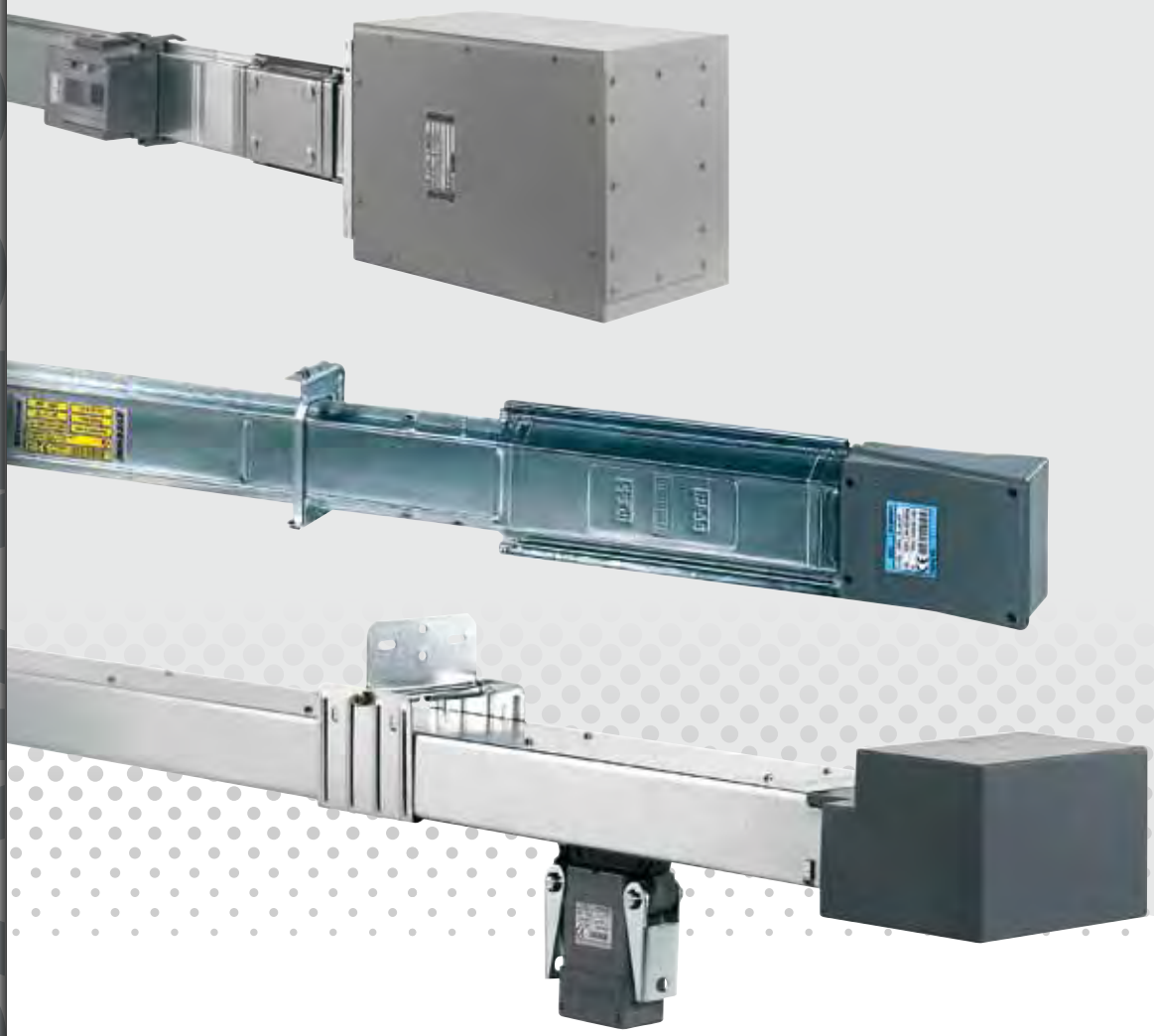
CATALOGUE

BUSBAR TRUNKING SYSTEM

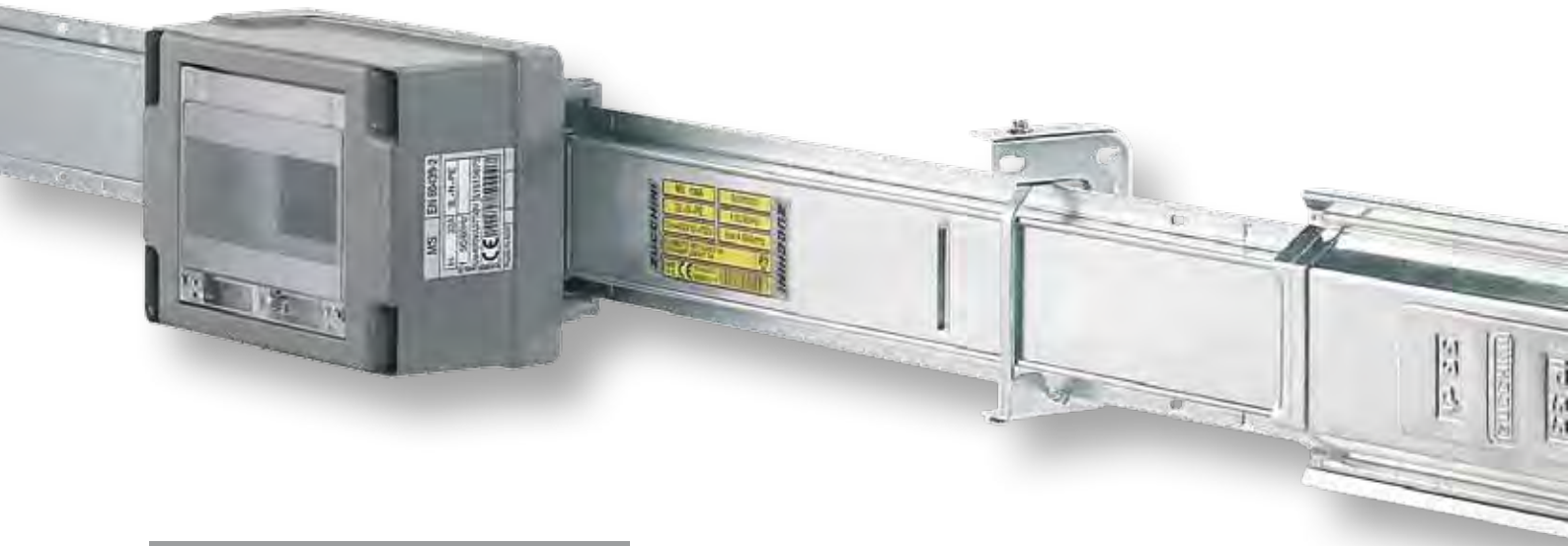
ZUCCHINI



MS - 63 - 160 A
MR - 160 - 1000 A
TS - 63 - 250 A

THE **GLOBAL SPECIALIST**
IN ELECTRICAL AND DIGITAL BUILDING INFRASTRUCTURES

legrand®



COMPONENTS DETAILS

Centre feed unit

Horizontal elbow

Vertical elbow

Tap-off boxes

Gasket and joint cover IP55

IP55 outlet cover

Laboratories

Small and middle-sized industries

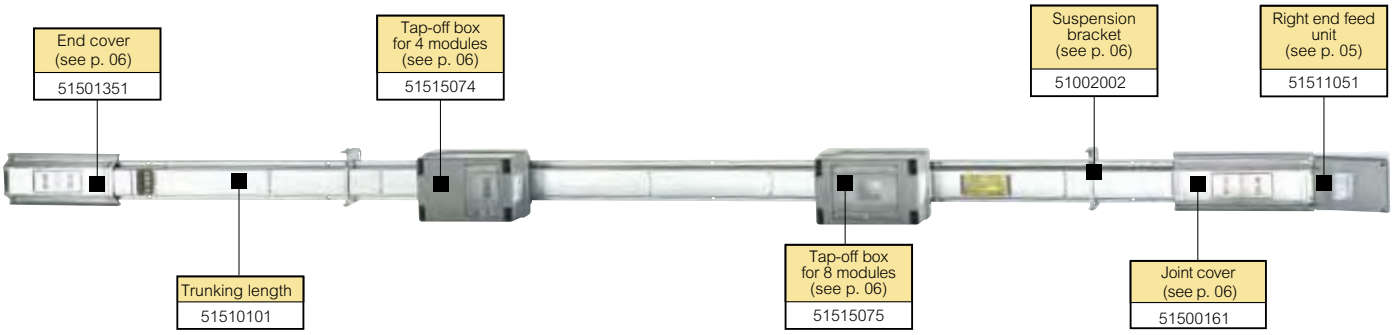
Zucchini MS - medium rating busbar

- Available in sizes ranging from 63A - 160A
- Fully compliant with the CEI EN 60439-1/2.
- Degree of protection upto IP55.
- Offers flexibility during planning & installation.
- Ideal for frequent changing requirement in small to medium sized commercial and industrial premises.
- Very fast assembly. (Pre-fitted junction block & joint cover)
- Choice of tap off boxes from 16 to 63A, with protection devices upto 16 DIN modules.
- Vast selection of elbows, tees and other accessories making bespoke solutions possible.

Shopping centres

Zucchini busbar trunking - MS

straight length - double sided



Dimensions **p. 10**
Technical data **p. 7-8**

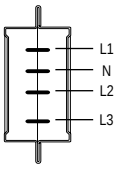
Conforms to CEI EN 60439-1/2. Casing manufactured from Senzimir quality galvanised steel suitable for use as a protective earth
IP 40 as standard, increasing to IP 55 with use of appropriate accessories

63 A busbar trunking

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

Pack	Cat.Nos (Aluminium)	Length (m)	Outlet points	Weight (kg)
1	51530101	3	3 + 3	7·890
1	51530116	2	2 + 2	5·260
1	51530115	1·5	1 + 1	3·945
1	51530114	1	1 + 1	2·630
1	51530112	< 1·5	–	–
1	51530113	> 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

Pack	Cat.Nos	Length (m)	Outlet points	Weight (kg)
1	51530131	3	3 + 3	7·990

Thrust unit

Thrust unit to be located at the bottom and is required for vertical runs or riser applications exceeding 12-15 m

Pack	Cat.Nos	Length (m)	Outlet points	Weight (kg)
1	51530141	3	3 + 3	7·890

100 A busbar trunking

Standard lengths

Pack	Cat.Nos (Aluminium)	Length (m)	Outlet points	Weight (kg)
1	51510101	3	3 + 3	7·890
1	51510116	2	2 + 2	5·260
1	51510115	1·5	1 + 1	3·945
1	51510114	1	1 + 1	2·630
1	51510112	< 1·5	–	–
1	51510113	> 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

Pack	Cat.Nos	Length (m)	Outlet points	Weight (kg)
1	51510131	3	3 + 3	7·990

Thrust unit

Thrust unit to be located at the bottom and is required for vertical runs or riser applications exceeding 12-15 m

Pack	Cat.Nos	Length (m)	Outlet points	Weight (kg)
1	51510141	3	3 + 3	7·890

160 A busbar trunking

Standard lengths

Pack	Cat.Nos (Copper)	Length (m)	Outlet points	Weight (kg)
1	51520101	3	3 + 3	9·290
1	51520116	2	2 + 2	6·190
1	51520115	1·5	1 + 1	4·645
1	51520114	1	1 + 1	3·100
1	51520112	< 1·5	–	–
1	51520113	> 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

Pack	Cat.Nos	Length (m)	Outlet points	Weight (kg)
1	51520131	3	3 + 3	10·290

Thrust unit

Thrust unit to be located at the bottom and is required for vertical runs or riser applications exceeding 12-15 m

Pack	Cat.Nos	Length (m)	Outlet points	Weight (kg)
1	51520141	3	3 + 3	9·290

Bold catalogue numbers are products normally available with Legrand (India) stockists.
Cat.Nos that are not bold - delivery within 4 - 8 weeks from the date of order.

Zucchini busbar trunking - MS
elbows and feed units

51500361

51500461

51511151

Dimensions **p. 10**
Technical data **p. 7-8**

Conforms to CEI EN 60439-1/2. 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

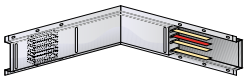
Trunking components

For changing the route of trunking, either horizontally or vertically

Horizontal elbows – right hand

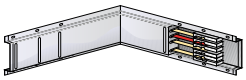
Right and left elbows differ because of the position of junction blocks

Pack	Cat.Nos	Rating (A)	Weight (kg)
1	51530351	63	1·6
1	51500361	100	1·6
1	51520351	160	2·6



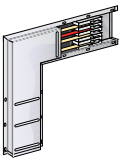
Horizontal elbows – left hand

Pack	Cat.Nos	Rating (A)	Weight (kg)
1	51530361	63	1·6
1	51500362	100	1·6
1	51520361	160	2·6



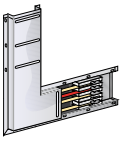
Vertical elbows – right hand

Pack	Cat.Nos	Rating (A)	Weight (kg)
1	51530451	63	1·6
1	51500461	100	1·7
1	51520451	160	2·7



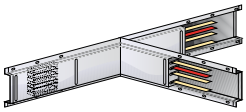
Vertical elbows – left hand

Pack	Cat.Nos	Rating (A)	Weight (kg)
1	51530461	63	1·6
1	51500462	100	1·6
1	51520461	160	2·6



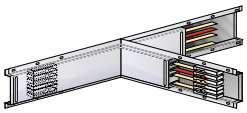
Right hand tees – male

Pack	Cat.Nos	Rating (A)	Weight (kg)
1	51530551	63	2·29
1	51500561	100	2·29
1	51520551	160	3·79



Right hand tees – female

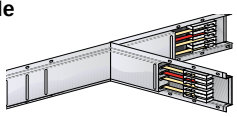
Pack	Cat.Nos	Rating (A)	Weight (kg)
1	51530571	63	2·29
1	51500563	100	2·29
1	51520571	160	3·79



Trunking components (continued)

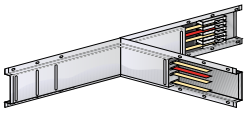
Left hand tee – female

Pack	Cat.Nos	Rating (A)	Weight (kg)
1	51530561	63	2·29
1	51500562	100	2·29
1	51520561	160	3·79



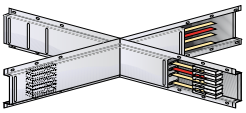
Left hand tee – male

Pack	Cat.Nos	Rating (A)	Weight (kg)
1	51530581	63	2·29
1	51500564	100	2·29
1	51520581	160	3·79



Crossovers

Pack	Cat.Nos	Rating (A)	Weight (kg)
1	51530651	63	2·29
1	51500661	100	2·29
1	51520651	160	3·79



Flexible elbow

For horizontal and vertical changes of direction up to 90°

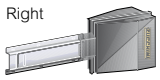
Pack	Cat.Nos	Rating (A)	Weight (kg)
1	51511261	63-100	2·29
1	51521261	160	3·79

Feed units

End feed units IP 55

IP 55 protection as standard. Supplied with cable clamp and terminals for 35 mm (MS 63/100) and 70 mm (MS 160) cables

Pack	Cat.Nos	Rating (A)	Weight (kg)
1	51511051	Right 63-100	1·732
1	51511052	Left 63-100	1·874
1	51521051	Right 160	2·218
1	51521052	Left 160	2·360



Centre feed units IP 55

Pack	Cat.Nos	Rating (A)	Weight (kg)
1	51511151	63-100	3·5
1	51521151	160	5·0

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Cat.Nos that are not bold - delivery within 4 - 8 weeks from the date of order.

Zucchini busbar trunking - MS
tap-offs and accessories

51515056

51515052

51515058

51500161

51500160

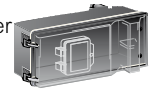
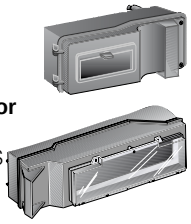
51515051

Dimensions **p. 10-11**
Technical data **p. 7-8**

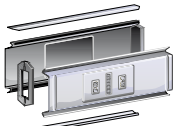
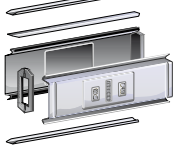
Tap-off boxes can be used to connect and energise single and three phase loads up to 63 A. Tap-offs can be inserted and removed when the busbar is energised and when the fixture is under load, up to a capacity 32 A. Compliant with IEC 60695-2-10 with V1 self-extinguishing degree (UL 94)
Standard IP 55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

Pack	Cat.Nos	Tap-off boxes IP 55
		Energy withstand 400·10³ A²S Totally insulated tap-off box Max. cable size 25 mm²
		Max. power losses 10 W
1	51515071	Empty tap-off box with DIN (4 mod.) Rating (A): 32 | Weight (kg): 0·68
1	51515076	Tap-off box with CH10 fuseholder (10·3 x 38) Rating (A): 32 | Weight (kg): 0·68
1	51515077	Tap-off box with D01 fuseholder Rating (A): 16 | Weight (kg): 0·95
1	51515078	Tap-off box with D02 fuseholder Rating (A): 32 | Weight (kg): 0·95
1	51515072	Tap-off box for (4 mod.) DIN Rating (A): 32 | Weight (kg): 0·73
		Max. power losses 16 W
1	51515073	Empty tap-off box (8 mod) Rating (A): 32 | Weight (kg): 0·93
1	51515074	Tap-off box (4 mod) DIN (long version) Rating (A): 32 | Weight (kg): 0·96
1	51515075	Tap-off box (8 mod) DIN (long version) Rating (A): 32 | Weight (kg): 0·99

Pack	Cat.Nos	Tap-off boxes with isolating device on the cover
		Tap-off box with CH10 fuseholder (10·3 x 38)
1	51515051	10·3 x 38 fuses not included Rating (A): 16 | Weight (kg): 0·908
		Tap-off box with CH14 fuseholder (14 x 51)
1	51515052	14 x 51 fuses not included Rating (A): 50 | Weight (kg): 0·908
		63 A tap-off boxes
1	51515057	Energy withstand 400·10³ A²S MAX power losses 20W Tap-off box with transparent cover Weight 1·1 kg
1	51515056	Tap-off box with transparent cover and hinged door (up to 4 mod.) Weight 1·2 kg
1	51515067	Tap-off box with hinged door (up to 7 mod.) Weight 1·1 kg
		Tap-off box with hinged door (up to 16 mod.)
1	51515058	Energy withstand 400·10³ A²S MAX power losses 20W Weight 2·5 kg

Pack	Cat.Nos	Accessories
		End cover IP 55
1	51501351	End covers are fitted to the last length in each run to maintain IP 55 protection Weight 0·57 kg
		Joint cover IP 55
1	51500161	One for each joint Weight 0·788 kg
		Tap-off outlet cover IP 55
1	51500160	6 per 3 m straight length Weight 0·061 kg
		Suspension bracket
1	51002002	Universal fixing brackets enable trunking to be either suspended or wall mounted 1 per 2 m Weight 0·1 kg

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Zucchini busbar trunking - MS

Technical data

General features

The MS (Mini Busbar) range is used for distributing low-medium power.

The MS line has compact dimensions but it is extremely strong; it is the smallest line of the Medium Power range.

The space inside the tap-off boxes is enough to contain up to 16 DIN modules.

Zucchini MS is extremely fast and simple to install. In addition, its flexibility can be appreciated during the planning stage and during installation, thus meeting the requirements when frequently changing the arrangement of the loads within a small company or laboratory.

MS, as all Zucchini products, is fully compliant with the CEI EN 60439-1 / 2 Harmonised Standards; specifically, the rated current of the Zucchini busbar trunking system is always referred to the average ambient temperature of 40°C (N.B.: the Standard requires 35°C), thus offering the market suitably oversized products.

Busbar trunking lengths

Used for distributing power and for supplying low-medium power loads.

MS straight lengths include the following components:

- Two "omega-shaped", ribbed, sealed section casing (39x97mm, thickness 0.8 mm), made of hot-galvanised steel (Senzimir) which also serve as a protective conductor due to its good cross-section and electrical continuity.
- 4 conductors with the same section 3L+N.

  The conductors are made from an aluminium alloy, copper plated with a final coat of tin for the 63A and 100A ratings, whereas for the 160A ratings, the conductors are made of electrolytic copper with purity no less than 99.9%.

  The cross-section of the conductors is 26 mm^2 (Al) for a 63A rating, 39 mm^2 (Al) for a 100A rating and 39 mm^2 (Cu) for a 160A rating; the conductors are spaced with plastic insulators reinforced with 20% glass fibre.

  The insulators have a V1 self-extinguishing degree (as per UL94) and are in compliance with the incandescent wire test as per EN 60695-2-1 (CEI 50.11).

  The electrical insulation between the conductors and the casing is ensured by suitable air distances maintained by the insulators.
- An electrical junction block for automatically connecting live conductors and the PE. The block is made of 4 silver-plated copper contacts with independent springs which make up the live conductor series. The continuity of the protective conductor (casing) is completed when the screws on the casing are tightened near the joint.

  A silver-plated contact, integral with the electrical junction block, sets up and ensures the continuity of the PE conductor.

  The connection between two straight lengths is quick: with only one operation both the electrical and mechanical connections are made. At the same time, achievins an IP40 degree of protection.

  Using a cover on the joint and a plug outlet cover for each outlet (tap-off free) increases the degree of protection to IP55. The whole busbar is "fire retardant" in compliance with standard EN 60332-3.

End feed units

These enable the MS range to be supplied by cable ; the assembly is carried out with a quick connection device as with the straight lengths. The end feed units have connection terminals to accept up to 35 mm^2 copper cables for a 63/100A supply and 70 mm^2 for a 160A supply. The entrance point of the cables is located at the base of the end feed unit.

End covers

An end cover ensures the IP55 degree of protection at the end of the run.

Hangers

In order to fix the line to the structure of the building, directly or with a wall bracket, it is necessary to use a bracket which serves as a busbar collar. The bracket has holes so it can be easily used with the brackets (for details refer pg. 28)

Busbar trunking components and additional elements

Depending on different installation requirements, Zucchini offers different technical solutions:

a) 90° angles: available for changing routes both horizontally and vertically.

   The joint is of the quick type as with the straight lengths. The degree of protection is IP55.

b) T and X elements: available for making elbows. The degree of protection is IP55.

c) Flexible angle: makes possible directional changes with different angles.

   The protection degree is IP55.

d) Straight lengths with fire barrier (internal+external).

   These elements are used when fire-resistant walls need to be passed through.

   The elements 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.

e) Straight lengths with thrust unit: when the busbar is installed vertically (rising mains), these elements are provided with a device which blocks the conductors from slipping when supporting the weight of the riser .

   This type of element is required for vertical installations (risers) every 10 m (approx.) of the riser.

Tap-off boxes

They include the following features:

- The PE contact (protective conductor) is the first to make an electrical connection when the tap-off is plugged into the outlet, and the last to disconnect when the tap-off is unplugged;
- all insulating plastic components comply with the incandescent wire test (EN 60695-2-1) and have a V1 self-extinguishing degree (UL94);

  These boxes are available in a wide range of versions, all characterized by "total isolation": no metallic part accessible from the outside is connected directly with the inside of the box, hence no accessible metallic part can be energized, not even accidentally.

Different versions are available:

- empty box (with a terminal block for connecting the cables), with internal DIN guide and transparent hinged door to see and operate the protection devices that can be installed inside the box.
- with cylindrical fuseholder – CH10 type (10.3x38)
- tap-off box upto 63A with a switch device integral with the cover.

When the box is installed on the busbar, the opening of the cover electrically disconnects its internal parts, ensuring no accessible metallic part is energized when the cover is open. Tap-off boxes with an isolator have an interlock with the cover and can be inserted and removed only when the cover is open, namely with the isolating device in the"open" position.

Different versions are available:

- 16A with cylindrical fuseholder – CH10 (10.3x38)
- 50A with cylindrical fuseholder – CH14 (14x51)
- 63A – empty for various applications
- 63A with door – 4 DIN mod.
- 63A with door – 7 DIN mod.
- 63A with door – 16 DIN mod.

Technical data (continued)

Complies to :
IEC 439-1 and 2, CEI EN 60439 part 1 and 2,
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 (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 are flame retardant in compliance with IEC 332-3 : 1992

Rating (A)		63	100	160
Live conductors	No.	4	4	4
Casing overal dimension	A x B (mm)	39 x 97	39 x 97	39 x 97
Rated current	I_n (A)	63	100	160
Cross-section of conductors (3P + N)	S (mm^2)	26	39	39
Cross-section of protective conductor eq. Cu	S_{PE} (mm^2)	21	21	21
Operational voltage	U_e (V)	400	400	400
Insulation voltage	U_i (V)	750	750	750
Rated frequency	f (Hz)	50/60	50/60	50/60
Rated short-time current (0·1 s)	I_{cw} (kA)rms	2·3	4·5	5·5
Peak current	Ipk (kA)	10	10	10
Maximum thermal limit	I^2† (A^2s x 106)	5·29	20·25	30·25
Phase resistance	R_{20} (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	R_{PE} (mΩ/m)	0·857	0·857	0·857
Reactance of the protective bar (50Hz)	X_{PE} (mΩ/m)	0·090	0·090	0·102
Resistance of the fault loop	R_o (mΩ/m)	1·85	1·26	1·08
Reactance of the fault loop (50Hz)	X_o (mΩ/m)	0·456	0·456	0·349
Impedance of the fault loop	Z_o (mΩ/m)	1·91	1·34	1·13
$\Delta V_{1F} = \frac{1}{2}(2 R_{20} \cos\varphi + 2 X \operatorname{sen}\varphi)$	ΔV (V/m/A)10^{-3} cosφ = 0·70	0·98	0·63	0·44
	ΔV (V/m/A)10^{-3} cosφ = 0·75	1·02	0·64	0·45
	ΔV (V/m/A)10^{-3} cosφ = 0·80	1·06	0·65	0·46
Voltage drop with distributed load (k)	ΔV (V/m/A)10^{-3} cosφ = 0·85	1·09	0·65	0·46
	ΔV (V/m/A)10^{-3} cosφ = 0·90	1·11	0·65	0·47
$\Delta V_{3F} = \frac{\sqrt{3}}{2}(R_{20} \cos\varphi + X \operatorname{sen}\varphi)$	ΔV (V/m/A)10^{-3} cosφ = 0·95	1·13	0·64	0·46
	ΔV (V/m/A)10^{-3} cosφ = 1·00	1·08	0·57	0·41
Straight length weight	p (kg/m)	2·0	2·6	2·8
Fire load	(kWh/m)	1·64	1·64	1·64
Protection degree	IP	40/55	40/55	40/55
Losses for the Joule effect at full load	P (W/m)	14·9	19·7	36·7
Min./max. ambient temperature	† (°C)	-5/+50	-5/+50	-5/+50

Temperature rating schedule

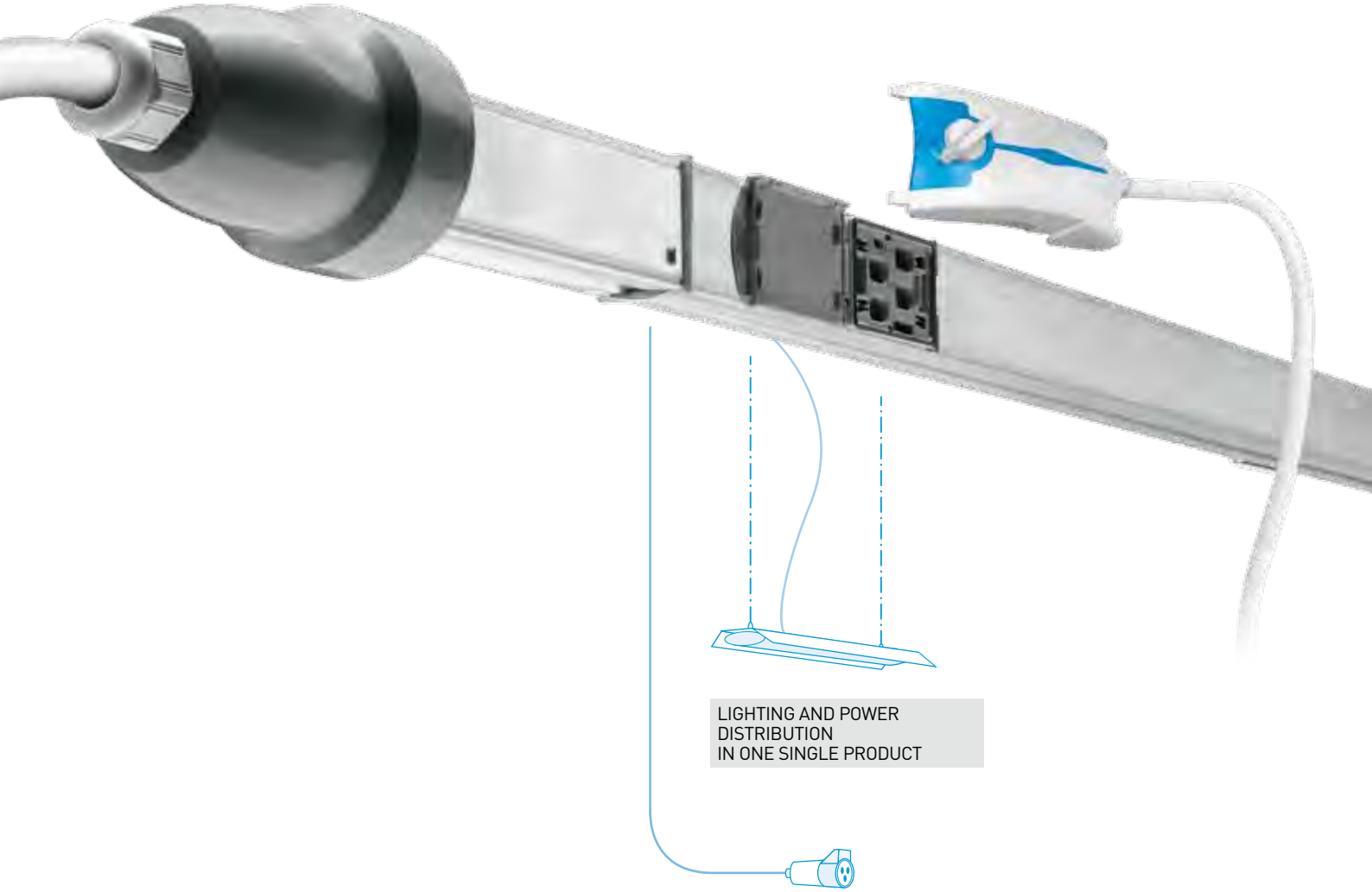
Mean room temperature (°C)	15	20	25	30	35	40	45	50	55	60
K1 factor	1·15	1·12	1·08	1·05	1·025	1	0·975	0·95	0·93	0·89

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

The enhanced Zucchini LB plus busbar range

Many advantages within one single product line

- The new range of Zucchini busbars for the distribution of power, from 25 to 63 A. With a single product, Zucchini replaces the LB, HL, and SL ranges, offering a busbar that is simpler, better performing, and easier to install.
- 10, 16 and 32 A tap-offs available;
- Increased functionality; fewer part numbers make up the complete range, with common accessories for all versions;
- An extremely robust product that allows complete flexibility every time an area is refurbished.



LIGHTING AND POWER DISTRIBUTION IN ONE SINGLE PRODUCT

SHOPPING CENTRES, STORES, OFFICES...

WAREHOUSES, GYMS, UNDERGROUND CAR PARKS...

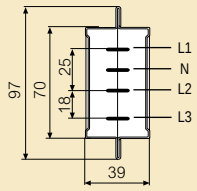
HOSPITALS, LABORATORIES...

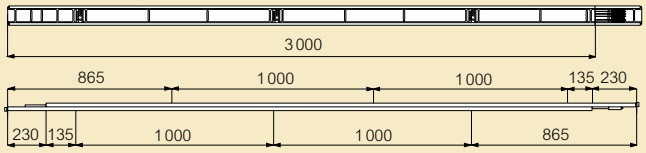
WORKSHOPS, MAINTENANCE & REPAIR FACILITIES, PRODUCTION SITES...

Zucchini busbar trunking - MS

Dimension

Trunking lengths

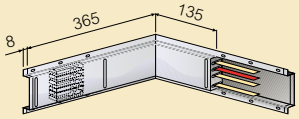




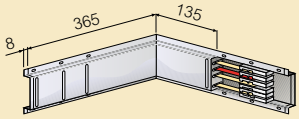
Trunking components

IP 55 (according to BS EN 60529)

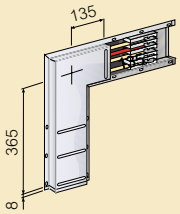
Horizontal elbow - right hand



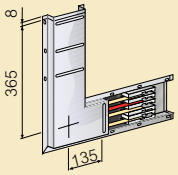
Horizontal elbow - left hand



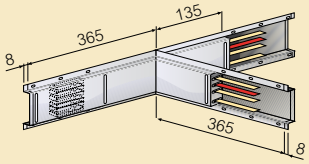
Vertical elbow - right hand



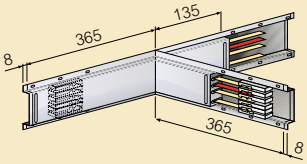
Vertical elbow - left hand



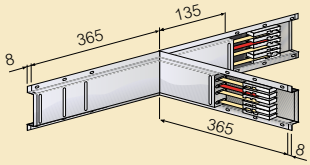
Right hand tees - male



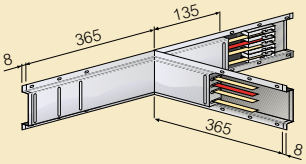
Right hand tees - female



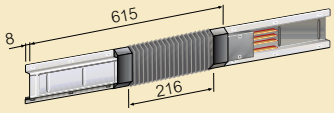
Left hand tees - female



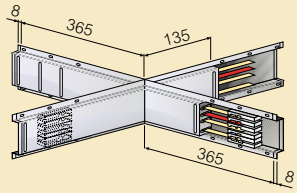
Left hand tees - male



Flexible elbow

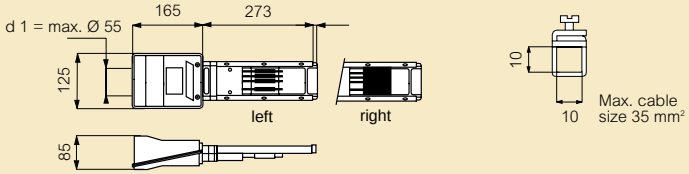


Crossovers

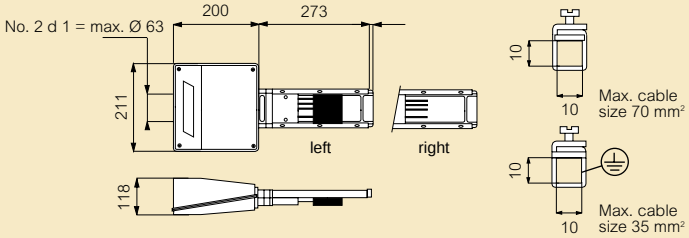


End feed units

63 – 100 A

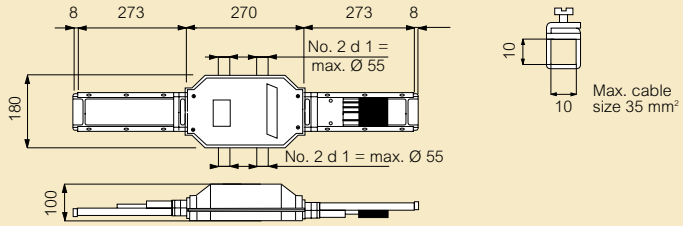


160 A

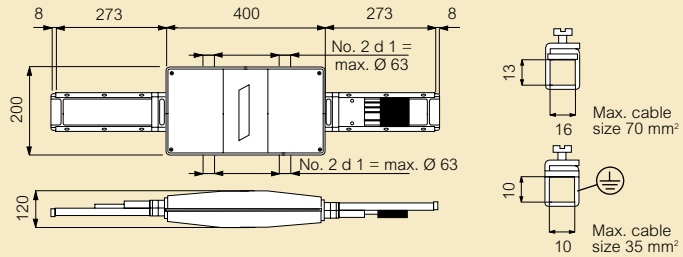


Centre feed units

63 – 100 A

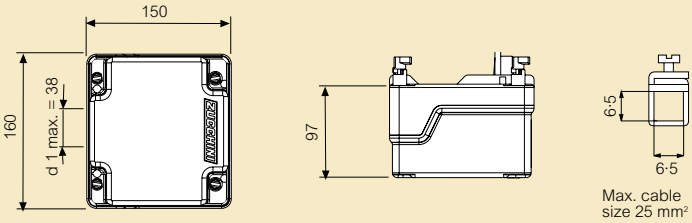


160 A

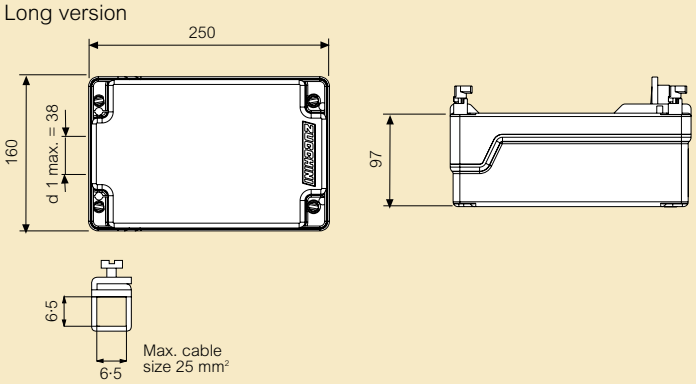


Tap-off boxes

Standard version



Long version

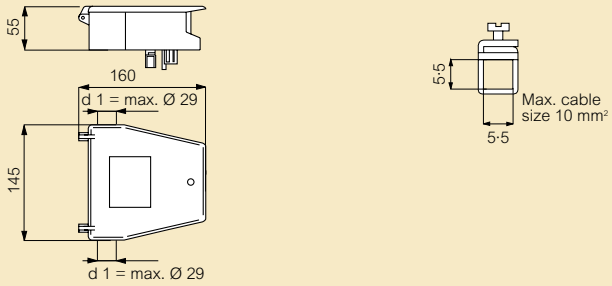


All dimensions in mm.

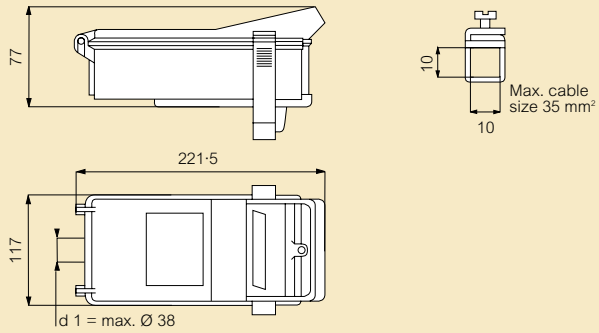
Zucchini busbar trunking - MS

Dimension (continued)

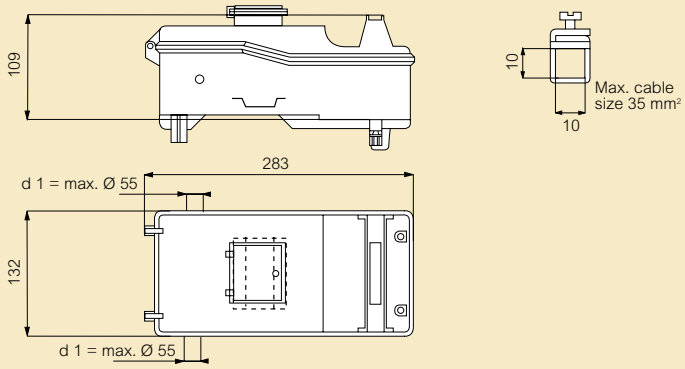
Tap-off box with CH10 fuseholder (10·3 x 38)



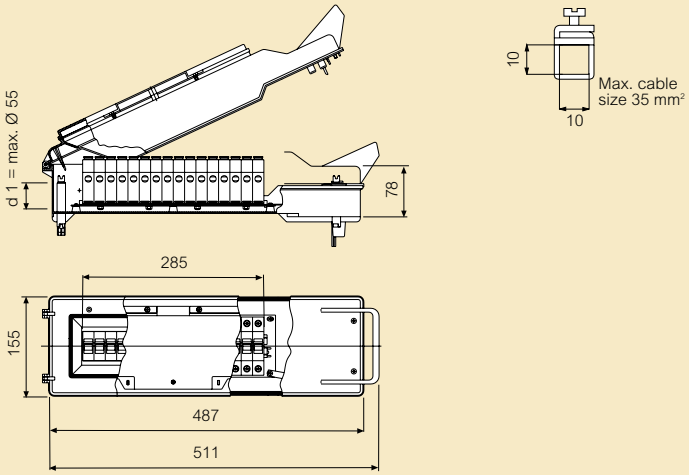
Tap-off box with CH14 fuseholder (14 x 51)



63 A tap-off boxes

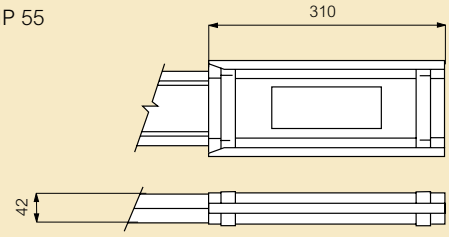


Tap-off box with hinged door (up to 16 modules DIN)



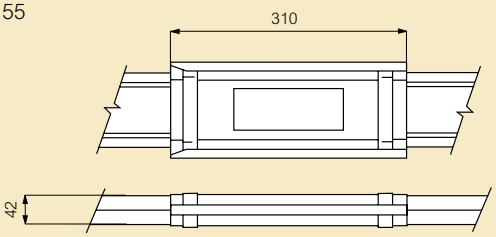
End stop

IP 55



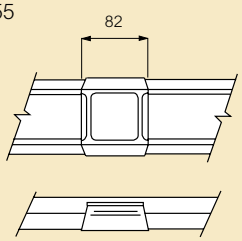
Joint cover

IP 55

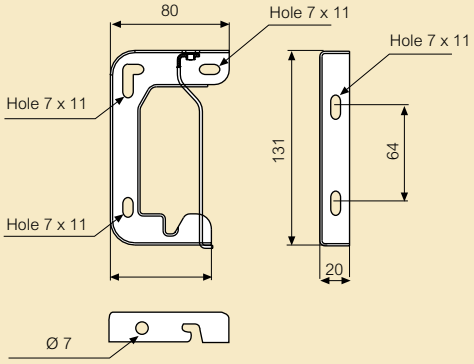


Tap-off outlet cover

IP 55



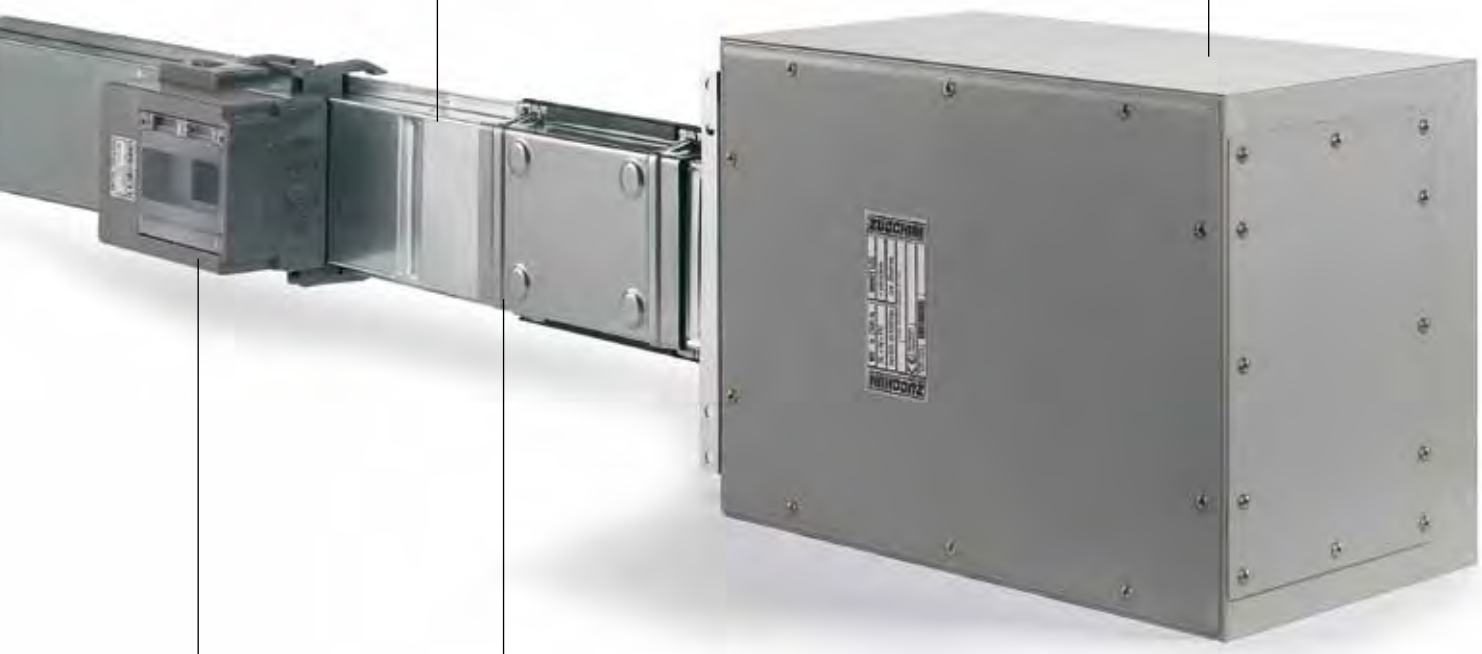
Suspension bracket



All dimensions in mm.

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

Metal end feed unit (centre feed and switched end feed units are also available)



Tap-off boxes are available pre-wired or empty with plug-in or bolt-on options

Joint covers guarantee mechanical rigidity and maintain IP 55 protection

SWITCHBOARD - TRANSFORMER FEED UNIT

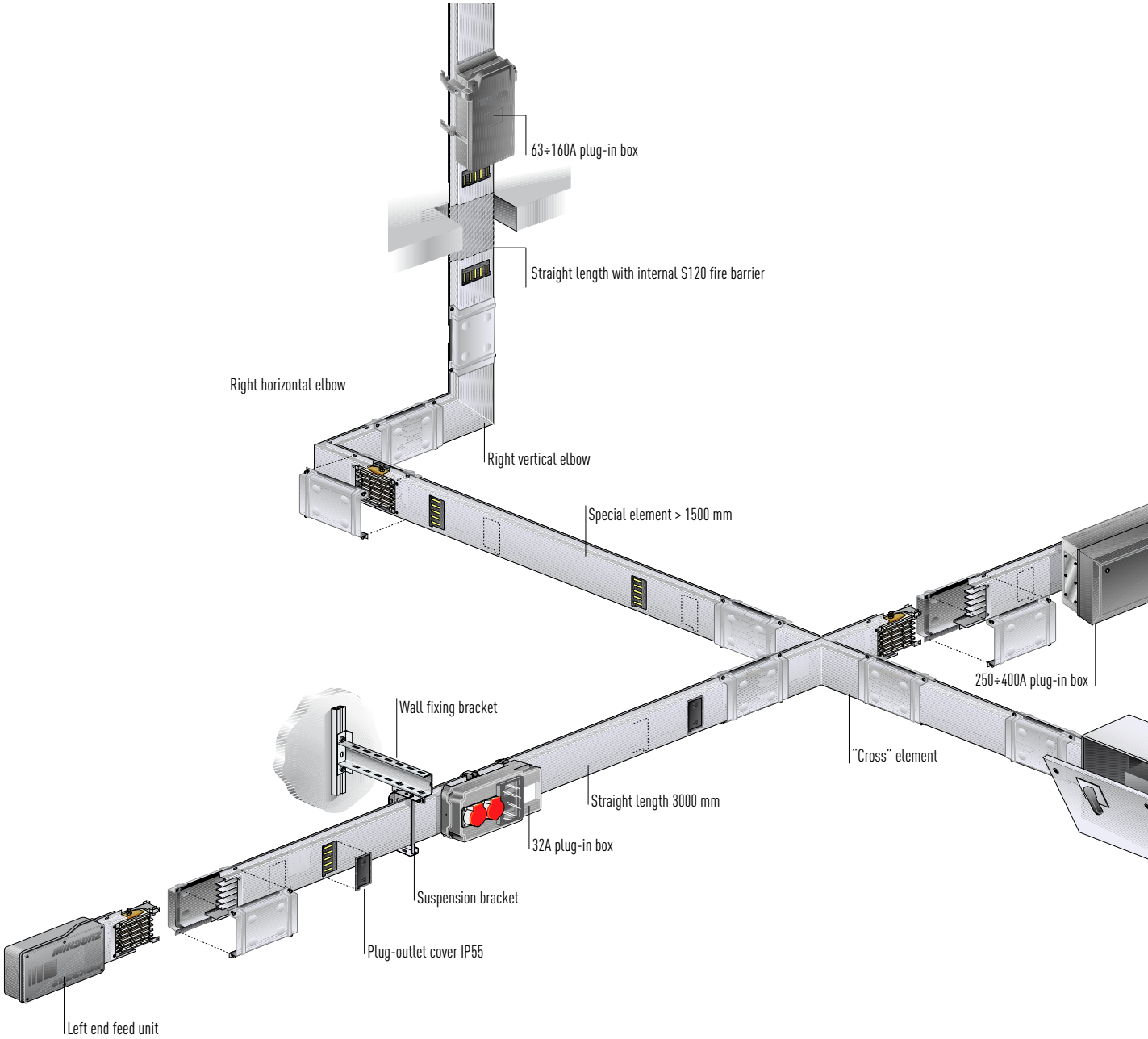
HORIZONTAL ELBOW

VERTICAL ELBOW

TAP-OFF BOXES

Zucchini MR - medium rating busbar

- Available in sizes ranging from
  160A – 1000A in Aluminium
  250A – 1000A in Copper
- Fully compliant with the CEI EN 60439-1/2.
- Available in 4 & 5 conductor versions.
- Wide ranging of tap off boxes from 16 to 1000A, allow supply and protection of wide range of loads using fuses, MCBs and MCCBs.



BENEFITS

PRE-ASSEMBLED MONOBLOC JOINT

All the run elements (straight elements, elbows, etc.) are supplied complete with a factory fitted monobloc. The system is faster to install and easier to handle and store.

COVER PLATE

If the monobloc has not been tightened correctly, the head of the dynamometric bolt will prevent the mechanical coupling from closing. The joint covers and the gaskets protect the element during handling, and once installed, they guarantee mechanical rigidity and the degree of protection.

GLOW WIRE TEST

All plastics used are "glow wire test" proof and in compliance with IEC EN 60439-2 (second edition). These are therefore resistant to abnormal heat.

VERY FAST ASSEMBLY

The monobloc and the shearhead bolt allow very fast assembly of the run.

"IP" PROTECTION

The MR busbar on edgewise position has a standard IP52 degree of protection.
By simply adding covers to the tap-off outlets the degree of protection of the run becomes IP55.

TYPES

The MR symbol indicates a busbar with 4 conductors with an equal cross section (3L+N), and the casing acts as the protective earth conductor (PE); the MRf (full) busbar has 5 conductors with an equal cross section (3L+N+PE). The MR and MRf busbars are available with a galvanised sheet steel casing.

DYNAMOMETRIC MONOBLOC

Tighten the "dynamometric" bolt on the monobloc until the head breaks to electrically connect the elements. Breaking the head of the bolt guarantees long-term reliability and safety.

EXCELLENT FIRE RESISTANCE

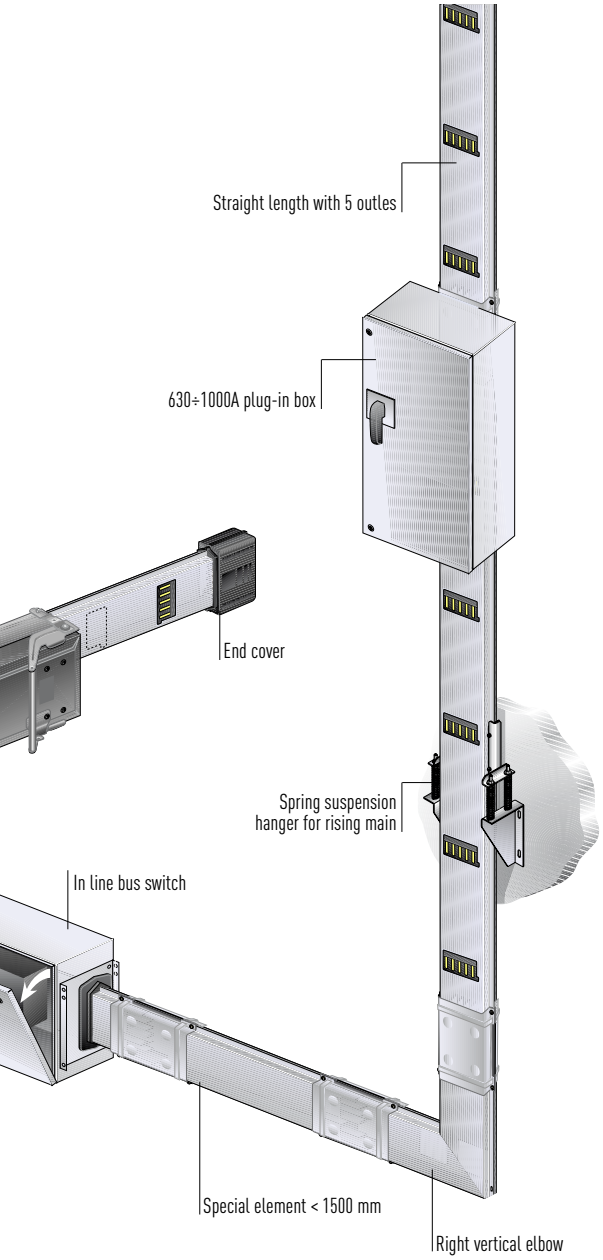
The MR busbar features fireproof fire barrier elements (S120 according to DIN 4102-9) and special structures that guarantee that the bus-line continues to function in fire conditions (E120 according to DIN 4102-12). The fire load of the MR busbar is extremely low compared to the quantity of plastic materials required to insulate cables of the same capacity.

STRAIGHT FORWARD AND RELIABLE

The "monobloc" connection of the MR busbar means it is possible to compensate for any heat expansion affecting the conductors, thus avoiding the need to insert special expansion elements even in considerably long systems. If the MR line is installed vertically (rising main) there is no need to install a busbar thrust unit because the new monobloc prevents the conductors from sliding.

Zucchini MR - medium rating busbar

- Busbar trunking system for medium power.
- Ideal for power distribution in medium to large installations and rising mains in commercial buildings.
- Vast range of elbows, tees and other accessories making bespoke solutions possible.
- Easy to manage & suitable for modifications or extensions.



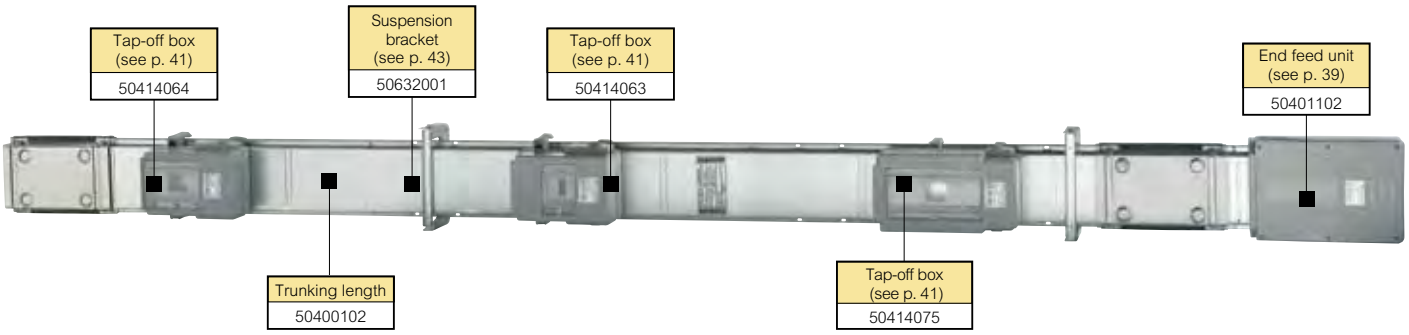
MAXIMUM STRENGTH

The MR busbar has been designed and manufactured for heavy industrial environments. The degree of impact-resistance of the casing which houses the MR bus-line is the maximum stated in IEC EN 60068-2-62: IK10.XX

ALUMINIUM AND COPPER RATING

Aluminium	160	250	315	400	500	630	800	1000
Copper	-	250	315	400	-	630	800	1000

Zucchini busbar trunking - MR
straight lengths



Dimensions **p. 37**
Technical data **p. 29-36**

IP 55 (according to EN 60529)
Flame retardant in compliance with IEC 60332-3. Fully compliant with CEI EN 60439-1/2
Rated currents are at an average ambient temperature of 40° C (over and above the required standard of 35° C)

Busbar trunking lengths - 3m

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)

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) 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	1 000	46·8	83·7

With 5 outlets on one side

Suitable for rising mains (see p. 42)

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) 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	1 000	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)

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) 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	1 000	46·8	83·7

Busbar trunking lengths – bespoke dimensions

Please specify required length when ordering
(see p. 43 – how to measure bespoke dimensions)

1 501 to 2 999 mm lengths with 2 + 2 outlets

Tap-off outlets in fixed position on both sides

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)
1	50400151		160
1	50400152	55400152	250
1	50400153	55400153	315
1	50400154	55400154	400
1	50400158		500
1	50400155	55400155	630
1	50400156	55400156	800
1	50400157[1]	55400157	1 000

1 501 to 2 999 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)

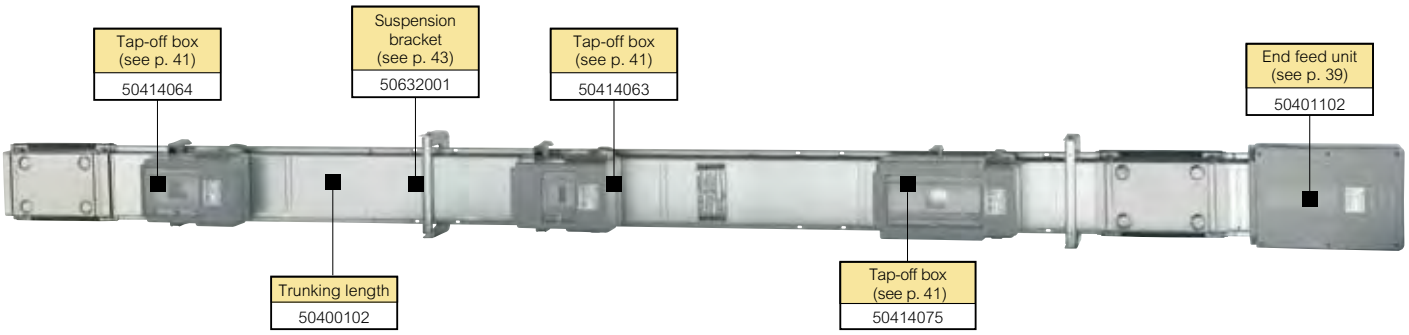
Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)
1	50400121		160
1	50400122	55400122	250
1	50400123	55400123	315
1	50400124	55400124	400
1	50400128		500
1	50400125	55400125	630
1	50400126	55400126	800
1	50400127[1]	55400127	1 000

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 1 000 A aluminium is supplied painted as standard (RAL 7035)

Bold catalogue numbers are products normally available with Legrand (India) stockists.
Cat. nos. that are not bold - delivery within 4 - 8 weeks from the date of order.

Zucchini busbar trunking - MR
straight lengths



Dimensions and technical information **p. 37**
Technical data **p. 29-36**

IP 55 (according to EN 60529)
Flame retardant in compliance with IEC 60332-3. Fully compliant with CEI EN 60439-1/2
Rated currents are at an average ambient temperature of 40° C (over and above the required standard of 35° C)

Busbar trunking lengths – bespoke dimensions (continued)

Please specify required length when ordering
(see p. 43 – 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

Pack	Cat.Nos Aluminium	Cat.Nos 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	1 000

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)

Pack	Cat.Nos Aluminium	Cat.Nos Copper	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	1 000

Busbar trunking lengths with fire barriers

With external fire barriers

Please specify the required position of the external fire barrier when ordering (see p. 37)

Pack	Cat.Nos Aluminium	Cat.Nos 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	1 000

With internal fire barriers

Please specify the required position of the internal fire barrier when ordering (see p. 37)

Pack	Cat.Nos Aluminium	Cat.Nos Copper	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	1 000

Tap-off outlet cover IP 55

Suitable for all MR versions
6 for each length
Weight : 0·10 kg

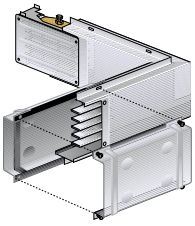
Pack	Cat.Nos
1	50403601

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

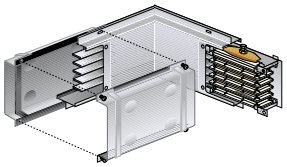
1 : The 1 000 A aluminium is supplied painted as standard (RAL 7035)

Bold catalogue numbers are products normally available with Legrand (India) stockists.
Cat. nos. that are not bold - delivery within 4 - 8 weeks from the date of order.

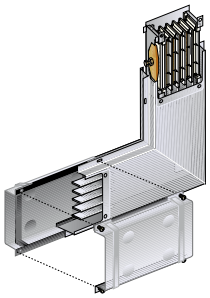
Zucchini busbar trunking - MR
single elbows



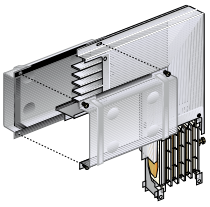
Horizontal elbow – right hand



Horizontal elbow – left hand



Vertical elbow – right hand



Vertical elbow – left hand

Dimensions **p. 38**

MR is fully compliant with CEI EN 60439-1/2
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 EN 60529)

Single elbows – standard dimensions (300 + 300 mm)

Horizontal elbow – right hand

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) 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

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) 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

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) 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

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) 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

Single elbows – bespoke dimensions

Please specify required length when ordering

Horizontal elbow – right hand

250 to 900 mm per arm

Pack	Cat.Nos Aluminium	Cat.Nos Copper	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

Pack	Cat.Nos Aluminium	Cat.Nos Copper	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

Pack	Cat.Nos Aluminium	Cat.Nos Copper	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

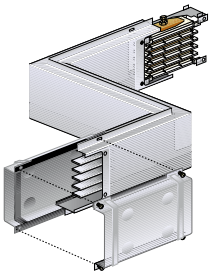
Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)
1	50400431		160
1	50400432	55400432	250
1	50400433	55400433	315
1	50400434	55400434	400
1	50400438		500
1	50400435	55400435	630
1	50400436	55400436	800
1	50400437[1]	55400437	1 000

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

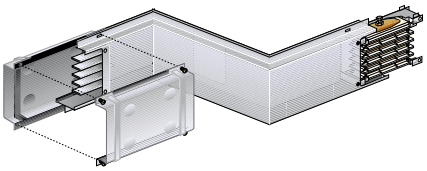
1 : The 1 000 A aluminium is supplied painted as standard (RAL 7035)

Bold catalogue numbers are products normally available with Legrand (India) stockists.
Cat. nos. that are not bold - delivery within 4 - 8 weeks from the date of order.

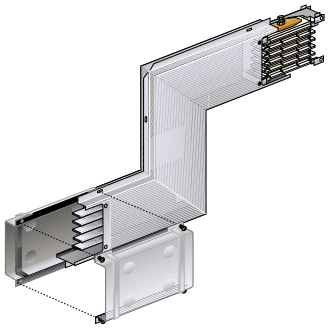
Zucchini busbar trunking - MR
double elbows



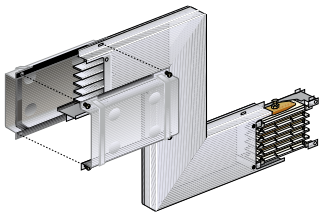
Horizontal elbow – right + left hand



Horizontal elbow – left + right hand



Vertical elbow – right + left hand



Vertical elbow – left + right hand

Dimensions **p. 38**

MR is fully compliant with CEI EN 60439-1/2
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 EN 60529)

Double elbows – standard dimensions (300 + 300 + 300 mm)

Horizontal elbow – right + left hand

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) 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	1 000	21·80	34·55

Horizontal elbow – left + right hand

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) 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	1 000	21·80	34·55

Vertical elbow – right + left hand

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) 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	1 000	21·80	34·55

Vertical elbow – left + right hand

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) 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	1 000	21·80	34·55

Double elbows – bespoke dimensions

Please specify required length when ordering

Horizontal elbow – right + left hand

250 to 900 mm per arm

Pack	Cat.Nos Aluminium	Cat.Nos Copper	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	1 000

Horizontal elbow – left + right hand

250 to 900 mm per arm

Pack	Cat.Nos Aluminium	Cat.Nos Copper	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	1 000

Vertical elbow – right + left hand

300 to 900 mm per arm

Pack	Cat.Nos Aluminium	Cat.Nos Copper	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	1 000

Vertical elbow – left + right hand

300 to 900 mm per arm

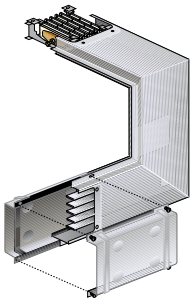
Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)
1	50400471		160
1	50400472	55400472	250
1	50400473	55400473	315
1	50400474	55400474	400
1	50400478		500
1	50400475	55400475	630
1	50400476	55400476	800
1	50400477[1]	55400477	1 000

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

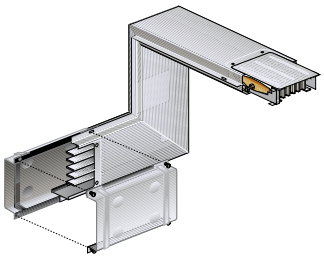
1 : The 1 000 A aluminium is supplied painted as standard (RAL 7035)

Bold catalogue numbers are products normally available with Legrand (India) stockists.
Cat. nos. that are not bold - delivery within 4 - 8 weeks from the date of order.

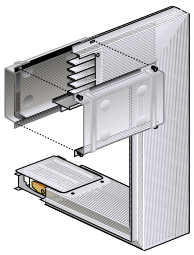
Zucchini busbar trunking - MR
combination vertical + horizontal elbows



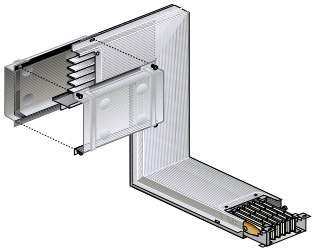
Combination vertical + horizontal elbow right + right hand



Combination vertical + horizontal elbow right + left hand



Combination vertical + horizontal elbow left + right hand



Combination vertical + horizontal elbow left + left hand

Dimensions **p. 38**

MR is fully compliant with CEI EN 60439-1/2
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 EN 60529)

Combination vertical + horizontal elbows – standard dimensions (300 + 300 + 300 mm)

Right hand + right hand

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) 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	1 000	21·80	34·55

Right hand + left hand

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) 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	1 000	21·80	34·55

Left hand + right hand

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) 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	1 000	21·80	34·55

Left hand + left hand

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) 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	1 000	21·80	34·55

Combination vertical + horizontal elbows – bespoke dimensions

Please specify required length when ordering

Right hand + right hand
300 to 900 mm per arm

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)
1	50400541		160
1	50400542	55400542	250
1	50400543	55400543	315
1	50400544	55400544	400
1	50400548		500
1	50400545	55400545	630
1	50400546	55400546	800
1	50400547[1]	55400547	1 000

Right hand + left hand
300 to 900 mm per arm

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)
1	50400551		160
1	50400552	55400552	250
1	50400553	55400553	315
1	50400554	55400554	400
1	50400558		500
1	50400555	55400555	630
1	50400556	55400556	800
1	50400557[1]	55400557	1 000

Left hand + right hand
300 to 900 mm per arm

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)
1	50400561		160
1	50400562	55400562	250
1	50400563	55400563	315
1	50400564	55400564	400
1	50400568		500
1	50400565	55400565	630
1	50400566	55400566	800
1	50400567[1]	55400567	1 000

Left hand + left hand
300 to 900 mm per arm

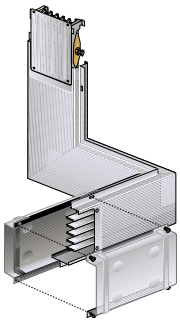
Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)
1	50400571		160
1	50400572	55400572	250
1	50400573	55400573	315
1	50400574	55400574	400
1	50400578		500
1	50400575	55400575	630
1	50400576	55400576	800
1	50400577[1]	55400577	1 000

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

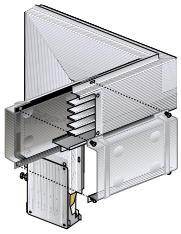
1 : The 1 000 A aluminium is supplied painted as standard (RAL 7035)

Bold catalogue numbers are products normally available with Legrand (India) stockists.
Cat. nos. that are not bold - delivery within 4 - 8 weeks from the date of order.

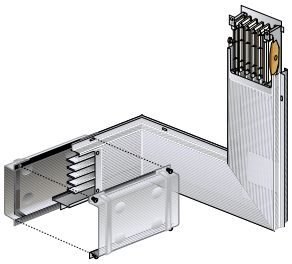
Zucchini busbar trunking - MR
combination horizontal + vertical elbows (continued)



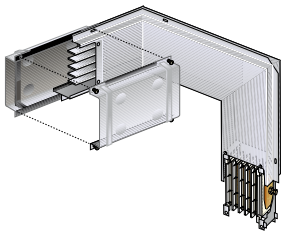
Combination horizontal + vertical elbows right + right hand



Combination horizontal + vertical elbows right + left hand



Combination horizontal + vertical elbows left + right hand



Combination horizontal + vertical elbows left + left hand

Dimensions **p. 38**

MR is fully compliant with CEI EN 60439-1/2
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 EN 60529)

Combination horizontal + vertical elbows – standard dimensions (300 + 300 + 300 mm)

Right hand + right hand

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) 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	1 000	21·80	34·55

Right hand + left hand

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) 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	1 000	21·80	34·55

Left hand + right hand

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) 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	1 000	21·80	34·55

Left hand + left hand

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) 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	1 000	21·80	34·55

Combination horizontal + vertical elbows – bespoke dimensions

Please specify required length when ordering

Right hand + right hand
300 to 900 mm per arm

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)
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	1 000

Right hand + left hand
300 to 900 mm per arm

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)
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	1 000

Left hand + right hand
300 to 900 mm per arm

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)
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	1 000

Left hand + left hand
300 to 900 mm per arm

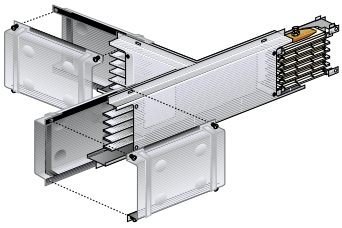
Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)
1	50400671		160
1	50400672	55400672	250
1	50400673	55400673	315
1	50400674	55400674	400
1	50400678		500
1	50400675	55400675	630
1	50400676	55400676	800
1	50400677[1]	55400677	1 000

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

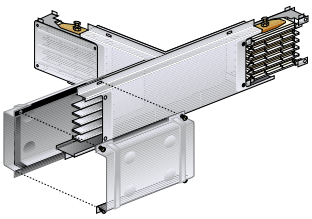
1 : The 1 000 A aluminium is supplied painted as standard (RAL 7035)

Bold catalogue numbers are products normally available with Legrand (India) stockists.
Cat. nos. that are not bold - delivery within 4 - 8 weeks from the date of order.

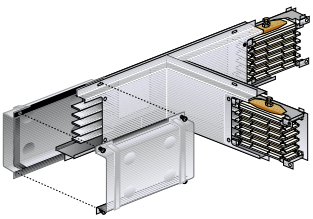
Zucchini busbar trunking - MR
horizontal tees



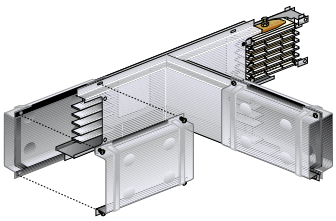
Horizontal tee
right hand – female



Horizontal tee
right hand – male



Horizontal tee
left hand – female



Horizontal tee
left hand – male

Dimensions **p. 39**

MR is fully compliant with CEI EN 60439-1/2
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 EN 60529)

Horizontal tees – standard dimension (300 + 300 + 300 mm)

Right hand – female

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) 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	1 000	21·0	31·3

Right hand – male

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) 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	1 000	21·0	31·3

Left hand – female

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) 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	1 000	21·0	31·3

Left hand – male

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) 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	1 000	21·0	31·3

Horizontal tees – bespoke dimensions

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

Right hand – female

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)
1	50400741		160
1	50400742	55400742	250
1	50400743	55400743	315
1	50400744	55400744	400
1	50400748		500
1	50400745	55400745	630
1	50400746	55400746	800
1	50400747[1]	55400747	1 000

Right hand – male

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)
1	50400751		160
1	50400752	55400752	250
1	50400753	55400753	315
1	50400754	55400754	400
1	50400758		500
1	50400755	55400755	630
1	50400756	55400756	800
1	50400757[1]	55400757	1 000

Left hand – female

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)
1	50400761		160
1	50400762	55400762	250
1	50400763	55400763	315
1	50400764	55400764	400
1	50400768		500
1	50400765	55400765	630
1	50400766	55400766	800
1	50400767[1]	55400767	1 000

Left hand – male

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)
1	50400771		160
1	50400772	55400772	250
1	50400773	55400773	315
1	50400774	55400774	400
1	50400778		500
1	50400775	55400775	630
1	50400776	55400776	800
1	50400777[1]	55400777	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
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1 = 5 conductors. Galvanised 3 = 5 conductors. Painted
Replace 0 with 1, 2, or 3 if required

1 : The 1 000 A aluminium is supplied painted as standard (RAL 7035)

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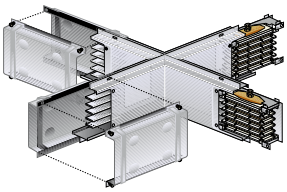
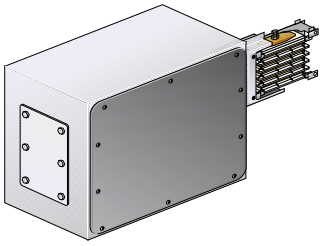
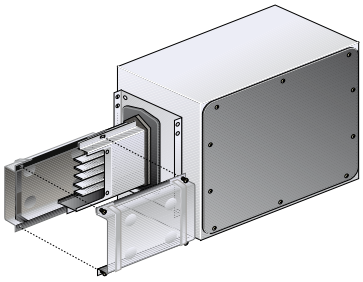
Cat. nos. that are not bold - delivery within 4 - 8 weeks from the date of order.

Zucchini busbar trunking - MR
cross element and feed units


Crossover


Feed unit
left end


Feed unit
right end

End stop

Dimensions **p. 39**

MR is fully compliant with CEI EN 60439-1/2
Rated currents are at an average ambient temperature of 40° C (over and above the required standard of 35° C)
IP 55 (according to EN 60529)

Cross element - standard dimension (300 + 300 + 300 + 300 mm)

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) 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	1 000	29·9	43·7

Feed units

Metal end feed units

For plates and hole dimensions refer to switchboard-transformer feed units with same rating (p. 38)

Left end

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) 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[1]	55401137	1 000	24·00	29·03

Right end

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) 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[1]	55401127	1 000	20·20	24·83

1 : The 1 000 A aluminium is supplied painted as standard (RAL 7035)

Feed units (continued)

Plastic end feed units

Terminals accept cables up to 150 mm². For higher ratings attach cable lugs to spreaders provided

Left end

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) Copper
1	50401111		160	6·80	–
1	50401112	55401112	250	6·85	7·20

Right end

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) Copper
1	50401101		160	5·70	–
1	50401102	55401102	250	5·85	6·10

End cover

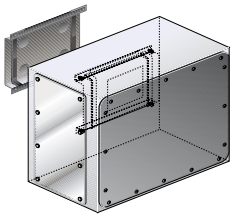
Ensure IP 55 protection at the end of the run
For right and left feed units

Pack	Cat.Nos	
1	50403101	160-250-315 A - for aluminium 250-315-400 A - for copper
1	50403102	400-630-1 000 A - for aluminium 630-800-1 000 A - for copper

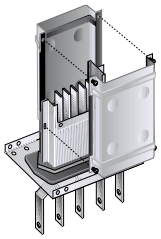
Key : How to select the correct configuration and finish
All examples on this page show 4 conductor galvanised lengths
No. of conductors and finish is dictated by the red number
0 = 4 conductors. Galvanised 2 = 4 conductors. Painted
1 = 5 conductors. Galvanised 3 = 5 conductors. Painted
Replace 0 with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

Bold catalogue numbers are products normally available with Legrand (India) stockists.
Cat. nos. that are not bold - delivery within 4 - 8 weeks from the date of order.

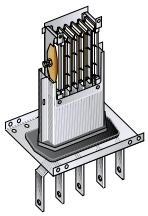
Zucchini busbar trunking - MR
feed units (continued)



Centre feed unit



Switchboard-transformer feed units right hand



Switchboard-transformer feed units left hand

Dimensions **p. 39**

MR is fully compliant with CEI EN 60439-1/2
Rated currents are at an average ambient temperature of 40° C (over and above the required standard of 35° C)
IP 55 (according to EN 60529)

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

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) 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[1]	55401207	1 000	25·70	29·95

Feed units (continued)

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

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) 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[1]	55401007	1 000	8·3	12·9

Left hand

Pack	Cat.Nos Aluminium	Cat.Nos Copper	Rating (A)	Weight (kg) Aluminium	Weight (kg) 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[1]	55401017	1 000	12·5	17·1

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 1 000 A aluminium is supplied painted as standard (RAL 7035)

Bold catalogue numbers are products normally available with Legrand (India) stockists.
Cat. nos. that are not bold - delivery within 4 - 8 weeks from the date of order.

Zucchini busbar trunking - MR

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

32 A plug-in tap-offs – Empty

Energy withstand 400 · 10^3 A^2s

Type 1 – Max. power losses 16 W					Type 2 – Max. power losses 20 W	
	With 8 mod. DIN rail	Complete with 3 x CH10 fuse holders	Transparent hinged door and 4 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	50414061	50414062	50414063	50414064	50414071	50414075
Weight (kg)	1·6	1·75	1·7	1·7	1·9	2·05

Plug-in tap offs for with MCB & Sockets

Energy withstand 400 · 10^3 A^2s

Type 1 – Max. power losses 16 W		Rating		3 x 1P	3 x (1P + N)	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	–
	Transparent hinged door and 4 mod. DIN rail. Plus 3 x 16 A Schuko sockets	16 A	**Cat.Nos**	50414122	50414121	–	50414221
			Weight (kg)	2.13	2.10	–	1.83
	Transparent hinged door and 8 mod. DIN rail. Plus 3 x 16 A Schuko sockets	16 A	**Cat.Nos**	–	–	–	50414251
			Weight (kg)	–	–	–	1.94
Type 2 – Max. power losses 20 W							
	Transparent hinged door and 8 mod. DIN rail. Plus 1 x 16 A 3P socket	16 A	**Cat.Nos**	–	–	50414187	–
			Weight (kg)	–	–	2·92	–
	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 socket	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 socket	32 A	**Cat.Nos**	–	–	–	50414291
			Weight (kg)	–	–	–	2·59
	Transparent hinged door and 8 mod. DIN rail. Plus 3 x 16 A 2P + E sockets	16 A	**Cat.Nos**	50414181	–	–	50414281
			Weight (kg)	3·05	–	–	2·55

For dimensions, technical information and mounting instructions **see p. 41-42**

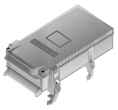
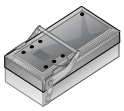
Bold catalogue numbers are products normally available with Legrand (India) stockists.
Cat. nos. that are not bold - delivery within 4 - 8 weeks from the date of order.

Zucchini busbar trunking - MR

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

MR tap-off boxes from 16 to 1 000 A can accomodate 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.

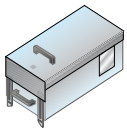
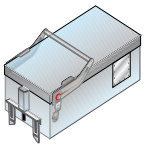
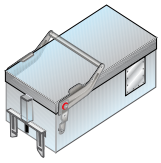
Plug-in tap-offs with fuse carriers (or empty) 63-400 A

	TYPE 3	TYPE 4						TYPE 5		
										
Rating	32 A	63 A	100 A	125 A			160 A	250 A	400 A (Neutral section 50%)	
Fuse Carrier	CH10 (Ø10·3 x 38)	TIA / TIS	TCP	Empty	NH 0	NH 00	NH 0	NH 1	Empty	NH 1
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**	55055066	–	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 disconnector 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. 41-42**

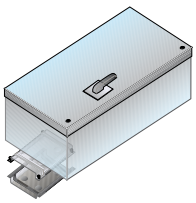
Bold catalogue numbers are products normally available with Legrand (India) stockists.
Cat. nos. that are not bold - delivery within 4 - 8 weeks from the date of order.

Zucchini busbar trunking - MR

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

Bolt-on type

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

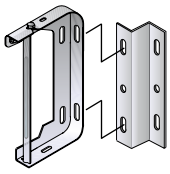


Positioned in the joint between straight lengths
As this connection affects live conductors, it cannot be carried out when the line is live – the line must be isolated

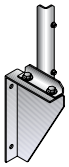
		Busbar rating		Tap-off size		
				630 A – NH 3 TYPE 9	800 A – NH 4 TYPE 10	1 000 A – NH 4 TYPE 10
Busbar system	Aluminium	630 A	Cat.Nos	50401801	–	–
			Weight (kg)	59	–	–
		800 A	Cat.Nos	50401802	50401804	–
			Weight (kg)	59	89	–
		1 000 A	Cat.Nos	50401803	50401805	50401806
			Weight (kg)	59	89	89
	Copper	630 A	Cat.Nos	55401801	–	–
			Weight (kg)	59	–	–
		800 A	Cat.Nos	55401802	55401804	–
			Weight (kg)	59	89	–
		1 000 A	Cat.Nos	55401803	55401805	55401806
			Weight (kg)	59	89	89

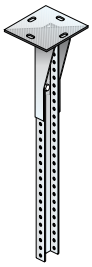
For dimensions, technical information and mounting instructions **see p. 41-42**

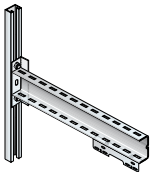
Zucchini busbar trunking - MR
fixing accessories

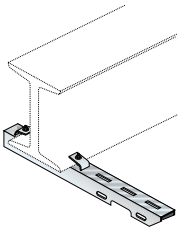

50632001 + 50632205

50403712


50403711


50632201 + 50632202


50632212


50632210 + 50632211

Dimensions **p. 43**

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
		Suspension brackets
		Use 1 bracket every 2 m
1	50632001	Weight : 0·55 kg For use with aluminium rated 160, 250, 315 A and copper rated 250, 315, 400 A
1	50632003	Weight : 0·60 kg For use with aluminium rated 400, 500, 630, 800 A and copper rated 630, 800, 1 000 A
		Wall spacer
		Used when suspension bracket is fixed directly to the wall
1	50632205	Weight : 0·05 kg
		Suspension hanger for rising main
		For vertical trunking lengths. Suitable for rising mains up to 4 m and for weights up to 300 kg Must be used in conjunction with Cat.Nos 50632001 or 50632003 1 bracket at the base of the rising main Maximum use distance 4 m
1	50403711	Weight : 1·05 kg
		Spring suspension hanger for rising main
		For weight refer technical data p. 31-34 Minimum use distance 4 m
1	50403712	Weight : 1·20 kg

Pack	Cat.Nos	Fixing accessories for other applications
		Wall fixing bracket
		Adjustable height and depth arm. Bracket holder can be coupled with MS and MR brackets

Pack	Cat.Nos	Length (m)	Weight (kg)	Load on end point
1	50632212	0·45	2·80	pmax=80 kg
1	50632213	0·55	3·00	pmax=68 kg
1	50632214	0·75	3·50	pmax=50 kg

Ceiling fixing bracket kit

Comprises a base to be fixed to the ceiling and various length struts that accept MR brackets

Base

Pack	Cat.Nos	Length (m)	Weight (kg)
1	50632201	–	2·80

Strut

Pack	Cat.Nos	Length (m)	Weight (kg)
1	50632202	0·50	3·00
1	50632203	1·00	3·50
1	50632204	2·00	3·50

Beam fixing bracket

Comprises a beam shelf base and two beam clamps

Beam shelf base

Pack	Cat.Nos	Length (m)	Weight (kg)	Load on end point
1	50632210	0·54	0·90	pmax=65 kg
1	50632211	Beam clamp		

Zucchini busbar trunking - MR

Technical data

General features

- MR (Medium Rating) is part of the Zucchini range used for the distribution of power in medium – large installations; it is also particularly suitable in rising main applications (trunking systems) within buildings used for the service sector (banks, insurance, commercial headquarters, etc.). The MR range is available in sizes ranging from 160A to 1000A with conductors made from an aluminium alloy and from 250A to 1000A with copper conductors.
- MR has a wide range of tap-off boxes which are rated from 16A to 1000A, thus allowing the supply and protection of all kinds of loads using different protection devices such as fuses, miniature circuit breakers and/or moulded case circuit breakers.
- Zucchini MR can be installed quickly.
- It is easy to manage and suitable for modifications and extensions, which is always necessary for installations were MR is used.
- MR, as all Zucchini products, is fully compliant with the CEI EN 60439-1 / 2 Harmonised Standards; specifically, the rated current of the 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.

Straight lengths

Used for distributing power and for supplying medium powered loads.

MR straight lengths include the following components:

- casing made from two "omega-shaped", ribbed, sealed section cases (75-135x196 mm, thickness 0.8 mm), made of hot-galvanised steel (Senzimir) which also serves as a protective conductor due to its cross-section and electrical continuity; if required, the line can be provided with a special earthing conductor whose section and material can be the same as the phases (MR full) and/or with a hot galvanised casing. As a special case, painted casing (RAL mentioned by customer) is available.
- 4 conductors with the same section 3L+N with PE made from the casing (5 conductors in case of MRfull: 3L+N+PE).

  The conductors are made from an aluminum alloy, copper plated with a final coat of tin. Alternatively, the MR range is available with copper conductors with purity no less than 99.9% (electrolytic copper).

  The conductors are spaced with plastic insulators reinforced with 20% glass fibre; They have a V1 self-extinguishing degree (as per UL94) and are in compliance with the incandescent wire test as per EN 60695-2-1 (CEI 50.11). The electrical insulation between the conductors and the casing is ensured by air distances maintained by the insulators.
- The outlets are normally closed but open automatically by inserting a tap-of box and reclose when the tap-off is unplugged.
- an electrical junction "monobloc" system for fast and reliable connection of the live conductors and PE.

The monobloc is made with aluminium plates for aluminium busbar & copper plates for copper busbar. Aluminium versions are tin coated.

The "monobloc" has a shearhead bolt: use a 13mm-wrench to tighten the external head until the collar which connects the two heads breaks; this will ensure the correct nominal torque to guarantee optimum electrical continuity over time. The protective conductor (PE=casing) is also connected through the monobloc.

In order to simplify storage and speed up the installation of the line, straight lengths, trunking components and all components of the MR line are already provided with a monobloc pre-installed at the factory at one end and with IP covers fitted at the other end.

To ensure proper IP, fixing of joint cover plates can be done only after breaking the dynamometric monobloc bolt, thus ensuring complete electrical connectivity.

The IP covers are provided with anti-aging gaskets which guarantee an IP55 degree of protection.

All components and accessories of the MR range are IP55 as standard; therefore, the degree of protection of the line.

The whole busbar is "fire retardant" in compliance with standard EN 60332-3.

End feed units

These enable the MR range to be supplied by cable or directly connected to an electrical distribution panel; the assembly of the line is carried out with a quick monobloc connection as with the straight lengths.

The 160 and 250A end feed units have terminals to accept cables up to 150 mm^2; for higher ratings, the cable connection to the end feed units requires terminals which need extensions (11 mm hole).

The cable entry is generally located at the base of the end feed unit, in which there is a removable plate; it is also possible to insert the cables from side plates.

The MR range also has centre feed units and switched end feed boxes; the latter allows disconnection of the whole line to carry out maintenance operations or modifications to the installation.

End covers

End covers ensure the IP55 degree of protection at the end of the run.

Hangers

In order to fix the run to the structure of the building, directly or with a wall, ceiling or beam bracket, it is necessary to use a bracket which serves as a busbar collar.

The bracket has holes for use with the support brackets.

Trunking components and additional elements

Depending on the different installation requirements, Zucchini is able to offer different technical solutions:

a) 90° angles: available for changing routes both horizontally and vertically.
   They have the same quick joint connection as the straight lengths.
   The protection degree is IP55.
b) T, X and double angle Z elements. The degree of protection is IP55.
c) Straight lengths with fire barrier (internal+external) S120.
   These elements are used when REI120 fire-resistant walls need to be passed through. The elements 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. S120 means that the barrier is certified for 120' (minutes).
d) Straight lengths with 5 outlets on one side are ideal for achieving rising mains or sections with high density of tap-off points.
e) Straight lengths without outlets are available for feeder only applications.

The MR range has more advantages when used in vertical applications (rising mains) because thrust units or thermal expansion units are not required.

The monobloc joint used on the MR range allows for the thermal expansions of the conductors.

Tap-off boxes

Used for supplying three-phase loads from 32A up to 1000A; they can be divided into two main categories:

1) Plug-in-type tap-off boxes (from 32A up to 630A): they can be operated when energized and when under load conditions up to a rating of 32A; for ratings from 63A to 630A, the boxes are equipped with an isolating device integral with the cover. When the tap-off box is installed on the busbar, the opening of the cover electrically disconnects its internal parts, no accessible metallic part is live when the cover is open.
   Tap-off boxes have an interlock with a cover and can be inserted and removed from the outlet only when the cover is in the "open" position, that is in the "isolated" position.
   The cover of the box can be locked in the open-isolated position to allow safe maintenance of the loads connected to it.
   All Zucchini plug-in type boxes have a PE contact (protective conductor), which is the first to make an electrical connection when plugged into the outlet, and the last to disconnect when the tap-off is unplugged; All insulating plastic components comply with the incandescent wire test (EN 60695-2-1) and have a V2 self-extinguishing degree (UL94); the standard degree of protection is IP55 without using additional IP protection kits; Plug-in type boxes are available in the following versions: with fuseholder, with miniature circuit breakers, with CEE sockets, schuko, with switchfuse or with moulded case circuit breakers.
2) Boxes bolted on the junction (from 630A to 1000A): these high rated current boxes are rigidly connected to the busbar with a special "monobloc" connection system similar to that of the straight lengths but this also allows for the power to be tapped-off.
   The boxes can only be installed and removed when the system is de-energized (isolated busbar).
   When the monobloc system is used, installation is extremely easy, quick and reliable. These tap-off boxes are available in the switchfuse and fuseholder version and with moulded case circuit breakers.

Technical data

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**

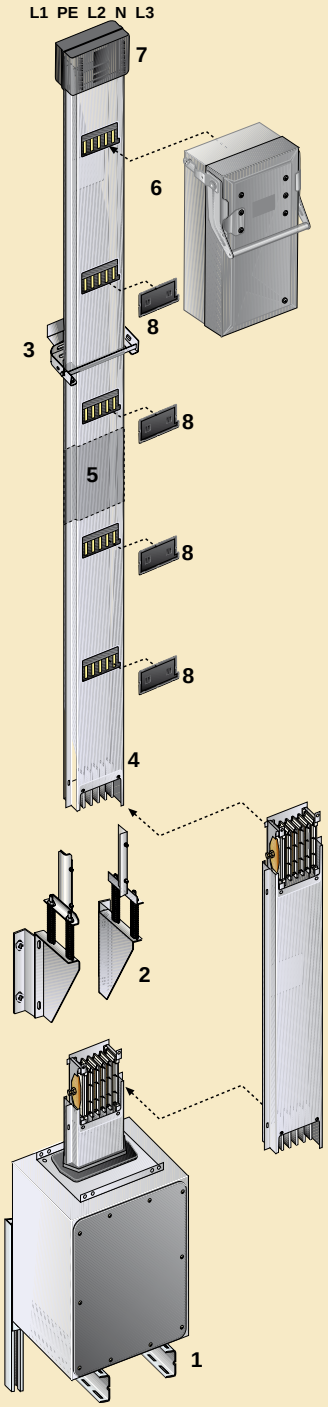
4 **Use straight lengths with plug outlets on one side**

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. 37)

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**



Zucchini busbar trunking - MR

■ Technical data

Complies to :
IEC 439-1 and 2, EN 60439 part 1 and 2,
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)

Rated current	In (A)	**160**	**250**	**315**	**400**	**500**	**630**	**800**	**1 000**
Operational voltage	Ue (V)	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000
Insulation voltage	Ui (V)	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
Rated shortcircuit current withstand for 3-phase fault (1 s)	I_{cw} (kA)$_{rms}$	15[1]	25[1]	25[1]	25	30	36	36	36
Specific Energy withstand for 3-phase fault	I^2t (M A^2s)	23	63	63	625	900	1 296	1 296	1 296
Peak current	I_{pk} (kA)	30	53	53	53	63	76	76	76
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	22
Peak current for single-phase fault Ph-N	I_{pk} (kA)	15	30	30	30	36	45	45	45
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	Rn_{20} (mΩ/m)	0·492	0·328	0·197	0·120	0·077	0·060	0·052	0·039
Neutral reactance (50 Hz)	Xn (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)	0·341	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	$R_{Ph\text{-}Pe\ fault\ loop}$ (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)	$XR_{Ph\text{-}Pe\ fault\ loop}$ (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	$R_{Ph\text{-}N\ fault\ loop}$ (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)	$XR_{Ph\text{-}N\ fault\ loop}$ (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} cosφ = 0·70	564	394	276	179	131	109	102	90
	Δv (V/m/A)10^{-6} cosφ = 0·75	581	404	279	180	130	108	100	88
	Δv (V/m/A)10^{-6} cosφ = 0·80	596	412	281	180	129	107	98	85
	Δv (V/m/A)10^{-6} cosφ = 0·85	608	418	281	179	127	104	95	82
	Δv (V/m/A)10^{-6} cosφ = 0·90	616	422	277	176	122	100	91	77
	Δv (V/m/A)10^{-6} cosφ = 0·95	617	419	269	169	115	93	83	69
	Δv (V/m/A)10^{-6} cosφ = 0·00	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	p (kg/m)	7·4	7·7	8·4	10·7	12·3	13·8	14·7	15·9
Overall dimensions of the busbar	L x H (mm)	76 x 195	76 x 195	76 x 195	136 x 195	136 x 195	136 x 195	136 x 195	136 x 195
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

Zucchini busbar trunking - MR

■ Technical data

Complies to :
IEC 439-1 and 2, EN 60439 part 1 and 2,
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)

Rated current	In (A)	**250**	**315**	**400**	**630**	**800**	**1 000**
Operational voltage	Ue (V)	1 000	1 000	1 000	1 000	1 000	1 000
Insulation voltage	Ui (V)	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
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^2t (M A^2s)	63	63	90	1 296	1 296	1 296
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	Rn_{20} (mΩ/m)	0·237	0·180	0·096	0·061	0·040	0·032
Neutral reactance (50 Hz)	Xn (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	$R_{Ph\text{-}Pe\ fault\ loop}$ (mΩ/m)	0·657	0·579	0·466	0·361	0·332	0·322
Reactance of the phase-Pe fault loop (50 Hz)	$XR_{Ph\text{-}Pe\ fault\ loop}$ (mΩ/m)	0·425	0·408	0·349	0·302	0·302	0·300
Resistance of the phase-neutral fault loop	$R_{Ph\text{-}N\ fault\ loop}$ (mΩ/m)	0·558	0·423	0·225	0·143	0·093	0·074
Reactance of the phase-neutral fault loop (50 Hz)	$XR_{Ph\text{-}N\ fault\ loop}$ (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 = 0·00	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	p (kg/m)	9·3	10·2	13·3	18·2	23·9	27·9
Overall dimensions of the busbar	L x H (mm)	76 x 195	76 x 195	76 x 195	136 x 195	136 x 195	136 x 195
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

Zucchini busbar trunking - MR

■ Technical data

Complies to :
IEC 439-1 and 2, EN 60439 part 1 and 2,
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)

Rated current	In (A)	**160**	**250**	**315**	**400**	**500**	**630**	**800**	**1 000**
Operational voltage	Ue (V)	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000
Insulation voltage	Ui (V)	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
Rated shortcircuit current withstand for 3-phase fault (1 s)	I_{cw} (kA)$_{rms}$	15[1]	25[1]	25[1]	25	30	36	36	36
Specific Energy withstand for 3-phase fault	I^2t (M A^2s)	23	63	63	625	900	1 296	1 296	1 296
Peak current	I_{pk} (kA)	30	53	53	53	63	76	76	76
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	22
Peak current for single-phase fault Ph-N	I_{pk} (kA)	15	30	30	30	36	45	45	45
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)	$R_\dagger$ (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	Rn_{20} (mΩ/m)	0·492	0·328	0·197	0·120	0·077	0·060	0·052	0·039
Neutral reactance (50 Hz)	Xn (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	$R_{Ph\text{-}Pe\ fault\ loop}$ (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)	$XR_{Ph\text{-}Pe\ fault\ loop}$ (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	$R_{Ph\text{-}N\ fault\ loop}$ (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)	$XR_{Ph\text{-}N\ fault\ loop}$ (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} cosφ = 0·70	564	394	276	179	131	109	102	90
	Δv (V/m/A)10^{-6} cosφ = 0·75	581	404	279	180	130	108	100	88
	Δv (V/m/A)10^{-6} cosφ = 0·80	596	412	281	180	129	107	98	85
	Δv (V/m/A)10^{-6} cosφ = 0·85	608	418	281	179	127	104	95	82
	Δv (V/m/A)10^{-6} cosφ = 0·90	616	422	277	176	122	100	91	77
	Δv (V/m/A)10^{-6} cosφ = 0·95	617	419	269	169	115	93	83	69
	Δv (V/m/A)10^{-6} cosφ = 0·00	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	p (kg/m)	7·6	8·0	8·9	11·4	13·5	15·2	16·4	17·9
Overall dimensions of the busbar	L x H (mm)	76 x 195	76 x 195	76 x 195	136 x 195	136 x 195	136 x 195	136 x 195	136 x 195
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

Zucchini busbar trunking - MR

■ Technical data

Complies to :
IEC 439-1 and 2, EN 60439 part 1 and 2,
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)

Rated current	In (A)	**250**	**315**	**400**	**630**	**800**	**1 000**
Operational voltage	Ue (V)	1 000	1 000	1 000	1 000	1 000	1 000
Insulation voltage	Ui (V)	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
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^2t (M A^2s)	63	63	90	1 296	1 296	1 296
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	Rn_{20} (mΩ/m)	0·237	0·180	0·096	0·061	0·040	0·032
Neutral reactance (50 Hz)	Xn (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	$R_{Ph\text{-}Pe\ fault\ loop}$ (mΩ/m)	0·460	0·360	0·204	0·132	0·088	0·071
Reactance of the phase-Pe fault loop (50 Hz)	$XR_{Ph\text{-}Pe\ fault\ loop}$ (mΩ/m)	0·311	0·289	0·210	0·195	0·195	0·192
Resistance of the phase-neutral fault loop	$R_{Ph\text{-}N\ fault\ loop}$ (mΩ/m)	0·558	0·423	0·225	0·143	0·093	0·074
Reactance of the phase-neutral fault loop (50 Hz)	$XR_{Ph\text{-}N\ fault\ loop}$ (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 = 0·00	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	p (kg/m)	10·0	11·1	14·9	20·8	27·9	32·9
Overall dimensions of the busbar	L x H (mm)	76 x 195	76 x 195	76 x 195	136 x 195	136 x 195	136 x 195
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

Zucchini busbar trunking - MR

■ Coordination table

with Legrand DPX³/DPX MCCBs

MS, MR switches-busbar coordination table

Contingent short circuit kA eff. (50/60 Hz - 380/415 V)

DPX/DPX³ Legrand				MS	MS	MS MR	MR	MR	MR	MR	MR	MR	MR
				63A	100A	160A	250A	315A	400A	500A	630A	800A	1000A
DPX³ 160	Icu	16kA	63A	16	16								
DPX³ 160	Icu	25kA	63A	25	25								
DPX³ 160	Icu	36kA	63A	36	36								
DPX³ 160	Icu	50kA	63A	50	50								
DPX³ 160	Icu	16kA	80A		16								
DPX³ 160	Icu	25kA	80A		25								
DPX³ 160	Icu	36kA	80A		36								
DPX³ 160	Icu	50kA	80A		50								
DPX³ 160	Icu	16kA	100A		16								
DPX³ 160 / 250	Icu	25kA	100A		25		25						
DPX³ 160 / 250	Icu	36kA	100A		36		36						
DPX³ 160 / 250	Icu	50kA	100A		50		50						
DPX³ 160	Icu	16kA	125A			16							
DPX³ 160	Icu	25kA	125A			25							
DPX³ 160	Icu	36kA	125A			36							
DPX³ 160	Icu	50kA	125A			50							
DPX³ 160	Icu	16kA	160A			16							
DPX³ 160 / 250	Icu	25kA	160A			25	25						
DPX³ 160 / 250	Icu	36kA	160A			36	36						
DPX³ 160 / 250	Icu	50kA	160A			50	50						
DPX³ 250	Icu	25kA	200A				25						
DPX³ 250	Icu	36kA	200A				36						
DPX³ 250	Icu	50kA	200A				50						
DPX³ 250	Icu	70kA	200A				70						
DPX³ 250	Icu	25kA	250A				25						
DPX³ 250	Icu	36kA	250A				36						
DPX³ 250	Icu	50kA	250A				50						
DPX³ 250	Icu	70kA	250A				70						
DPX 630	Icu	36kA	400A					36	36				
DPX 630	Icu	70kA	400A					70	70				
DPX 630	Icu	100kA	400A			100	100	100	100				
DPX 630	Icu	36kA	630A							36	36		
DPX 630	Icu	70kA	630A							70	70		
DPX 630	Icu	100kA	630A				100	100	100	100	100		
DPX 1250	Icu	50kA	800A									50	
DPX 1250	Icu	70kA	800A									70	
DPX 1250	Icu	100kA	800A									100	
DPX 1250	Icu	50kA	1000A										50
DPX 1250	Icu	70kA	1000A										70
DPX 1250	Icu	100kA	1000A										100

Note for Lexic MCBs:

The Zucchini Busbar Trunking Systems, specified herein, are protected by Lexic MCBs up to their breaking capacity

Zucchini busbar trunking - MR

determining the operating current of a busbar

■ Technical data

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 cosφ 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 :

$$I_b = \frac{PTOT \cdot \alpha \cdot \beta \cdot d}{\sqrt{3} \cdot Ue \cdot \cos\varphi_{medium}} (A)$$

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)
Ue	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 ½ 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 k1 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, 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 :

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

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

Voltage drop

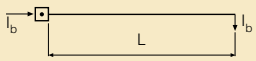
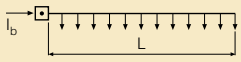
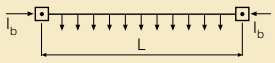
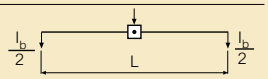
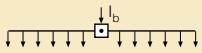
If the length of the line is particularly long (>100m) it is necessary to check the voltage drop (hereinafter specified as v.d.). If the installation is a three phase system and the power factor is not lower than cosϕ = 0.7 the v.d. may be calculated with the coefficients of the voltage drop specified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

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

Defined :

I_b	= the current that supplies the busbar (A)
Vn	= 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. 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 = 2	Supplies at one end and load at the end of the line	
b = 1	Supplies at one end and with load evenly distributed	
b = 0·5	Supplies at both ends and with load evenly distributed	
b = 0·5	Central supply with loads at both ends	
b = 0·25	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. 31-34
Cosφ	= 0·85
L	= 30 m line length
Vn	= 400 V operating voltage

$$\Delta v\% = 1 \times \frac{179 \cdot 10^{-6} \cdot 315 \cdot 30}{400} \times 100 = 0{\cdot}42\%$$

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

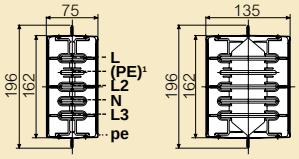
$P = 2 \cdot R_t \cdot I_b^2 \cdot 10^{-3}$(W/m)

Zucchini busbar trunking - MR

Busbar trunking length

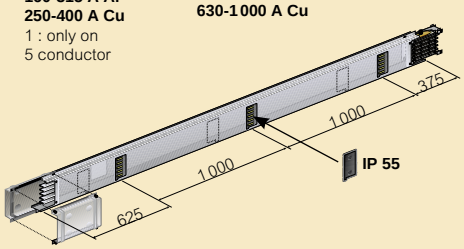
■ Dimension

Busbar trunking lengths – 3 m

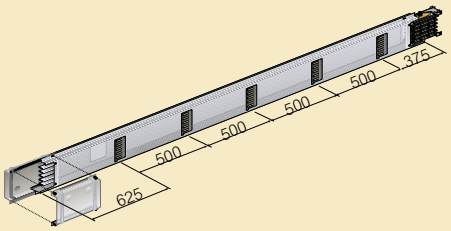


160-315 A Al
250-400 A Cu
1 : only on
5 conductor

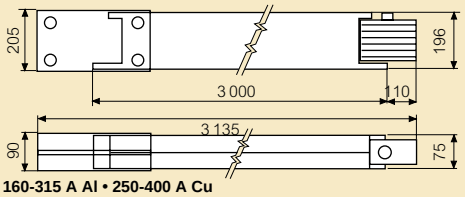
400-1 000 A Al
630-1 000 A Cu



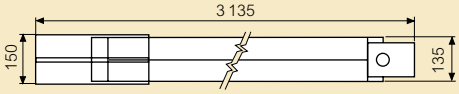
Busbar trunking lengths – 3 m with 5 outlets on one side only



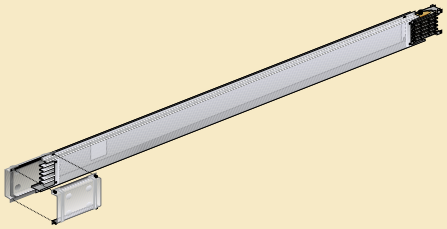
Busbar trunking length – 3 m without outlets



160-315 A Al • 250-400 A Cu

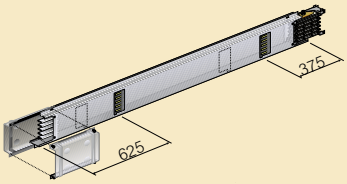


400-1 000 A Al • 630-1 000 A Cu

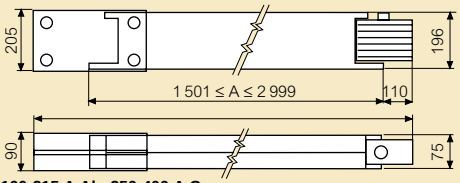


Tap-off outlet cover – IP 55

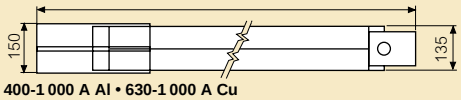
Busbar trunking lengths – 1 501 to 2 999 mm with 2 + 2 outlets



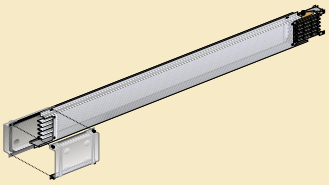
Busbar trunking lengths – 1 501 to 2 999 mm without outlets



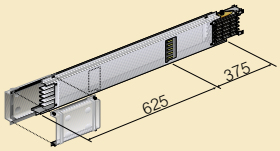
160-315 A Al • 250-400 A Cu



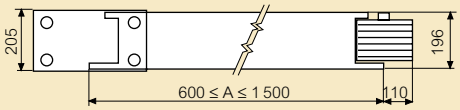
400-1 000 A Al • 630-1 000 A Cu



Busbar trunking lengths – 1 000 to 1 500 mm with 1 + 1 outlets

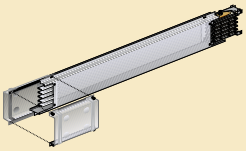


Busbar trunking lengths – 600 to 1 500 mm without outlets

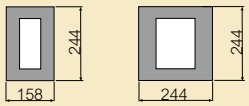


160-315 A Al • 250-400 A Cu

400-1 000 A Al • 630-1 000 A Cu

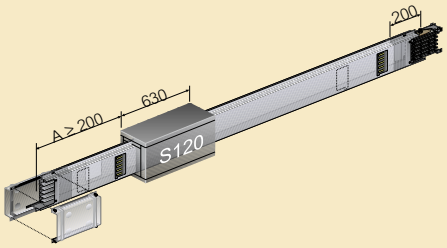


Busbar trunking lengths with S120 fire barrier



160-315 A Al
250-400 A Cu

400-1 000 A Al
630-1 000 A Cu



All dimensions in mm.

Zucchini busbar trunking - MR
elbows

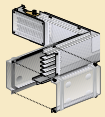
■ Dimension

Single elbows – standard dimensions (300 + 300 mm)

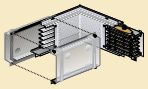
90° as standard. Other angles available on request. IP 55 quick connection

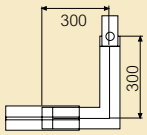
Horizontal elbow

RH



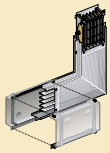
LH



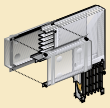


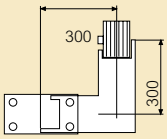
Vertical elbow

RH



LH

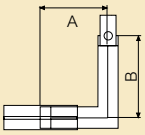




Single elbows – Bespoke dimensions

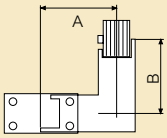
Measure from the long casing to the axis of the elbow

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

Double elbows

Standard dimensions (300 + 300 + 300 mm)

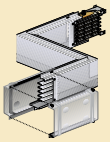
90° as standard. Other angles available on request. IP 55 quick connection

Bespoke dimensions

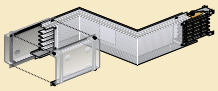
Measure from the long casing to the axis of the elbow

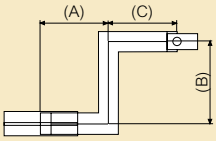
Double horizontal elbow

Right + left



Left + right

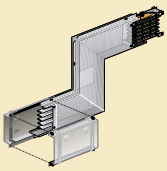




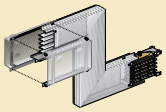
Bespoke dimensions (mm)		
Min		Max
250 ≤	A, B, C	≤ 900

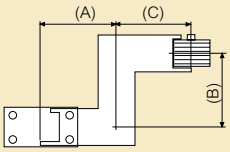
Double vertical elbow

Right + left



Left + right

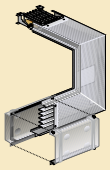




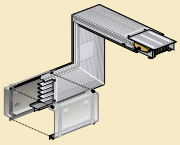
Bespoke dimensions (mm)		
Min		Max
300 ≤	A, B, C	≤ 900

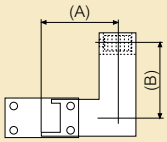
Vertical + horizontal elbows

RH + RH

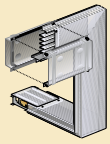


RH + LH

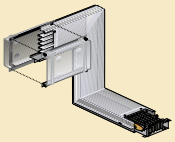


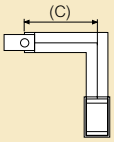


LH + RH



LH + LH

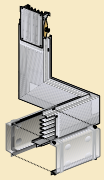




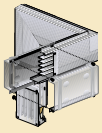
Bespoke dimensions (mm)		
Min		Max
300 ≤	A, B, C	≤ 900

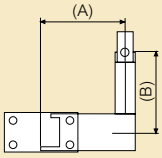
Horizontal + vertical elbows

RH + RH

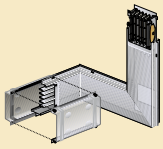


RH + LH

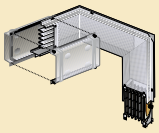


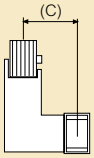


LH + RH



LH + LH





Bespoke dimensions (mm)		
Min		Max
300 ≤	A, B, C	≤ 900

All dimensions in mm.

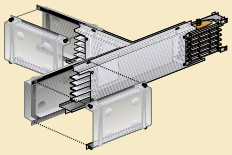
Zucchini busbar trunking - MR

tees, crossover, end feed units and center feed units

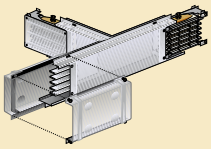
■ Dimension

Horizontal tee
Standard dimensions (300 + 300 + 300 mm)

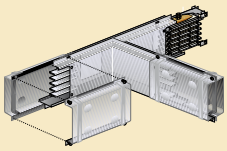
Right hand – female tee



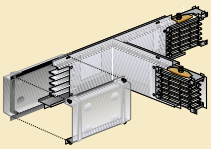
Right hand – male tee



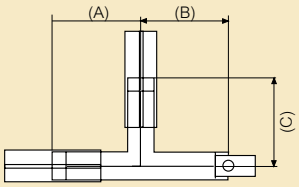
Left hand – female tee



Left hand – male tee

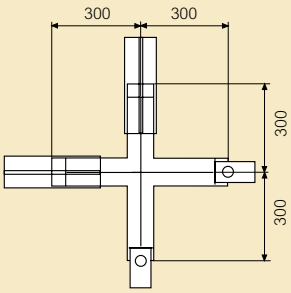


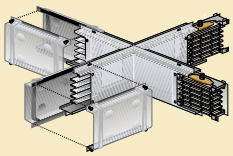
Bespoke dimensions



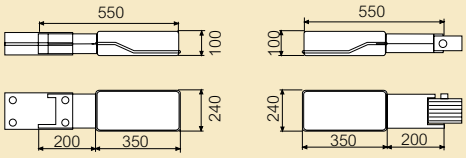
Bespoke dimensions (mm)		
Min		Max
250 ≤	A, B, C	≤ 900

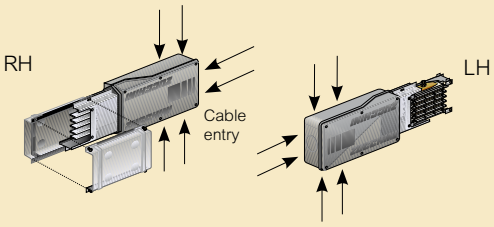
Crossover – standard dimensions
(300 + 300 + 300 + 300 mm)



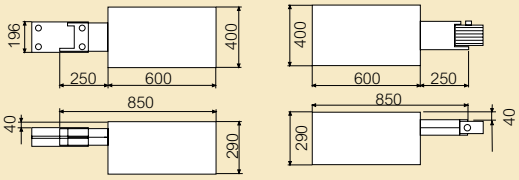


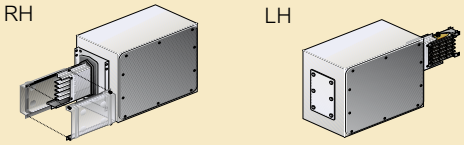
End feed units
Cable connection : max. sect. (3 x 120 mm² + 1 x 70 mm²) or 3 x 150 mm², max PG 48



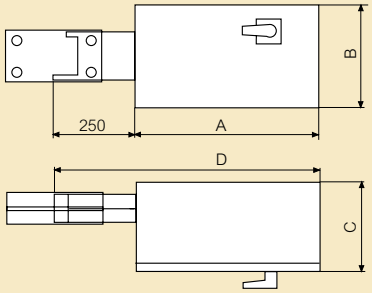


Metal end feed units
During shipment the stump is positioned in the box to reduce its bulk
Take it out and screw it in the position illustrated here
Opening on the base cable entry : 180 x 290 mm. For plates and holes dimensions, see p. 46 for the switchboard feed unit with the same rating



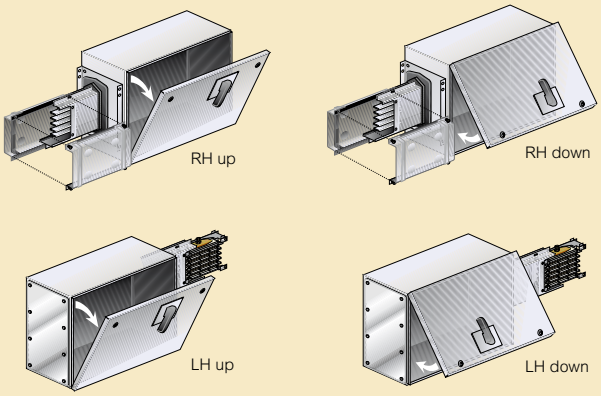


End feed unit with AC23 switch disconnector

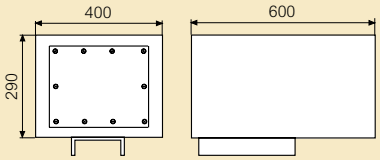


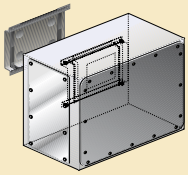
Dimensions (mm)	1	2
A	550	1050
B	350	450
C	280	300
D	800	1300

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



Centre feed units



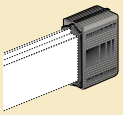


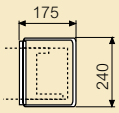
All dimensions in mm.

Zucchini busbar trunking - MR
end stop and in-line bus switch

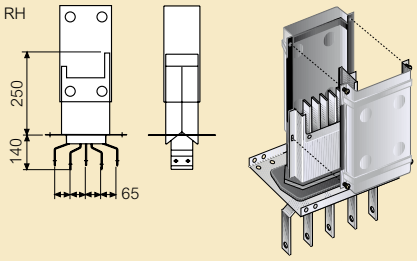
■ Dimension

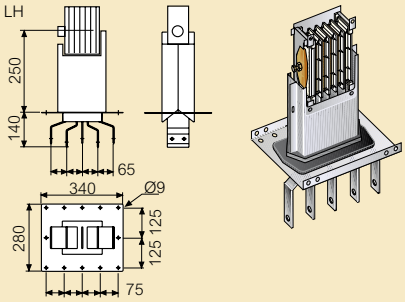
End stop
Ensures IP 55 protection at the end of the run (EN 60529)

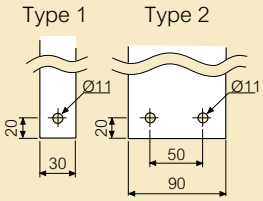




Switchboard-transformer feed units

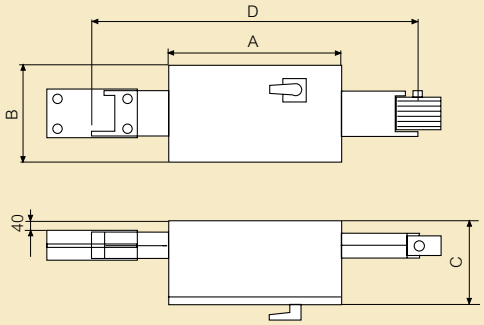


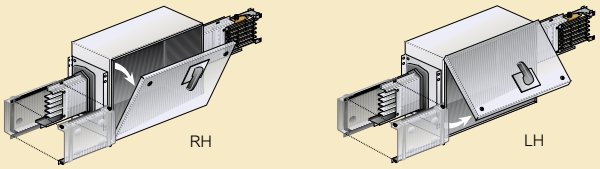




Dimensions (mm)		
	Al	Cu
Type 1	160 A	250 A
	250 A	315 A
	315 A	400 A
Type 2	400 A	630 A
	500 A	800 A
	630 A	1 000 A
	800 A	–
	1 000 A	–

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

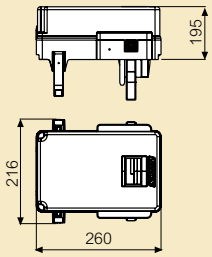
All dimensions in mm.

Zucchini busbar trunking - MR
tap-off boxes

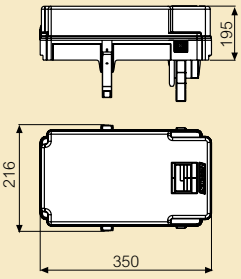
■ Dimension

Tap-off boxes

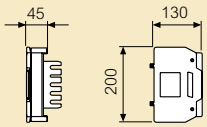
Type 1



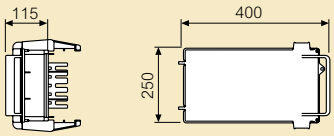
Type 2



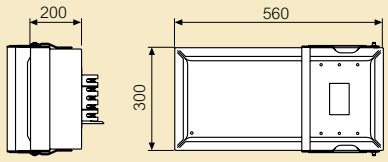
Type 3 32 A



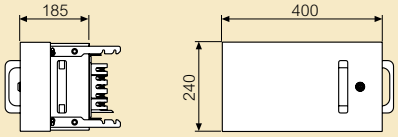
Type 4 63-160 A



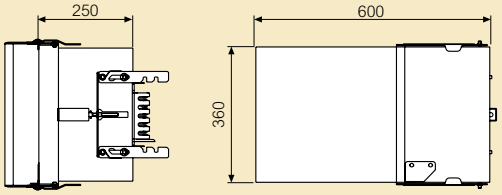
Type 5 250-400 A



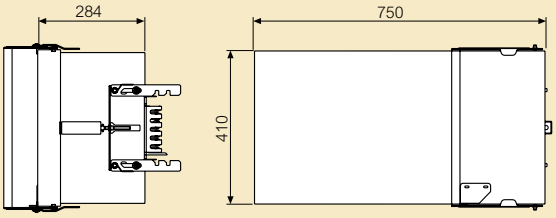
Type 6 63-160 A



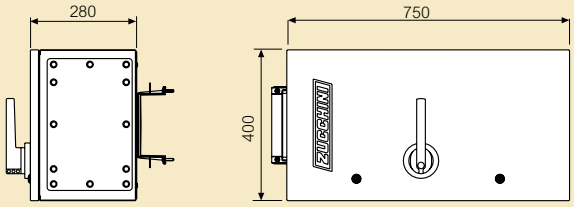
Type 7 250 A



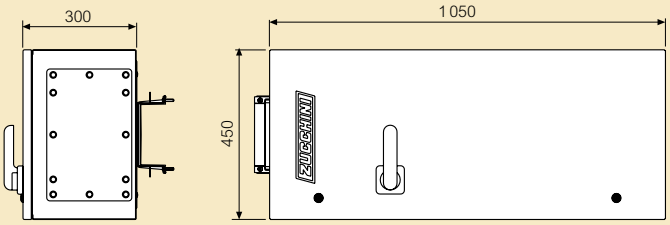
Type 8 400-630 A



Type 9 630 A



Type 10 800-1 000 A

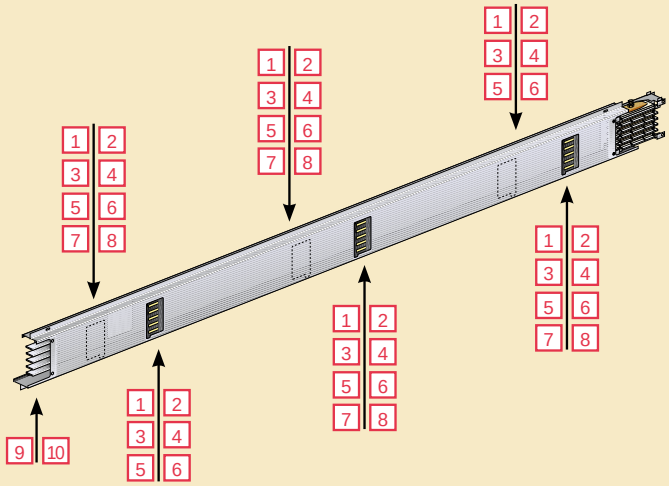


All dimensions in mm.

Zucchini busbar trunking - MR
mounting tap-offs

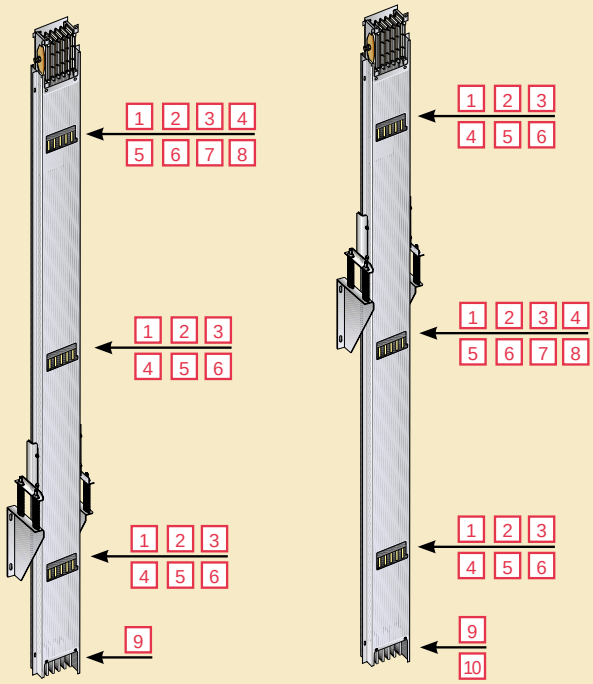
■ Dimension

Trunking length with 3 outlets
Edgeways

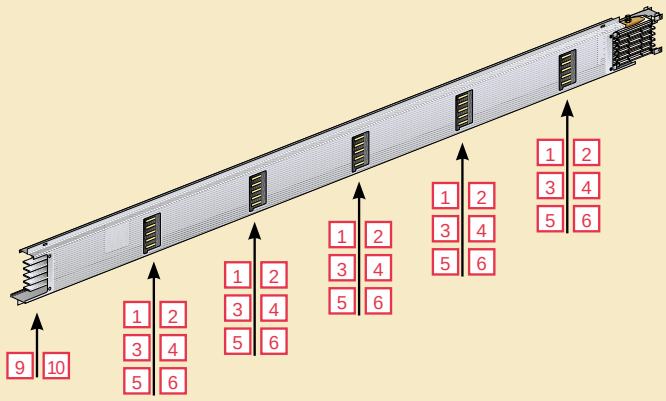


Numbers in squares refer to the tap-off box type

Rising main

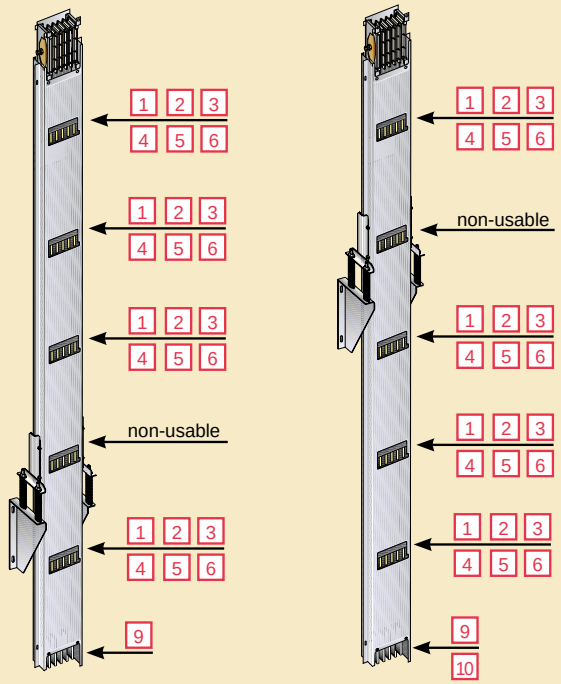


Trunking length with 5 outlets
Edgeways



Numbers in squares refer to the tap-off box type

Rising main



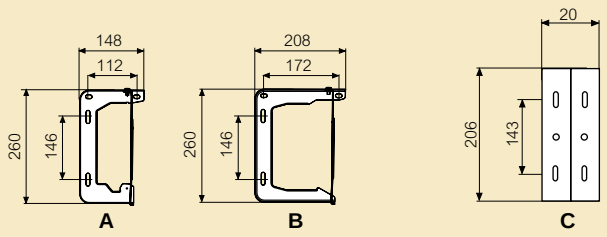
Note : in lengths with 5 outlets, using an outlet excludes the use of the next one

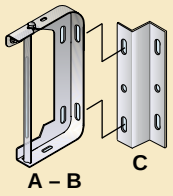
All dimensions in mm.

Zucchini busbar trunking - MR
brackets

■ Dimension

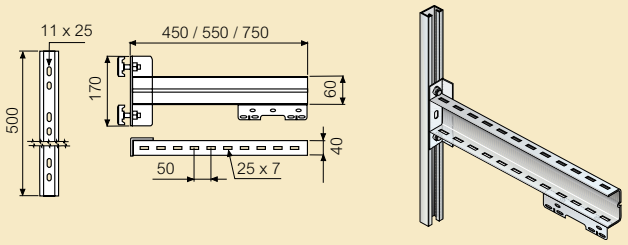
Suspension brackets



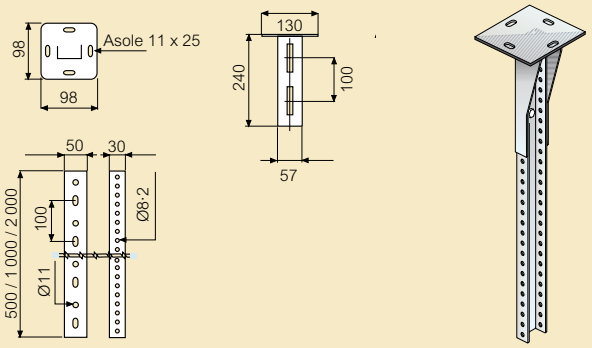


	Cat.Nos
A	50632001
B	50632003
C	50632205

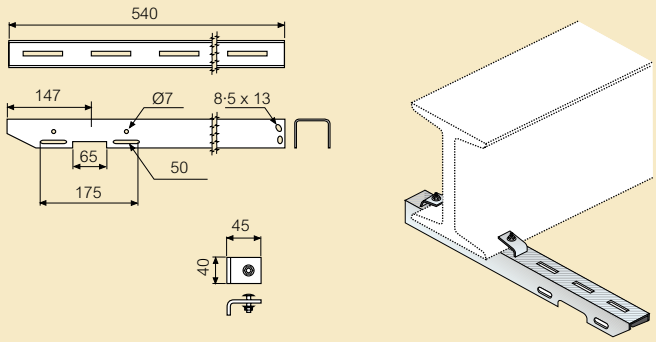
Wall fixing bracket



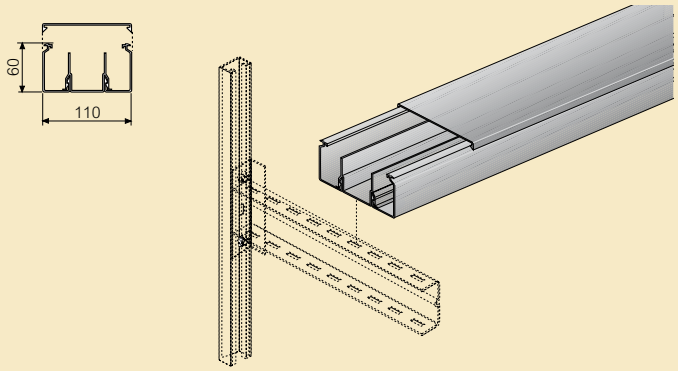
Ceiling fixing bracket kit



Beam fixing bracket



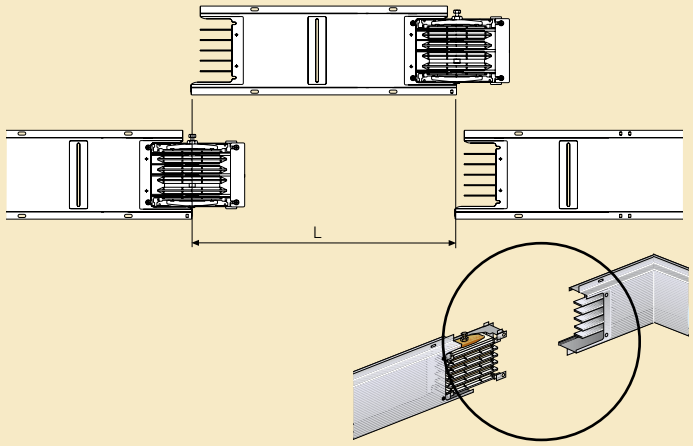
Triple cable channel



Measuring bespoke dimensions

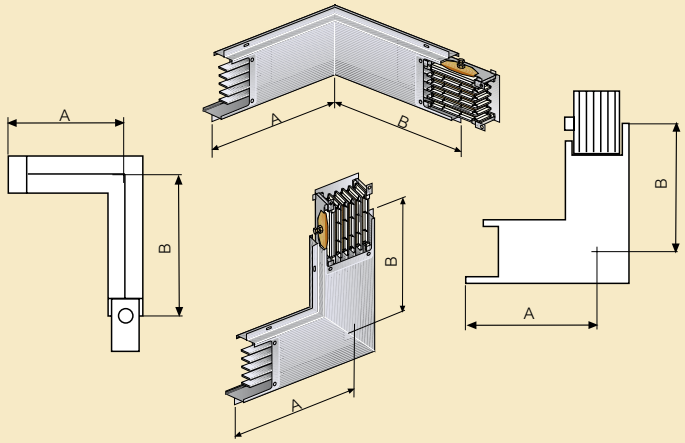
Straight lengths

Always measure from the long side of the casing as illustrated

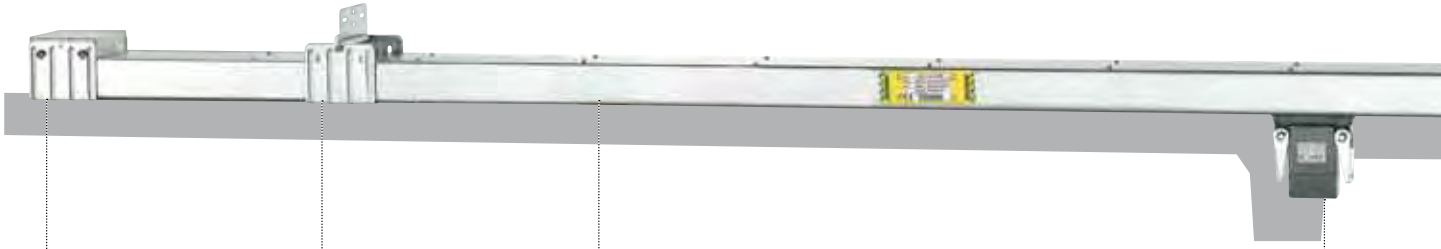


Elbows

Measure from the long casing to the axis of the elbow



All dimensions in mm.



End cover. It completes line assembly and gives an IP20 degree of protection.

Suspension bracket. It can be positioned anywhere along the line.

Straight elements

Trolley. It slides on the conductors, assuring contact with the conductors.

LINE DETAILS

End feed unit

End cover

Electrical and mechanical joint

Suspension and joint hanger

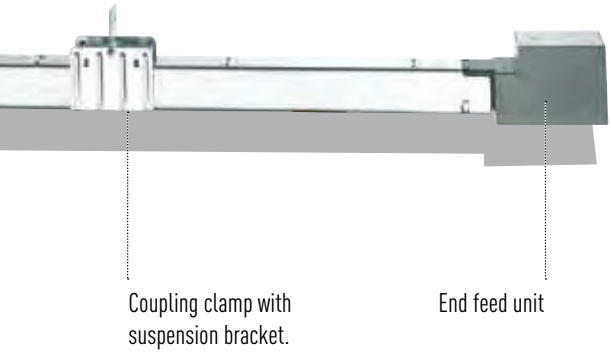
Suspension hanger

Tap trolley 40A

Automated warehouses

Gantry cranes

Workbenches

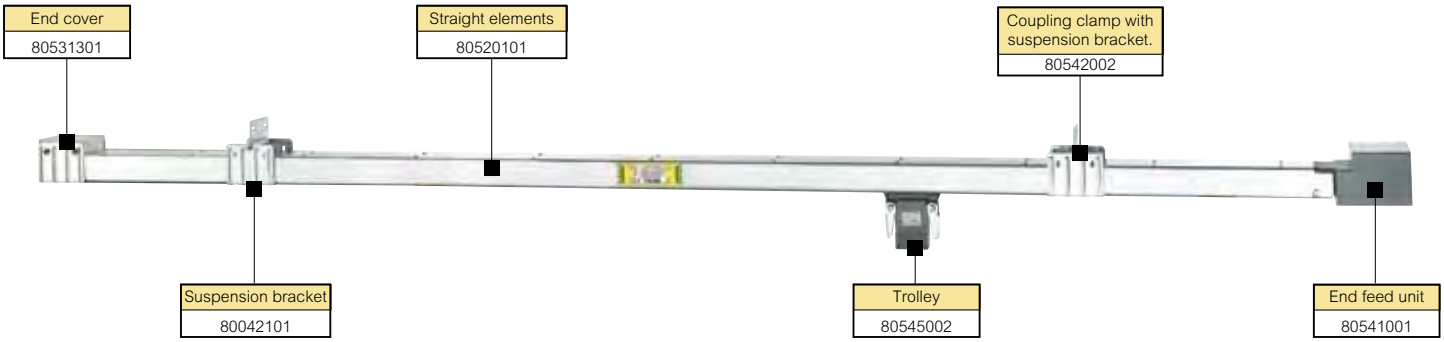


Zucchini Trolley System TS - medium rating busbar

- Available in sizes ranging from
  63-70-110-150A (5 conductor – R, Y, B, N, E)
  250A (4 conductor – R, Y, B, E).
- Conductors in electrolytic copper.
- Suitable for straight and curved sections (only for horizontal changes of direction).
- Fast assembly with junction clamps.
- 40A & 80A trolleys are available with driving arms.
- Easy to manage & suitable for modifications or extensions.
- Fully compliant with the CEI EN 60439-1/2.
- Standard protection degree: IP20

Zucchini busbar trunking - TS

TS5 - straight lengths



Straight element

A straight element is made up of:
• hot galvanised steel section bar (senzimir) to offer good mechanical strength, gasket in rigid PVC
• conductors rack in polyamide resin reinforced with fibreglass with high insulating level
• phase conductors in electrolytic copper UNI5649 ETP 99,9, allowing smooth sliding of the trolley.

Pack	Cat. Nos. L=3000	Cat. Nos. L=1500	Rating (A)	Weight (kg) L=3000	Weight (kg) L=1500
1	80520101	80530102	70	12	6
1	80530101	80530102	110	12·5	6
1	80540101	80540102	150	13	6·5

With trolley introduction device - 3m

When open this allows the introduction of the trolley when closed it aligns the trolley with the line.

Pack	Cat. Nos.	Rating (A)	Weight (kg)
1	80530201	70	13
1	80530201	110	13
1	80540201	150	13·5

With expansion joint - 3m

It compensates for the expansion of the conductors due to temperature variations.
We suggest they are used every 35-40m.

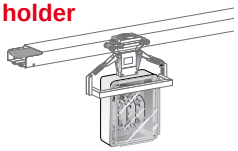
Pack	Cat. Nos.	Rating (A)	Weight (kg)
1	80530301	70	14
1	80530301	110	14
1	80540301	150	14·5

Curved element

Curved elements can be ordered with whatever radius of curvature down to a minimum of 1500mm.
No special trolley is needed.

Pack	Cat. Nos. L=1500	Rating (A)
1	80530401	70
1	80530401	110
1	80540401	150

Box with NH 00 fuse holder for line 70A 250A



Set of three fuse holders NH00

Pack	Cat. Nos.	Rating (A)
1	80045504	Max 160

Zucchini busbar trunking - TS
TS5 - accessories

End feed unit

End cover

Electrical and mechanical joint

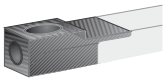
Suspension and joint hanger

Tap trolley 40A

End feed unit

The end feed unit can be installed at one end or the other of a line.

Pack	Cat. Nos.	Rating (A)
1	80541001	70
1	80541001	110
1	80541001	150



Centre feed unit

It feeds a trunking system from whatever central position. The centre feed unit is also used to reduce the volt drop of the line.

Pack	Cat. Nos.	Rating (A)
1	80541101	70
1	80541101	110
1	80541101	150

Coupling clamp

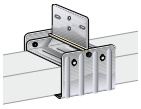
One for each element.

Pack	Cat. Nos.	Rating (A)
1	80542001	70
1	80542001	110
1	80542001	150

Coupling clamp (ready for suspension)

It allows to hang the line at its junction points.

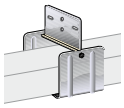
Pack	Cat. Nos.	Rating (A)
1	80542002	70
1	80542002	110
1	80542002	150



Central suspension bracket

It can be positioned anywhere along the line. Use one every 2 metres.

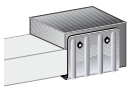
Pack	Cat. Nos.	Rating (A)
1	80042101	70
1	80042101	110
1	80042101	150



End cover

The end cover can be installed at one end or the other of a line.

Pack	Cat. Nos.	Rating (A)
1	80531301	70
1	80531301	110
1	80541301	150



Trolleys 3P + N + T

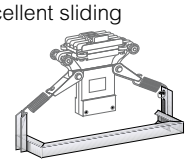
With its graphite contacts assuring the electrical continuity, this trolley is available for 40A; but its rating can be doubled to 80A using two trolleys in parallel with code 80045203.
It works properly up to a sliding speed of 90m/min and bears weights up to 30kg.

Pack	Cat. Nos.	Rating (A)
1	L=1500 80545002	40

Drive arms

For perfect alignment and excellent sliding a driving arm is essential.
It adjusts the trolley both horizontally and vertically.

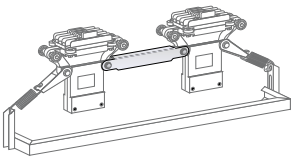
Pack	Cat. Nos.	
1	L=1500 80045201	Simple
1	80045202	Double



Trolley junction

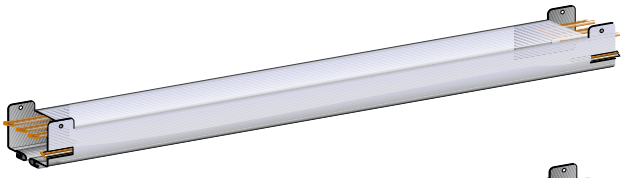
It joins two trolleys together

Pack	Cat. Nos.	Rating (A)
1	L=1500 80045203	80



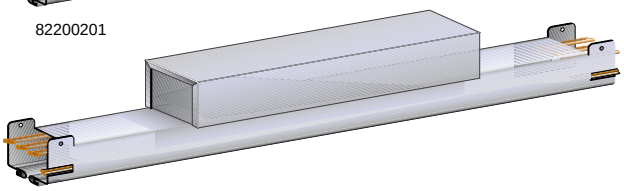
Zucchini busbar trunking - TS

TS250 - straight lengths and accessories

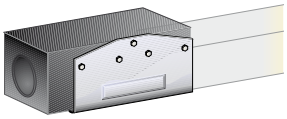


82200101

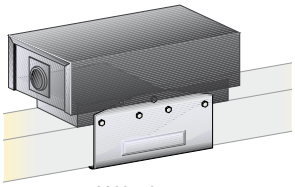
82200201



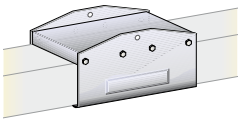
82200301



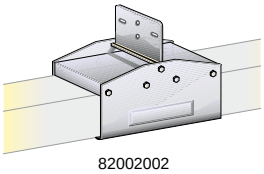
82001001



82001101



82002001



82002002

Straight element

A straight element is made up of:
- hot galvanised steel section bar (senzimir) to offer good mechanical strength
- conductors supported in polyamide resin reinforced with fibreglass with high insulating level
- phase conductors in electrolytic copper UNI5649 ETP 99.9, allowing smooth sliding of the trolley.
- two rigid PVC gaskets assuring an IP20 protection degree against direct contact.

Pack	Cat. Nos. L=3000	Cat. Nos. L=1500	Rating (A)	Weight (kg) L=3000	Weight (kg) L=1500
1	82200101	82200102	250	29.2	15

With trolley introduction device - 3m

When open this allows the introduction of in the trolley, when closed it aligns the trolley with the line.
To be employed for lines longer than 20 m.

Pack	Cat. Nos.	Rating (A)	Weight (kg)
1	82200201	250	29.2

With expansion joint - 3m

It compensates for the expansion of the conductors due to temperature variations.
We suggest they are used every 35-40m.

Pack	Cat. Nos.	Rating (A)	Weight (kg)
1	82200301	250	32

End feed unit

The end feed unit can be installed at one end or the other of a line.

Pack	Cat. Nos.	Rating (A)
1	82001001	250

Centre feed unit

It feeds a trunking system from whatever central position. The centre feed unit is also used to reduce the volt drop of the line.

Pack	Cat. Nos.	Rating (A)
1	82001101	250

Coupling clamp

One for each element.

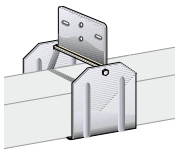
Pack	Cat. Nos.	Rating (A)
1	82002001	250

Coupling clamp (ready for suspension)

It allows to hang the line at its junction points.

Pack	Cat. Nos.	Rating (A)
1	82002002	250

Zucchini busbar trunking - TS
TS250 - accessories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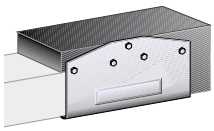
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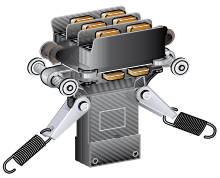

82205001

Central suspension bracket

It can be positioned anywhere along the line. Use one every 2 metres.

Pack	Cat. Nos.	Rating (A)
1	82002101	250

End cover

The cover can be installed at one end or the other of a line.

Pack	Cat. Nos.	Rating (A)
1	82001301	250

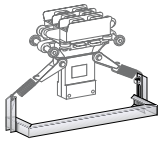
Current tap trolley 3P + T

A single 80A trolley is offered for the 250A (3P+T) line. Contacts are sliding, two for each phase. The earth ones are on the side of the trolley, and assure a constant and efficient earth contact. It works properly up to a sliding speed of 90m/min and bears weights up to 30 kg.

Pack	Cat. Nos.	Rating (A)
1	82205001	80

Driving arms

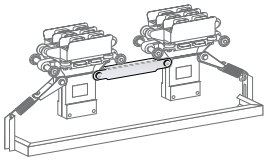
For perfect alignment and excellent sliding a driving arm is essential. It adjusts the trolley both horizontally and vertically.



Pack	Cat. Nos.	
1	80045201	Simple
1	80045202	Double

Trolley junction

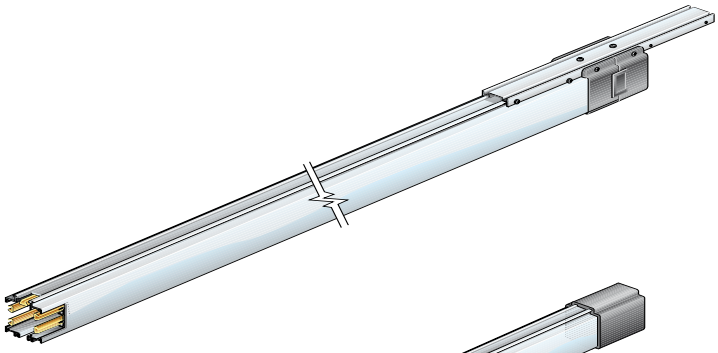
It joins two trolleys together.



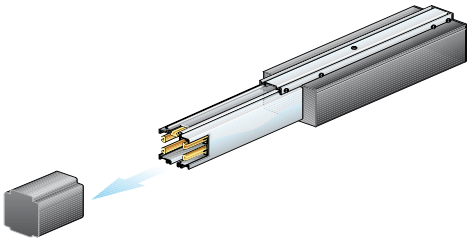
Pack	Cat. Nos.	Rating (A)
1	80045203	160

Zucchini busbar trunking - TS

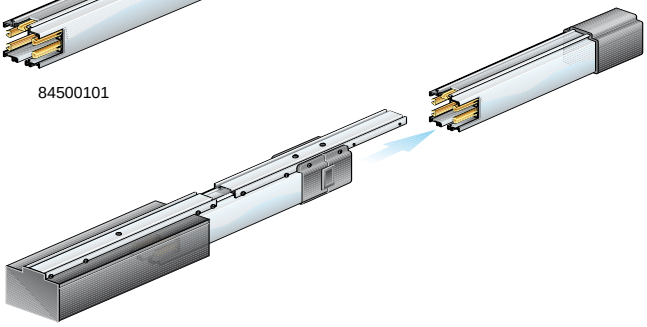
MTS63 - straight lengths & accessories



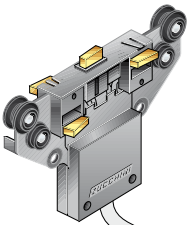
84500101



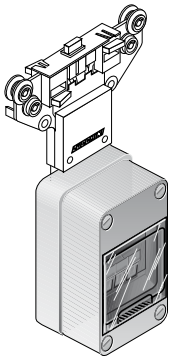
84501001



84501002



84505001



84505004

Straight element

A straight element is made up of:
- a shaped casing in extruded aluminium sheet with good mechanical strength.
- internal sheath as conductor support in rigid PVC
- Electrolytic copper phase conductors in UNI 5649 ETP 99.9

Pack	Cat. Nos. L=3000	Cat. Nos. L=1500	Rating (A)	Weight (kg) L=3000	Weight (kg) L=1500
1	84500101	84500111	63	5	2.5

Accessories

End feed unit & end cover (RH)

Pack	Cat. Nos.	Rating (A)	Weight (kg)
1	84501001	63	1

End feed unit & end cover (LH)

Pack	Cat. Nos.	Rating (A)	Weight (kg)
1	84501002	63	1.5

Trolley

er phase conductors in UNI 5649 ETP 99.9
With its graphite contacts assuring the electrical continuity, the 25A trolley works properly up to a sliding speed of 90m/min and bears weights up to 30kg.

Pack	Cat. Nos.	Rating (A)	Weight (kg)
1	84505001	25	0.32

Hangers

Pack	Cat. Nos.	
1	71003001	Simple suspension
1	84502101	Ceiling simple suspension

Box with fuse holders

Pack	Cat. Nos.	
1	84505004	For local protection (10.3 x 38)

Bracket

Wall fixing kit

Pack	Cat. Nos.	Length (mm)	Weight (kg)
1	50632212	450	2.800
1	50632213	550	3.000
1	50632214	750	3.500

Ceiling fixing kit including

Pack	Cat. Nos.		Weight (kg)
1	50632201	Ceiling flange	0.900
1	50632202	U iron L = 500 mm	0.900
1	50632203	U iron L = 1000 mm	1.800
1	50632204	U iron L = 2000 mm	3.600

I beam fixing kit including

Pack	Cat. Nos.		Weight (kg)
1	50632210	Beam arm base	1.000
1	50632211	Clamp for beam	0.100

Bold catalogue numbers are products normally available with Legrand (India) stockists.
Cat. nos. that are not bold - delivery within 4 - 8 weeks from the date of order.

Zucchini busbar trunking - TS

■ Technical data

General features

TS (Trolley System) is part of the Zucchini range used for supplying moving devices such as: overhead cranes, traversing motors, assembly lines, etc.

TS is suitable for straight and curved sections (route changes only in the horizontal).

Zucchini TS can be installed quickly using an electrical terminal junction and a wide range of supporting accessories.

TS, as all Zucchini products, is fully compliant with the CEI EN 60439-1 / 2 Harmonised Standards; the rated current of the 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 TS line is available in the following versions: 3L+N+PE (5 conductors) for ratings from 63-70-110-150A and 3L+PE (4 conductors) for a 250A rating in which the connected loads are normally three-phase motors.

Straight lengths

TS straight lengths include the following components:

• casing made from a hot-galvanised steel section bar (Senzimir), which is characterised by optimum mechanical rigidity due to its rectangular shape and 1.2 mm sheet metal thickness (1.5 mm for 250A). In addition, it preserves its linearity over time.

As for the 63A (MTS63) rating, the casing is made of anodised extruded aluminium with a minimum thickness of 1.4 mm.

• 5 conductors with the same section 3L+N+PE (4 for the TS 250A), shaped to guarantee excellent mechanical strength.

The conductors are made of copper with purity no less than 99.9% (electrolytic copper) and are spaced out with plastic insulators reinforced with 20% glass fibre.

The insulators have a V1 self-extinguishing degree (as per UL94) and comply with the incandescent wire test as per EN 60695-2-1 (CEI 50.11).

The electrical insulation between the conductors and the casing is ensured by air distances maintained by the insulators.

• the slot along the underside of the busbar, allows a current trolley to slide in it.

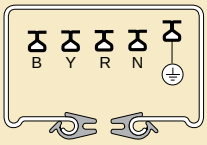
The size of the slot gives an IP20 degree of protection.

• an independent electrical junction terminal system for fast and reliable connection of the live conductors and PE. The terminals are made with bronze plates, thus keeping their base smooth in order to make the trolleys slide more easily.

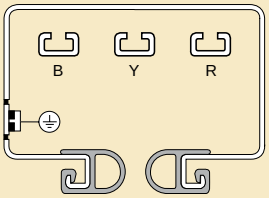
The mechanical junction can be completed by applying the connection flanges to the casing.

The whole busbar is “fire retardant” in compliance with standard EN 60332-3.

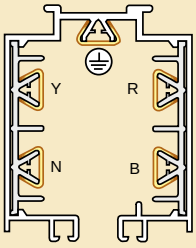
TS5



TS250



MTS63

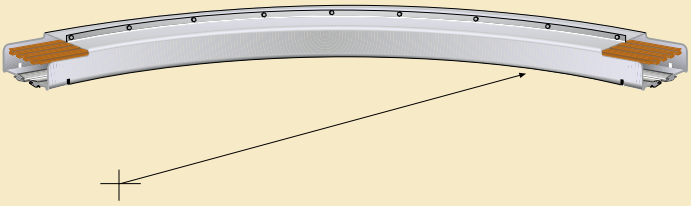


Trunking components and additional elements

Depending on the different installation requirements, Zucchini offers different technical solutions:

a) Curved elements: available for making route changes (only horizontally) up to a minimum radius of 1.5m.

The joint is of the quick type as with the straight lengths. Standard trolleys slide efficiently even within the curved sections of the run. The protection degree is IP20.



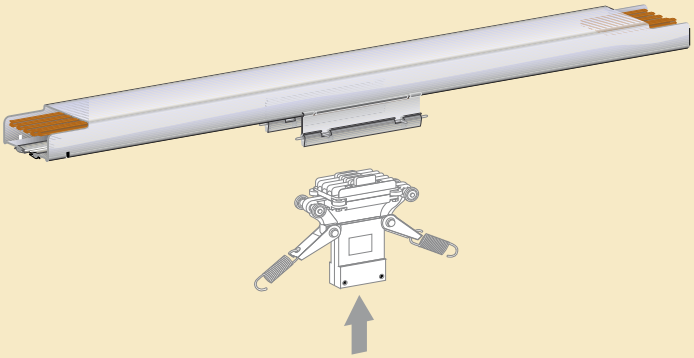
b) Straight lengths with trolley introduction device: these elements are provided with an access door on the underside.

With this door open, it makes it possible to insert or remove a trolley from the line.

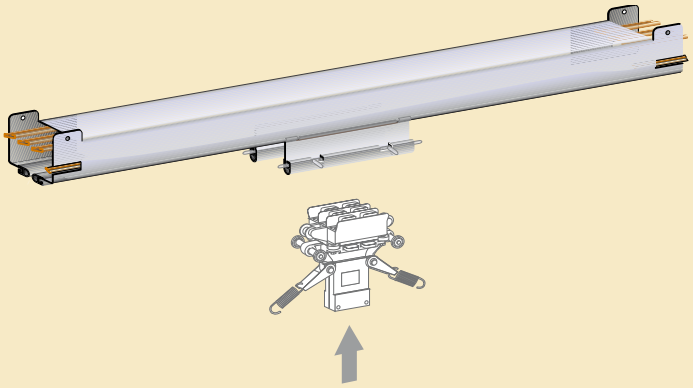
Trolleys can generally be introduced to the line near the end covers. However, lines with several operating trolleys or when using very long lines, it is recommended to use an inserting element in the middle of the line so as to make maintenance operation on the trolleys easier.

The degree of protection is IP20.

63-70-110-150A



250A

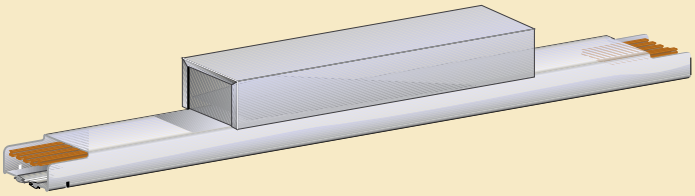


■ Technical data

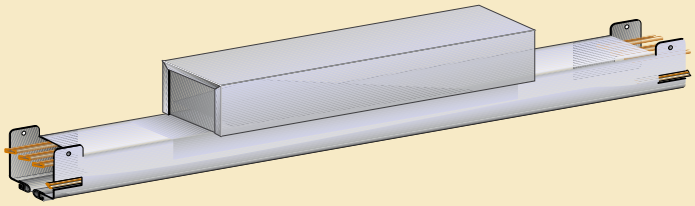
Trunking components and additional elements (continued)

c) Straight lengths with a thermal expansion device: These elements are necessary in lines exceeding 35-40 m in length. Expansion elements "absorb and compensate" the thermal expansion of the conductors preventing them from losing their linearity, avoiding the reduction of the air insulation distances and obstructing the sliding action of the trolleys.

63-70-110-150A



250A

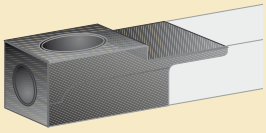


End feed units

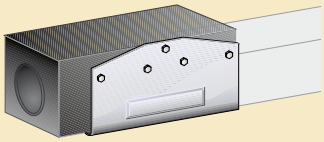
These enable the TS busbar to be supplied by cable ; the assembly of the line is carried out with a quick terminal connection as with the straight lengths.

The cable entry is generally located at the base of the end feed unit.

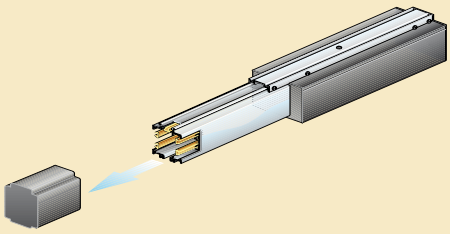
63-70-110-150A



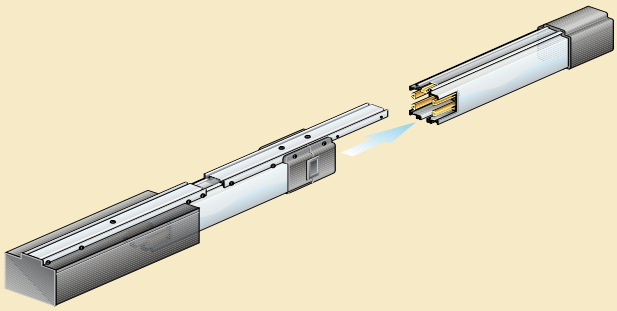
250A



63A RH + end cover RH



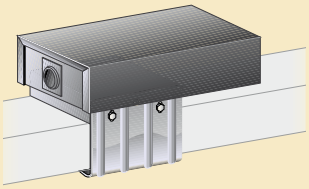
63A LH + end cover LH



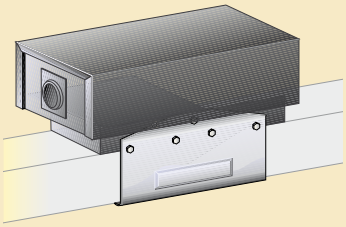
Centre feed units

The TS range has centre feed units which can be installed wherever there is a junction between the straight lengths.

63-70-110-150A



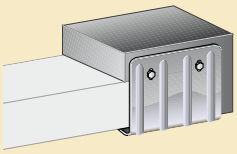
250A



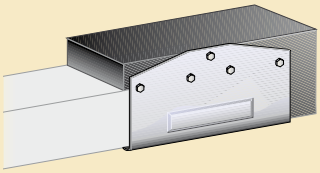
End covers

End covers ensure the IP20 degree of protection at the end of the run.

63-70-110-150A

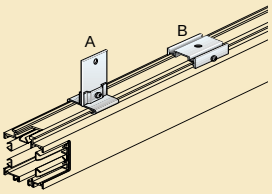


250A



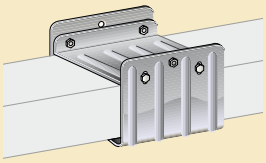
Hangers

In order to fix the run to the structure of the building, directly to a wall, ceiling or beam bracket, it is necessary to use a bracket which serves as a busbar collar. An electrical junction, set up for suspending the busbar, is available on the TS line. The bracket has holes so it can be easily used with the fixing brackets available in the Zucchini catalogue.

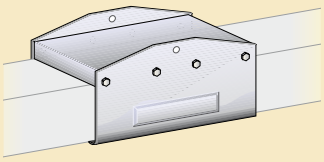


Coupling clamp

63-70-110-150A

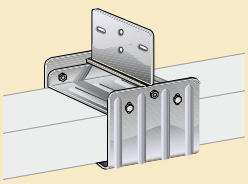


250A

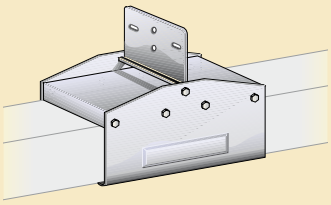


Coupling clamp (ready for suspension)

63-70-110-150A



250A

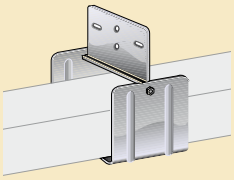


Zucchini busbar trunking - TS

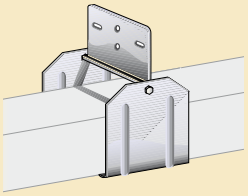
■ Technical data

Central suspension bracket

TS5 - 63-70-110-150A

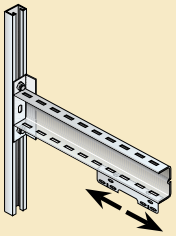


TS250 - 250A

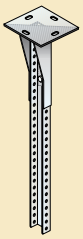


MTS63

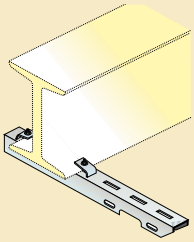
Wall fixing kit
45 cm - 55 cm - 75 cm



Ceiling fixing kit including



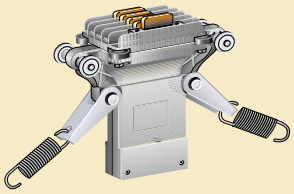
I beam fixing kit including



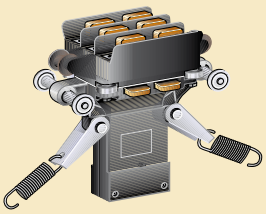
Trolleys

These are used for connecting and supplying 25A – 40A – 80A or 160A three-phase loads (in the coupled version).
The trolleys are equipped with 5 graphite brushes (3L+N+PE) which, due to the action of the springs, keep the correct pressure on the conductors enabling them to pick up current from the line while the trolley is moving (travel) inside the TS busbar.
The trolleys can be coupled with a mechanical joint so as to pickup twice the rated current of a single trolley: 40A trolleys are available for TS5 lines from 70 to 150A; if coupled, the trolleys can pickup 80A from the line (40+40=80A); the trolley is 80A for the TS 250A line and, if coupled with a twin trolley, it can pickup up to 160A.
Trolleys are generally driven by the same electric motor they supply power to; the motor coupling is achieved with a “drive arm” which suitably releases the traction forces on the trolley without risking a trolley malfunction.
The drive arms are connected to the trolleys with special springs which reduce the acceleration (so-called “sudden pulls”) when starting up and when braking.
The maximum travelling speed of the trolleys is 90 m/min (150 m/min for the MTS 63A).
A box used as an accessory can be connected directly downstream of the trolley; inside the box is a fuseholder to protect the cable from overcurrents.
All insulating plastic components are in comply with the incandescent wire test (EN 60695-2-1) and have a V1 self-extinguishing degree (UL94); the standard degree of protection is IP20 without using additional sealing accessories.

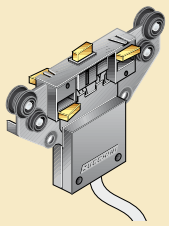
Trolleys 3P + N + T - 40A



Current tap trolley 3P + T - 80A

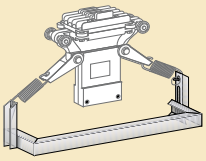


Trolley 25A

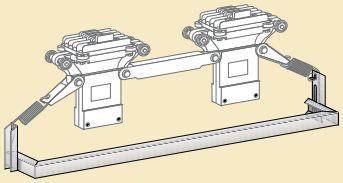


Drive arms (63-70-110-150A)

Simple

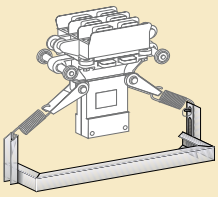


Double



Drive arms (250A)

Simple



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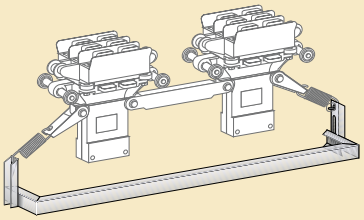
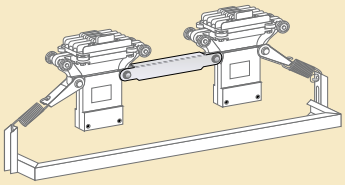
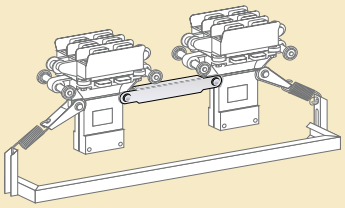


Trolley junction (63-70-110-150A)

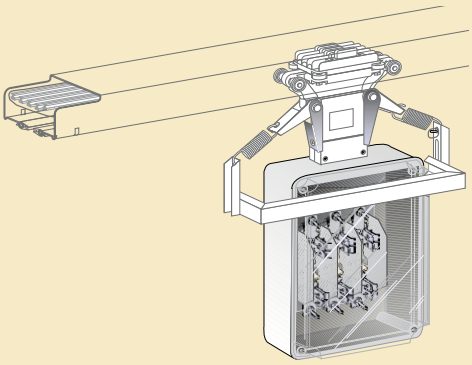


Trolley junction (250A)

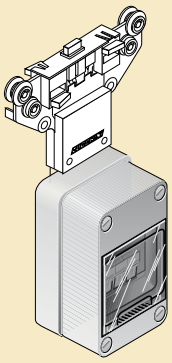


Box with fuse holders

NH 00 fuse holder for line 70A - 250A



(10.3 X 38) - 63A



Zucchini busbar trunking - TS

■ Technical data

Complies to :
IEC 439-1 e 2, EN 60439 parte 1 e 2,
DIN VDE 0660 parte 500 e 502

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

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

Zucchini's busbar system with a nominal current less or equal to 100A (LB Plus-MS 63 and 100) are correctly protected against short circuit effects through a MCB (MCB Modular 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 are not flame propogating in compliance with IEC 332-3: 1992.

Rating (A)		MTS 63A	TS 5 70A	TS 5 110A	TS 5 150A	TS 250A
Live conductors	n°	3P+N+T	3P+N+T	3P+N+T	3P+N+T	3P+T
Casing overal dimension	A x B [mm]	44.8x57	98x65.5	98x65.5	98x65.5	144x89
Rated current	In [A]	63	70	110	150	250
Cross-section of conductors (3P+N)	S [mm²]	12	19	24	43	85
Cross-section of protective conductor eq. Cu	S_{PE} [mm²]	12	19	24	24	120
Operational voltage	U_e [V]	400	600	600	600	600
Insulation voltage	U_i [V]	750	750	750	750	750
Rated frequency	f [Hz]	50/60	50/60	50/60	50/60	50/60
Rated short-time current	I_{CW} [kA]rms	5	9	9	9	11
Peak current	I_{pk} [kA]	7.5	15.3	15.3	15.3	18.7
Maximum thermal limit	I^2t [$A^2s \times 10^6$]	25	81	81	81	121
Phase resistance	R_{20} [mΩ/m]	1.500	0.947	0.785	0.515	0.255
Phase reactance (50Hz)	X [mΩ/m]	1.400	0.059	0.063	0.092	0.161
Phase impedance	Z [mΩ/m]	2.052	0.949	0.788	0.523	0.302
Resistance of the protective bar	R_{PE} [mΩ/m]	1.500	0.947	0.785	0.515	0.150
Reactance of the protective bar (50Hz)	X_{PE} [mΩ/m]	0.080	0.100	0.100	0.100	0.120
Resistance of the fault loop	R_0 [mΩ/m]	3.000	1.895	1.570	1.030	0.405
Reactance of the fault loop (50Hz)	X_0 [mΩ/m]	1.480	0.159	0.163	0.192	0.281
Impedance of the fault loop	Z_0 [mΩ/m]	3.345	1.901	1.578	1.048	0.493
$\Delta V_{1F} = \frac{1}{2}(2 R_{20} \cos\varphi + 2 X \operatorname{sen}\varphi)$	ΔV [V/m/A]10^{-3} cosφ = 0.70	1.775	0.611	0.515	0.369	0.254
	ΔV [V/m/A]10^{-3} cosφ = 0.75	1.776	0.649	0.546	0.387	0.258
	ΔV [V/m/A]10^{-3} cosφ = 0.80	1.767	0.687	0.577	0.405	0.260
Voltage drop with distribuited load (k)	ΔV [V/m/A]10^{-3} cosφ = 0.85	1.743	0.724	0.607	0.421	0.261
$\Delta V_{3F} = \frac{\sqrt{3}}{2}(R_{20} \cos\varphi + X \operatorname{sen}\varphi)$	ΔV [V/m/A]10^{-3} cosφ = 0.90	1.698	0.761	0.636	0.436	0.260
	ΔV [V/m/A]10^{-3} cosφ = 0.95	1.613	0.795	0.663	0.449	0.253
	ΔV [V/m/A]10^{-3} cosφ = 1.00	1.299	0.820	0.680	0.446	0.221
Straight length weight	p [kg/m]	1.0	4.0	4.1	4.2	9.8
Fire load	[kWh/m]	150	90	90	90	90
Protection degree	IP	23	20	20	20	20
Losses for the Joule effect at full load	P [W/m]	17.9	13.9	28.5	34.8	47.8
Ambient temperature min./MAX.	t [°C]	-5/+50	-5/+50	-5/+50	-5/+50	-5/+50

* Value for 0.3 s

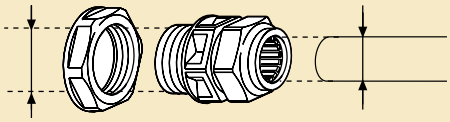
Temperature rating schedule

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

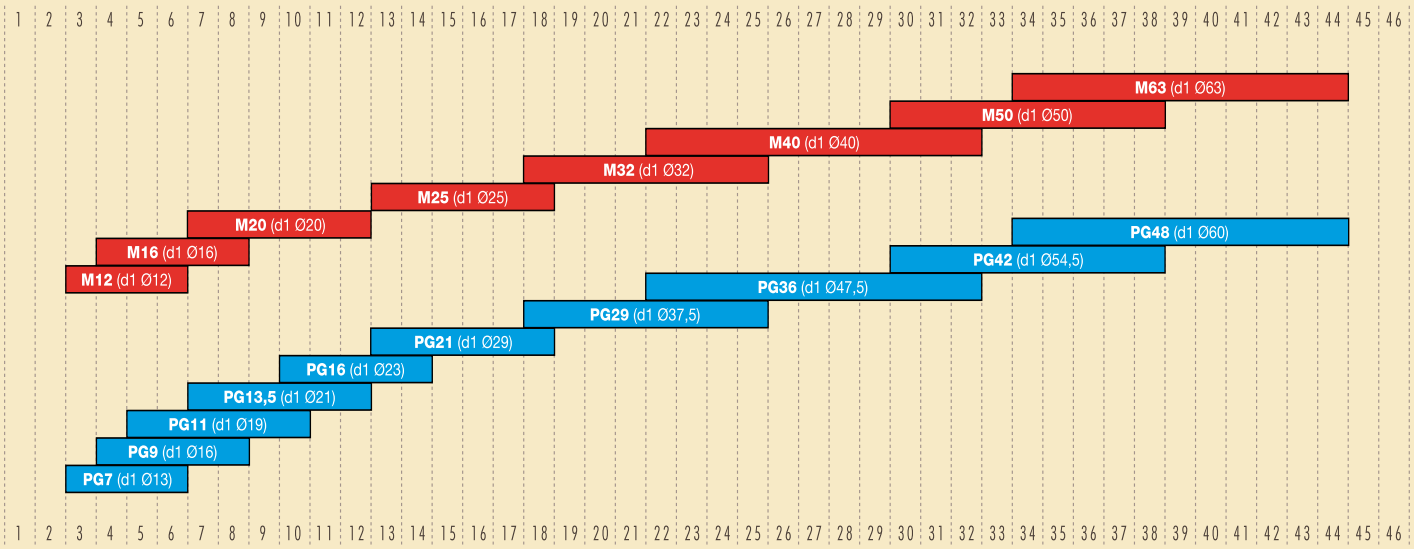
Multiplier coefficient of nominal rating for room temperature values different from 40°C

Zucchini busbar trunking - TS
cable gland table

■ Technical data



Dimension d2 Ø cable [mm]

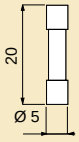


Ceramic Fuse 5 X 20

Operating characteristics					
In = 6.3	1.5 In	2.1 In	2.75 In	4 In	10 In
Operating time	> 1 h	< 30 min	10 ms ÷ 3 s	3 ms - 30 ms	< 20 ms

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

Fuse



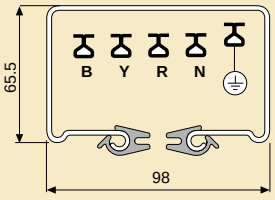
- I_n = 6.3 A
- U_e 250V ceramic fuse IEC 127
- Interrupting power H 1500 A
- Voltage drop ΔV = 150 mV
- I^2t = 48 A^2s

Zucchini busbar trunking - TS

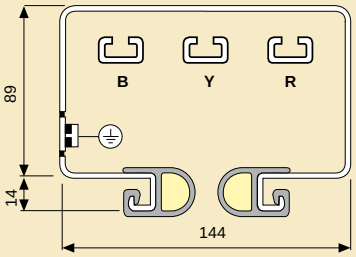
■ Dimension

Straight element

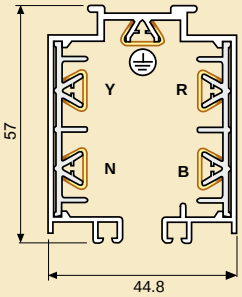
TS5 - 63-70-110-150A



TS250 - 250A

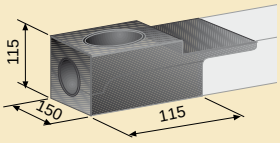


MTS63 - 63A

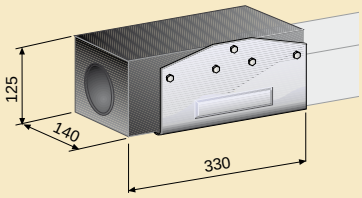


End feed units

63-70-110-150A

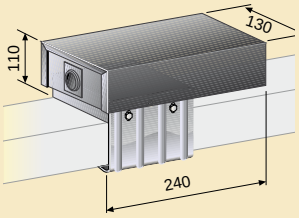


250A

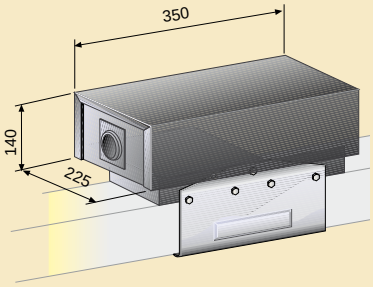


Centre feed units

63-70-110-150A

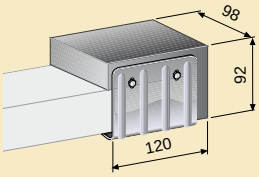


250A

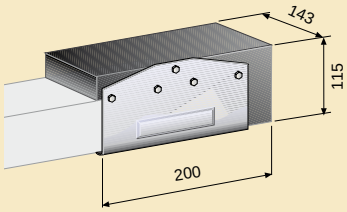


End covers

63-70-110-150A

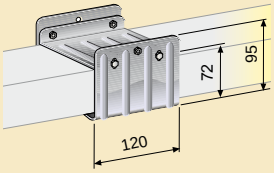


250A



Coupling clamp

63-70-110-150A



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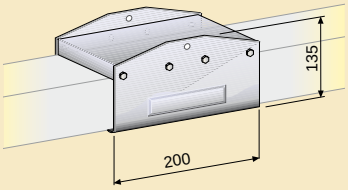
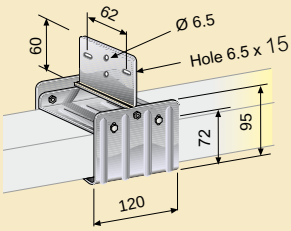
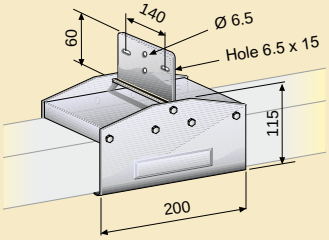


Coupling clamp (ready for suspension)

63-70-110-150A

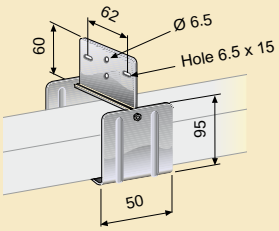


250A



Central suspension bracket

63-70-110-150A



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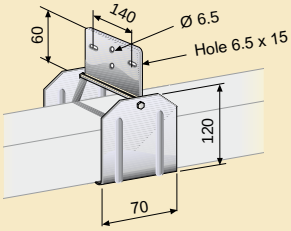
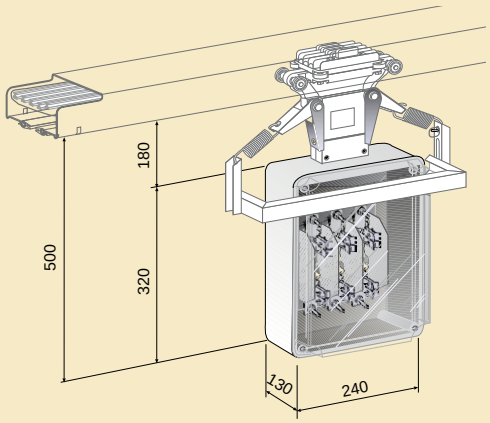


Box with fuse holders



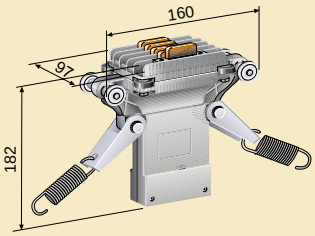
All dimensions in mm.

Zucchini busbar trunking - TS
dimension (continued)

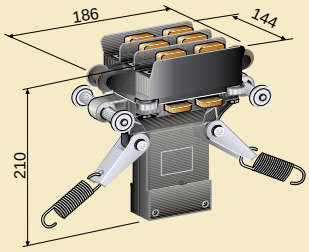
■ Dimension

Trolleys

Trolleys 3P + N + T - 40A

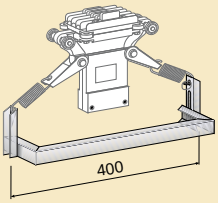


Current tap trolley 3P + T - 80A



Drive arms (63-70-110-150A)

Simple



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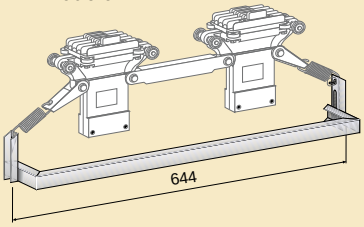
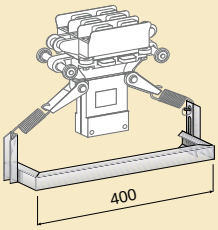


Drive arms (250A)

Simple



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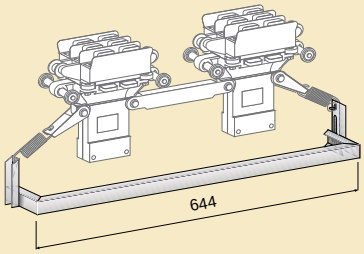
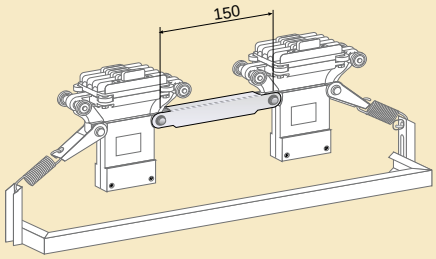
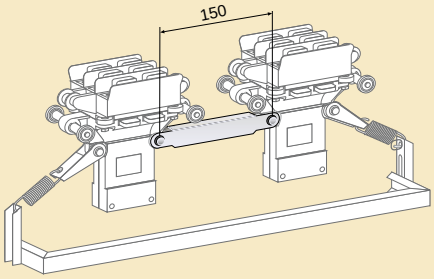


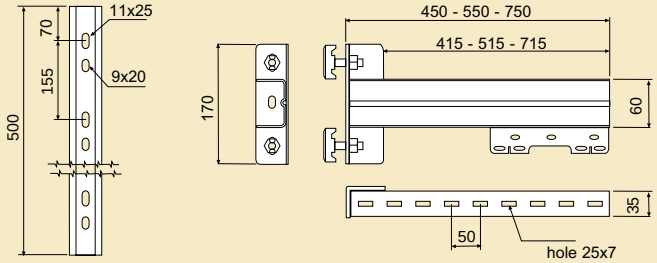
Trolley junction (63-70-110-150A)



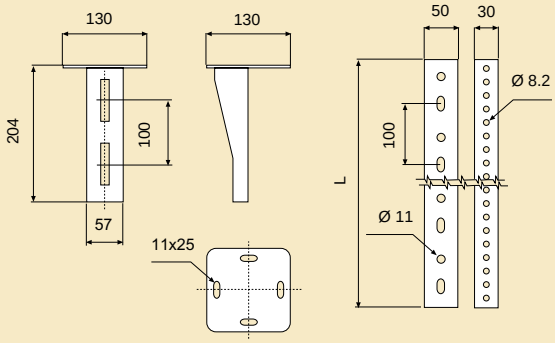
Trolley junction (250A)



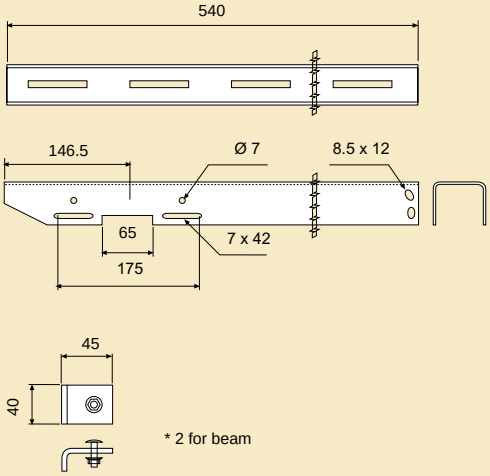
Wall fixing kit 45cm - 55cm - 75cm



Ceiling fixing kit including



I beam fixing kit including



All dimensions in mm.

50400000

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0103	-	1
0104	-	1
0105	-	1
0106	-	1
0107[1]	-	1
0108	-	1
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0112	-	1
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0114	-	1
0115	-	1
0116	-	1
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0123	-	1
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0125	-	1
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0141	17	1
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50632000

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2212	28	1
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2213	28	1
2213	50	1
2214	28	1
2214	50	1

51000000

Cat.Nos	Page No	Pack
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0131	-	1
0141	-	1
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1151	-	1
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5052	-	1
5056	-	1
5057	-	1
5058	-	1
5067	-	1
5071	-	1
5072	-	1

Bold catalogue numbers are products normally available with Legrand (India) stockists.
Cat. nos. that are not bold - delivery within 4 - 8 weeks from the date of order.
Bold packing quantity is our mandatory packing. Orders to be placed by Legrand (India) stockists in multiples of the same.

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0361	-	1
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0116	-	1
0117	-	1
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0123	-	1
0124	-	1
0125	-	1
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0127	-	
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0244	-	1
0245	-	1

Cat.Nos	Page No	Pack
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0437	-	1
0442	19	1
0443	-	1
0444	-	1

Cat.Nos	Page No	Pack
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0622	-	1
0623	-	1

Cat.Nos	Page No	Pack
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0777	-	1
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5202	47	1
5202	49	1
5203	47	1
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0102	-	1
0201	-	1
0201	-	1
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0301	-	1
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0201	-	1
0301	-	1
0401	-	1
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1101	-	1

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09	-	1

In accordance with its policy of continuous improvement, the Company reserves the right to change specifications and designs without notice.

All illustrations, descriptions, dimensions and weights in this catalogue are for guidance and cannot be held binding on the Company.

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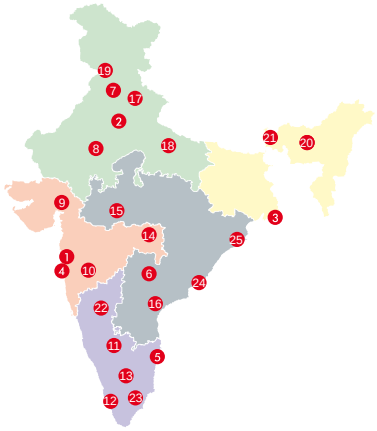

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1. 61 & 62, 6th Floor,
Kalpataru Square, Kondivita Road,
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Fax : (011) 2699 0047

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Fax : (033) 4021 3537

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Andheri (East),
MUMBAI - 400 059.
Tel : (022) 3385 6200
Fax : (022) 3385 6201

5. Gee Gee Universal,
8th Floor, Door No. 2, 18/1 & 18/2,
McNichols Road, Chetput,
CHENNAI – 600 031.
Tel : (044) 3024 7200, 2836 4165 / 67 / 68
Fax: (044) 2836 4169

6. 205-208, 2nd Floor, Block - II,
White House, Kundan Bagh, Begumpet,
HYDERABAD – 500 016.
Tel : (040) 2341 4398 / 67
Fax : (040) 6636 6974

Branch offices

7. SCO 1-2-3,
Second Floor, Sector 17B,
CHANDIGARH - 160 017.
Tel : (0172) 305 8631 / 32 / 33 / 34 / 35
Fax : (0172) 501 9008

8. 507-510, Vth Floor, Soni Paris Point,
Jai Singh Highway, Banipark,
JAIPUR - 302 016.
Telefax : (0141) 511 3129

9. 504, Sakar IV,
Opp. M. J. Library, Ellis Bridge,
AHMEDABAD - 380 006. Gujarat
Tel : (079) 2658 6561 / 2
Fax : (079) 2658 6563

10. 402, Swastik Chambers,
Near Ashwamegh Marriage Hall,
Behind HP Petrol Pump,
Off Karve Road, Erandwane,
PUNE - 411 004.
Tel : (020) 6729 5600 / 601
Fax : (020) 6729 5604

11. IInd Floor, Al-Latheef Building,
2/1, Union Street, Off. Infantry Road,
BANGALORE – 560 001.
Tel : (080) 2286 1081, 4113 3293 / 4
Fax : (080) 2286 1078

12. No. 36/2178, Syda Building, 2nd Floor,
Kaloor – Kadavanthra Road, Kaloor,
KOCHI – 682 017.
Tel : (0484) 234 2921, 658 0921
Fax : (0484) 233 3921

13. B-15, Thirumalai Towers,
IV-D, Fourth Floor,
723, Avanashi Road,
COIMBATORE – 641 018.
Tel : (0422) 650 2728, 222 3634 / 0283
Fax : (0422) 222 3164

14. Plot No.95, II Floor,
Shreyash Heights,
Ramdas Peth, VIP Road,
NAGPUR - 440 010.
Tel : (0712) 662 7857 / 58
Fax : (0712) 662 7859

15. 204-205, Megapolis Square,
579, M G Road,
INDORE - 452 001.
Tel : (0731) 393 1650 / 51 / 52
Fax : (0731) 393 1653

16. MF-2, Datta's Lords House,
Jammi Chettu Street,
VIJAYAWADA – 520 010.
Telefax : (0866) 669 9393

Area offices

17. ABC Business Club 16,
Tagore Villa, Chakrata Road,
DEHRADUN - 248 001.
Uttaranchal.
Tel : (0135) 271 5189 / 248 001

18. Cabin No.104/105,
Trade Point,
Ground Floor,
Saran Chamber 1,
5, Park Road, Hazratganj,
LUCKNOW - 226 001.
Tel : (0522) 223 9044 / 7285
Fax : (0522) 223 9124

19. Cabin No. 9,
Second Floor,
Madhok Trade Centre,
Madhok Complex,
Ferozpur Road,
LUDHIANA - 141 001.
Tel/Fax No.: (0161) 277 0301 / 304

20. House No. 97, Ground Floor,
Rajgarh Main Road,
Opp. City Heart Nursing Home,
GUWAHATI - 781 007.
Tel : (0361) 245 8498

21. 94, Udham Singh Sarani,
Ground Floor, Ashrampara,
SILIGURI - 734 001.
Tel : 94341 91635 / 98009 77780

22. Prime Plaza, 2nd Floor,
1st Main,
Girls High School Road,
Near PNB, Deshpande Nagar,
HUBLI - 580 029.
Mobile Nos: 98807 64338 / 98807 64339

23. Aparna Towers, 1st Floor,
2/3, Bypass Road,
MADURAI – 625 010.
Telefax : (0452) 230 8414

24. 404, Eshwar Plaza,
Dwaraka Nagar, Main Road,
VISHAKHAPATNAM – 530 020.
Telefax : (0891) 663 9363

25. Plot No. 359,
Saheed Nagar, 2nd Floor,
BHUBANESWAR - 751 007.
Tel : (0674) 254 0623

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