minimum and maximum dimensions of single and double bars

| | |
|--------------------|-----------------|
| Aluminium | 630 A to 4000 A |
| Copper | 800 A to 5000 A |
| (A) min./max. (mm) | 250 / 1299 |
| (B) min./max. (mm) | 50 / 599 |
| (C) min./max. (mm) | 250 / 1299 |

All dimensions (mm) are nominal.

Double vertical elbow – standard dimensions



Dimension H changes with the rating, and is specified on p. 112-117
The dimensions refer to standard elbows (bold = double bar)

Double vertical elbow – bespoke dimensions

Please specify required dimensions when ordering

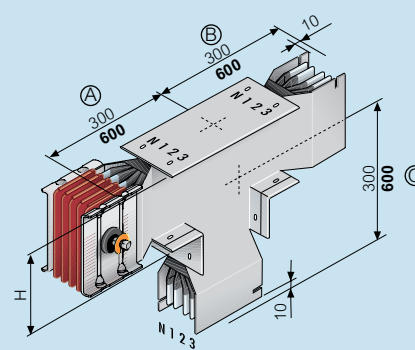
Minimum and maximum dimensions of single bar

| | |
|--------------------|------------------|
| Aluminium | 630 A to 2 000 A |
| Copper | 800 A to 2 500 A |
| (A) min./max. (mm) | 300 / 1 299 |
| (B) min./max. (mm) | 50 / 599 |
| (C) min./max. (mm) | 300 / 1 299 |

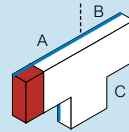
Minimum and maximum dimensions of double bar

| | |
|--------------------|--------------------|
| Aluminium | 2 500 A to 4 000 A |
| Copper | 3 200 A to 5 000 A |
| (A) min./max. (mm) | 450 / 1 449 |
| (B) min./max. (mm) | 50 / 899 |
| (C) min./max. (mm) | 450 / 1 449 |

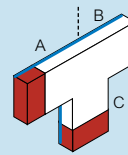
Vertical tees – standard dimensions



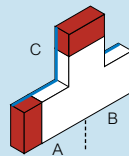
Right hand - female



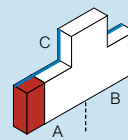
Right hand - male



Left hand - male



Left hand - female



Dimension H changes with the rating, and is specified on p. 112-117
The dimensions refer to standard tees (bold = double bar)

Vertical tees – bespoke dimensions

Please specify required dimensions when ordering

Minimum and maximum dimensions of single bar

| | |
|--------------------|------------------|
| Aluminium | 630 A to 2 000 A |
| Copper | 800 A to 2 500 A |
| (A) min./max. (mm) | 250 / 1 299 |
| (B) min./max. (mm) | 200 / 599 |
| (C) min./max. (mm) | 300 / 1 299 |

Minimum and maximum dimensions of double bar

| | |
|--------------------|--------------------|
| Aluminium | 2 500 A to 4 000 A |
| Copper | 3 200 A to 5 000 A |
| (A) min./max. (mm) | 250 / 1 449 |
| (B) min./max. (mm) | 330 / 749 |
| (C) min./max. (mm) | 450 / 1 449 |

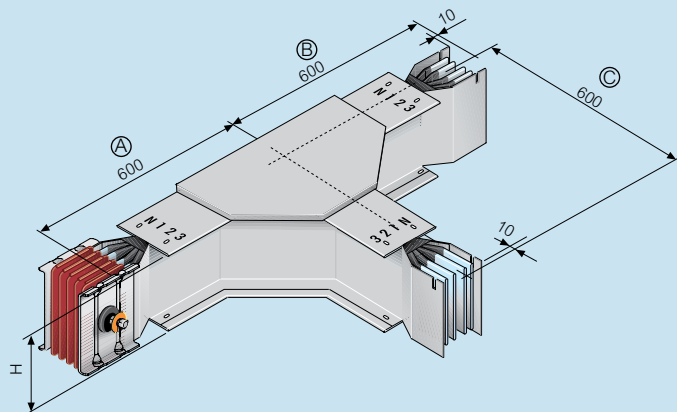
All dimensions (mm) are nominal

SCP super compact busbar

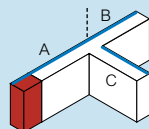
technical information

Direction changes (continued)

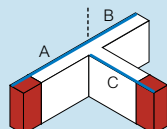
Horizontal tees – standard dimensions



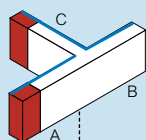
Right hand – female



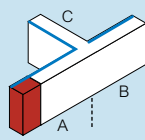
Right hand – male



Left hand – male



Left hand – female



Dimension H changes with the rating, and is specified on p. 112-117
The dimensions refer to standard tees (bold = double bar)

Horizontal tees – bespoke dimensions

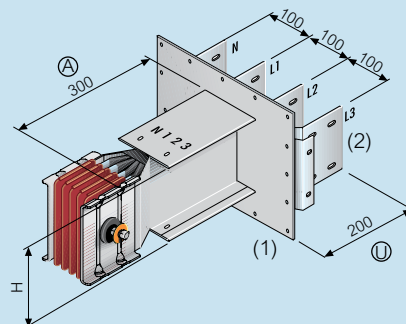
Please specify required dimensions when ordering

Minimum and maximum dimensions of single and double bars

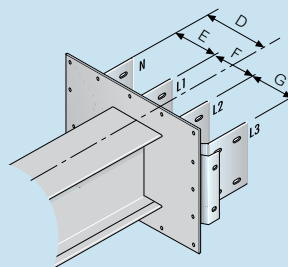
| | |
|----------------------|------------------|
| Aluminium | 630 A to 4 000 A |
| Copper | 800 A to 5 000 A |
| (A) min. / max. (mm) | 550 / 1 049 |
| (B) min. / max. (mm) | 550 / 1 049 |
| (C) min. / max. (mm) | 550 / 1 049 |

Connection interfaces – in-line

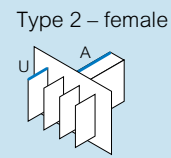
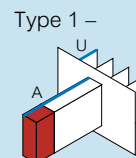
Standard dimensions



Non-standard centre distance



Dimensions to be provided when requesting a non-standard centre distance



Dimension H changes with the rating, and is specified on p. 112-117
See p. 100 for dimensions of cover plate (1) and bars (2)

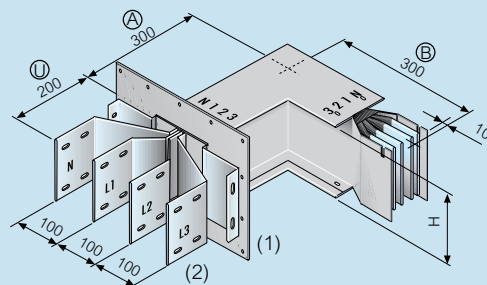
Connection interfaces – in-line bespoke dimensions

Please specify required dimensions when ordering

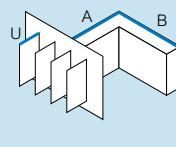
Minimum and maximum dimensions of single and double bars

| | |
|----------------------|------------------|
| Aluminium | 630 A to 4 000 A |
| Copper | 800 A to 5 000 A |
| (A) min. / max. (mm) | 300 / 1 299 |
| (U) min. / max. (mm) | 150 / 400 |

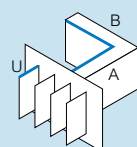
Connection interfaces + horizontal elbows



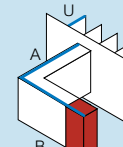
Type 1 – female



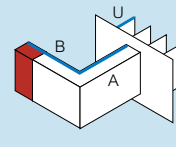
Type 2 – female



Type 3 – male



Type 4 – male



Dimension H changes with the rating and is specified on p. 112-117
The dimensions are referred to standard elements
See p. 100 for dimensions of standard elements

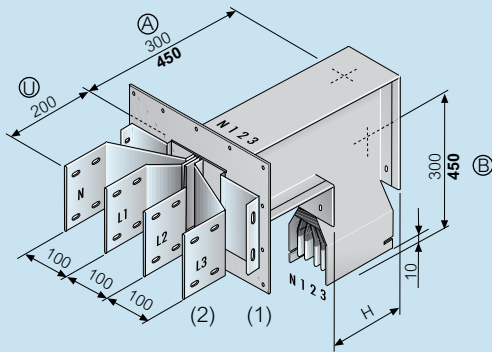
Connection interfaces + horizontal elbows – bespoke dimensions

Please specify required dimensions when ordering

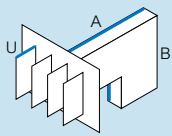
Minimum and maximum dimensions of single and double bars

| | |
|----------------------|------------------|
| Aluminium | 630 A to 4 000 A |
| Copper | 800 A to 5 000 A |
| (A) min. / max. (mm) | 150 / 1 299 |
| (B) min. / max. (mm) | 250 / 1 299 |
| (U) min. / max. (mm) | 150 / 400 |

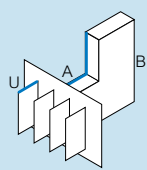
■ Connection interfaces + vertical elbows



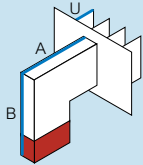
Type 1 – female



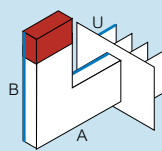
Type 2 – female



Type 3 – male



Type 4 – male



Dimension H changes with the rating and is specified on p. 112-117
The dimensions refer to standard tees (bold = double bar)
See p. 100 for dimensions of cover plate (1) and bars (2)

■ Connection interfaces + vertical elbows – bespoke dimensions

Please specify required dimensions when ordering

Minimum and maximum dimensions of single bar

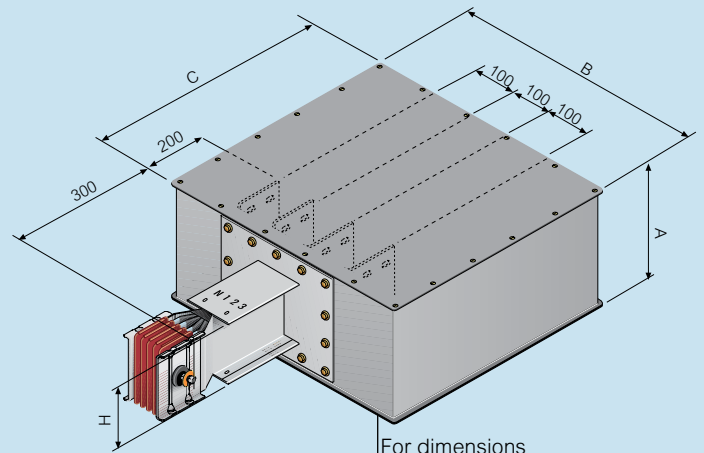
| | |
|----------------------|-----------------|
| Aluminium | 630 A to 2000 A |
| Copper | 800 A to 2500 A |
| (A) min. / max. (mm) | 150 / 1299 |
| (B) min. / max. (mm) | 300 / 1299 |
| (U) min. / max. (mm) | 150 / 400 |

Minimum and maximum dimensions of double bar

| | |
|----------------------|------------------|
| Aluminium | 2500 A to 4000 A |
| Copper | 3200 A to 5000 A |
| (A) min. / max. (mm) | 300 / 1449 |
| (B) min. / max. (mm) | 450 / 1449 |
| (U) min. / max. (mm) | 150 / 400 |

■ Feed units

End feed unit

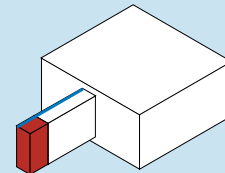


For dimensions of holes for connections, see p. 100

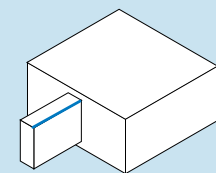
Dimension H changes with the rating and is specified on p. 112-117

Rear cable input
Aluminium gland plate(s) for cable entry
170mm x 410mm
Single bar : 1 plate
Double bar : 2 plates

Type 1 – male



Type 2 – female



Dimensions of the box

| | | | |
|-----------|-----------------|------------------|------------------|
| Aluminium | 630 A to 1250 A | 1600 A to 2000 A | 2500 A to 4000 A |
| Copper | 800 A to 1250 A | 1600 A to 2500 A | 3200 A to 5000 A |
| A | | | |
| (A) (mm) | 320 | 320 | 600 |
| (B) (mm) | 600 | 600 | 600 |

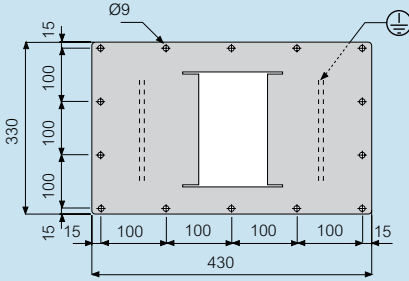
All dimensions (mm) are nominal

SCP super compact busbar
 technical information

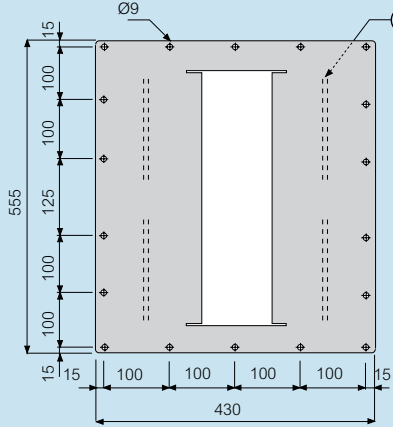
■ **Connection interfaces**

Cover plate drilling details

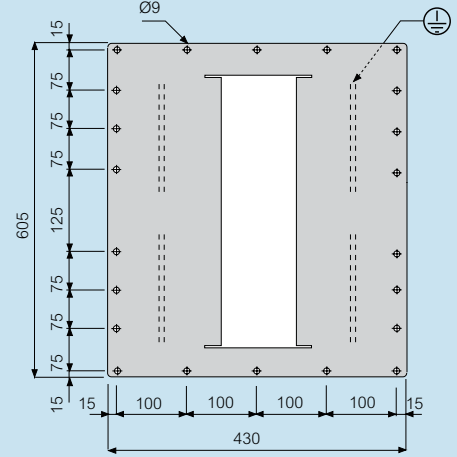
Aluminium 630 A to 2000 A
 Copper 800 A to 2500 A



Aluminium 2500 A to 3200 A
 Copper 3200 A to 4000 A

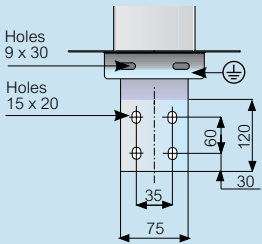


Aluminium 4000 A
 Copper 5000 A

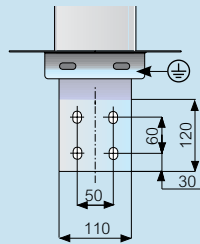


Bar drilling details

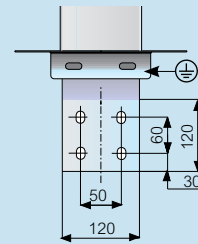
Aluminium 630 A
 Copper 800 A



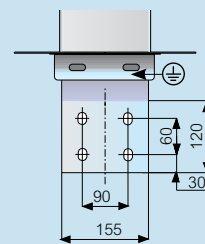
Aluminium 800 A-1000 A
 Copper 1000 A-1250 A



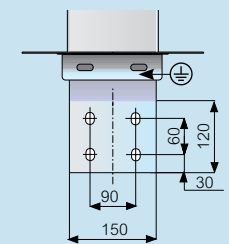
Aluminium 1250 A



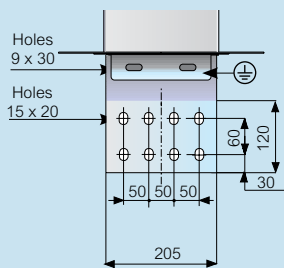
Aluminium 1600 A



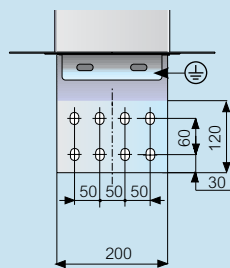
Copper 1600-2000 A



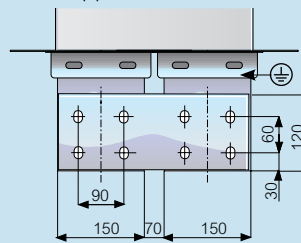
Aluminium 2000 A



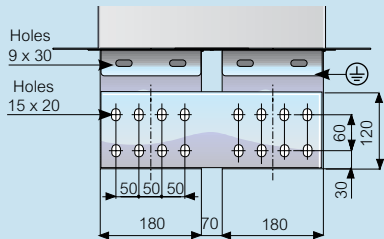
Copper 2500 A



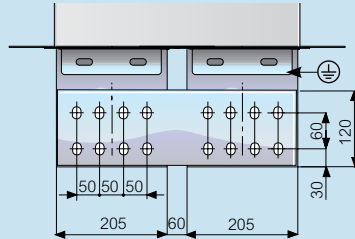
Aluminium 2500 A
 Copper 3200 A



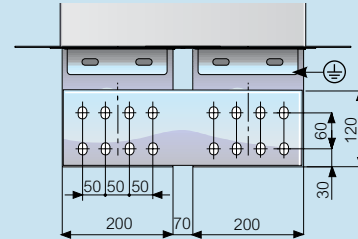
Aluminium 3200 A
 Copper 4000 A



Aluminium 4000 A



Copper 5000 A



All dimensions (mm) are nominal

Compatibility with Zucchini SCP busbar

The Zucchini SCP busbar trunking system and EdM cast resin transformers have been designed in perfect synergy for a direct connection
The versions shown below represent just a few of the standardised solutions

400 V secondary voltage

| Transformer | | | | Busbar (aluminium) | |
|-------------|-----------------------|-------------------|-------------|--------------------|----------------------|
| kVA (kVA) | Insulation class (kV) | 400 V current (A) | IK 6 % (kA) | Family | Connection component |
| 630 | 12, 17-5, 24, 36 | 910 | 15-20 | SCP 1 000 A | 60281012P |
| 800 | | 1 155 | 19-30 | SCP 1 250 A | 60281014P |
| 1 000 | | 1 444 | 24-10 | SCP 1 600 A | 60281016P |
| 1 250 | | 1 805 | 30-10 | SCP 2 000 A | 60281017P |
| 1 600 | | 2 310 | 38-50 | SCP 2 500 A | 60391014P |
| 2 000 | | 2 887 | 48-20 | SCP 3 200 A | 60391016P |
| 2 500 | | 3 609 | 60-20 | SCP 4 000 A | 60391017P |

| Transformer | | | | Busbar (copper) | |
|-------------|-----------------------|--------------------|-------------|-----------------|----------------------|
| kVA (kVA) | Insulation class (kV) | 400 V current (A) | IK 6 % (kA) | Family | Connection component |
| 630 | 12, 17-5, 24, 36 | 910 | 15-20 | SCP 1 000 A | 65281011P |
| 800 | | 1 155 | 19-30 | SCP 1 250 A | 65281013P |
| 1 000 | | 1 444 | 24-10 | SCP 1 600 A | 65281015P |
| 1 250 | | 1 805 | 30-10 | SCP 2 000 A | 65281016P |
| 1 600 | | 2 310 | 38-50 | SCP 2 500 A | 65391018P |
| 2 000 | | 2 887 | 48-20 | SCP 3 200 A | 65391015P |
| 2 500 | | 3 609 | 60-20 | SCP 4 000 A | 65391016P |
| 3 150 | 4 547 | 65-00 ¹ | SCP 5 000 A | 65391018P | |

1 : 7% impedance

417 V secondary voltage

| Transformer | | | | Busbar (aluminium) | |
|-------------|-----------------------|-------------------|-------------|--------------------|----------------------|
| kVA (kVA) | Insulation class (kV) | 417 V current (A) | IK 6 % (kA) | Family | Connection component |
| 630 | 12, 17-5, 24, 36 | 873 | 14-60 | SCP 1 000 A | 60281012P |
| 800 | | 1 108 | 18-50 | SCP 1 250 A | 60281014P |
| 1 000 | | 1 385 | 23-10 | SCP 1 600 A | 60281016P |
| 1 250 | | 1 731 | 28-90 | SCP 2 000 A | 60281017P |
| 1 600 | | 2 216 | 37-00 | SCP 2 500 A | 60391014P |
| 2 000 | | 2 770 | 46-20 | SCP 3 200 A | 60391016P |
| 2 500 | | 3 462 | 57-70 | SCP 4 000 A | 60391017P |

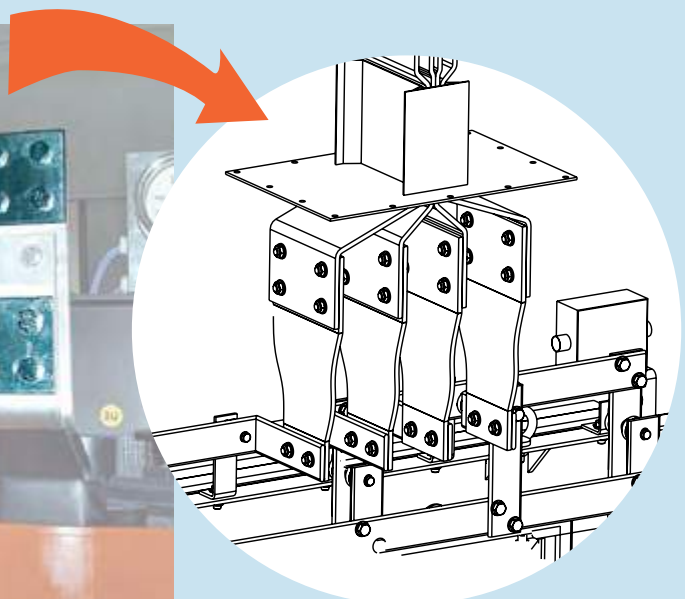
| Transformer | | | | Busbar (copper) | |
|-------------|-----------------------|--------------------|-------------|-----------------|----------------------|
| kVA (kVA) | Insulation class (kV) | 417 V current (A) | IK 6 % (kA) | Family | Connection component |
| 630 | 12, 17-5, 24, 36 | 873 | 14-60 | SCP 1 000 A | 65281011P |
| 800 | | 1 108 | 18-50 | SCP 1 250 A | 65281013P |
| 1 000 | | 1 385 | 23-10 | SCP 1 600 A | 65281015P |
| 1 250 | | 1 731 | 28-90 | SCP 2 000 A | 65281016P |
| 1 600 | | 2 216 | 37-00 | SCP 2 500 A | 65391018P |
| 2 000 | | 2 770 | 46-20 | SCP 3 200 A | 65391015P |
| 2 500 | | 3 462 | 57-70 | SCP 4 000 A | 65391016P |
| 3 150 | 4 362 | 62-40 ¹ | SCP 5 000 A | 65391018P | |

433 V secondary voltage

| Transformer | | | | Busbar (aluminium) | |
|-------------|-----------------------|-------------------|-------------|--------------------|----------------------|
| kVA (kVA) | Insulation class (kV) | 433 V current (A) | IK 6 % (kA) | Family | Connection component |
| 630 | 12, 17-5, 24, 36 | 841 | 14-10 | SCP 1 000 A | 60281012P |
| 800 | | 1 067 | 17-80 | SCP 1 250 A | 60281014P |
| 1 000 | | 1 334 | 22-30 | SCP 1 600 A | 60281016P |
| 1 250 | | 1 667 | 27-80 | SCP 2 000 A | 60281017P |
| 1 600 | | 2 134 | 35-60 | SCP 2 500 A | 60391014P |
| 2 000 | | 2 667 | 44-50 | SCP 3 200 A | 60391016P |
| 2 500 | | 3 334 | 55-60 | SCP 4 000 A | 60391017P |

| Transformer | | | | Busbar (copper) | |
|-------------|-----------------------|--------------------|-------------|-----------------|----------------------|
| kVA (kVA) | Insulation class (kV) | 433 V current (A) | IK 6 % (kA) | Family | Connection component |
| 630 | 12, 17-5, 24, 36 | 841 | 14-10 | SCP 1 000 A | 65281011P |
| 800 | | 1 067 | 17-80 | SCP 1 250 A | 65281013P |
| 1 000 | | 1 334 | 22-30 | SCP 1 600 A | 65281015P |
| 1 250 | | 1 667 | 27-80 | SCP 2 000 A | 65281016P |
| 1 600 | | 2 134 | 35-60 | SCP 2 500 A | 65391018P |
| 2 000 | | 2 667 | 44-50 | SCP 3 200 A | 65391015P |
| 2 500 | | 3 334 | 55-60 | SCP 4 000 A | 65391016P |
| 3 150 | 4 201 | 60-10 ¹ | SCP 5 000 A | 65391018P | |

Transformer to busbar connection



SCP super compact busbar

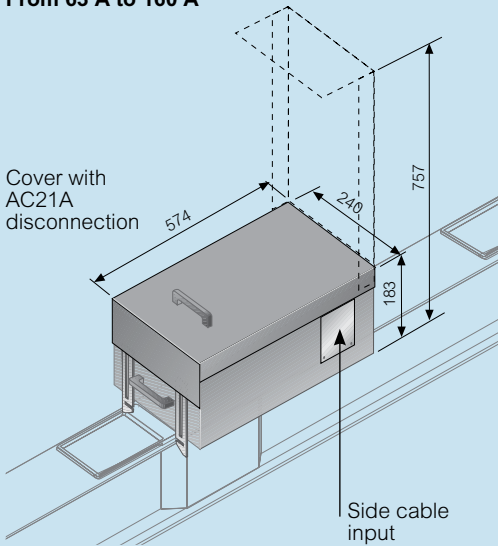
technical information

■ Tap-off boxes

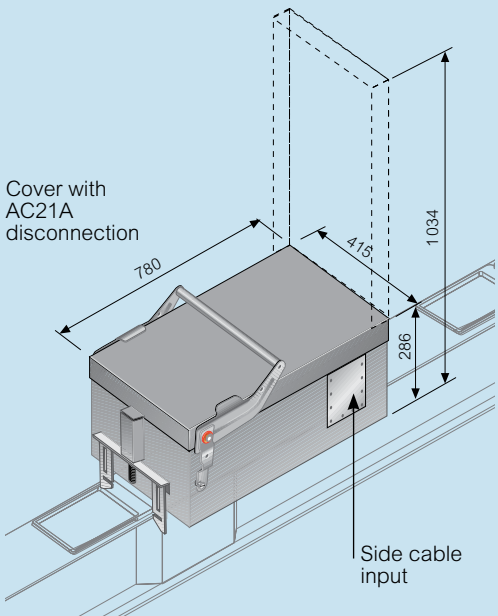
63 A to 630 A : plug-in type

Polyester coated, galvanised steel structure. Metal boxes are suitable for heavy loads and are used to shield electromagnetic fields caused by flows of current
Fuses not included. Please contact us on +44 (0) 370 608 9020 for details of available fuses

With fuse carrier From 63 A to 160 A



With switch disconnector From 250 A to 630 A

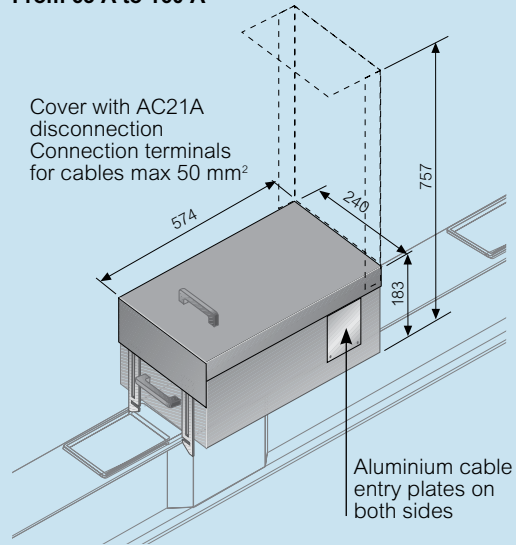


These tap-off boxes are equipped with a switch disconnector (AC23) and a fuse carrier. The disconnector switch is operated through a rotary handle on the cover (not shown in the picture)
N.B. Cover with AC21A disconnection : it is not possible to open, close, install or pull out the tap-off box if the switch is in 'ON' position
Can be installed and removed when the busbar is energized
To be used with components with any rating, with tap-off outlets
Fuses not included. Please contact us on +44 (0) 370 608 9020 for details of available fuses

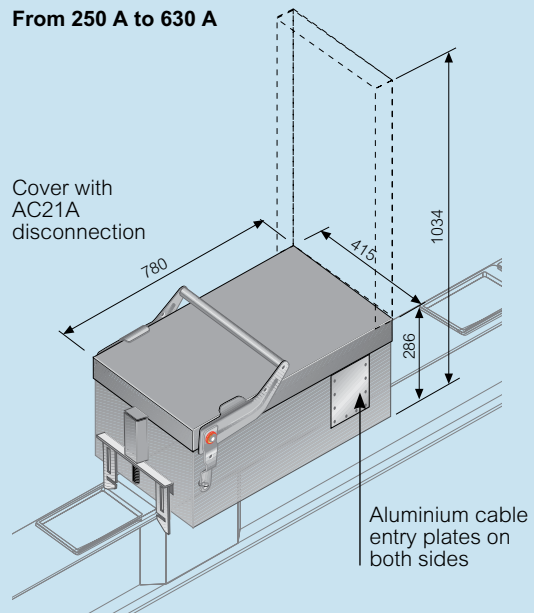
■ Tap-off boxes

Empty tap-off box 63 A to 630 A

From 63 A to 160 A



From 250 A to 630 A

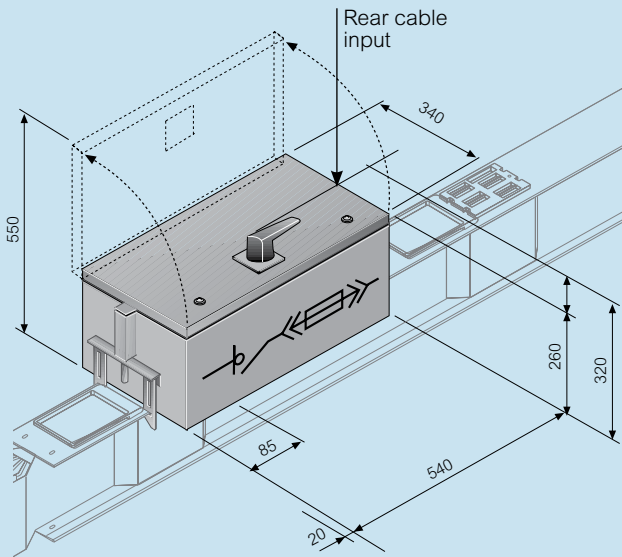


Tap-off boxes can be pre-equipped with DPX MCCBs on request, contact us on +44 (0) 370 608 9020
Can be installed and removed when the busbar is energized
To be used with components with any rating, with tap-off outlets

All dimensions (mm) are nominal

■ **Tap-off boxes**

With AC23A switch disconnecter and fuse carrier,
125 A to 400 A : plug-in type



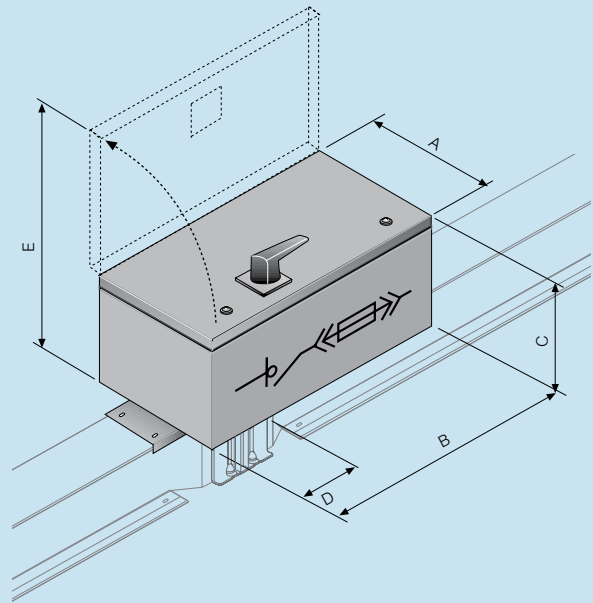
Can be installed and removed when the busbar is energized because the protective earth makes contact before other conductors
To be applied on components with any rating, with tap-off outlets
For operating voltages (Ue) different from 400 V, please contact us on +44 (0) 370 608 9020
Fuses not included. Please contact us on +44 (0) 370 608 9020 for details of available fuses

Specification

| | | |
|---|-----------|----------------|
| Rated insulating AC voltage | Ui (V) | 1000 |
| Rated impulse withstand voltage | Uimp (kV) | 12 |
| Type of rated duty | | AC23A |
| Rated conditional short circuit current | (kA) | 100 |
| | | CEI EN 60947-3 |

■ **Bolt-on tap-off boxes**

With AC23 switch disconnecter and fuse carrier : 125 A to 1250 A



Please specify SCP type when ordering
Boxes cannot be installed simultaneously on both sides of the same junction



The bolted boxes are to be installed directly on the junction when the busbar is disconnected and not energized

For operating voltages (Ue) different from 400 V please contact us on +44 (0) 370 608 9020
Fuses not included. Please contact us on +44 (0) 370 608 9020 for details of available fuses

Dimensions of the box

| Box rating | 125 A to 400 A | 630 A | 800 A to 1250 A |
|------------|----------------|-------|-----------------|
| (A) (mm) | 365 | 400 | 450 |
| (B) (mm) | 630 | 750 | 1050 |
| (C) (mm) | 270 | 280 | 300 |
| (D) (mm) | 95 | 115 | 115 |
| (E) (mm) | 635 | 680 | 750 |

Specification

| | | |
|---|-----------|----------------|
| Rated insulating AC voltage | Ui (V) | 1000 |
| Rated impulse withstand voltage | Uimp (kV) | 12 |
| Type of rated duty | | AC23A |
| Rated conditional short circuit current | (kA) | 100 |
| | | CEI EN 60947-3 |

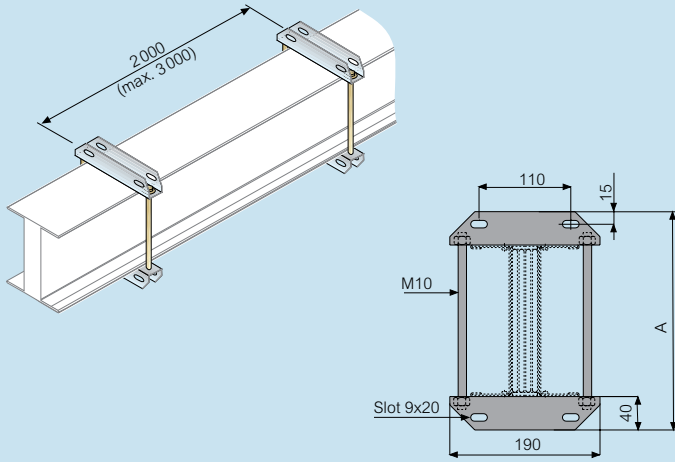
All dimensions (mm) are nominal

SCP super compact busbar

technical information

■ Fixing supports

Suspension bracket for edgeways installation

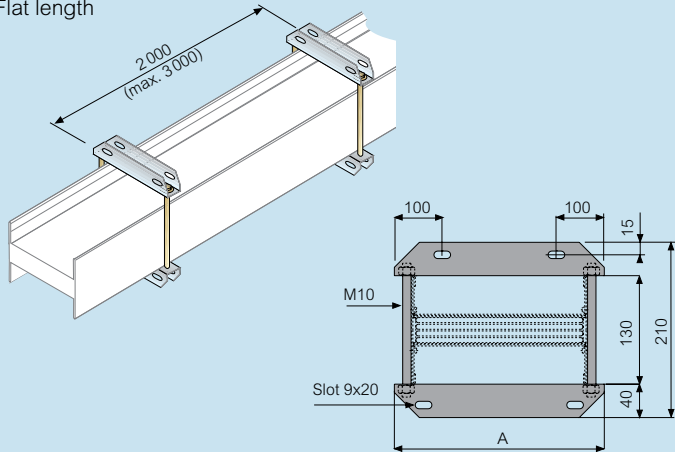


Suspension bracket for edgeways installation

| | Single bar | | | | | | Double bar | | | |
|-----------------------------|------------|-----|------|------|------|------|------------|------|------|------|
| Aluminium busbar rating (A) | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3200 | 4000 | 5000 |
| Dimension A (mm) | 210 | 210 | 210 | 210 | 250 | 300 | 460 | 520 | 560 | – |
| | | | | | | | | | | |
| | Single bar | | | | | | Double bar | | | |
| Copper busbar rating (A) | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3200 | 4000 | 5000 |
| Dimension A (mm) | – | 210 | 210 | 210 | 250 | 250 | 300 | 460 | 520 | 560 |

Suspension bracket for flat installation

Flat length

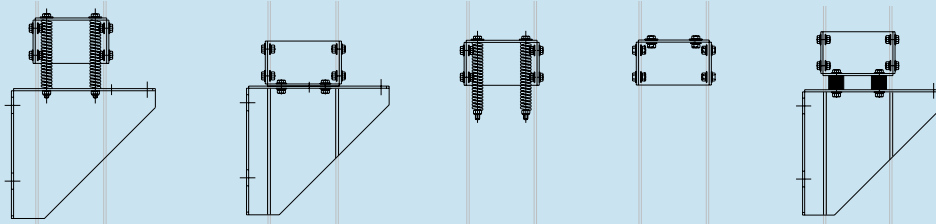


Suspension bracket for flat installation

| | Single bar | | | | | | Double bar | | | |
|-----------------------------|------------|-----|------|------|------|------|------------|------|------|------|
| Aluminium busbar rating (A) | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3200 | 4000 | 5000 |
| Dimension A (mm) | 190 | 190 | 190 | 190 | 315 | 315 | 430 | 490 | 530 | – |
| | | | | | | | | | | |
| | Single bar | | | | | | Double bar | | | |
| Copper busbar rating (A) | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3200 | 4000 | 5000 |
| Dimension A (mm) | – | 190 | 190 | 190 | 315 | 315 | 315 | 430 | 490 | 530 |

All dimensions (mm) are nominal

■ Fixing supports



Type A and B brackets are used for wall installation, while type C and D are used for floor installation

Type A
With bracket
and spring

Type B
Standard with
anti-seismic
bracket¹

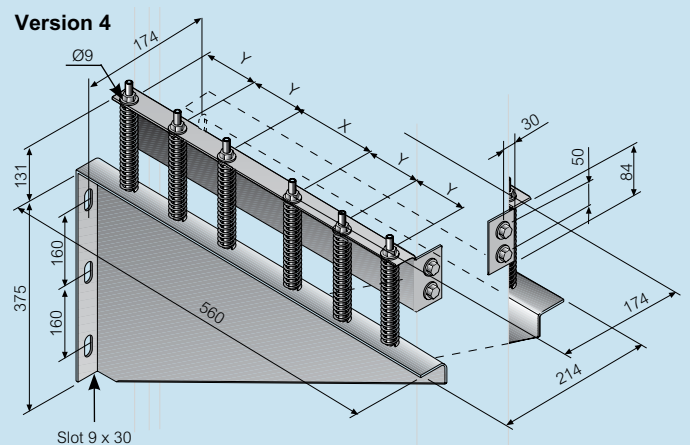
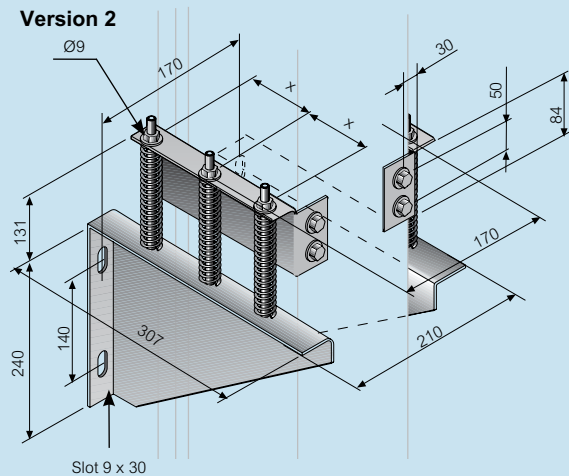
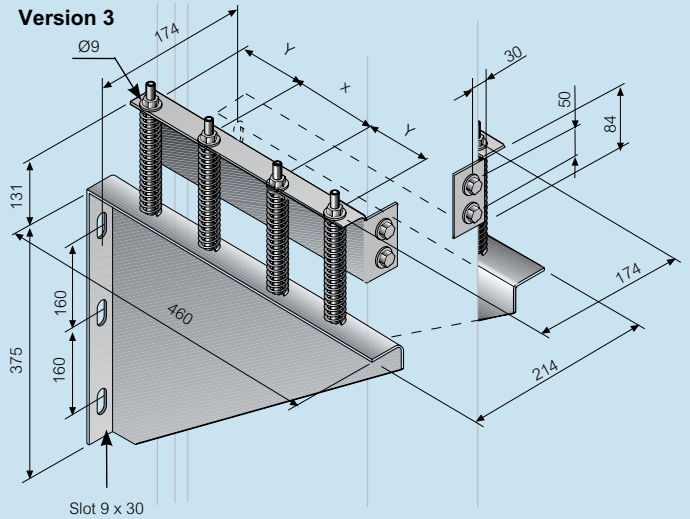
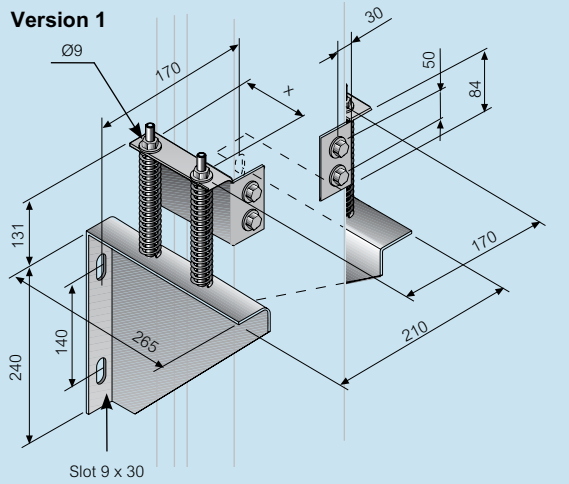
Type C
With springs

Type D
Bracket only

Type E
Naval
applications

1 : For single bar lengths, the standard bracket is also anti-seismic rated
For double bar loads there are two separate Cat. Nos. see p. 82

Fixing supports for vertical lengths – dimensions



| X and Y dimensions of the brackets | | | | | | | |
|------------------------------------|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|
| | Version 1 | Version 1 | Version 2 | Version 2 | Version 3 | Version 4 | Version 4 |
| Aluminium | 630 A to 1000 A | 1250 A | 1600 A | 2000 A | 2500 A | 3200 A | 4000 A |
| Copper | 800 A to 1250 A | 1600 A | 2000 A | 2500 A | 3200 A | 4000 A | 5000 A |
| x (mm) | 90 | 120 | 80 | 90 | 80 | 80 | 80 |
| y (mm) | - | - | - | - | 110 | 80 | 90 |

All dimensions (mm) are nominal

SCP super compact busbar

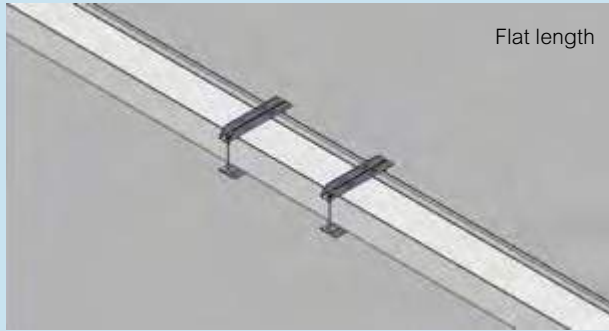
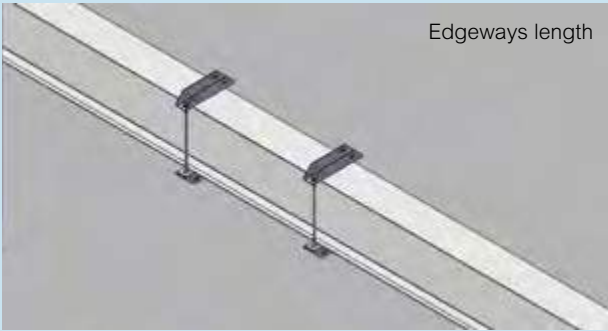
technical information

■ Fixing in standard conditions

For vertical path sections of less than 2 m the use of standard suspension brackets is sufficient

Horizontal installation fixing

Fixing recommended : 1 bracket every 1.5 m



Vertical installation fixing (rising mains)

In the case of rising mains, in addition to the standard brackets, it will also be necessary to use other screw fixed brackets to prevent the busbar sliding

Due to their pre-loaded springs, the brackets absorb the forces pressing on the busbar and direct any expansion in a precise direction. They therefore operate as a limitation, and support the traction and compression forces of the busbar trunking system

• Section between 2 and 4 m

In the lowest point Type B vertical bracket if secured to the wall, or Type D if secured to the floor and one edgeways installation bracket

• Section of over 4 m

In the lowest point Type A vertical bracket if secured to the wall, or Type C if secured to the floor and one edgeways installation bracket every 1.5 m of the path and one Type A or C bracket based on the following table

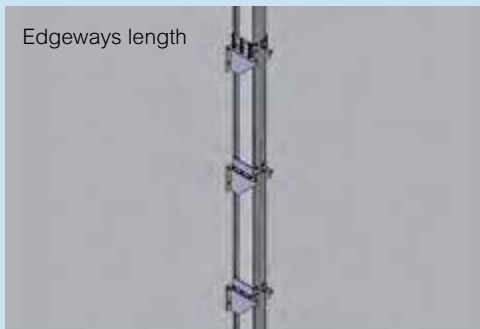
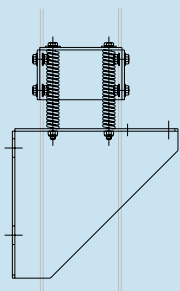
| Aluminium | | Copper | |
|------------|-----|------------|-----|
| Rating (A) | (m) | Rating (A) | (m) |
| 630 | 17 | – | – |
| 800 | 16 | 800 | 10 |
| 1 000 | 16 | 1 000 | 9 |
| 1 250 | 15 | 1 250 | 9 |
| 1 600 | 12 | 1 600 | 7 |
| 2 000 | 10 | 2 000 | 6 |
| 2 500 | 14 | 2 500 | 4 |
| 3 200 | 12 | 3 200 | 7 |
| 4 000 | 10 | 4 000 | 6 |
| – | – | 5 000 | 5 |

■ Fixing for installation in seismic environments

Vertical installation (section lengths > 2 m)

Fit 1 bracket every 1.5 m of the busbar

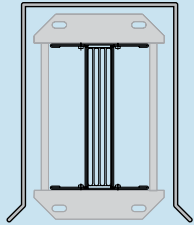
Every 2 anti-seismic brackets with bracket (Type B) use one bracket with bracket and spring (Type A)



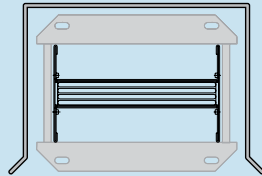
All dimensions (mm) are nominal

■ **Protective cover for outdoor applications**

Covering accessory to be used for outdoor installations and wherever the standard IP 55 protection is not adequate
For more information, please contact us on +44 (0) 370 608 9020



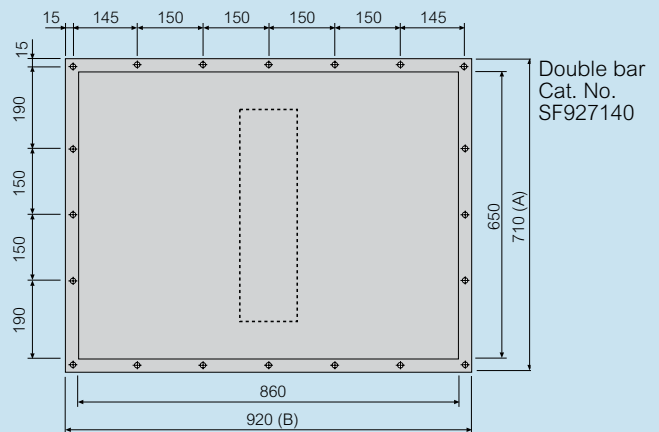
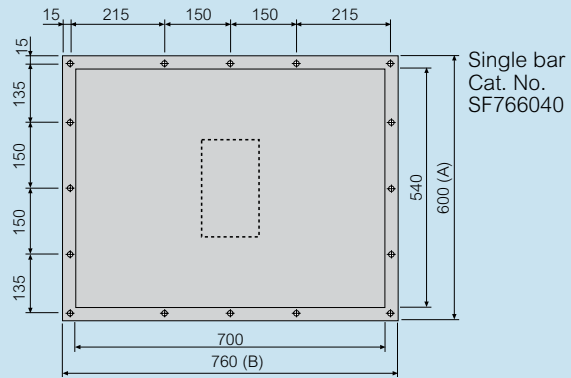
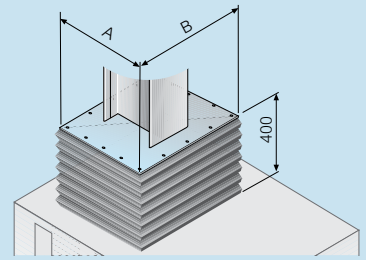
Edgewise length



Flat length

■ **Protective bellows**

Recommended for protection of the interface connection on panel boards, dry-type transformers with enclosure and oil-type transformers
For EdM cast resin transformers, custom-made connections are available upon request (see p. 83)



| | Single bar | Double bar |
|-----------|--------------------------------------|---------------------------------------|
| Aluminium | 630 A to 2000 A Cat. No. SF766040 | 2500 A to 4000 A Cat. No. SF927140 |
| Copper | 800 A to 2500 A Cat. No. SF766040 | 3200 A to 5000 A Cat. No. SF927140 |

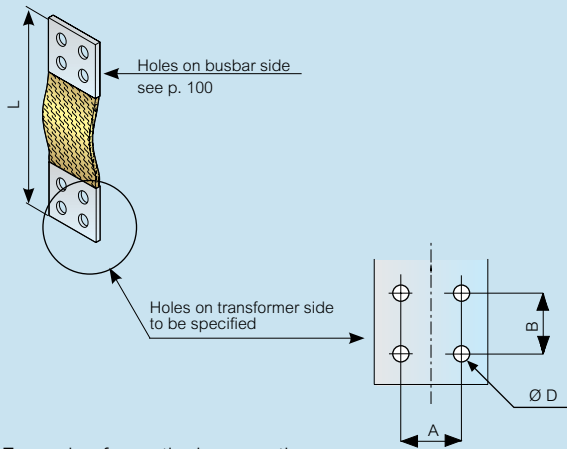
All dimensions (mm) are nominal

SCP super compact busbar

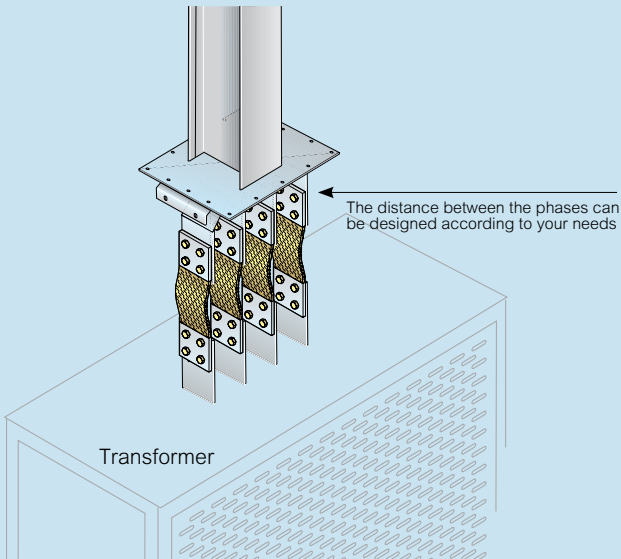
technical information

Flexible braid connections

When ordering, please specify hole dimensions on transformer side (A, B, Ø D) and length L



Example of a vertical connection



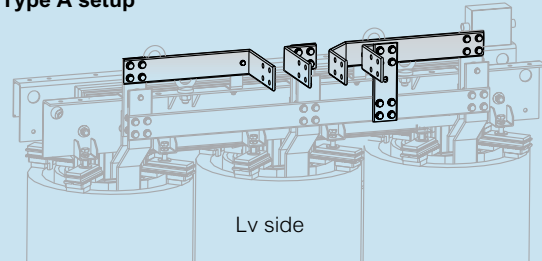
The system : the EdM transformer advantage

The Legrand Group offer meets the needs of any installation. EdM cast resin transformers have specifically designed connections for Zucchini busbars

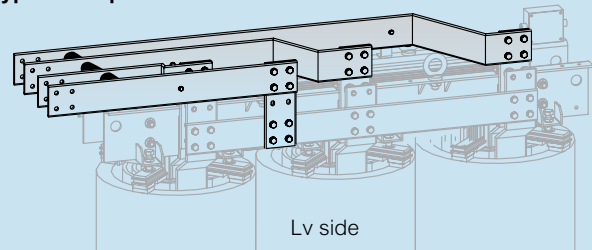
The versions shown represent some of the standardised solutions

For the outgoing busbar run from the transformer, see p. 98-100

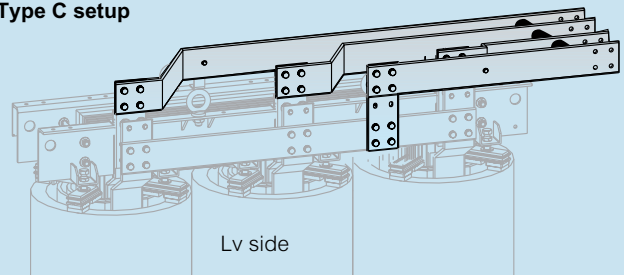
Type A setup



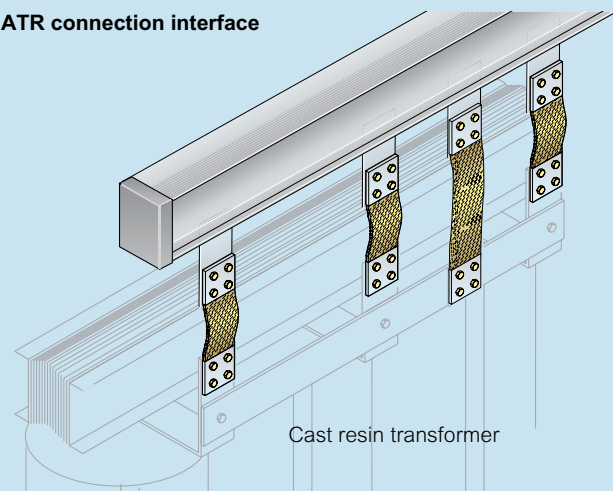
Type B setup



Type C setup



ATR connection interface



A technical drawing of the transformer is needed when creating an ATR connection interface

For EdM cast resin transformers contact us on +44 (0) 370 608 9020

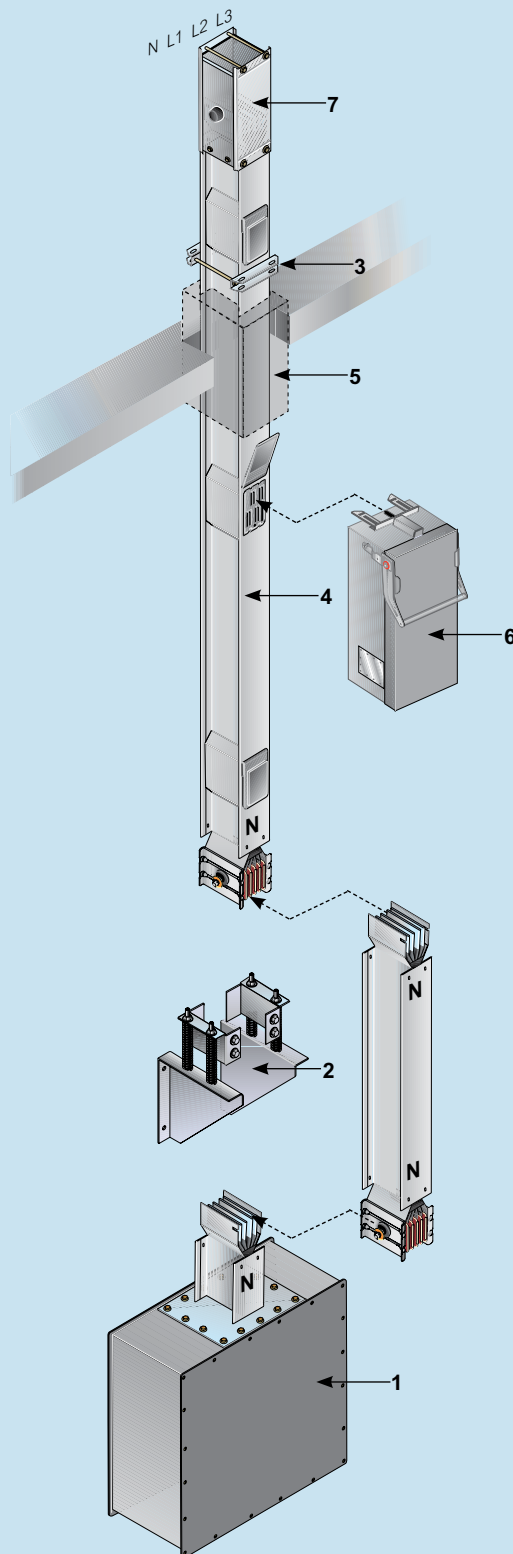
All dimensions (mm) are nominal

SCP super compact busbar installation guidelines

■ Installation design

- 1 Use a right hand end feed unit (without monobloc)
To position the tap-off boxes correctly, the neutral conductor of the riser mains must be on the left side of the length
- 2 Use one or more suspension brackets for the vertical lengths, according to the weight of the whole riser mains
For risers that are shorter than 4 m, fix to the base with type B brackets (see p. 81)
When longer, use a type A suspension bracket (see p. 81) every 300 kg of riser (including boxes)
- 3 Use a standard suspension bracket to hang the busbar every 2 metres of riser mains
- 4 Use lengths with tap-off outlets (see p. 66)
- 5 Use S120 fire barrier kit for each compartment floor (see p. 69)
- 6 Tap-off boxes can be installed in the tap-off outlets and near the connection between lengths
In both cases, the boxes extend downward
- 7 Position the IP 55 end cover at the end of the riser mains

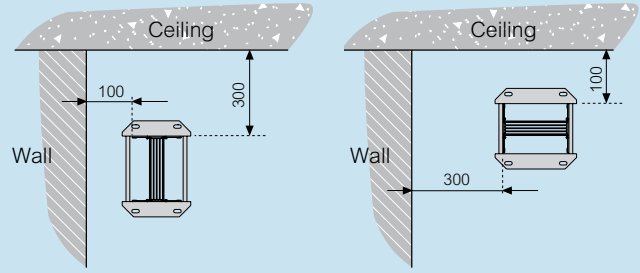
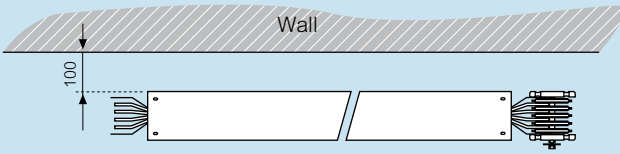
For further information,
please contact us on +44 (0) 370 608 9020



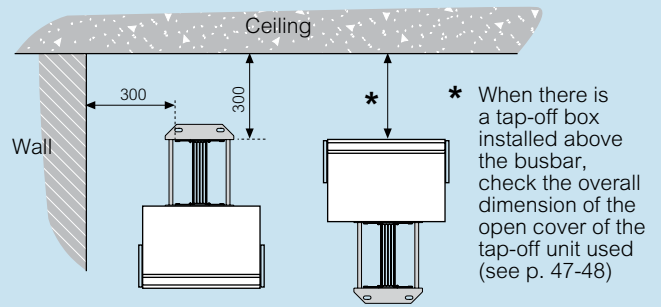
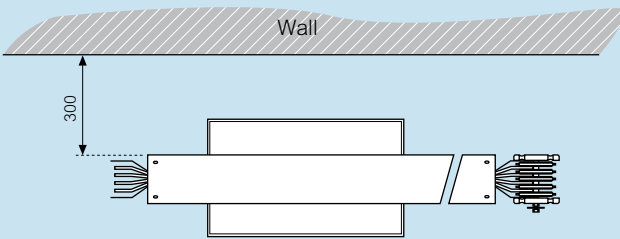
SCP super compact busbar

installation guidelines

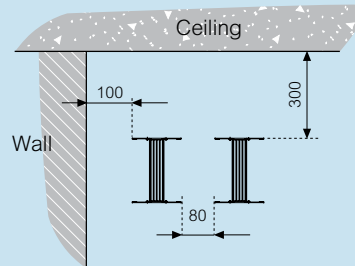
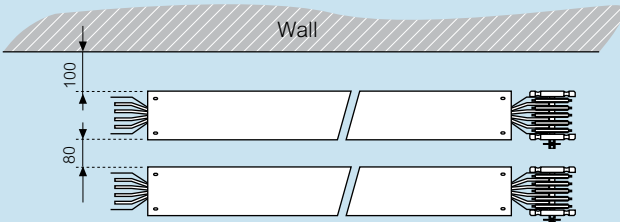
■ Minimum distance of the wall / ceiling lengths



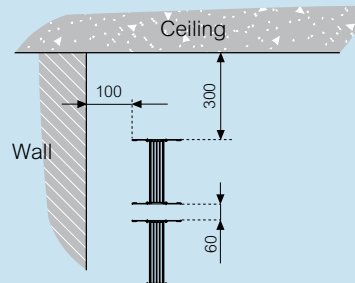
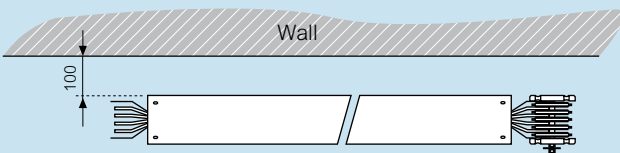
When there are tap-off units along the busbars, the minimum distances depend on the dimensions of the tap-offs selected.



* When there is a tap-off box installed above the busbar, check the overall dimension of the open cover of the tap-off unit used (see p. 47-48)



Minimum installation distance when there are several adjacent lines



Minimum installation distance when there are several overlapped lines

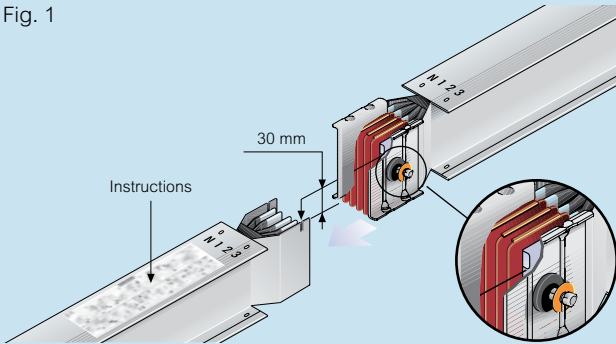
For further information, please contact us on +44 (0) 370 608 9020

All dimensions (mm) are nominal

■ Installation sequence of the junction

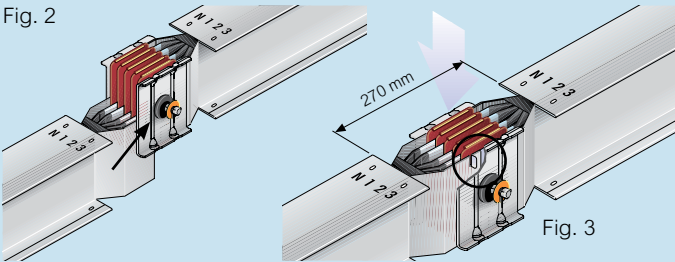
- 1 Installation instructions are included near the junction (Fig.1)
Make sure that the contacts are clean before joining lengths

Fig. 1

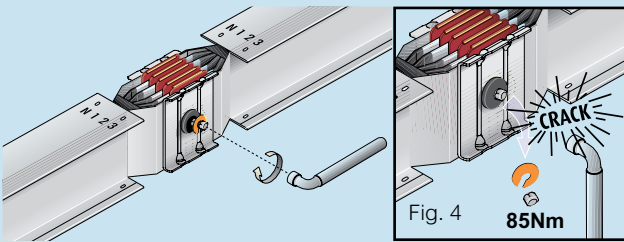


- 2 Make sure that the earth plate of the trunking length is inserted behind the front plate of the junction (Fig.2)
The positioning pin on the monobloc should be fitted into the corresponding slot on the earth plate. Verify the distance between lengths, 270 mm, before tightening the monobloc completely (Fig.3)

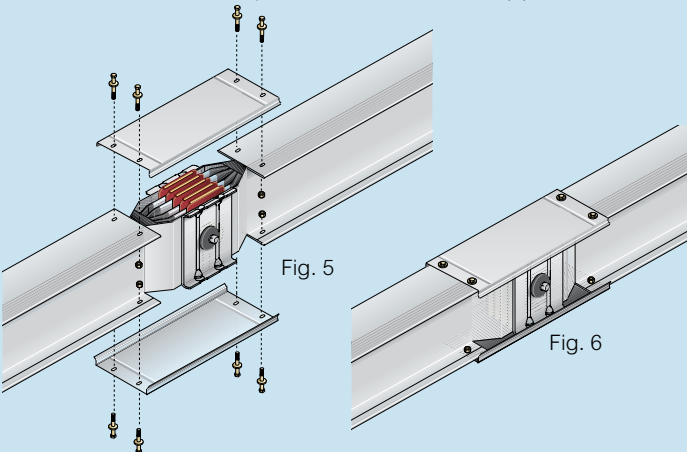
Fig. 2



- 3 Tighten the bolt of the monobloc until the 1st head breaks off (Fig. 4)
The bolt that tightens the monobloc has a second head which is used when carrying out operations or inspections on the line
The nominal tightening torque is 85Nm



- 4 Install the junction covers (Fig. 5)
Completed IP 55 installation (Fig. 6)
For further information, please contact us on +44 (0) 370 608 9020

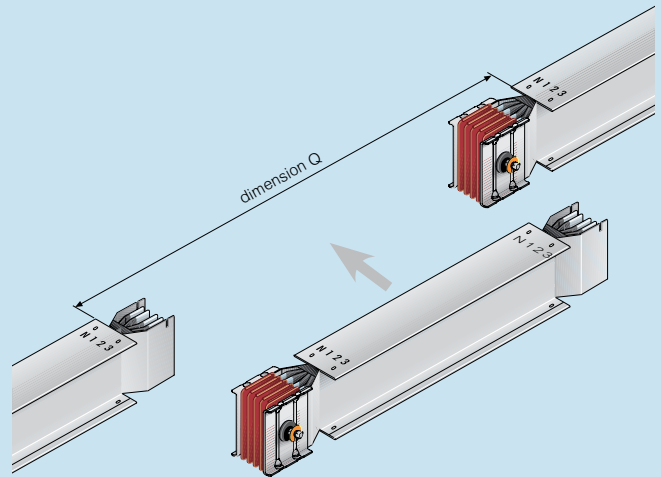


■ Measurement of trunking lengths

The exact length to be ordered can be determined by measuring the distance between the components (as shown below) and then subtracting 270 mm

$$\text{Length} = Q - 270 \text{ mm}$$

Example : dimension measured = 2500 mm
length required = 2230 mm



■ Measurement of bespoke components

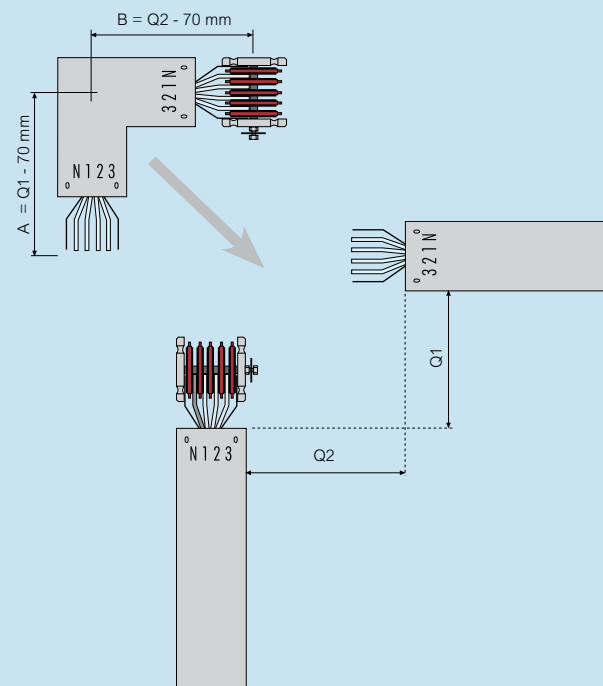
Horizontal elbow

The exact length to be ordered can be determined by measuring the dimensions Q1 and Q2 (as shown below) and then subtracting 70 mm from each dimension

$$A = Q1 - 70 \text{ mm}$$

$$B = Q2 - 70 \text{ mm}$$

For further information, please contact us on +44 (0) 370 608 9020

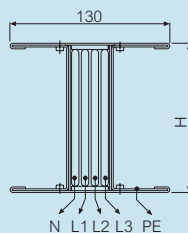


All dimensions (mm) are nominal

SCP super compact busbar – 4 conductor (aluminium)

technical data

■ 3L + N + PE aluminium



| Aluminium | Single bar | | | | | | | Double bar | | |
|---|----------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | I_n [A] | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3200 | 4000 |
| Casing overall dimensions | L x H [mm] | 130x130 | 130x130 | 130x130 | 130x130 | 130x170 | 130x220 | 130x380 | 130x440 | 130x480 |
| Operating voltage | U_e [V] | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Insulation voltage | U_i [V] | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Frequency | f [Hz] | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 |
| Rated short-time current for three-phase fault (1 s) | I_{cw} [kA]rms | 36 | 42 | 50 | 75 | 80 | 80 | 150 | 160 | 160 |
| Allowable peak current for three-phase fault | I_{pk} [kA] | 76 | 88 | 110 | 165 | 176 | 176 | 330 | 352 | 352 |
| Rated short-time current for single-phase fault (1 s) | I_{cw} [kA]rms | 22 | 25 | 30 | 45 | 48 | 48 | 90 | 96 | 96 |
| Allowable peak current for single-phase fault | I_{pk} [kA] | 48 | 55 | 66 | 99 | 106 | 106 | 198 | 211 | 211 |
| Allowable specific energy for three-phase fault | I^2t [MA ² s] | 1296 | 1764 | 2500 | 5625 | 6400 | 6400 | 22500 | 25600 | 25600 |
| Phase resistance | R_{20} [mΩ/m] | 0.077 | 0.057 | 0.057 | 0.046 | 0.033 | 0.025 | 0.021 | 0.016 | 0.013 |
| Phase reactance (50 Hz) | X [mΩ/m] | 0.023 | 0.017 | 0.017 | 0.015 | 0.014 | 0.011 | 0.006 | 0.006 | 0.006 |
| Phase impedance | Z [mΩ/m] | 0.080 | 0.059 | 0.059 | 0.048 | 0.036 | 0.027 | 0.022 | 0.017 | 0.014 |
| Phase resistance at thermal conditions | R_t [mΩ/m] | 0.084 | 0.063 | 0.068 | 0.055 | 0.039 | 0.030 | 0.024 | 0.019 | 0.016 |
| Phase impedance at thermal conditions | Z [mΩ/m] | 0.087 | 0.066 | 0.070 | 0.057 | 0.041 | 0.032 | 0.025 | 0.020 | 0.018 |
| Neutral resistance | R_{20} [mΩ/m] | 0.077 | 0.057 | 0.057 | 0.046 | 0.033 | 0.025 | 0.021 | 0.016 | 0.013 |
| Resistance of the protective conductor (PE 1) | R_{PE} [mΩ/m] | 0.125 | 0.125 | 0.125 | 0.125 | 0.113 | 0.101 | 0.075 | 0.069 | 0.065 |
| Resistance of the protective conductor (PE 2) | R_{PE} [mΩ/m] | 0.036 | 0.036 | 0.036 | 0.036 | 0.028 | 0.023 | 0.014 | 0.012 | 0.011 |
| Resistance of the protective conductor (PE 3) | R_{PE} [mΩ/m] | 0.050 | 0.050 | 0.050 | 0.050 | 0.041 | 0.033 | 0.021 | 0.018 | 0.017 |
| Reactance of the protective conductor (50 Hz) | X_{PE} [mΩ/m] | 0.080 | 0.078 | 0.078 | 0.048 | 0.039 | 0.028 | 0.020 | 0.015 | 0.016 |
| Resistance of the fault loop (PE 1) | R_o [mΩ/m] | 0.209 | 0.188 | 0.193 | 0.180 | 0.152 | 0.131 | 0.099 | 0.088 | 0.081 |
| Resistance of the fault loop (PE 2) | R_o [mΩ/m] | 0.120 | 0.099 | 0.104 | 0.091 | 0.067 | 0.053 | 0.038 | 0.031 | 0.027 |
| Resistance of the fault loop (PE 3) | R_o [mΩ/m] | 0.134 | 0.113 | 0.118 | 0.105 | 0.080 | 0.063 | 0.045 | 0.037 | 0.033 |
| Reactance of the fault loop (50 Hz) | X_o [mΩ/m] | 0.10 | 0.10 | 0.10 | 0.06 | 0.05 | 0.04 | 0.03 | 0.02 | 0.02 |
| Impedance of the fault loop (PE 1) | Z_o [mΩ/m] | 0.233 | 0.211 | 0.215 | 0.191 | 0.161 | 0.137 | 0.103 | 0.091 | 0.084 |
| Impedance of the fault loop (PE 2) | Z_o [mΩ/m] | 0.158 | 0.137 | 0.141 | 0.111 | 0.085 | 0.066 | 0.046 | 0.038 | 0.035 |
| Impedance of the fault loop (PE 3) | Z_o [mΩ/m] | 0.169 | 0.148 | 0.152 | 0.123 | 0.096 | 0.074 | 0.052 | 0.043 | 0.040 |
| Zero-sequence resistance phase - N | R_o [mΩ/m] | 0.306 | 0.257 | 0.257 | 0.238 | 0.172 | 0.140 | 0.107 | 0.080 | 0.070 |
| Zero-sequence reactance phase - N | X_o [mΩ/m] | 0.174 | 0.160 | 0.160 | 0.128 | 0.106 | 0.108 | 0.083 | 0.073 | 0.060 |
| Zero-sequence Impedance phase - N | Z_o [mΩ/m] | 0.352 | 0.303 | 0.303 | 0.270 | 0.202 | 0.177 | 0.135 | 0.108 | 0.092 |
| Zero-sequence resistance phase - PE | R_o [mΩ/m] | 0.581 | 0.519 | 0.519 | 0.369 | 0.321 | 0.270 | 0.217 | 0.196 | 0.164 |
| Zero-sequence reactance phase - PE | X_o [mΩ/m] | 0.263 | 0.229 | 0.229 | 0.191 | 0.175 | 0.212 | 0.155 | 0.148 | 0.146 |
| Zero-sequence Impedance phase - PE | Z_o [mΩ/m] | 0.638 | 0.567 | 0.567 | 0.416 | 0.366 | 0.343 | 0.267 | 0.246 | 0.22 |
| Voltage drop factor with distributed load $\Delta V = k \cdot L \cdot I_e \cdot 10^{-6}$ [V] | $\cos\phi = 0.70$ | 65.3 | 48.9 | 51.9 | 42.9 | 32.3 | 25.1 | 18.4 | 15.4 | 13.7 |
| | $\cos\phi = 0.75$ | 67.9 | 50.9 | 54.1 | 44.6 | 33.4 | 25.9 | 19.2 | 16.0 | 14.1 |
| | $\cos\phi = 0.80$ | 70.3 | 52.7 | 56.1 | 46.2 | 34.3 | 26.7 | 19.9 | 16.5 | 14.5 |
| | $\cos\phi = 0.85$ | 72.5 | 54.4 | 58.0 | 47.7 | 35.1 | 27.3 | 20.6 | 16.9 | 14.9 |
| | $\cos\phi = 0.90$ | 74.3 | 55.8 | 59.6 | 48.9 | 35.7 | 27.7 | 21.2 | 17.3 | 15.1 |
| | $\cos\phi = 0.95$ | 75.5 | 56.7 | 60.8 | 49.7 | 35.9 | 27.8 | 21.6 | 17.5 | 15.2 |
| $\cos\phi = 1.00$ | 72.9 | 54.9 | 59.1 | 48.0 | 33.8 | 26.2 | 21.0 | 16.7 | 14.3 | |
| Weight (PE 1) | ρ [kg/m] | 17.3 | 17.0 | 17.0 | 18.7 | 20.3 | 30.7 | 43.7 | 52.3 | 62.7 |
| Weight (PE 2) | ρ [kg/m] | 20.8 | 20.5 | 20.5 | 23.2 | 24.9 | 36.7 | 53.9 | 64.3 | 75.7 |
| Weight (PE 3) | ρ [kg/m] | 18.4 | 18.1 | 18.1 | 20.8 | 21.8 | 32.6 | 46.9 | 56.1 | 66.8 |
| Fire load | [kWh/m] | 4.5 | 5.5 | 5.5 | 6.0 | 8.5 | 10.5 | 16.0 | 19.0 | 21.0 |
| Degree of protection | IP | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 |
| Thermal resistance class of the insulating materials | - | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ |
| Joule effect losses at rated current | P [W/m] | 100 | 122 | 205 | 260 | 300 | 363 | 455 | 592 | 790 |
| Min./max. ambient temperature | [°C] | -5/50 | -5/50 | -5/50 | -5/50 | -5/50 | -5/50 | -5/50 | -5/50 | -5/50 |

Regulations and conformity :

IEC EN 61439-6; DIN VDE 0660 500 and 502

Product suitable for Constant/Cyclic Warm, humid climates :

DIN IEC 68 part 2-3; DIN IEC 68 part 2-30

Degree of protection :

IP 55; IP x7 carrying lines available with accessories, on request - +44 (0) 370 608 9020

Insulation and surface treatment of the conductors :

Insulated conductors for the whole length, aluminum copper-plated and tin-plated

Busbar casing material :

1.5 mm galvanised steel plate, pre-painted or stainless steel (available, if required, with special paint and/or with thickness 2 mm)

1 : Class F thermal resistance (155°C) available on request - +44 (0) 370 608 9020

I_n : rated current referred to a room temperature of 40°C



PE 1
Standard version



PE 2
Extra earth - copper

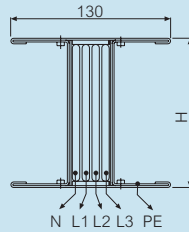


PE 3
Extra earth - aluminium

SCP super compact busbar – 4 conductor (copper)

technical data

■ 3L + N + PE copper



| Copper | Single bar | | | | | | | Double bar | | |
|---|----------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | I_n [A] | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3200 | 4000 | 5000 |
| Casing overall dimensions | L x H [mm] | 130x130 | 130x130 | 130x130 | 130x170 | 130x170 | 130x220 | 130x380 | 130x440 | 130x480 |
| Operating voltage | U_e [V] | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Insulation voltage | U_i [V] | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Frequency | f [Hz] | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 |
| Rated short-time current for three-phase fault (1 s) | I_{cw} [kA]rms | 45 | 50 | 60 | 85 | 88 | 88 | 170 | 176 | 176 |
| Allowable peak current for three-phase fault | I_{pk} [kA] | 95 | 110 | 132 | 187 | 194 | 194 | 374 | 387 | 387 |
| Rated short-time current for single-phase fault (1 s) | I_{cw} [kA]rms | 27 | 30 | 36 | 51 | 53 | 53 | 102 | 106 | 106 |
| Allowable peak current for single-phase fault | [kA] | 57 | 66 | 79 | 112 | 116 | 116 | 224 | 232 | 232 |
| Allowable specific energy for three-phase fault | I^2t [MA ² s] | 2025 | 2500 | 3600 | 7225 | 7744 | 7744 | 28900 | 30976 | 30976 |
| Phase resistance | R_{20} [mΩ/m] | 0.039 | 0.030 | 0.030 | 0.022 | 0.018 | 0.014 | 0.011 | 0.009 | 0.007 |
| Phase reactance (50 Hz) | X [mΩ/m] | 0.023 | 0.017 | 0.017 | 0.015 | 0.014 | 0.011 | 0.007 | 0.006 | 0.006 |
| Phase impedance | Z [mΩ/m] | 0.045 | 0.035 | 0.035 | 0.027 | 0.023 | 0.018 | 0.013 | 0.011 | 0.009 |
| Phase resistance at thermal conditions | R_t [mΩ/m] | 0.042 | 0.035 | 0.037 | 0.027 | 0.022 | 0.017 | 0.013 | 0.011 | 0.008 |
| Phase impedance at thermal conditions | Z [mΩ/m] | 0.048 | 0.039 | 0.041 | 0.031 | 0.026 | 0.020 | 0.015 | 0.013 | 0.010 |
| Neutral resistance | R_{20} [mΩ/m] | 0.039 | 0.030 | 0.030 | 0.022 | 0.018 | 0.014 | 0.011 | 0.009 | 0.007 |
| Resistance of the protective conductor (PE 1) | R_{PE} [mΩ/m] | 0.125 | 0.125 | 0.125 | 0.113 | 0.113 | 0.101 | 0.075 | 0.069 | 0.065 |
| Resistance of the protective conductor (PE 2) | R_{PE} [mΩ/m] | 0.036 | 0.036 | 0.036 | 0.028 | 0.028 | 0.023 | 0.014 | 0.012 | 0.011 |
| Resistance of the protective conductor (PE 3) | R_{PE} [mΩ/m] | 0.050 | 0.050 | 0.050 | 0.041 | 0.041 | 0.033 | 0.021 | 0.018 | 0.017 |
| Reactance of the protective conductor (50 Hz) | X_{PE} [mΩ/m] | 0.054 | 0.054 | 0.054 | 0.044 | 0.044 | 0.032 | 0.022 | 0.017 | 0.016 |
| Resistance of the fault loop (PE 1) | R_o [mΩ/m] | 0.167 | 0.160 | 0.162 | 0.140 | 0.135 | 0.118 | 0.088 | 0.080 | 0.073 |
| Resistance of the fault loop (PE 2) | R_o [mΩ/m] | 0.078 | 0.071 | 0.073 | 0.055 | 0.050 | 0.040 | 0.027 | 0.023 | 0.019 |
| Resistance of the fault loop (PE 3) | R_o [mΩ/m] | 0.092 | 0.085 | 0.087 | 0.068 | 0.063 | 0.050 | 0.034 | 0.029 | 0.025 |
| Reactance of the fault loop (50 Hz) | X_o [mΩ/m] | 0.077 | 0.071 | 0.071 | 0.059 | 0.058 | 0.043 | 0.029 | 0.023 | 0.022 |
| Impedance of the fault loop (PE 1) | Z_o [mΩ/m] | 0.184 | 0.175 | 0.177 | 0.152 | 0.147 | 0.126 | 0.093 | 0.083 | 0.077 |
| Impedance of the fault loop (PE 2) | Z_o [mΩ/m] | 0.110 | 0.100 | 0.102 | 0.081 | 0.077 | 0.059 | 0.040 | 0.033 | 0.029 |
| Impedance of the fault loop (PE 3) | Z_o [mΩ/m] | 0.120 | 0.110 | 0.112 | 0.090 | 0.086 | 0.066 | 0.045 | 0.037 | 0.034 |
| Zero-sequence resistance phase - N | R_o [mΩ/m] | 0.170 | 0.155 | 0.155 | 0.115 | 0.120 | 0.098 | 0.083 | 0.071 | 0.062 |
| Zero-sequence reactance phase - N | X_o [mΩ/m] | 0.159 | 0.151 | 0.151 | 0.114 | 0.098 | 0.065 | 0.056 | 0.055 | 0.042 |
| Zero-sequence Impedance phase - N | Z_o [mΩ/m] | 0.233 | 0.216 | 0.216 | 0.162 | 0.155 | 0.118 | 0.100 | 0.090 | 0.075 |
| Zero-sequence resistance phase - PE | R_o [mΩ/m] | 0.507 | 0.429 | 0.429 | 0.331 | 0.283 | 0.221 | 0.177 | 0.178 | 0.144 |
| Zero-sequence reactance phase - PE | X_o [mΩ/m] | 0.201 | 0.177 | 0.177 | 0.143 | 0.150 | 0.124 | 0.111 | 0.094 | 0.086 |
| Zero-sequence Impedance phase - PE | Z_o [mΩ/m] | 0.545 | 0.464 | 0.464 | 0.361 | 0.320 | 0.253 | 0.209 | 0.201 | 0.168 |
| Voltage drop factor with distributed load $\Delta V = k.L.I_e.10^{-6}$ [V] | $\cos\phi = 0.70$ | 39.9 | 31.5 | 33.0 | 25.6 | 22.1 | 17.1 | 12.2 | 10.5 | 8.9 |
| | $\cos\phi = 0.75$ | 40.7 | 32.2 | 33.9 | 26.1 | 22.4 | 17.4 | 12.4 | 10.8 | 8.9 |
| | $\cos\phi = 0.80$ | 41.3 | 32.8 | 34.6 | 26.5 | 22.6 | 17.5 | 12.6 | 10.9 | 9.0 |
| | $\cos\phi = 0.85$ | 41.7 | 33.3 | 35.1 | 26.7 | 22.7 | 17.5 | 12.8 | 11.0 | 9.0 |
| | $\cos\phi = 0.90$ | 41.7 | 33.4 | 35.4 | 26.7 | 22.5 | 17.4 | 12.8 | 11.0 | 8.9 |
| | $\cos\phi = 0.95$ | 41.1 | 33.1 | 35.1 | 26.2 | 22.0 | 17.0 | 12.6 | 10.9 | 8.6 |
| | $\cos\phi = 1.00$ | 36.7 | 30.0 | 32.2 | 23.3 | 19.1 | 14.7 | 11.2 | 9.8 | 7.3 |
| Weight (PE 1) | p [kg/m] | 31.0 | 31.0 | 31.0 | 42.0 | 46.0 | 69.0 | 84.0 | 101.0 | 126.0 |
| Weight (PE 2) | p [kg/m] | 35.0 | 35.0 | 35.0 | 47.0 | 51.0 | 70.0 | 94.0 | 114.0 | 139.0 |
| Weight (PE 3) | p [kg/m] | 33.0 | 32.0 | 32.0 | 44.0 | 48.0 | 66.0 | 87.0 | 105.0 | 130.0 |
| Fire load | [kWh/m] | 4.5 | 5.5 | 5.5 | 8 | 8.2 | 10.5 | 16 | 19 | 21 |
| Degree of protection | IP | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 |
| Thermal resistance class of the insulating materials | - | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ |
| Joule effect losses at rated current | P [W/m] | 81 | 104 | 174 | 207 | 265 | 319 | 399 | 541 | 636 |
| Min./max. ambient temperature | [°C] | -5/50 | -5/50 | -5/50 | -5/50 | -5/50 | -5/50 | -5/50 | -5/50 | -5/50 |

Regulations and conformity :
IEC EN 61439-6; DIN VDE 0660 500 and 502

Product suitable for Constant/Cyclic Warm, humid climates :
DIN IEC 68 part 2-3; DIN IEC 68 part 2-30

Degree of protection :

IP 55; IP x7 carrying lines available with accessories, on request - +44 (0) 370 608 9020

Insulation and surface treatment of the conductors :

Insulated conductors for the whole length, aluminum copper-plated and tin-plated

Busbar casing material :

1.5 mm galvanised steel plate, pre-painted or stainless steel (available, if required, with special paint and/or with thickness 2 mm)

1 : Class F thermal resistance (155°C) available on request - +44 (0) 370 608 9020

I_n : rated current referred to a room temperature of 40°C



PE 1
Standard version



PE 2
Extra earth - copper

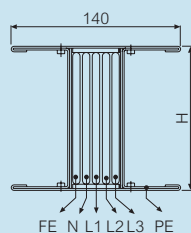


PE 3
Extra earth - aluminium

SCP super compact busbar – 5 conductor (aluminium)

technical data

■ SCP technical data functional earth clean earth / low noise SCP5C (3L + N + PE + FE) aluminium



| Aluminium | Single bar | | | | | | | Double bar | | |
|---|-----------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | I_n [A] | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3200 | 4000 |
| Rated current | I_n [A] | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3200 | 4000 |
| Casing overall dimensions | L x H [mm] | 140x130 | 140x130 | 140x130 | 140x130 | 140x170 | 140x220 | 140x380 | 140x440 | 140x480 |
| Operating voltage | U_e [V] | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Insulation voltage | U_i [V] | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Frequency | f [Hz] | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 |
| Rated short-time current for three-phase fault (1 s) | I_{cw} [kA]rms | 36 | 42 | 50 | 75 | 80 | 80 | 150 | 160 | 160 |
| Allowable peak current for three-phase fault | I_{pk} [kA] | 76 | 88 | 110 | 165 | 176 | 176 | 330 | 352 | 352 |
| Rated short-time current for single-phase fault (1 s) | I_{cw} [kA]rms | 22 | 25 | 30 | 45 | 48 | 48 | 90 | 96 | 96 |
| Allowable peak current for single-phase fault | I_{pk} [kA] | 48 | 55 | 66 | 99 | 106 | 106 | 198 | 211 | 211 |
| Allowable specific energy for three-phase fault | I^2t [MA ² s] | 1296 | 1764 | 2500 | 5625 | 6400 | 6400 | 22500 | 25600 | 25600 |
| Phase resistance | R_{20} [mΩ/m] | 0.077 | 0.057 | 0.057 | 0.046 | 0.033 | 0.025 | 0.021 | 0.016 | 0.013 |
| Phase reactance (50 Hz) | X [mΩ/m] | 0.023 | 0.017 | 0.017 | 0.015 | 0.014 | 0.011 | 0.006 | 0.006 | 0.006 |
| Phase impedance | Z [mΩ/m] | 0.080 | 0.059 | 0.059 | 0.048 | 0.036 | 0.027 | 0.022 | 0.017 | 0.014 |
| Phase resistance at thermal conditions | R_t [mΩ/m] | 0.084 | 0.063 | 0.068 | 0.055 | 0.039 | 0.030 | 0.024 | 0.019 | 0.016 |
| Phase impedance at thermal conditions | Z [mΩ/m] | 0.087 | 0.066 | 0.070 | 0.057 | 0.041 | 0.032 | 0.025 | 0.020 | 0.018 |
| Neutral resistance | R_{20} [mΩ/m] | 0.077 | 0.057 | 0.057 | 0.046 | 0.033 | 0.025 | 0.021 | 0.016 | 0.013 |
| Functional earthing resistance (FE) | R_{20} [mΩ/m] | 0.077 | 0.057 | 0.057 | 0.046 | 0.033 | 0.025 | 0.021 | 0.016 | 0.013 |
| Functional earthing reactance (FE) | X [mΩ/m] | 0.023 | 0.017 | 0.017 | 0.015 | 0.014 | 0.011 | 0.006 | 0.006 | 0.006 |
| Resistance of the protective conductor (PE type 1) | R_{PE} [mΩ/m] | 0.121 | 0.121 | 0.121 | 0.121 | 0.110 | 0.098 | 0.074 | 0.068 | 0.064 |
| Resistance of the protective conductor (PE type 2) | R_{PE} [mΩ/m] | 0.035 | 0.035 | 0.035 | 0.035 | 0.028 | 0.023 | 0.014 | 0.012 | 0.011 |
| Resistance of the protective conductor (PE type 3) | R_{PE} [mΩ/m] | 0.050 | 0.050 | 0.050 | 0.050 | 0.040 | 0.033 | 0.020 | 0.018 | 0.017 |
| Reactance of the protective conductor (50 Hz) | X_{PE} [mΩ/m] | 0.080 | 0.078 | 0.078 | 0.048 | 0.039 | 0.028 | 0.020 | 0.015 | 0.016 |
| Resistance of the fault loop (PE 1) | R_o [mΩ/m] | 0.131 | 0.102 | 0.107 | 0.089 | 0.064 | 0.050 | 0.041 | 0.032 | 0.027 |
| Resistance of the fault loop (PE 2) | R_o [mΩ/m] | 0.108 | 0.085 | 0.090 | 0.075 | 0.054 | 0.042 | 0.033 | 0.026 | 0.022 |
| Resistance of the fault loop (PE 3) | R_o [mΩ/m] | 0.115 | 0.090 | 0.095 | 0.079 | 0.057 | 0.044 | 0.034 | 0.028 | 0.024 |
| Reactance of the fault loop (50 Hz) | X_o [mΩ/m] | 0.10 | 0.10 | 0.10 | 0.06 | 0.05 | 0.04 | 0.03 | 0.02 | 0.02 |
| Impedance of the fault loop (PE 1) | Z_o [mΩ/m] | 0.167 | 0.139 | 0.143 | 0.109 | 0.083 | 0.064 | 0.048 | 0.038 | 0.035 |
| Impedance of the fault loop (PE 2) | Z_o [mΩ/m] | 0.149 | 0.128 | 0.131 | 0.098 | 0.076 | 0.057 | 0.042 | 0.034 | 0.031 |
| Impedance of the fault loop (PE 3) | Z_o [mΩ/m] | 0.154 | 0.131 | 0.134 | 0.101 | 0.078 | 0.059 | 0.043 | 0.035 | 0.032 |
| Zero-sequence resistance phase - N | R_o [mΩ/m] | 0.306 | 0.257 | 0.257 | 0.238 | 0.172 | 0.140 | 0.107 | 0.080 | 0.070 |
| Zero-sequence reactance phase - N | X_o [mΩ/m] | 0.174 | 0.160 | 0.160 | 0.128 | 0.106 | 0.108 | 0.083 | 0.073 | 0.060 |
| Zero-sequence Impedance phase - N | Z_o [mΩ/m] | 0.352 | 0.303 | 0.303 | 0.270 | 0.202 | 0.177 | 0.135 | 0.108 | 0.092 |
| Zero-sequence resistance phase - PE | R_o [mΩ/m] | 0.468 | 0.387 | 0.387 | 0.246 | 0.213 | 0.173 | 0.113 | 0.107 | 0.070 |
| Zero-sequence reactance phase - PE | X_o [mΩ/m] | 0.263 | 0.229 | 0.229 | 0.191 | 0.175 | 0.212 | 0.155 | 0.148 | 0.146 |
| Zero-sequence Impedance phase - PE | Z_o [mΩ/m] | 0.537 | 0.450 | 0.450 | 0.311 | 0.276 | 0.274 | 0.192 | 0.183 | 0.162 |
| Voltage drop factor with distributed load $\Delta V = k.L.I.e.10^{-6}$ [V] | k [V/m/A]10 ⁻⁶ | | | | | | | | | |
| | $\cos\phi = 0.70$ | 65.3 | 48.9 | 51.9 | 42.9 | 32.3 | 25.1 | 18.4 | 15.4 | 13.7 |
| | $\cos\phi = 0.75$ | 67.9 | 50.9 | 54.1 | 44.6 | 33.4 | 25.9 | 19.2 | 16.0 | 14.1 |
| | $\cos\phi = 0.80$ | 70.3 | 52.7 | 56.1 | 46.2 | 34.3 | 26.7 | 19.9 | 16.5 | 14.5 |
| | $\cos\phi = 0.85$ | 72.5 | 54.4 | 58.0 | 47.7 | 35.1 | 27.3 | 20.6 | 16.9 | 14.9 |
| | $\cos\phi = 0.90$ | 74.3 | 55.8 | 59.6 | 48.9 | 35.7 | 27.7 | 21.2 | 17.3 | 15.1 |
| $\cos\phi = 0.95$ | 75.5 | 56.7 | 60.8 | 49.7 | 35.9 | 27.8 | 21.6 | 17.5 | 15.2 | |
| $\cos\phi = 1.00$ | 72.9 | 54.9 | 59.1 | 48.0 | 33.8 | 26.2 | 21.0 | 16.7 | 14.3 | |
| Weight (PE 1) | p [kg/m] | 21.6 | 21.3 | 21.3 | 23.4 | 25.4 | 38.4 | 54.6 | 65.4 | 78.4 |
| Weight (PE 2) | p [kg/m] | 23.0 | 22.8 | 22.8 | 26.4 | 28.6 | 41.4 | 60.1 | 72.1 | 84.9 |
| Weight (PE 3) | p [kg/m] | 20.6 | 20.4 | 20.4 | 24.0 | 25.5 | 37.4 | 53.1 | 64.0 | 76.0 |
| Fire load | [kWh/m] | 5.6 | 6.9 | 6.9 | 7.5 | 10.6 | 13.1 | 20.0 | 23.8 | 26.3 |
| Degree of protection | IP | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 |
| Thermal resistance class of the insulating materials | - | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ |
| Joule effect losses at rated current | P [W/m] | 100 | 122 | 205 | 260 | 300 | 363 | 455 | 592 | 790 |
| Min./max. ambient temperature | [°C] | -5/50 | -5/50 | -5/50 | -5/50 | -5/50 | -5/50 | -5/50 | -5/50 | -5/50 |

Regulations and conformity :

IEC EN 61439-6; DIN VDE 0660 500 and 502

Product suitable for Constant/Cyclic Warm, humid climates :

DIN IEC 68 part 2-3; DIN IEC 68 part 2-30

Degree of protection :

IP 55; IP x7 carrying lines available with accessories, on request - +44 (0) 370 608 9020

Insulation and surface treatment of the conductors :

Insulated conductors for the whole length, aluminum copper-plated and tin-plated

Busbar casing material :

1.5 mm galvanised steel plate, pre-painted or stainless steel (available, if required, with special paint and/or with thickness 2 mm)

1 : Class F thermal resistance (155°C) available on request - +44 (0) 370 608 9020

I_n : rated current referred to a room temperature of 40°C



PE 1
Standard version



PE 2
Extra earth - copper

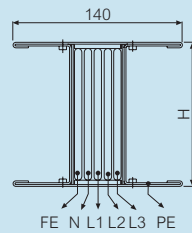


PE 3
Extra earth - aluminium

SCP super compact busbar – 5 conductor (copper)

technical data

■ SCP technical data functional earth clean earth / low noise SCP5C (3L + N + PE + FE) copper



| Copper | Single bar | | | | | | | Double bar | | | |
|---|--------------------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----|
| | I_n [A] | 800 | 1 000 | 1 250 | 1 600 | 2 000 | 2 500 | 3 200 | 4 000 | 5 000 | |
| Rated current | I_n [A] | 800 | 1 000 | 1 250 | 1 600 | 2 000 | 2 500 | 3 200 | 4 000 | 5 000 | |
| Casing overall dimensions | L x H [mm] | 140x130 | 140x130 | 140x130 | 140x170 | 140x170 | 140x220 | 140x380 | 140x440 | 140x480 | |
| Operating voltage | U_e [V] | 1 000 | 1 000 | 1 000 | 1 000 | 1 000 | 1 000 | 1 000 | 1 000 | 1 000 | |
| Insulation voltage | U_i [V] | 1 000 | 1 000 | 1 000 | 1 000 | 1 000 | 1 000 | 1 000 | 1 000 | 1 000 | |
| Frequency | f [Hz] | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | |
| Rated short-time current for three-phase fault (1 s) | I_{cw} [kA]rms | 45 | 50 | 60 | 85 | 88 | 88 | 170 | 176 | 176 | |
| Allowable peak current for three-phase fault | I_{pk} [kA] | 95 | 110 | 132 | 187 | 194 | 194 | 374 | 387 | 387 | |
| Rated short-time current for single-phase fault (1 s) | I_{cw} [kA]rms | 27 | 30 | 36 | 51 | 53 | 53 | 102 | 106 | 106 | |
| Allowable peak current for single-phase fault | I_{pk} [kA] | 57 | 66 | 79 | 112 | 116 | 116 | 224 | 232 | 232 | |
| Allowable specific energy for three-phase fault | I^2t [MA ² s] | 2025 | 2 500 | 3 600 | 7 225 | 7 744 | 7 744 | 28 900 | 30 976 | 30 976 | |
| Phase resistance | R_{20} [mΩ/m] | 0.039 | 0.030 | 0.030 | 0.022 | 0.018 | 0.014 | 0.011 | 0.009 | 0.007 | |
| Phase reactance (50 Hz) | X [mΩ/m] | 0.023 | 0.017 | 0.017 | 0.015 | 0.014 | 0.011 | 0.007 | 0.006 | 0.006 | |
| Phase impedance | Z [mΩ/m] | 0.045 | 0.035 | 0.035 | 0.027 | 0.023 | 0.018 | 0.013 | 0.011 | 0.009 | |
| Phase resistance at thermal conditions | R_t [mΩ/m] | 0.042 | 0.035 | 0.037 | 0.027 | 0.022 | 0.017 | 0.013 | 0.011 | 0.008 | |
| Phase impedance at thermal conditions | Z [mΩ/m] | 0.048 | 0.039 | 0.041 | 0.031 | 0.026 | 0.020 | 0.015 | 0.013 | 0.010 | |
| Neutral resistance | R_{20} [mΩ/m] | 0.039 | 0.030 | 0.030 | 0.022 | 0.018 | 0.014 | 0.011 | 0.009 | 0.007 | |
| Functional earthing resistance (FE) | R_{20} [mΩ/m] | 0.039 | 0.030 | 0.030 | 0.022 | 0.018 | 0.014 | 0.011 | 0.009 | 0.007 | |
| Functional earthing reactance (FE) | X [mΩ/m] | 0.023 | 0.017 | 0.017 | 0.015 | 0.014 | 0.011 | 0.007 | 0.006 | 0.006 | |
| Resistance of the protective conductor (PE type 1) | R_{PE} [mΩ/m] | 0.125 | 0.125 | 0.125 | 0.113 | 0.113 | 0.101 | 0.075 | 0.069 | 0.065 | |
| Resistance of the protective conductor (PE type 2) | R_{PE} [mΩ/m] | 0.036 | 0.036 | 0.036 | 0.028 | 0.028 | 0.023 | 0.014 | 0.012 | 0.011 | |
| Resistance of the protective conductor (PE type 3) | R_{PE} [mΩ/m] | 0.050 | 0.050 | 0.050 | 0.041 | 0.041 | 0.033 | 0.021 | 0.018 | 0.017 | |
| Reactance of the protective conductor (50 Hz) | X_{PE} [mΩ/m] | 0.054 | 0.054 | 0.054 | 0.044 | 0.044 | 0.032 | 0.022 | 0.017 | 0.016 | |
| Resistance of the fault loop (PE 1) | R_o [mΩ/m] | 0.072 | 0.059 | 0.062 | 0.045 | 0.038 | 0.029 | 0.023 | 0.019 | 0.015 | |
| Resistance of the fault loop (PE 2) | R_o [mΩ/m] | 0.061 | 0.051 | 0.054 | 0.039 | 0.033 | 0.026 | 0.019 | 0.016 | 0.013 | |
| Resistance of the fault loop (PE 3) | R_o [mΩ/m] | 0.064 | 0.054 | 0.056 | 0.041 | 0.035 | 0.027 | 0.020 | 0.017 | 0.013 | |
| Reactance of the fault loop (50 Hz) | X_o [mΩ/m] | 0.077 | 0.071 | 0.071 | 0.059 | 0.058 | 0.043 | 0.029 | 0.023 | 0.022 | |
| Impedance of the fault loop (PE 1) | Z_o [mΩ/m] | 0.105 | 0.092 | 0.094 | 0.074 | 0.069 | 0.052 | 0.037 | 0.030 | 0.026 | |
| Impedance of the fault loop (PE 2) | Z_o [mΩ/m] | 0.098 | 0.087 | 0.089 | 0.071 | 0.067 | 0.050 | 0.035 | 0.028 | 0.025 | |
| Impedance of the fault loop (PE 3) | Z_o [mΩ/m] | 0.100 | 0.089 | 0.090 | 0.072 | 0.068 | 0.051 | 0.035 | 0.029 | 0.026 | |
| Zero-sequence resistance phase - N | R_o [mΩ/m] | 0.170 | 0.155 | 0.155 | 0.115 | 0.120 | 0.098 | 0.083 | 0.071 | 0.062 | |
| Zero-sequence reactance phase - N | X_o [mΩ/m] | 0.159 | 0.151 | 0.151 | 0.114 | 0.098 | 0.065 | 0.056 | 0.055 | 0.042 | |
| Zero-sequence Impedance phase - N | Z_o [mΩ/m] | 0.233 | 0.216 | 0.216 | 0.162 | 0.155 | 0.118 | 0.100 | 0.090 | 0.075 | |
| Zero-sequence resistance phase - PE | R_o [mΩ/m] | 0.408 | 0.320 | 0.320 | 0.220 | 0.188 | 0.142 | 0.092 | 0.077 | 0.061 | |
| Zero-sequence reactance phase - PE | X_o [mΩ/m] | 0.196 | 0.158 | 0.158 | 0.126 | 0.135 | 0.136 | 0.104 | 0.088 | 0.075 | |
| Zero-sequence Impedance phase - PE | Z_o [mΩ/m] | 0.453 | 0.357 | 0.357 | 0.254 | 0.231 | 0.197 | 0.139 | 0.117 | 0.097 | |
| Voltage drop factor with distributed load $\Delta V = k.L.I.e.10^{-6}$ [V] | k [V/(m/A)10 ⁻⁶] | $\cos\phi = 0.70$ | 39.9 | 31.5 | 33.0 | 25.6 | 22.1 | 17.1 | 12.2 | 10.5 | 8.9 |
| | $\cos\phi = 0.75$ | 40.7 | 32.2 | 33.9 | 26.1 | 22.4 | 17.4 | 12.4 | 10.8 | 8.9 | |
| | $\cos\phi = 0.80$ | 41.3 | 32.8 | 34.6 | 26.5 | 22.6 | 17.5 | 12.6 | 10.9 | 9.0 | |
| | $\cos\phi = 0.85$ | 41.7 | 33.3 | 35.1 | 26.7 | 22.7 | 17.5 | 12.8 | 11.0 | 9.0 | |
| | $\cos\phi = 0.90$ | 41.7 | 33.4 | 35.4 | 26.7 | 22.5 | 17.4 | 12.8 | 11.0 | 8.9 | |
| | $\cos\phi = 0.95$ | 41.1 | 33.1 | 35.1 | 26.2 | 22.0 | 17.0 | 12.6 | 10.9 | 8.6 | |
| $\cos\phi = 1.00$ | 36.7 | 30.0 | 32.2 | 23.3 | 19.1 | 14.7 | 11.2 | 9.8 | 7.3 | | |
| Weight (PE 1) | p [kg/m] | 39.0 | 39.0 | 39.0 | 53.0 | 58.0 | 86.0 | 105.0 | 126.0 | 158.0 | |
| Weight (PE 2) | p [kg/m] | 41.0 | 41.0 | 41.0 | 55.0 | 60.0 | 83.0 | 111.0 | 134.0 | 174.0 | |
| Weight (PE 3) | p [kg/m] | 38.0 | 38.0 | 38.0 | 52.0 | 57.0 | 79.0 | 104.0 | 126.0 | 163.0 | |
| Fire load | [kWh/m] | 5.6 | 6.9 | 6.9 | 10.0 | 10.3 | 13.1 | 20.0 | 23.8 | 26.3 | |
| Degree of protection | IP | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | |
| Thermal resistance class of the insulating materials | - | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | |
| Joule effect losses at rated current | P [W/m] | 81 | 104 | 174 | 207 | 265 | 319 | 399 | 541 | 636 | |
| Min./max. ambient temperature | [°C] | -5/50 | -5/50 | -5/50 | -5/50 | -5/50 | -5/50 | -5/50 | -5/50 | -5/50 | |

Regulations and conformity :
IEC EN 61439-6; DIN VDE 0660 500 and 502

Product suitable for Constant/Cyclic Warm, humid climates :
DIN IEC 68 part 2-3; DIN IEC 68 part 2-30

Degree of protection :

IP 55; IP x7 carrying lines available with accessories, on request - +44 (0) 370 608 9020

Insulation and surface treatment of the conductors :

Insulated conductors for the whole length, aluminum copper-plated and tin-plated

Busbar casing material :

1.5 mm galvanised steel plate, pre-painted or stainless steel (available, if required, with special paint and/or with thickness 2 mm)

1 : Class F thermal resistance (155°C) available on request - +44 (0) 370 608 9020

I_n : rated current referred to a room temperature of 40°C



PE 1
Standard version



PE 2
Extra earth - copper

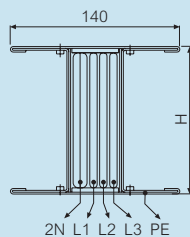


PE 3
Extra earth - aluminium

SCP super compact busbar – double neutral (aluminium)

technical data

Double neutral SCP2N (3L + 2N + PE) aluminium



| Aluminium | Single bar | | | | | | | Double bar | | |
|---|-----------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | I_n [A] | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3200 | 4000 |
| Rated current | I_n [A] | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3200 | 4000 |
| Casing overall dimensions | L x H [mm] | 140x130 | 140x130 | 140x130 | 140x130 | 140x170 | 140x220 | 140x380 | 140x440 | 140x480 |
| Operating voltage | U_e [V] | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Insulation voltage | U_i [V] | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Frequency | f [Hz] | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 |
| Rated short-time current for three-phase fault (1 s) | I_{cw} [kA]rms | 36 | 42 | 50 | 75 | 80 | 80 | 150 | 160 | 160 |
| Allowable peak current for three-phase fault | I_{pk} [kA] | 76 | 88 | 110 | 165 | 176 | 176 | 330 | 352 | 352 |
| Rated short-time current for single-phase fault (1 s) | I_{cw} [kA]rms | 22 | 25 | 30 | 45 | 48 | 48 | 90 | 96 | 96 |
| Allowable peak current for single-phase fault | I_{pk} [kA] | 48 | 55 | 66 | 99 | 106 | 106 | 198 | 211 | 211 |
| Rated short-time protection current (1 s) | I_{cw} [kA]rms | 22 | 25 | 30 | 45 | 48 | 48 | 90 | 96 | 96 |
| Protection circuit peak rated current | I_{pk} [kA] | 48 | 55 | 66 | 99 | 106 | 106 | 198 | 211 | 211 |
| Allowable specific energy for three-phase fault | I^2t [MA ² s] | 1296 | 1764 | 2500 | 5625 | 6400 | 6400 | 22500 | 25600 | 25600 |
| Phase resistance | R_{20} [mΩ/m] | 0.077 | 0.057 | 0.057 | 0.046 | 0.033 | 0.025 | 0.021 | 0.016 | 0.013 |
| Phase reactance (50 Hz) | X [mΩ/m] | 0.023 | 0.017 | 0.017 | 0.015 | 0.014 | 0.011 | 0.006 | 0.006 | 0.006 |
| Phase impedance | Z [mΩ/m] | 0.080 | 0.059 | 0.059 | 0.048 | 0.036 | 0.027 | 0.022 | 0.017 | 0.014 |
| Phase resistance at thermal conditions | R_t [mΩ/m] | 0.084 | 0.063 | 0.068 | 0.055 | 0.039 | 0.030 | 0.024 | 0.019 | 0.016 |
| Phase impedance at thermal conditions | Z [mΩ/m] | 0.087 | 0.066 | 0.070 | 0.057 | 0.041 | 0.032 | 0.025 | 0.020 | 0.018 |
| Neutral resistance | R_{20} [mΩ/m] | 0.039 | 0.029 | 0.029 | 0.023 | 0.017 | 0.013 | 0.011 | 0.008 | 0.007 |
| Resistance of the protective conductor (PE type 1) | R_{PE} [mΩ/m] | 0.121 | 0.121 | 0.121 | 0.121 | 0.110 | 0.098 | 0.074 | 0.068 | 0.064 |
| Resistance of the protective conductor (PE type 2) | R_{PE} [mΩ/m] | 0.035 | 0.035 | 0.035 | 0.035 | 0.028 | 0.023 | 0.014 | 0.012 | 0.011 |
| Resistance of the protective conductor (PE type 3) | R_{PE} [mΩ/m] | 0.050 | 0.050 | 0.050 | 0.050 | 0.040 | 0.033 | 0.020 | 0.018 | 0.017 |
| Reactance of the protective conductor (50 Hz) | X_{PE} [mΩ/m] | 0.080 | 0.078 | 0.078 | 0.048 | 0.039 | 0.028 | 0.020 | 0.015 | 0.016 |
| Resistance of the fault loop (PE 1) | R_o [mΩ/m] | 0.205 | 0.184 | 0.189 | 0.176 | 0.149 | 0.128 | 0.098 | 0.087 | 0.080 |
| Resistance of the fault loop (PE 2) | R_o [mΩ/m] | 0.119 | 0.098 | 0.103 | 0.090 | 0.067 | 0.053 | 0.038 | 0.031 | 0.027 |
| Resistance of the fault loop (PE 3) | R_o [mΩ/m] | 0.134 | 0.113 | 0.118 | 0.105 | 0.079 | 0.063 | 0.044 | 0.037 | 0.033 |
| Reactance of the fault loop (50 Hz) | X_o [mΩ/m] | 0.10 | 0.10 | 0.10 | 0.06 | 0.05 | 0.04 | 0.03 | 0.02 | 0.02 |
| Impedance of the fault loop (PE 1) | Z_o [mΩ/m] | 0.230 | 0.207 | 0.212 | 0.187 | 0.158 | 0.134 | 0.102 | 0.090 | 0.083 |
| Impedance of the fault loop (PE 2) | Z_o [mΩ/m] | 0.158 | 0.137 | 0.140 | 0.110 | 0.085 | 0.066 | 0.046 | 0.038 | 0.035 |
| Impedance of the fault loop (PE 3) | Z_o [mΩ/m] | 0.169 | 0.148 | 0.152 | 0.123 | 0.095 | 0.074 | 0.051 | 0.043 | 0.040 |
| Zero-sequence resistance phase - N | R_o [mΩ/m] | 0.147 | 0.135 | 0.135 | 0.132 | 0.129 | 0.126 | 0.084 | 0.063 | 0.048 |
| Zero-sequence reactance phase - N | X_o [mΩ/m] | 0.198 | 0.180 | 0.180 | 0.166 | 0.160 | 0.190 | 0.135 | 0.165 | 0.103 |
| Zero-sequence Impedance phase - N | Z_o [mΩ/m] | 0.247 | 0.225 | 0.225 | 0.212 | 0.206 | 0.228 | 0.159 | 0.177 | 0.114 |
| Zero-sequence resistance phase - PE | R_o [mΩ/m] | 0.581 | 0.519 | 0.519 | 0.369 | 0.321 | 0.270 | 0.217 | 0.196 | 0.164 |
| Zero-sequence reactance phase - PE | X_o [mΩ/m] | 0.263 | 0.229 | 0.229 | 0.191 | 0.175 | 0.212 | 0.155 | 0.148 | 0.146 |
| Zero-sequence Impedance phase - PE | Z_o [mΩ/m] | 0.638 | 0.567 | 0.567 | 0.416 | 0.366 | 0.343 | 0.267 | 0.246 | 0.220 |
| Voltage drop factor with distributed load $\Delta V = k \cdot L \cdot I_e \cdot 10^{-6}$ [V] | k [V/m/A]10 ⁻⁶ | | | | | | | | | |
| | $\cos\phi = 0.70$ | 65.3 | 48.9 | 51.9 | 42.9 | 32.3 | 25.1 | 18.4 | 15.4 | 13.7 |
| | $\cos\phi = 0.75$ | 67.9 | 50.9 | 54.1 | 44.6 | 33.4 | 25.9 | 19.2 | 16.0 | 14.1 |
| | $\cos\phi = 0.80$ | 70.3 | 52.7 | 56.1 | 46.2 | 34.3 | 26.7 | 19.9 | 16.5 | 14.5 |
| | $\cos\phi = 0.85$ | 72.5 | 54.4 | 58.0 | 47.7 | 35.1 | 27.3 | 20.6 | 16.9 | 14.9 |
| | $\cos\phi = 0.90$ | 74.3 | 55.8 | 59.6 | 48.9 | 35.7 | 27.7 | 21.2 | 17.3 | 15.1 |
| $\cos\phi = 0.95$ | 75.5 | 56.7 | 60.8 | 49.7 | 35.9 | 27.8 | 21.6 | 17.5 | 15.2 | |
| $\cos\phi = 1.00$ | 72.9 | 54.9 | 59.1 | 48.0 | 33.8 | 26.2 | 21.0 | 16.7 | 14.3 | |
| Weight (PE 1) | p [kg/m] | 21.6 | 21.3 | 21.3 | 23.4 | 25.4 | 38.4 | 54.6 | 65.4 | 78.4 |
| Weight (PE 2) | p [kg/m] | 23.0 | 22.8 | 22.8 | 26.4 | 28.6 | 41.4 | 60.1 | 72.1 | 84.9 |
| Weight (PE 3) | p [kg/m] | 20.6 | 20.4 | 20.4 | 24.0 | 25.5 | 37.4 | 53.1 | 64.0 | 76.0 |
| Fire load | [kWh/m] | 5.6 | 6.9 | 6.9 | 7.5 | 10.6 | 13.1 | 20.0 | 23.8 | 26.3 |
| Degree of protection | IP | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 |
| Thermal resistance class of the insulating materials | - | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ |
| Joule effect losses at rated current | P [W/m] | 100 | 122 | 205 | 260 | 300 | 363 | 455 | 592 | 790 |
| Min./max. ambient temperature | [°C] | -5/50 | -5/50 | -5/50 | -5/50 | -5/50 | -5/50 | -5/50 | -5/50 | -5/50 |

Regulations and conformity :

IEC/EN 61439-6; DIN VDE 0660 500 and 502

Product suitable for Constant/Cyclic Warm, humid climates :

DIN IEC 68 part 2-3; DIN IEC 68 part 2-30

Degree of protection :

IP 55; IP x7 carrying lines available with accessories, on request - +44 (0) 370 608 9020

Insulation and surface treatment of the conductors :

Insulated conductors for the whole length, aluminum copper-plated and tin-plated

Busbar casing material :

1.5 mm galvanised steel plate, pre-painted or stainless steel (available, if required, with special paint and/or with thickness 2 mm)

1 : Class F thermal resistance (155°C) available on request - +44 (0) 370 608 9020

I_n : rated current referred to a room temperature of 40°C



PE 1
Standard version



PE 2
Extra earth - copper

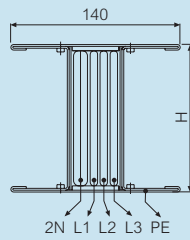


PE 3
Extra earth - aluminium

SCP super compact busbar – double neutral (copper)

technical data

Double neutral SCP2N (3L + 2N + PE) copper



| Copper | Single bar | | | | | | | Double bar | | |
|---|-----------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | I_n [A] | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3200 | 4000 | 5000 |
| Rated current | I_n [A] | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3200 | 4000 | 5000 |
| Casing overall dimensions | L x H [mm] | 140x130 | 140x130 | 140x130 | 140x170 | 140x170 | 140x220 | 140x380 | 140x440 | 140x480 |
| Operating voltage | U_e [V] | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Insulation voltage | U_i [V] | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Frequency | f [Hz] | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 |
| Rated short-time current for three-phase fault (1 s) | I_{cw} [kA]rms | 45 | 50 | 60 | 85 | 88 | 88 | 170 | 176 | 176 |
| Allowable peak current for three-phase fault | I_{pk} [kA] | 95 | 110 | 132 | 187 | 194 | 194 | 374 | 387 | 387 |
| Rated short-time current for single-phase fault (1 s) | I_{cw} [kA]rms | 27 | 30 | 36 | 51 | 53 | 53 | 102 | 106 | 106 |
| Allowable peak current for single-phase fault | I_{pk} [kA] | 57 | 66 | 79 | 112 | 116 | 116 | 224 | 232 | 232 |
| Rated short-time protection current (1 s) | I_{cw} [kA]rms | 27 | 30 | 36 | 51 | 53 | 53 | 102 | 106 | 106 |
| Protection circuit peak rated current | I_{pk} [kA] | 57 | 66 | 79 | 112 | 116 | 116 | 224 | 232 | 232 |
| Allowable specific energy for three-phase fault | I^2t [MA ² s] | 2025 | 2500 | 3600 | 7225 | 7744 | 7744 | 28900 | 30976 | 30976 |
| Phase resistance | R_{20} [mΩ/m] | 0.039 | 0.030 | 0.030 | 0.022 | 0.018 | 0.014 | 0.011 | 0.009 | 0.007 |
| Phase reactance (50 Hz) | X [mΩ/m] | 0.023 | 0.017 | 0.017 | 0.015 | 0.014 | 0.011 | 0.007 | 0.006 | 0.006 |
| Phase impedance | Z [mΩ/m] | 0.045 | 0.035 | 0.035 | 0.027 | 0.023 | 0.018 | 0.013 | 0.011 | 0.009 |
| Phase resistance at thermal conditions | R_t [mΩ/m] | 0.042 | 0.035 | 0.037 | 0.027 | 0.022 | 0.017 | 0.013 | 0.011 | 0.008 |
| Phase impedance at thermal conditions | Z [mΩ/m] | 0.048 | 0.039 | 0.041 | 0.031 | 0.026 | 0.020 | 0.015 | 0.013 | 0.010 |
| Neutral resistance | R_{20} [mΩ/m] | 0.020 | 0.015 | 0.015 | 0.011 | 0.009 | 0.007 | 0.006 | 0.005 | 0.003 |
| Resistance of the protective conductor (PE type 1) | R_{PE} [mΩ/m] | 0.125 | 0.125 | 0.125 | 0.113 | 0.113 | 0.101 | 0.075 | 0.069 | 0.065 |
| Resistance of the protective conductor (PE type 2) | R_{PE} [mΩ/m] | 0.036 | 0.036 | 0.036 | 0.028 | 0.028 | 0.023 | 0.014 | 0.012 | 0.011 |
| Resistance of the protective conductor (PE type 3) | R_{PE} [mΩ/m] | 0.050 | 0.050 | 0.050 | 0.041 | 0.041 | 0.033 | 0.021 | 0.018 | 0.017 |
| Reactance of the protective conductor (50 Hz) | X_{PE} [mΩ/m] | 0.054 | 0.054 | 0.054 | 0.044 | 0.044 | 0.032 | 0.022 | 0.017 | 0.016 |
| Resistance of the fault loop (PE 1) | R_o [mΩ/m] | 0.167 | 0.160 | 0.162 | 0.140 | 0.135 | 0.118 | 0.088 | 0.080 | 0.073 |
| Resistance of the fault loop (PE 2) | R_o [mΩ/m] | 0.078 | 0.071 | 0.073 | 0.055 | 0.050 | 0.040 | 0.027 | 0.023 | 0.019 |
| Resistance of the fault loop (PE 3) | R_o [mΩ/m] | 0.092 | 0.085 | 0.087 | 0.068 | 0.063 | 0.050 | 0.034 | 0.029 | 0.025 |
| Reactance of the fault loop (50 Hz) | X_o [mΩ/m] | 0.077 | 0.071 | 0.071 | 0.059 | 0.058 | 0.043 | 0.029 | 0.023 | 0.022 |
| Impedance of the fault loop (PE 1) | Z_o [mΩ/m] | 0.184 | 0.175 | 0.177 | 0.152 | 0.147 | 0.126 | 0.093 | 0.083 | 0.077 |
| Impedance of the fault loop (PE 2) | Z_o [mΩ/m] | 0.110 | 0.100 | 0.102 | 0.081 | 0.077 | 0.059 | 0.040 | 0.033 | 0.029 |
| Impedance of the fault loop (PE 3) | Z_o [mΩ/m] | 0.120 | 0.110 | 0.112 | 0.090 | 0.086 | 0.066 | 0.045 | 0.037 | 0.034 |
| Zero-sequence resistance phase - N | R_o [mΩ/m] | 0.128 | 0.125 | 0.125 | 0.121 | 0.117 | 0.094 | 0.088 | 0.065 | 0.046 |
| Zero-sequence reactance phase - N | X_o [mΩ/m] | 0.184 | 0.152 | 0.152 | 0.143 | 0.127 | 0.122 | 0.078 | 0.076 | 0.073 |
| Zero-sequence Impedance phase - N | Z_o [mΩ/m] | 0.224 | 0.197 | 0.197 | 0.187 | 0.173 | 0.154 | 0.118 | 0.100 | 0.086 |
| Zero-sequence resistance phase - PE | R_o [mΩ/m] | 0.507 | 0.429 | 0.429 | 0.331 | 0.283 | 0.221 | 0.177 | 0.178 | 0.144 |
| Zero-sequence reactance phase - PE | X_o [mΩ/m] | 0.201 | 0.177 | 0.177 | 0.143 | 0.150 | 0.124 | 0.111 | 0.094 | 0.086 |
| Zero-sequence Impedance phase - PE | Z_o [mΩ/m] | 0.545 | 0.464 | 0.464 | 0.361 | 0.320 | 0.253 | 0.209 | 0.201 | 0.168 |
| Voltage drop factor with distributed load $\Delta V = k.L.I.e.10^{-6}$ [V] | k [V/m/A]10 ⁻⁶ | | | | | | | | | |
| | $\cos\phi = 0.70$ | 39.9 | 31.5 | 33.0 | 25.6 | 22.1 | 17.1 | 12.2 | 10.5 | 8.9 |
| | $\cos\phi = 0.75$ | 40.7 | 32.2 | 33.9 | 26.1 | 22.4 | 17.4 | 12.4 | 10.8 | 8.9 |
| | $\cos\phi = 0.80$ | 41.3 | 32.8 | 34.6 | 26.5 | 22.6 | 17.5 | 12.6 | 10.9 | 9.0 |
| | $\cos\phi = 0.85$ | 41.7 | 33.3 | 35.1 | 26.7 | 22.7 | 17.5 | 12.8 | 11.0 | 9.0 |
| | $\cos\phi = 0.90$ | 41.7 | 33.4 | 35.4 | 26.7 | 22.5 | 17.4 | 12.8 | 11.0 | 8.9 |
| $\cos\phi = 0.95$ | 41.1 | 33.1 | 35.1 | 26.2 | 22.0 | 17.0 | 12.6 | 10.9 | 8.6 | |
| $\cos\phi = 1.00$ | 36.7 | 30.0 | 32.2 | 23.3 | 19.1 | 14.7 | 11.2 | 9.8 | 7.3 | |
| Weight (PE 1) | p [kg/m] | 39.0 | 39.0 | 39.0 | 53.0 | 58.0 | 86.0 | 105.0 | 126.0 | 158.0 |
| Weight (PE 2) | p [kg/m] | 41.0 | 41.0 | 41.0 | 55.0 | 60.0 | 83.0 | 111.0 | 134.0 | 174.0 |
| Weight (PE 3) | p [kg/m] | 38.0 | 38.0 | 38.0 | 52.0 | 57.0 | 79.0 | 104.0 | 126.0 | 163.0 |
| Fire load | [kWh/m] | 5.6 | 6.9 | 6.9 | 10.0 | 10.3 | 13.1 | 20.0 | 23.8 | 26.3 |
| Degree of protection | IP | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 |
| Thermal resistance class of the insulating materials | - | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ | B/F ¹ |
| Joule effect losses at rated current | P [W/m] | 81 | 104 | 174 | 207 | 265 | 319 | 399 | 541 | 636 |
| Min./max. ambient temperature | [°C] | -5/50 | -5/50 | -5/50 | -5/50 | -5/50 | -5/50 | -5/50 | -5/50 | -5/50 |

Regulations and conformity :

IEC EN 61439-6; DIN VDE 0660 500 and 502

Product suitable for Constant/Cyclic Warm, humid climates :

DIN IEC 68 part 2-3; DIN IEC 68 part 2-30

Degree of protection :

IP 55; IP x7 carrying lines available with accessories, on request - +44 (0) 370 608 9020

Insulation and surface treatment of the conductors :

Insulated conductors for the whole length, aluminum copper-plated and tin-plated

Busbar casing material :

1.5 mm galvanised steel plate, pre-painted or stainless steel (available, if required, with special paint and/or with thickness 2 mm)

1 : Class F thermal resistance (155°C) available on request - +44 (0) 370 608 9020

I_n : rated current referred to a room temperature of 40°C



PE 1
Standard version



PE 2
Extra earth - copper



PE 3
Extra earth - aluminium

EXTENSIVE RANGE, HIGH
PERFORMANCE AND SAFETY

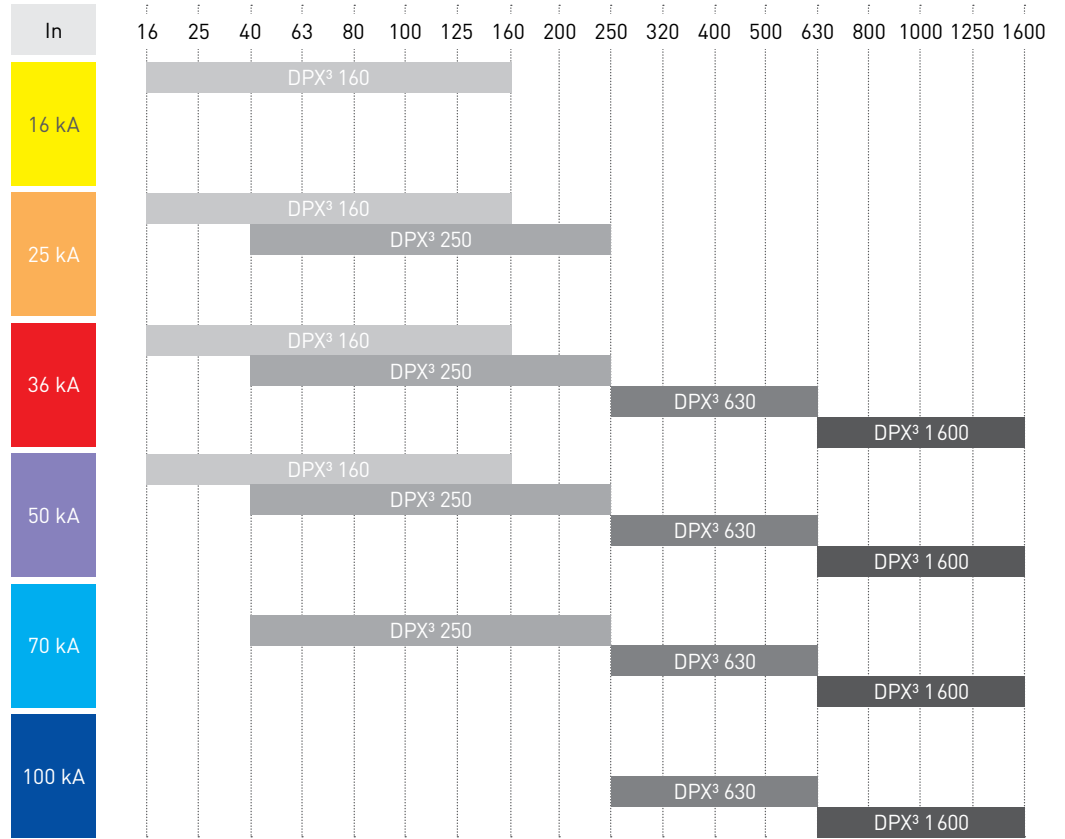


DPX³ MCCBs

A comprehensive range
for all your requirements
from 16 to 1600 A



The DPX³ range features four sizes of moulded case circuit breakers with breaking capacities ranging from 16 to 100 kA.



DPX³ 160
Mounting on rail
or plate



DPX³ 250
Mounting on rail
or plate



DPX³ 630
Mounting on plate



DPX³ 1600
Mounting on plate

Easy identification
of the breaking capacity
by the coloured tab:



16 kA



25 kA



36 kA



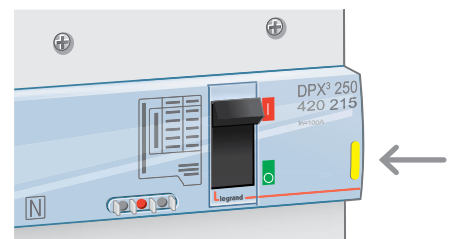
50 kA







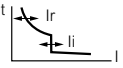
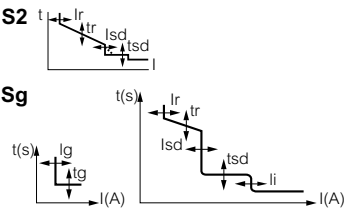


70 kA



100 kA



| |  | | | |  | | | |  | | | | | | | |
|--|---|-------|-------|-------|---|-------|-------|-------|---|---------|---------|----------|---|-----|-----|-----|
| DEVICES | DPX ³ 160 thermal magnetic | | | | DPX ³ 250 thermal magnetic | | | | DPX ³ 250 electronic release | | | | | | | |
| Mounting | On rail  or on plate | | | | On rail  or on plate | | | | On rail  or on plate | | | | | | | |
| Breaking capacity (kA) (EN 60947-2 and IEC 60947-2) | 16 kA | 25 kA | 36 kA | 50 kA | 25 kA | 36 kA | 50 kA | 70 kA | 25 kA | 36 kA | 50 kA | 70 kA | | | | |
| 380/415 V~ | 16 | 25 | 36 | 50 | 25 | 36 | 50 | 70 | 25 | 36 | 50 | 70 | | | | |
| 220/240 V~ | 25 | 35 | 50 | 65 | 40 | 60 | 100 | 100 | 40 | 60 | 100 | 100 | | | | |
| Breaking capacity (% Icu) | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | | | | |
| Characteristic of use | | | | | | | | | | | | | | | | |
| Nominal frequency | 50/60 Hz | | | | | | | | | | | | | | | |
| Maximum rated operating voltage Ue | 690 V (500 V with integrated e.l.c.bs) | | | | 690 V (500 V with integrated e.l.c.bs) | | | | 690 V (500 V with integrated e.l.c.bs) | | | | | | | |
| Category of use | A | | | | A | | | | A | | | | | | | |
| Thermal magnetic adjustment | | | | | | | | | | | | | | | | |
|  Thermal | 0.8 to 1 I _n | | | | 0.8 to 1 I _n | | | | - | | | | | | | |
| Magnetic | 10 I _n (400 A for 16 A and 25 A sizes) | | | | 5 to 10 I _n | | | | - | | | | | | | |
| Electronic protection adjustment | | | | | | | | | | | | | | | | |
|  S2 Sg | | | | | | | | | I _r : 0.4 to 1 I _n I _{sd} : 1.5 to 10 I _r | | | | | | | |
| Maximum cable cross-section | Standard version | | | | High capacity | | | | | | | | | | | |
| Rigid cable | 95 mm ² | | | | 150 mm ² | | | | 150 mm ² | | | | | | | |
| Flexible cable | 70 mm ² | | | | 120 mm ² | | | | 120 mm ² | | | | | | | |
| Copper bar and lug width | 14 mm | | | | 18 mm | | | | 28.5 mm ⁽¹⁾ | | | | | | | |
| Tightening torque | 8 Nm | | | | 8 Nm | | | | 10 Nm | | | | | | | |
| Nominal current (I _n) at 40 °C (A) | | | | | | | | | | | | | | | | |
| I _n (A) | 16 | 25 | 40 | 63 | 80 | 100 | 125 | 160 | 100 | 160 | 200 | 250 | 40 | 100 | 160 | 250 |
| Phase | 16 | 25 | 40 | 63 | 80 | 100 | 125 | 160 | 100 | 160 | 200 | 250 | 40 | 100 | 160 | 250 |
| N | 16 | 25 | 40 | 63 | 80 | 100 | 125 | 160 | 100 | 160 | 200 | 250 | 0 - 50 -100 % of phase value ⁽³⁾ | | | |
| N/2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Magnetic threshold (I _m) (A) ⁽²⁾ of DPX ³ thermal magnetic | Fixed | | | | Adjustable | | | | Adjustable | | | | | | | |
| I _m (A) | 16 | 25 | 40 | 63 | 80 | 100 | 125 | 160 | 100 | 160 | 200 | 250 | - | | | |
| Phase | 400 | 400 | 400 | 630 | 800 | 1000 | 1250 | 1600 | 125-250 | 200-400 | 315-630 | 500-1000 | - | | | |
| N | 400 | 400 | 400 | 630 | 800 | 1000 | 1250 | 1600 | 125-250 | 200-400 | 315-630 | 500-1000 | - | | | |
| N/2 | - | - | - | - | - | - | - | - | - | - | - | - | - | | | |
| Endurance (cycles) | | | | | | | | | | | | | | | | |
| Electrical | 8000 | | | | 8000 | | | | 8000 | | | | | | | |
| Mechanical | 25000 | | | | 20000 | | | | 20000 | | | | | | | |
| Electronic earth leakage module | | | | | | | | | | | | | | | | |
| Type | without or integrated | | | | without or integrated | | | | without or integrated | | | | | | | |

1: Copper bars only

2: Trip current for 50/60 Hz. For direct current, multiply by 1.5

3: For maximum values related to I_n phase limit



**DPX³ 630
thermal magnetic**

**DPX³ 630
electronic release**

**DPX³ 1600
thermal magnetic**

**DPX³ 1600
electronic release**

On plate

On plate

On plate

On plate

| 36 kA | 50 kA | 70 kA | 100 kA | 36 kA | 50 kA | 70 kA | 100 kA | 36 kA | 50 kA | 70 kA | 100 kA | 36 kA | 50 kA | 70 kA | 100 kA |
|-------|-------|-------|--------|-------|-------|-------|--------|-------|-------|-------|--------|-------|-------|-------|--------|
| 36 | 50 | 70 | 100 | 36 | 50 | 70 | 100 | 36 | 50 | 70 | 100 | 36 | 50 | 70 | 100 |
| 70 | 100 | 120 | 170 | 70 | 100 | 120 | 170 | 70 | 100 | 120 | 170 | 70 | 100 | 120 | 170 |
| 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

50/60 Hz

690 V~

690 V~

690 V~

690 V~

A

A: In 630 A - B: In 200 to 400 A

A

B

0.8 to 1 In

-

0.8 to 1 In

-

5 to 10 In

-

5 to 10 In

-

| | S2 | Sg |
|---|----|----|
| Ir = 0.4 - 1 x In | • | • |
| tr = 3-30 s | • | • |
| I _{sd} = 1.5 - 10 Ir | • | • |
| t _{sd} (I=K) = 0-500 ms | • | • |
| t _{sd} (I ² t=K) = 0-500 ms | • | • |
| I _g = 0.2 - 1 x In | • | • |
| t _g = 0.1 - 1 s | • | • |

| | S2 | Sg |
|---|----|----|
| Ir = 0.4 - 1 x In | • | • |
| tr = 3-30 s | • | • |
| I _{sd} = 1.5 - 10 Ir | • | • |
| t _{sd} (I=K) = 0-500 ms | • | • |
| t _{sd} (I ² t=K) = 0-500 ms | • | • |
| I _g = 0.2 - 1 x In | • | • |
| t _g = 0.1 - 1 s | • | • |

300 mm² or 2 x 240 mm²

300 mm² or 2 x 240 mm²

2 or 4 x 240 mm²

2 or 4 x 240 mm²

240 mm² or 2 x 185 mm²

240 mm² or 2 x 185 mm²

2 or 4 x 185 mm²

2 or 4 x 185 mm²

32 mm

32 mm

50 mm

50 mm

15 Nm

20 Nm

| | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|--|-----|-----|-----|-----|-----|-----|-----|------|------|--|-----|-----|------|------|------|
| 250 | 320 | 400 | 500 | 630 | 250 | 320 | 400 | 500 | 630 | 500 | 630 | 800 | 1000 | 1250 | 500 | 630 | 800 | 1000 | 1250 | 1600 |
| 250 | 320 | 400 | 500 | 630 | 250 | 320 | 400 | 500 | 630 | 500 | 630 | 800 | 1000 | 1250 | 500 | 630 | 800 | 1000 | 1250 | 1600 |
| 250 | 320 | 400 | 500 | 630 | 0 - 50 - 100 % of phase value ⁽³⁾ | | | | | 500 | 630 | 800 | 1000 | 1250 | 0 - 50 - 100 % of phase value ⁽³⁾ | | | | | |
| - | 250 | 250 | 250 | 320 | - | | | | | - | - | - | 500 | 630 | - | | | | | |

Adjustable

| | | | | | | | | | | | | | | | | | | | |
|-----------|-----------|-----------|-----------|-----------|---|--|--|--|--|-----------|-----------|-----------|------------|------------|---|--|--|--|--|
| 250 | 320 | 400 | 500 | 630 | - | | | | | 500 | 630 | 800 | 1000 | 1250 | - | | | | |
| 1250-2500 | 1600-3200 | 2000-4000 | 2500-5000 | 3150-6300 | - | | | | | 2500-5000 | 3150-6300 | 4000-8000 | 5000-10000 | 6250-12500 | - | | | | |
| 1250-2500 | 1600-3200 | 2000-4000 | 2500-5000 | 3150-6300 | - | | | | | 2500-5000 | 3150-6300 | 4000-8000 | 5000-10000 | 6250-12500 | - | | | | |
| - | 1000-2000 | 1250-2500 | 1600-2500 | 2000-4000 | - | | | | | - | - | - | 2500-5000 | 3150-5000 | - | | | | |

5000

5000

4000

4000

10000

20000

10000

10000

downstream e.l.c.bs.

downstream e.l.c.bs.

-

-

■ Technical characteristics (at 40°)

| MCCBs | DPX ³ 160 thermal magnetic | | | | DPX ³ 160 with electronic earth leakage module | | | | |
|--|--|-------|-------|-------|---|-------|-------|-------|------|
| | 16 kA | 25 kA | 36 kA | 50 kA | 16 kA | 25 kA | 36 kA | 50 kA | |
| Nominal current In (A) | 16-25-40-63-80-100-125-160 | | | | | | | | |
| Rated insulation voltage (V) | 50-60Hz | | | | 600 | | | | |
| Rated operational voltage (V) | 50-60Hz | | | | 500 | | | | |
| | Continuous | | | | 500 | | | | |
| Rated impulse withstand current Uimp (kV) | 8 | | | | | | | | |
| Category of use | A | | | | | | | | |
| Ultimate breaking capacity (kA) in AC | 220/240 V~ | 25 | 35 | 50 | 65 | 25 | 35 | 50 | 65 |
| | 380/415 V~ | 16 | 25 | 36 | 50 | 16 | 25 | 36 | 50 |
| | 440 V~ | 10 | 18 | 25 | 30 | 10 | 18 | 25 | 30 |
| | 480/500 V~ | 8 | 10 | 12 | 15 | 8 | 10 | 12 | 15 |
| | 690 V~ | 5 | 5 | 8 | 10 | 5 | 5 | 8 | 10 |
| Ultimate breaking capacity (kA) in DC | 125 V _{DC} ⁽¹⁾ | 32 | 50 | 60 | 80 | 32 | 50 | 60 | 80 |
| | 250 V _{DC} ⁽¹⁾ | 16 | 25 | 30 | 40 | 16 | 25 | 30 | 40 |
| | 400 V _{DC} ⁽²⁾ | 16 | 25 | 30 | 40 | 16 | 25 | 30 | 40 |
| | 500 V _{DC} ⁽²⁾ | 10 | 20 | 25 | 35 | 10 | 20 | 25 | 35 |
| | Standard breaking capacity Ics (% Icu) | 100 | | | | | | | |
| Short-circuit making capacity Icm (kA) | 415 V~ | | | | | | | | |
| Breaking capacity on 1 pole Isu (kA) For IT neutral earthing system | 220/240 V~ | 6.25 | 8.75 | 12.5 | 16.3 | 6.25 | 8.75 | 12.5 | 16.3 |
| | 380/415 V~ | 4 | 6.25 | 9 | 12.5 | 4 | 6.25 | 9 | 12.5 |
| | 440 V~ | 2.5 | 4.5 | 6.25 | 7.5 | 2.5 | 4.5 | 6.25 | 7.5 |
| | 480/500 V~ | 2 | 2.5 | 3 | 3.75 | 2 | 2.5 | 3 | 3.75 |
| | 690 V~ | 1.25 | 1.25 | 2 | 2.5 | 1.25 | 1.25 | 2 | 2.5 |

| MCCBs | DPX ³ 250 thermal magnetic | | | | DPX ³ 250 electronic release | | | | |
|--|--|-------|-------|-------|---|-------|-------|-------|------|
| | 25 kA | 36 kA | 50 kA | 70 kA | 25 kA | 36 kA | 50 kA | 70 kA | |
| Nominal current In (A) | 100-160-200-250 | | | | 40-100-160-250 | | | | |
| Rated insulation voltage (V) | 50-60Hz | | | | 800 (with integrated e.l.c.bs: 500) | | | | |
| Rated operational voltage (V) | 50-60Hz | | | | 690 (with integrated e.l.c.bs: 500) | | | | |
| | Continuous | | | | 500 | | | | |
| Rated impulse withstand current Uimp (kV) | 8 | | | | | | | | |
| Category of use | A | | | | | | | | |
| Ultimate breaking capacity (kA) in AC | 220/240 V~ | 40 | 60 | 80 | 100 | 40 | 60 | 80 | 100 |
| | 380/415 V~ | 25 | 36 | 50 | 70 | 25 | 36 | 50 | 70 |
| | 440 V~ | 20 | 30 | 40 | 60 | 20 | 30 | 40 | 60 |
| | 480/500 V~ | 10 | 25 | 30 | 40 | 10 | 25 | 30 | 40 |
| | 690 V~ | 8 | 16 | 18 | 20 | 8 | 16 | - | 20 |
| Ultimate breaking capacity (kA) in DC | 125 V _{DC} ⁽¹⁾ | 50 | 72 | 80 | 90 | 50 | 72 | 80 | 90 |
| | 250 V _{DC} ⁽¹⁾ | 25 | 36 | 40 | 45 | 25 | 36 | 40 | 45 |
| | 400 V _{DC} ⁽²⁾ | 30 | 45 | 50 | 55 | 30 | 45 | 50 | 55 |
| | 500 V _{DC} ⁽²⁾ | 25 | 36 | 40 | 45 | 25 | 36 | 40 | 45 |
| | Standard breaking capacity Ics (% Icu) | 100 | | | | | | | |
| Breaking capacity on 1 pole Isu (kA) For IT neutral earthing system | 220/240 V~ | 10 | 15 | 20 | 25 | 15 | 15 | 20 | 25 |
| | 380/415 V~ | 6.25 | 9 | 12.5 | 17.5 | 6.25 | 9 | 12.5 | 17.5 |
| | 440 V~ | 5 | 7.5 | 10 | 15 | 5 | 7.5 | 10 | 15 |
| | 480/500 V~ | 2.5 | 6.25 | 7.5 | 10 | 2.5 | 6.25 | 7.5 | 10 |
| | 690 V~ | 2 | 4 | 4.5 | 5 | - | - | - | - |

■ Temperature derating

DPX³ 160

| In (A) | Temperature (°C) | | | | | | | | | | | |
|--------|------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | -25 | -20 | -10 | -5 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 |
| 16 | 23 | 22 | 21 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 15 | 14 |
| 25 | 37 | 35 | 34 | 33 | 32 | 30 | 28 | 26 | 25 | 23 | 22 | 21 |
| 40 | 55 | 54 | 52 | 51 | 50 | 47 | 43 | 42 | 40 | 38 | 36 | 34 |
| 63 | 88 | 87 | 84 | 83 | 81 | 76 | 69 | 66 | 63 | 60 | 57 | 55 |
| 80 | 115 | 113 | 111 | 109 | 107 | 97 | 87 | 84 | 80 | 78 | 75 | 72 |
| 100 | 135 | 133 | 130 | 123 | 115 | 108 | 100 | 100 | 100 | 95 | 90 | 85 |
| 125 | 160 | 158 | 155 | 153 | 150 | 138 | 125 | 125 | 125 | 118 | 112 | 105 |
| 160 | 224 | 221 | 214 | 210 | 205 | 192 | 176 | 168 | 160 | 152 | 145 | 139 |

DPX³

| In (A) | Temperature (°C) | | | | | | | | | | | |
|--------|------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | -25 | -20 | -10 | -5 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 |
| 40 | 54 | 53 | 51 | 50 | 49 | 48 | 45 | 41 | 40 | 38 | 36 | 34 |
| 100 | 135 | 132 | 128 | 126 | 123 | 120 | 112 | 102 | 100 | 94 | 90 | 84 |
| 160 | 216 | 211 | 205 | 201 | 197 | 192 | 179 | 163 | 160 | 151 | 143 | 134 |
| 200 | 270 | 264 | 256 | 251 | 246 | 240 | 224 | 203 | 200 | 189 | 179 | 168 |
| 250 | 338 | 330 | 320 | 314 | 308 | 300 | 280 | 254 | 250 | 236 | 224 | 210 |

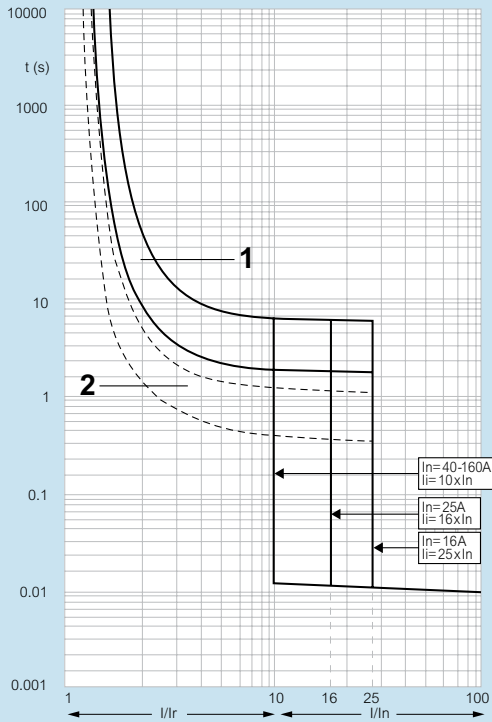
1: 2 poles in series
2: 3 poles in series

■ Derating at different altitudes

| Altitude (m) | 2000 | 3000 | 4000 |
|-------------------|--------------------------------|-----------|-----------|
| Rated current (A) | 1 x In | 0.96 x In | 0.93 x In |
| Rated voltage (V) | DPX ³ no e.l.c.bs | 690 | 690 |
| | DPX ³ with e.l.c.bs | 500 | 500 |

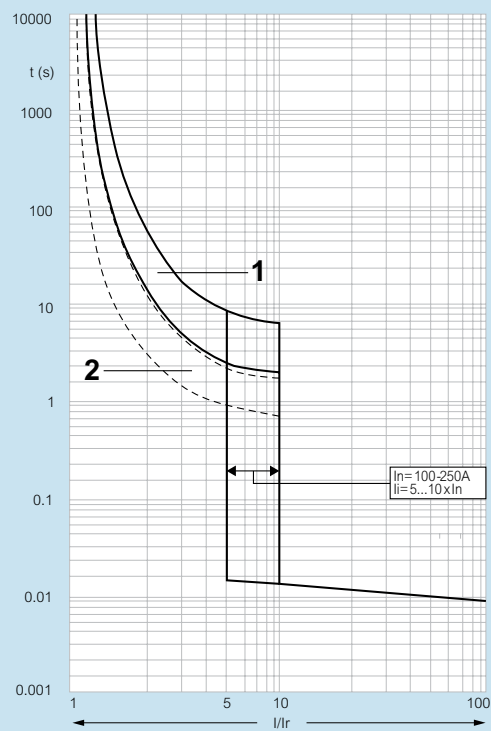
DPX³ 160/250

DPX³ 160 thermal-magnetic Tripping curve



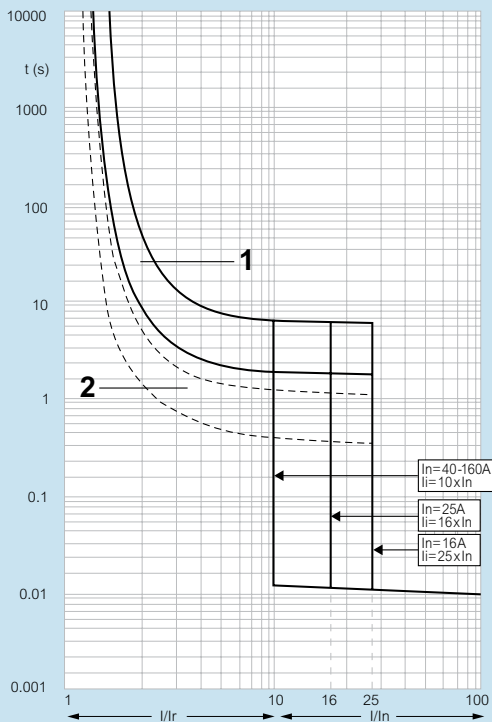
t: time
 I: rated current
 I_r: setting current
 Curve n°1: charateristic with cold start
 Curve n°2: charateristic with hot start

DPX³ 250 thermal-magnetic Tripping curves



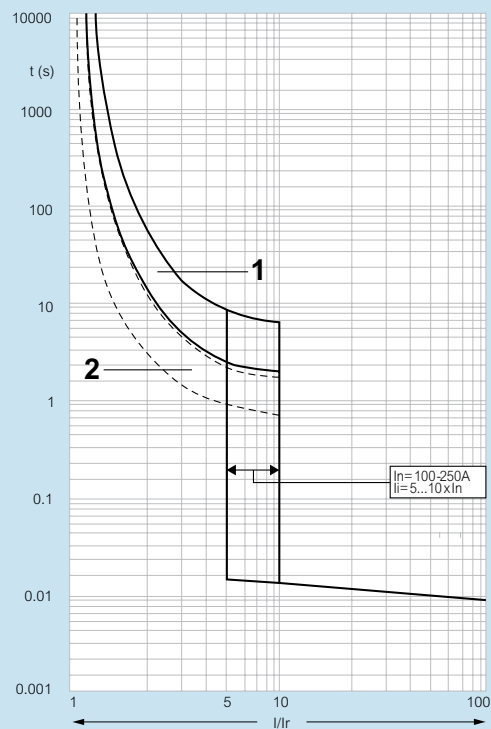
t: time
 I: rated current
 I_r: setting current
 Curve n°1: charateristic with cold start
 Curve n°2: charateristic with hot start

DPX³ 160 thermal-magnetic with integrated e.l.c.bs Tripping curves



t: time
 I: rated current
 I_r: setting current
 Curve n°1: charateristic with cold start
 Curve n°2: charateristic with hot start

DPX³ 250 thermal-magnetic with integrated e.l.c.bs Tripping curves



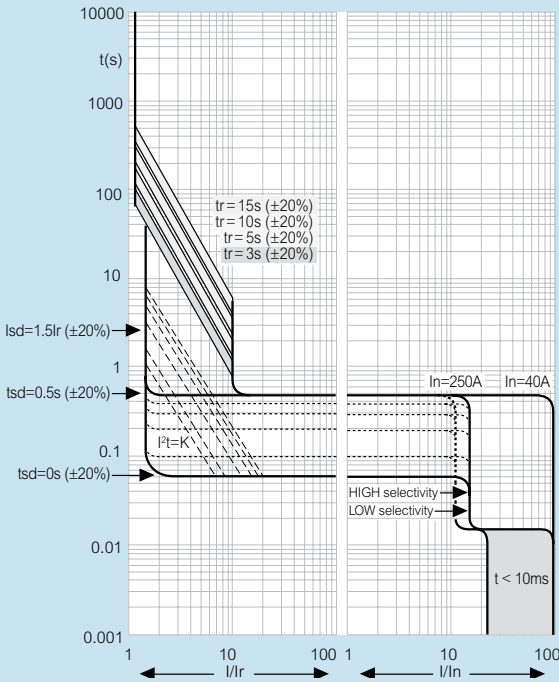
t: time
 I: rated current
 I_r: setting current

DPX³ 160/250 (continued)

DPX³ 630/1600

reading DPX³ characteristic curves and adjustment ranges

DPX³ 250 electronic release Tripping curves



Adjustment for thermal-magnetic DPX³

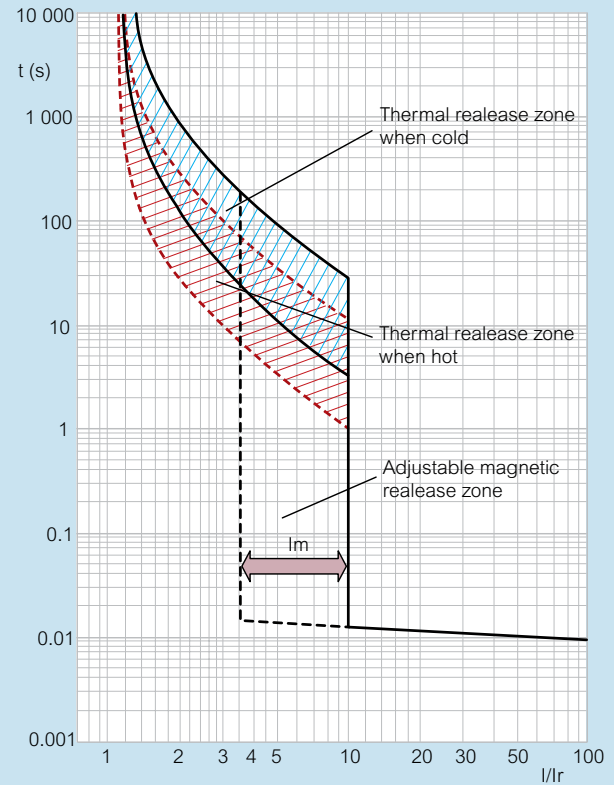
| Setting | DPX ³ thermal magnetic | DPX ³ with integrated e.l.c.bs |
|---|-----------------------------------|---|
| Ir overload trip threshold (thermal) | 0.4 to 1 In | 0.4 to 1 In |
| Im short-circuit trip threshold (magnetic) | fixed: 10 In ⁽¹⁾ | fixed: 10 In ⁽¹⁾ |
| I_{Δn} (A) | - | 0.03 - 0.03 - 1 - 3 |
| Δt (s) | - | 0 - 0.3 - 1 - 3 |

1: 400 A for DPX³ 160 In 16 A and 25 A

Adjustment for DPX³ electronic release

| Setting | DPX ³ | DPX ³ with integrated e.l.c.bs |
|---|--|---|
| Ir overload trip threshold (long delay) | 0.4 to 1 In | |
| tr long delay trip time | 3 - 5 - 10 - 15s | |
| Isd short-circuit trip threshold (short delay) | 1.5 - 2 - 2.5 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 x Ir | |
| tsd short delay trip time | 0.01 - 0.1 - 0.2 - 0.3 - 0.4 - 0.5s | |
| Ig | (0.2 - 0.3 - 0.4 - 0.5 - 0.6 - 0.7 - 0.8 - 1 - OFF) x In | |
| tg | 0.1 - 0.2 - 0.5 - 1s | |

Tripping curve for a DPX³ thermal-magnetic trip



I: actual current

Ir: thermal protection against overloads (setting: Ir = x In)

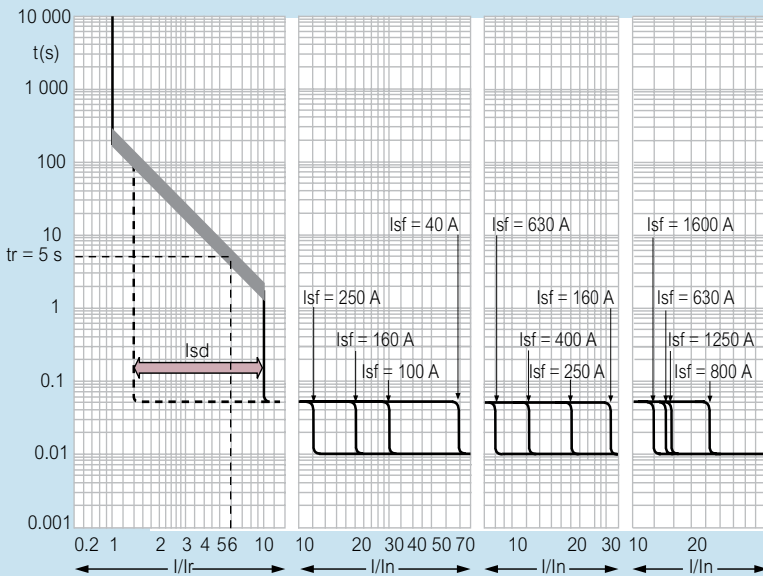
Im: magnetic protection against short-circuits (setting: Im = x In or Im = x Ir)

As the abscissa of the curves represents the ratio I/r, modifying the setting of Ir will not change the graphical representation of the thermal trip. However, the magnetic setting can be read directly (between 3.5 and 10 in the example).

DPX³ 630/1600

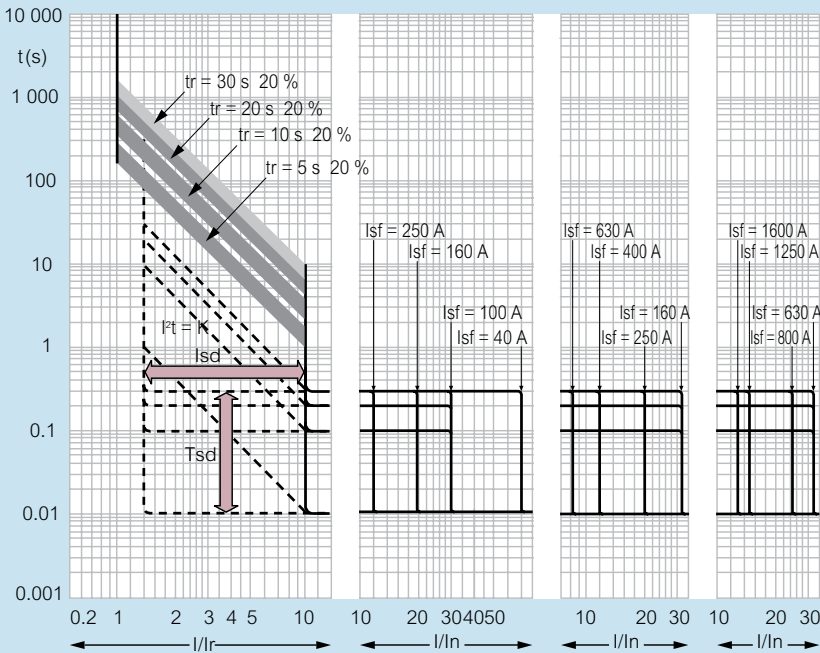
reading DPX³ characteristic curves and adjustment ranges

■ Tripping curve for a DPX³ electronic release S1, adjustable I_r and I_{sd}



I: actual current
 I_r: long delay protection against overloads (setting: I_r = x I_n)
 I_{sd}: long delay protection operation time (fixed value: 5 s at 6 I_r)
 I_{sd}: short delay protection against short-circuits (setting: I_m = x I_r, between 1.5 and 10 I_r in the example)
 I_{sd}: short delay protection operation time (fixed value: 0.05 s)
 I_f: fixed threshold instantaneous protection (4 to 20 kA depending on model)

■ Tripping curve for a DPX³ electronic release S2, adjustable I_r, I_{sd}, t_r and t_{sd}



I: actual current
 I_r: long delay protection against overloads (setting: I_r = x I_n)
 t_r: long delay protection operation time (fixed value: 5 to 30 s)
 I_{sd}: short delay protection against short-circuits (setting: I_m = x I_r, between 1.5 and 10 I_r in the example)
 t_{sd}: short delay protection operation time (setting: 0 to 0.3 s)
 I_{sd}: I_{sd} constant (adjustable via t_{sd})
 I_f: fixed threshold instantaneous protection (4 to 20 kA depending on model)

■ Adjustment for thermal-magnetic DPX³

| Setting | DPX ³ 630 | DPX ³ 1600 |
|--|-------------------------|-------------------------|
| I _r overload trip threshold (thermal) | 0.8 to 1 I _n | 0.8 to 1 I _n |
| I _m short-circuit trip threshold (magnetic) | 5 to 10 I _n | 5 to 10 I _n |

■ Adjustment for DPX³ electronic release

| Setting | DPX ³ 630 / 1600 S1 | DPX ³ 630 / 1600 S2 |
|--|--|---|
| I _r overload trip threshold (long delay) | (0.4 - 0.5 - 0.6 - 0.7 - 0.8 - 0.9 - 0.95 - 1) x I _n | |
| t _r long delay trip time | fixed: 5 s (to 6 I _r) | 5 - 10 - 20 - 30 s (to 6 I _r) |
| I _{sd} short-circuit trip threshold (short delay) | (1.5 - 2 - 3 - 4 - 5 - 6 - 8 - 10) x I _r ⁽¹⁾ | |
| t _{sd} Short delay trip time | fixed: 0.05 s | 0 - 0.1 - 0.2 - 0.3 s |

1: 7.9 I_r for DPX³ 630 I_n 630 A

| Cat. Nos. | Page No. | Cat. Nos. | Page No. | Cat. Nos. | Page No. | Cat. Nos. | Page No. | Cat. Nos. | Page No. | Cat. Nos. | Page No. | Cat. Nos. | Page No. |
|----------------|----------|-----------|----------|-----------|----------|-----------|----------|--------------|----------|-----------|----------|-----------|----------|
| 650 | | 50400372 | 33 | 50400606 | 35 | 50401101 | 38 | 50414005M4RJ | 41 | 55077M4TC | 41 | 55400473 | 33 |
| 652EFB01 | 69 | 00373 | - | 00607 | - | 01102 | - | 50414005MFI | - | 55077M4TD | - | 00474 | - |
| 652EFB02 | - | 00374 | - | 00608 | - | 50401111 | 37 | 50414005MFJ | - | 55077M4TE | - | 00475 | - |
| 652EFB03 | - | 00375 | - | 00611 | - | 00611 | - | 50414005MFK | - | 55077M4TF | - | 00476 | - |
| 6531FB01 | - | 00376 | - | 00612 | - | 01121 | - | 14022 | 40 | 55086 | 40 | 00477 | - |
| | | 00377 | - | 00613 | - | 01122 | - | 14023 | - | 55088 | - | 55400502 | 34 |
| 5000 00 | | 00378 | - | 00614 | - | 01123 | - | 50414023FMC | 41 | 55400102 | 30 | 00503 | - |
| 554EFB01 | 31 | 50400401 | 32 | 00615 | - | 01124 | - | 50414023FMD | - | 00103 | - | 00504 | - |
| EFB02 | - | 00402 | - | 00616 | - | 01125 | - | 50414023FME | - | 00104 | - | 00505 | - |
| IFB01 | - | 00403 | - | 00617 | - | 01126 | - | 50414023FME | - | 00105 | - | 00506 | - |
| IFB02 | - | 00404 | - | 00618 | - | 01127 | - | 50414023FME | - | 00106 | - | 00507 | - |
| IFB03 | - | 00405 | - | 00621 | - | 01128 | - | 50414023FME | - | 14025 | - | 00512 | - |
| IFB04 | - | 00406 | - | 00622 | - | 01131 | - | 50414061 | 39 | 14026 | - | 00513 | - |
| IFB05 | - | 00407 | - | 00623 | - | 01132 | - | 14062 | - | 14062 | - | 00514 | - |
| IFB06 | - | 00408 | - | 00624 | - | 01133 | - | 14063 | - | 14063 | - | 00515 | - |
| IFB07 | - | 00411 | - | 00625 | - | 01134 | - | 14064 | - | 14064 | - | 00516 | - |
| IFB08 | - | 00412 | - | 00626 | - | 01135 | - | 14071 | - | 14071 | - | 00517 | - |
| IFB09 | - | 00413 | - | 00627 | - | 01136 | - | 14075 | - | 14075 | - | 00522 | - |
| 557300 | 11 | 00414 | - | 00628 | - | 01137 | - | 14130 | - | 14130 | - | 00523 | - |
| 597013 | - | 00415 | - | 00631 | - | 01138 | - | 14143 | - | 14143 | - | 00524 | - |
| | | 00416 | - | 00632 | - | 50401201 | 38 | 14144 | - | 14144 | - | 00525 | - |
| | | 00417 | - | 00633 | - | 01202 | - | 50414181 | - | 14185 | - | 00526 | - |
| | | 00418 | - | 00634 | - | 01203 | - | 14188 | - | 14188 | - | 00527 | - |
| | | 00421 | - | 00635 | - | 01204 | - | 14192 | - | 14192 | - | 00532 | - |
| | | 00422 | - | 00636 | - | 01205 | - | 14241 | - | 14241 | - | 00533 | - |
| | | 00423 | - | 00637 | - | 01206 | - | 14281 | - | 14281 | - | 00534 | - |
| | | 00424 | - | 00638 | - | 01207 | - | 14282 | - | 14282 | - | 00535 | - |
| | | 00102 | - | 00425 | - | 00641 | - | 14291 | - | 14291 | - | 00536 | - |
| | | 00103 | - | 00426 | - | 00642 | - | 32003 | - | 32003 | - | 00537 | - |
| | | 00104 | - | 00427 | - | 00643 | - | 32201 | - | 32201 | - | 00542 | - |
| | | 00105 | - | 00428 | - | 00644 | - | 32202 | - | 32202 | - | 00543 | - |
| | | 00106 | - | 00431 | - | 00645 | - | 32203 | - | 32203 | - | 00544 | - |
| | | 00107 | - | 00432 | - | 00646 | - | 32205 | - | 32205 | - | 00545 | - |
| | | 00108 | - | 00433 | - | 00647 | - | 32210 | - | 32210 | - | 00546 | - |
| | | 50400111 | 31 | 00434 | - | 00648 | - | 32211 | - | 32211 | - | 00547 | - |
| | | 00112 | - | 00435 | - | 00651 | - | 32212 | - | 32212 | - | 00548 | - |
| | | 00113 | - | 00436 | - | 00652 | - | 32213 | - | 32213 | - | 00549 | - |
| | | 00114 | - | 00437 | - | 00653 | - | 32214 | - | 32214 | - | 00550 | - |
| | | 00115 | - | 00438 | - | 00654 | - | 32215 | - | 32215 | - | 00551 | - |
| | | 00116 | - | 50400441 | 33 | 00655 | - | 32216 | - | 32216 | - | 00552 | - |
| | | 00117 | - | 00442 | - | 00656 | - | 32217 | - | 32217 | - | 00553 | - |
| | | 00118 | - | 00443 | - | 00657 | - | 32218 | - | 32218 | - | 00554 | - |
| | | 50400121 | 30 | 00444 | - | 00658 | - | 32219 | - | 32219 | - | 00555 | - |
| | | 00122 | - | 00445 | - | 00661 | - | 32220 | - | 32220 | - | 00556 | - |
| | | 00123 | - | 00446 | - | 00662 | - | 32221 | - | 32221 | - | 00557 | - |
| | | 00124 | - | 00447 | - | 00663 | - | 32222 | - | 32222 | - | 00558 | - |
| | | 00125 | - | 00448 | - | 00664 | - | 32223 | - | 32223 | - | 00559 | - |
| | | 00126 | - | 00451 | - | 00665 | - | 32224 | - | 32224 | - | 00560 | - |
| | | 00127 | - | 00452 | - | 00666 | - | 32225 | - | 32225 | - | 00561 | - |
| | | 00128 | - | 00453 | - | 00667 | - | 32226 | - | 32226 | - | 00562 | - |
| | | 50400141 | 31 | 00454 | - | 00668 | - | 32227 | - | 32227 | - | 00563 | - |
| | | 00142 | - | 00455 | - | 00671 | - | 32228 | - | 32228 | - | 00564 | - |
| | | 00143 | - | 00456 | - | 00672 | - | 32229 | - | 32229 | - | 00565 | - |
| | | 00144 | - | 00457 | - | 00673 | - | 32230 | - | 32230 | - | 00566 | - |
| | | 00145 | - | 00458 | - | 00674 | - | 32231 | - | 32231 | - | 00567 | - |
| | | 00146 | - | 00461 | - | 00675 | - | 32232 | - | 32232 | - | 00568 | - |
| | | 00147 | - | 00462 | - | 00676 | - | 32233 | - | 32233 | - | 00569 | - |
| | | 00148 | - | 00463 | - | 00677 | - | 32234 | - | 32234 | - | 00570 | - |
| | | 50400151 | 30 | 00464 | - | 00678 | - | 32235 | - | 32235 | - | 00571 | - |
| | | 00152 | - | 00465 | - | 50400701 | 36 | 32236 | - | 32236 | - | 00572 | - |
| | | 00153 | - | 00466 | - | 00702 | - | 32237 | - | 32237 | - | 00573 | - |
| | | 00154 | - | 00467 | - | 00703 | - | 32238 | - | 32238 | - | 00574 | - |
| | | 00155 | - | 00468 | - | 00704 | - | 32239 | - | 32239 | - | 00575 | - |
| | | 00156 | - | 00471 | - | 00705 | - | 32240 | - | 32240 | - | 00576 | - |
| | | 00157 | - | 00472 | - | 00706 | - | 32241 | - | 32241 | - | 00577 | - |
| | | 00158 | - | 00473 | - | 00707 | - | 32242 | - | 32242 | - | 00578 | - |
| | | 00241 | - | 00474 | - | 00708 | - | 32243 | - | 32243 | - | 00579 | - |
| | | 00242 | - | 00475 | - | 00711 | - | 32244 | - | 32244 | - | 00580 | - |
| | | 00243 | - | 00476 | - | 00712 | - | 32245 | - | 32245 | - | 00581 | - |
| | | 00244 | - | 00478 | - | 00713 | - | 32246 | - | 32246 | - | 00582 | - |
| | | 00245 | - | 50400501 | 34 | 00714 | - | 32247 | - | 32247 | - | 00583 | - |
| | | 00246 | - | 00502 | - | 00715 | - | 32248 | - | 32248 | - | 00584 | - |
| | | 00247 | - | 00503 | - | 00716 | - | 32249 | - | 32249 | - | 00585 | - |
| | | 00248 | - | 00504 | - | 00717 | - | 32250 | - | 32250 | - | 00586 | - |
| | | 00251 | - | 00505 | - | 00718 | - | 32251 | - | 32251 | - | 00587 | - |
| | | 00252 | - | 00506 | - | 00721 | - | 32252 | - | 32252 | - | 00588 | - |
| | | 00253 | - | 00507 | - | 00722 | - | 32253 | - | 32253 | - | 00589 | - |
| | | 00254 | - | 00508 | - | 00723 | - | 32254 | - | 32254 | - | 00590 | - |
| | | 00255 | - | 00511 | - | 00724 | - | 32255 | - | 32255 | - | 00591 | - |
| | | 00256 | - | 00512 | - | 00725 | - | 32256 | - | 32256 | - | 00592 | - |
| | | 00257 | - | 00513 | - | 00726 | - | 32257 | - | 32257 | - | 00593 | - |
| | | 00258 | - | 00514 | - | 00727 | - | 32258 | - | 32258 | - | 00594 | - |
| | | 50400301 | 32 | 00515 | - | 00728 | - | 32259 | - | 32259 | - | 00595 | - |
| | | 00302 | - | 00516 | - | 00731 | - | 32260 | - | 32260 | - | 00596 | - |
| | | 00303 | - | 00517 | - | 00732 | - | 32261 | - | 32261 | - | 00597 | - |
| | | 00304 | - | 00518 | - | 00733 | - | 32262 | - | 32262 | - | 00598 | - |
| | | 00305 | - | 00519 | - | 00734 | - | 32263 | - | 32263 | - | 00599 | - |
| | | 00306 | - | 00522 | - | 00735 | - | 32264 | - | 32264 | - | 00600 | - |
| | | 00307 | - | 00523 | - | 00736 | - | 32265 | - | 32265 | - | 00601 | - |
| | | 00308 | - | 00524 | - | 00737 | - | 32266 | - | 32266 | - | 00602 | - |
| | | 00311 | - | 00525 | - | 00738 | - | 32267 | - | 32267 | - | 00603 | - |
| | | 00312 | - | 00526 | - | 00741 | - | 32268 | - | 32268 | - | 00604 | - |
| | | 00313 | - | 00527 | - | 00742 | - | 32269 | - | 32269 | - | 00605 | - |
| | | 00314 | - | 00528 | - | 00743 | - | 32270 | - | 32270 | - | 00606 | - |
| | | 00315 | - | 00531 | - | 00744 | - | 32271 | - | 32271 | - | 00607 | - |
| | | 00316 | - | 00532 | - | 00745 | - | 32272 | - | 32272 | - | 00608 | - |
| | | 00317 | - | 00533 | - | 00746 | - | 32273 | - | 32273 | - | 00609 | - |
| | | 00318 | - | 00534 | - | 00747 | - | 32274 | - | 32274 | - | 00610 | - |
| | | 00321 | - | 00535 | - | 00748 | - | 32275 | - | 32275 | - | 00611 | - |
| | | 00322 | - | 00536 | - | 00751 | - | 32276 | | | | | |

| Cat. Nos. | Page No. | Cat. Nos. | Page No. | Cat. Nos. | Page No. | Cat. Nos. | Page No. | Cat. Nos. | Page No. | Cat. Nos. | Page No. | Cat. Nos. | Page No. |
|-----------|----------|-----------|----------|-----------|----------|----------------|----------|-----------|----------|---------------|----------|-----------|----------|
| 60280280P | 67 | 60281011P | 75 | 60390417P | 71 | 65245003PMFE | 78 | 65280346P | 72 | 65281318P | 76 | 65390308P | 70 |
| 80281P | - | 81012P | - | *0424P | - | 65245003PMARF | - | 80348P | - | 81320P | - | 90315P | - |
| 80282P | - | 81014P | - | *0426P | - | 65245004P | - | 80350P | - | 81321P | - | 90316P | - |
| 80284P | - | 81016P | - | *0427P | - | 65245004PM4R6 | - | 80351P | - | 81322P | - | 90317P | - |
| 80285P | - | 81017P | - | *0434P | - | 65245004PM4ARH | - | 80353P | - | 81323P | - | 90325P | - |
| 80287P | - | 81020P | - | *0436P | - | 65245004PMF6 | - | 80355P | - | 81326P | - | 90326P | - |
| 60280290P | 68 | 81021P | - | *0437P | - | 65245004PMFH | - | 80356P | - | 81328P | - | 90328P | - |
| 80291P | - | 81022P | - | 60390444P | 72 | 65245006P | - | 80358P | - | 81330P | - | 90335P | - |
| 80292P | - | 81024P | - | *0446P | - | 65245006PM4RI | - | 65280400P | 71 | 81331P | - | 90336P | - |
| 80294P | - | 81026P | - | *0447P | - | 65245006PM4RJ | - | 80401P | - | 81333P | - | 90338P | - |
| 80296P | - | 81027P | - | *0454P | - | 65245006PMFJ | - | 80403P | - | 81335P | - | 65390345P | 72 |
| 80297P | - | 81030P | - | *0455P | - | 65245006PMJ | - | 80405P | - | 81336P | - | 90346P | - |
| 60280300P | 70 | 81031P | - | *0457P | - | 65245006PMJ | - | 80406P | - | 81338P | - | 90348P | - |
| 80301P | - | 81032P | - | 60390704P | 74 | 65245021P | - | 80408P | - | 65281400P | 77 | 90355P | - |
| 80302P | - | 81034P | - | *0706P | - | 45022P | - | 80409P | - | 81401P | - | 90356P | - |
| 80304P | - | 81036P | - | *0707P | - | 45023P | - | 80411P | - | 81403P | - | 90358P | - |
| 80306P | - | 81037P | - | *0714P | - | 45024P | - | 80413P | - | 81405P | - | 65390405P | 71 |
| 80307P | - | 60281100P | 77 | *0716P | - | 45026P | - | 80415P | - | 81406P | - | 90406P | - |
| 80310P | - | 81101P | - | *0717P | - | 45042P | - | 80416P | - | 81408P | - | 90408P | - |
| 80311P | - | 81102P | - | *0724P | - | 45043P | - | 80418P | - | 81410P | - | 90415P | - |
| 80312P | - | 81104P | - | *0725P | - | 45044P | - | 80420P | - | 81411P | - | 90416P | - |
| 80314P | - | 81106P | - | *0727P | - | 45045P | - | 80421P | - | 81413P | - | 90418P | - |
| 80316P | - | 81107P | - | *0734P | - | 45066P | - | 80423P | - | 81415P | - | 90425P | - |
| 80317P | - | 81110P | - | *0736P | - | 65255011P | 78 | 80425P | - | 81416P | - | 90426P | - |
| 80320P | - | 81111P | - | *0737P | - | 65255011PMFB | - | 80426P | - | 81418P | - | 90428P | - |
| 80321P | - | 81112P | - | 60390804P | 73 | 65255011PMFC | - | 80428P | - | 81420P | - | 90435P | - |
| 80322P | - | 81114P | - | *0806P | - | 65255012P | - | 80430P | - | 81421P | - | 90436P | - |
| 80324P | - | 81116P | - | *0807P | - | 65255012PMFD | - | 80431P | - | 81423P | - | 90438P | - |
| 80326P | - | 81117P | - | *0814P | - | 65255012PMFE | - | 80433P | - | 81425P | - | 65390445P | 72 |
| 80327P | - | 60281300P | 76 | *0816P | - | 65255013P | - | 80435P | - | 81426P | - | 90446P | - |
| 80330P | - | 81301P | - | *0817P | - | 65255013PMFF | - | 80436P | - | 81428P | - | 90448P | - |
| 80331P | - | 81302P | - | *0824P | - | 65255013PM4RB | - | 80438P | - | 81430P | - | 90455P | - |
| 80332P | - | 81304P | - | *0826P | - | 65255013PM4RC | - | 65280440P | 72 | 81431P | - | 90456P | - |
| 80334P | - | 81306P | - | *0827P | - | 65255013PM4RD | - | 80441P | - | 81433P | - | 90458P | - |
| 80336P | - | 81307P | - | *0834P | - | 65255013PM4RE | - | 80443P | - | 81435P | - | 65390705P | 74 |
| 80337P | - | 81310P | - | *0836P | - | 65255013PM4RF | - | 80445P | - | 81436P | - | 90706P | - |
| 60280340P | 72 | 81311P | - | *0837P | - | 65255014PM4R | - | 80446P | - | 81438P | - | 90708P | - |
| 80341P | - | 81312P | - | 60391004P | 75 | 65255014PM4RG | - | 80448P | - | 65281811P | 79 | 90715P | - |
| 80342P | - | 81314P | - | *1006P | - | 65255014PM4RH | - | 80450P | - | 81812P | - | 90716P | - |
| 80344P | - | 81316P | - | *1007P | - | 65255014PMF6 | - | 80451P | - | 81814P | - | 90718P | - |
| 80346P | - | 81317P | - | *1014P | - | 65255014PMFH | - | 80453P | - | 81821P | - | 90725P | - |
| 80347P | - | 81320P | - | *1016P | - | 65255016P | - | 80455P | - | 81822P | - | 90726P | - |
| 80350P | - | 81321P | - | *1017P | - | 65255016PM4RI | - | 80456P | - | 81824P | - | 90728P | - |
| 80351P | - | 81322P | - | *1024P | - | 65255016PM4RJ | - | 80458P | - | 81831P | - | 90735P | - |
| 80352P | - | 81324P | - | *1026P | - | 65255016PMFJ | - | 65280700P | 74 | 81832P | - | 90736P | - |
| 80354P | - | 81326P | - | *1027P | - | 65255016PMJ | - | 80701P | - | 81834P | - | 90738P | - |
| 80356P | - | 81327P | - | *1034P | - | 65255031P | 78 | 80703P | - | 81851P | - | 65390805P | 73 |
| 80357P | - | 81330P | - | *1036P | - | 55032P | - | 80705P | - | 81852P | - | 90806P | - |
| 60280400P | 71 | 81331P | - | *1037P | - | 55033P | - | 80706P | - | 81854P | - | 90808P | - |
| 80401P | - | 81332P | - | 60391104P | 77 | 55034P | - | 80708P | - | 81861P | - | 90815P | - |
| 80402P | - | 81334P | - | *1106P | - | 55036P | - | 80710P | - | 81862P | - | 90816P | - |
| 80404P | - | 81336P | - | *1107P | - | 55051P | - | 80711P | - | 81864P | - | 90818P | - |
| 80406P | - | 81337P | - | *1114P | - | 55052P | - | 80713P | - | 81871P | - | 90825P | - |
| 80407P | - | 60281400P | 77 | *1146P | - | 55053P | - | 80715P | - | 81872P | - | 90827P | - |
| 80410P | - | 81401P | - | *1117P | - | 55054P | - | 80716P | - | 81874P | - | 90828P | - |
| 80411P | - | 81402P | - | 60391304P | 76 | 55055P | - | 80718P | - | 65282001P | 79 | 90835P | - |
| 80412P | - | 81404P | - | *1306P | - | 55076P | - | 80720P | - | 82002P | - | 90836P | - |
| 80414P | - | 81406P | - | *1307P | - | 65280100P | 66 | 80721P | - | 82003P | - | 90838P | - |
| 80416P | - | 81407P | - | *1314P | - | 80101P | - | 80723P | - | 65283101P | 69 | 65391005P | 75 |
| 80417P | - | 81410P | - | *1316P | - | 80103P | - | 80725P | - | 83102P | - | 91006P | - |
| 80420P | - | 81411P | - | *1317P | - | 80105P | - | 80726P | - | 83104P | - | 91008P | - |
| 80421P | - | 81412P | - | *1324P | - | 80106P | - | 80728P | - | 65285011P | 78 | 91013P | - |
| 80422P | - | 81414P | - | *1326P | - | 80108P | - | 80730P | - | 65285011PMFE | - | 91016P | - |
| 80424P | - | 81416P | - | *1327P | - | 80120P | - | 80731P | - | 65285011PMFC | - | 91018P | - |
| 80426P | - | 81417P | - | *1334P | - | 80121P | - | 80733P | - | 65285012P | - | 91025P | - |
| 80427P | - | 81420P | - | *1336P | - | 80123P | - | 80735P | - | 65285012PMFD | - | 91026P | - |
| 80430P | - | 81421P | - | *1337P | - | 80125P | - | 80736P | - | 65285012PMFE | - | 91028P | - |
| 80431P | - | 81422P | - | 60391404P | 77 | 80126P | - | 80738P | - | 65285013P | - | 91035P | - |
| 80432P | - | 81424P | - | *1406P | - | 80128P | - | 80739P | - | 65285013PM4RB | - | 91036P | - |
| 80434P | - | 81426P | - | 65280130P | 67 | 80130P | - | 65280800P | 73 | 65285013PM4RE | - | 91038P | - |
| 80436P | - | 81427P | - | *1414P | - | 80131P | - | 80801P | - | 65285013PM4RD | - | 91046P | - |
| 80437P | - | 81430P | - | *1416P | - | 80133P | - | 80805P | - | 65285013PM4RE | - | 91106P | - |
| 60280440P | 72 | 81431P | - | *1417P | - | 80135P | - | 80806P | - | 65285013PM4RF | - | 91108P | - |
| 80441P | - | 81432P | - | *1424P | - | 80136P | - | 80808P | - | 65285013PMFF | - | 91115P | - |
| 80442P | - | 81434P | - | *1426P | - | 80138P | - | 80810P | - | 65285014P | - | 91116P | - |
| 80444P | - | 81436P | - | *1427P | - | 65280150P | 66 | 80811P | - | 65285014PM4RG | - | 91118P | - |
| 80446P | - | 81437P | - | *1434P | - | 80151P | - | 80813P | - | 65285014PM4RH | - | 65391305P | 76 |
| 80447P | - | 60281700P | 68 | *1436P | - | 80153P | - | 80815P | - | 65285014PM4R6 | - | 91306P | - |
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| 80451P | - | 81702P | - | 60391704P | 68 | 80156P | - | 80818P | - | 65285016P | - | 91315P | - |
| 80452P | - | 81704P | - | *1706P | - | 80158P | - | 80820P | - | 65285016PM4RJ | - | 91316P | - |
| 80454P | - | 81706P | - | *1707P | - | 80170P | - | 80821P | - | 65285016PM4R6 | - | 91318P | - |
| 80456P | - | 81707P | - | *1744P | - | 80171P | - | 80823P | - | 65285016PMFJ | - | 91325P | - |
| 80457P | - | 81740P | - | *1746P | - | 80173P | - | 80825P | - | 65285016PMFJ | - | 91326P | - |
| 60280700P | 74 | 81741P | - | *1747P | - | 80175P | - | 80826P | - | 65285031P | 78 | 91328P | - |
| 80701P | - | 81742P | - | 65280000 | 80 | 80176P | - | 80828P | - | 55032P | - | 91335P | - |
| 80702P | - | 81744P | - | 02004 | - | 80178P | - | 80829P | - | 55033P | - | 91336P | - |
| 80704P | - | 81746P | - | 02013 | - | 80180P | - | 80831P | - | 55034P | - | 91338P | - |
| 80706P | - | 81747P | - | 02112</ | | | | | | | | | |

Protection classifications

Protection against solid bodies and liquids : Index of protection - IP xx

Degree of protection of enclosures of electrical equipment in accordance with standards IEC 60529, BS EN 60529
Up to 1 000 V~ and 1 500 V=

| 1 st digit: protection against solid bodies | | Additional letter IP XX (ABCD): protection against direct contact resulting from the access to hazardous current-carrying parts | | 2 nd digit: protection against liquids | |
|---|--|--|---|--|---------------|
| IP | tests | IP | tests | protection | |
| 0 | No protection | | | | No protection |
| 1 | Protected against solid bodies larger than 50 mm | A | The back of the hand remains remote from dangerous parts | | 1 |
| 2 | Protected against solid bodies larger than 12.5 mm | B | The dangerous parts can not be touched when introducing a finger | | 2 |
| 3 | Protected against solid bodies larger than 2.5 mm | C | The dangerous parts can not be touched when introducing a tool (eg a screwdriver) | | 3 |
| 4 | Protected against solid bodies larger than 1 mm | | | | 4 |
| 5 | Protected against dust (no harmful deposit) | D | The dangerous parts can not be touched when introducing a wire | | 5 |
| 6 | Completely protected against dust | | | | 6 |
| | | | | | 7 |
| | | | | | 8 |

Protection against mechanical impact : Index of protection - IK

According to standards IEC 62262 and BS EN 62262

| IK | Tests | Impact energy (in Joules) |
|-------|----------------|---------------------------|
| IK 00 | | 0 |
| IK 01 | 0.2 kg, 75 mm | 0.15 |
| IK 02 | 0.2 kg, 100 mm | 0.2 |
| IK 03 | 0.2 kg, 175 mm | 0.35 |
| IK 04 | 0.2 kg, 250 mm | 0.5 |
| IK 05 | 0.2 kg, 350 mm | 0.7 |
| IK 06 | 0.5 kg, 200 mm | 1 |
| IK 07 | 0.5 kg, 400 mm | 2 |
| IK 08 | 1.7 kg, 295 mm | 5 |
| IK 09 | 5 kg, 200 mm | 10 |
| IK 10 | 5 kg, 400 mm | 20 |

(1) A product previously classed as IP xx-7 can be assumed to fulfill the conditions of an IP xx - IK 08

This table can be used to ascertain the resistance of a product to an impact given in Joules from the IK code (graduated from 00 to 10). It can also be used to ascertain the correspondence with the old IP code 3rd digit and the corresponding external "Ag" conditions.

The contents of the Protection Classifications charts are for guidance only. If you have any doubt as to the interpretation of the information contained therein, please refer either to the standard itself or contact Legrand.

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Statement to Purchasers and Prospective Purchasers

1. Section 6 of this Act provides that manufacturers, designers, importers or suppliers of articles for use at work have a duty to ensure so far as is reasonably practical, that the article will be safe and without risk to health when properly used. An article is not regarded as being 'properly used' if it is used without regard to any relevant information or advice relating to its use made available by the manufacturer, designer, importer or supplier.

2. With regard to these provisions the following is given as a guide to the information which is readily available to you. This information relates to those products detailed in our catalogue(s) or associated literature or may be obtained by specific request to the Company.

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other applicable standards, regulations for the installation of equipment by the Institute of Electrical Engineers or any other applicable Codes of Practice.

Health and Safety at Work Act

The Electricity at Work Regulations, 1989

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Email : cservices@bsi-global.com

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IP68 RCP RESIN busbar trunking



RCP resin busbar is the latest addition to the Zucchini range



With an ingress protection rating of IP68 and ranging from 630 A to 6300 A, RCP is ideal for the distribution of high power energy in external environments.

RCP is manufactured with either aluminium or copper conductors which are completely embedded

in an epoxy resin, that provides mechanical strength and electrical insulation.

RCP resin busbar has good performance in fire conditions and exceeds the requirements stipulated in IEC 60331-1 : 2009 for continuity of service in the event of fire.



Green T.HE high efficiency transformers

quality through to the core

EdM transformers are renowned for quality. Manufactured within a state-of-the-art production facility with attention to detail being paramount, each transformer undergoes rigorous testing prior to despatch.

Legrand has many years experience in the production of dry transformers cast under vacuum in epoxy resin up to 36 kV and has recently launched a new range of 'GreenT.HE' high efficiency transformers which conform to IEC 60076-11 and EU regulation 548/2014.



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