

# BUSBAR TRUNKING SYSTEMS

Power supply and control devices



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### JL DISTRIBUTING BUSBARS

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JL busbars are available in 125, 160, 250, 400, 630A current ratings. They are used in a variety of applications from horizontal distributing systems to vertical risers. They can also be used as feeders for low current distributing busbars. They are used, for example, in assembly, engineering and plastics industries, commercial, office, school and industrial properties, as well as Datacenters.

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### MJ DISTRIBUTING BUSBARS AND BUSDUCTS

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MJ busbars are used for high current electricity distribution and energy transfer on industrial sites, for risers and transport networks within properties, and as feeders for smaller busbars. They are most often used as busducts in transformer and main switchboard connections and between switchboards. The busbars can be equipped with fixed-installation power outlets. The product range includes 4- and 5-pole busbars for 800-4000A currents. If necessary, the electromagnetic radiation of MJ busbars can be reduced by using EMC shields.

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### COMPACT DISTRIBUTING BUSBARS AND BUSDUCTS

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Compact distributing busbars are low impedance, sandwich construction compact busbars. The product range of compact distributing busbars includes busbars for 500-6300A current ratings, with either aluminium or copper conductors. The busbars are available with 4 and 5 poles. The busbars lend themselves to a variety of uses and have an attractive design. The compact busbar can be used, for example, as a busduct between a transformer and main switchboard, between switchboards or as a distributing busbar in risers and transport networks.

## BENEFITS OF BUSBAR TRUNKING SYSTEMS

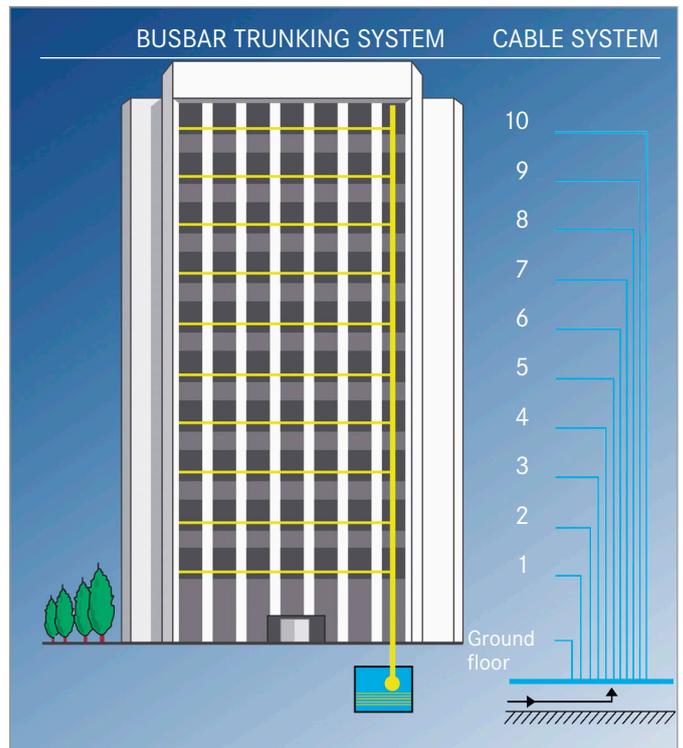
A busbar trunking system is an economical solution with reasonable investment and low operating costs. The machinery in production premises can be flexibly relocated and complemented while minimising disturbances and interruptions in production and electricity supply. Added value can be achieved, for example, through joint mounting of various energy systems, raw material piping, pressurised air, welding gases and cooling water, as well as through integrated measurement and control systems.

The high prefabrication degree of busbar trunking systems and applications also contribute to significantly shorter throughput times of electrification projects. Examples of use: Renovation of residential, commercial and office buildings, as well as machine room renovation and new building.

The use of busbar trunking systems as vertical risers is gaining popularity.

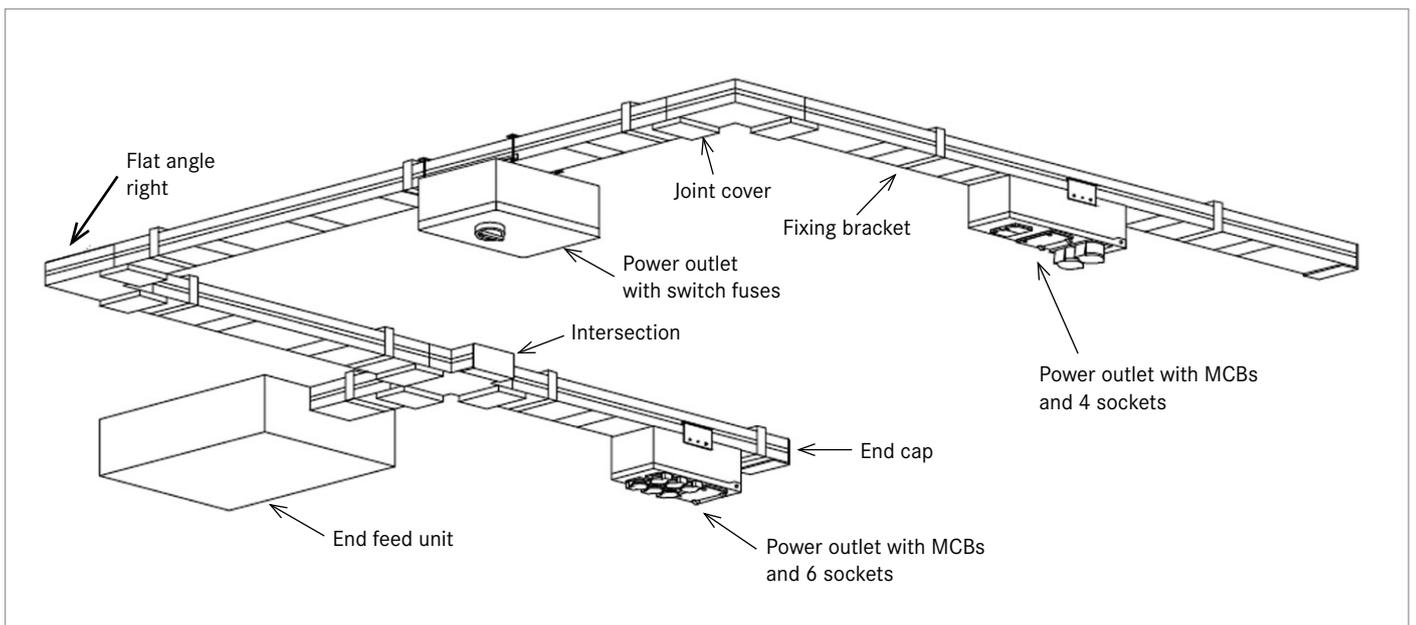
The benefits of busbar trunking systems include

- Clarity and simplicity, small space requirement
- Flexibility and adaptability. Power outlets can be added and moved while the busbar is live, which avoids power interruptions disturbing the main power distribution and opening firewalls between floors.
- Fire loads are reduced as less cable insulation is needed
- Long riser cables can be omitted
- Smaller main switchboards can be used, no need for distribution boards
- Less and lighter cable trays
- Busbars can be used for power distribution when a building is being constructed
- Busbar system can be integrated into a centralised energy metering system.



Busbars supplied as standard in 3m lengths, other lengths on special order. Power outlets are protected by fuses, switch fuses and MCBs or MCCBs.

## INSTALLATION EXAMPLE





The JL busbar range is available in 125, 160, 250, 400, 630 and 800A ratings. The JL range lends itself to a variety of uses from industrial distribution systems to vertical risers in residential buildings. The JL range can also be used to supply smaller distributing busbars.

The JL busbars are ideal for use in, for example, Datacenter, the engineering, plastics and electronics industries, workshops, laboratories, commercial and industrial buildings and schools where a flexible installation with plug-in outlets is needed.

In addition to their versatility, the JL Busbars are styled attractively and can be installed on all sites requiring flexibly modifiable installation on walls, on the ceiling or under raised floors. Standard power outlets have sockets or cable connectors, and they are equipped with MCBs or a 00 fuse base and main switch. Special power outlets are available on request.

The JL bus bar trunking system is a technically reliable and attractively styled distribution system for demanding environments.

The system can be complemented with a mechanical prevention system that prevents a faulty cross-connection between outlets in different systems, for example 400V 50Hz/48VDC.



JL-distributing busbar



JLS125 Feed unit with switch and cable gland with rubber (JLS125-PK-LK)



JLS125 Feed unit with compact circuit breaker and cable gland with rubber (JLS125-KK-LK)



JLS250 Feed unit with switch, digital display meter and cable gland with strain relief (JLS250-PK-LV-M-X)

TECHNICAL DATA

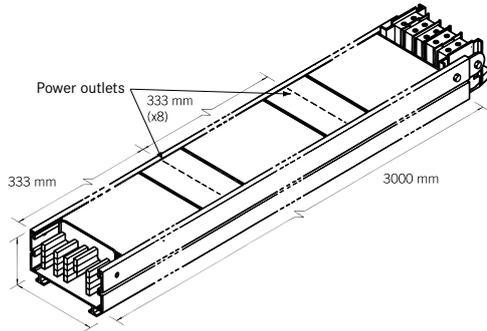
Rated current [A]	125	160	250	400	630
Rated voltage [Vac]	690	690	690	690	690
<b>Feed cable, Cu</b>					
<b>Short circuit strength</b>					
- short-time withstand current (1s) [kA]	5,1	8,6	11,5	16,5	21,5
- peak [kA]	8,7	14,6	23	35	45,1
<b>Electrical characteristics of conductors, phases:</b>					
Resistance R20 [Ω/m]	0,00079	0,00038	0,00027	0,00014	0,0000713
Resistance Rt [Ω/m]	0,000799	0,000468	0,00036	0,000195	0,00011
Reactance 50 Hz [Ω/m]	0,000185	0,000159	0,000148	0,000127	0,0000937
<b>PE conductor:</b>					
Resistance 20° [Ω/m]	0,00079	0,00079	0,00038	0,00027	0,00014
<b>Volt drop line-to-line, [V/A/m], power factor</b>					
1.0	0,0013839	0,0008106	0,0006235	0,0003377	0,0001905
0.9	0,0013852	0,0008496	0,0006729	0,0003999	0,0002422
0.8	0,0012994	0,0008137	0,0006526	0,0004022	0,0002498
0.7	0,0011976	0,0007641	0,0006195	0,0003935	0,0002493
Weight [kg/m]	4,4	5	6	9,3	14
Size width x lenght [mm]	142 x 48	142 x 48	142 x 48	142 x 82	142 x 82
Size width x lenght [mm] (includes extension parts)	148 x 67	148 x 67	148 x 67	148 x 101	148 x 101

FEED UNIT CONNECTION CABLES

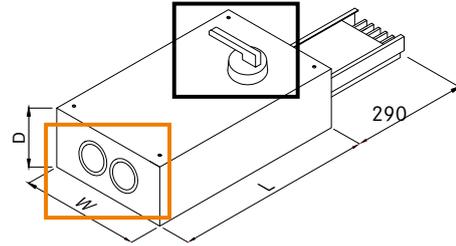
Rated current [A]	125	160	250	400	630
<b>Feed cable, Al/Cu max [mm<sup>2</sup>]</b>					
JLS feed Cu/mm <sup>2</sup>	70	70	185	2 x 240	2 x 240
JLS feed Al/mm <sup>2</sup>	70	70	185	2 x 240	2 x 240
JLS feed with switch Cu/mm <sup>2</sup>	70	70	185	2 x 185	2 x 185
JLS feed with switch Al/mm <sup>2</sup>	70	70	185	2 x 240	2 x 240

DIMENSIONS

EXTENSION BUSBAR JL125-630



FEED UNIT JL125-630



JLS

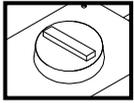
Dimensions	Cable	L [mm]	W [mm]	D [mm]
125, 160	CU	363	145	105
125, 160	AL/CU	500	360	170
250, 400	AL/CU	500	360	170
630	AL/CU	600	360	170

JLS-PK

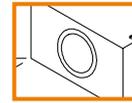
Dimensions	Cable	L [mm]	W [mm]	D [mm]
125, 160	CU	380	145	105
125, 160	AL/CU	600	360	170
250	AL/CU	600	360	170
400, 630	AL/CU	700	500	170

Standard end feeds. We manufacture also customized models.

FEED UNIT EQUIPMENTS

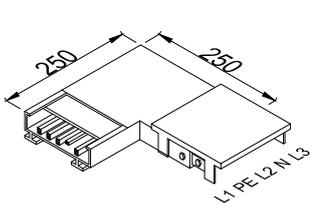


Switches and circuit breakers  
 If there is no switch or circuit breaker, the feed unit has the necessary connectors for cable connection.  
 PK = 3-pole load switch                      PK/4P = 4-pole load switch  
 KK = 3-pole compact circuit breaker      KK/4P = 4-pole compact circuit breaker

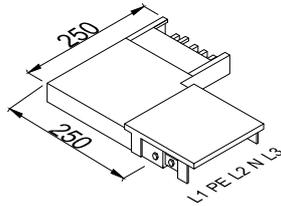


Cable glands  
 LK = Rubber Cable outlet  
 LV = cable Outlet with strain relief  
 KM = Plastic cable gland  
 MM =Metallic cable gland

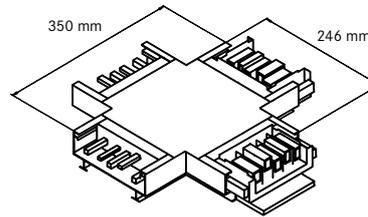
ANGLES



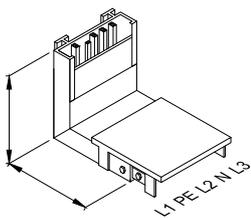
Flat angle left  
 JLV 125-800



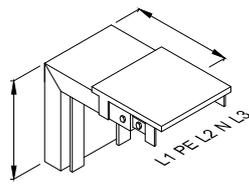
Flat angle right  
 JLK 125-800



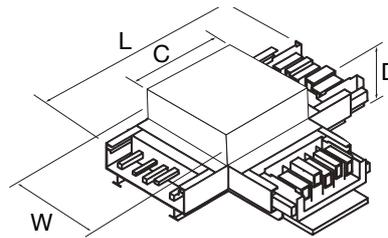
Intersection  
 JLR 125-250 (Dimensions)  
 JLR 400-800  
 (Dimensions by request)



Angle down  
 JLA125-250 185x185 mm  
 JLA400-800 220x220 mm



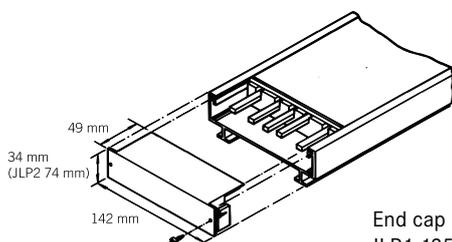
Angle up  
 JLY125-250 165x165 mm  
 JLY400-800 195x195 mm



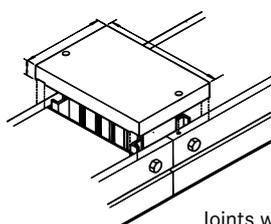
T-joint  
 JLT 125-800A  
 JLT 125-160A  
 (Dimensions by request)

Dimensions	L [mm]	W [mm]	D [mm]	C [mm]
250	300	225	50	-
630/400	520	245	160	280

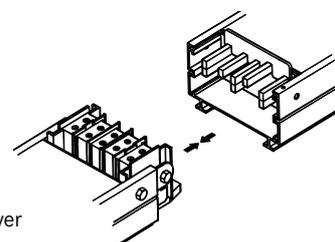
FITTINGS



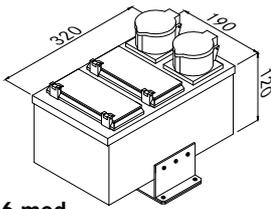
End cap  
 JLP1 125-250  
 JLP2 400-800



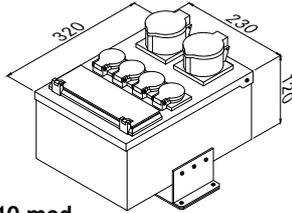
Joints with cover  
 JLI1-JLI6



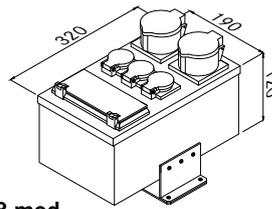
POWER OUTLETS



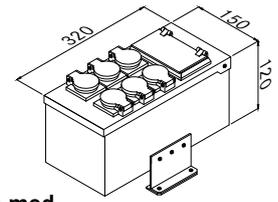
- 16 mod**
- 8-mod hinged window
  - Energy meters
  - MCCB 's
  - 2 x socket
  - Models with type A and B residual current circuit breakers available



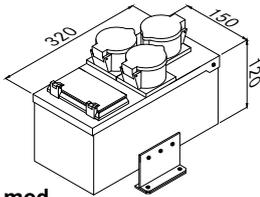
- 10 mod**
- 10-mod hinged window
  - MCCB 's
  - 2 x socket
  - 4 x Schuko socket
  - Models with type A and B residual current circuit breakers available



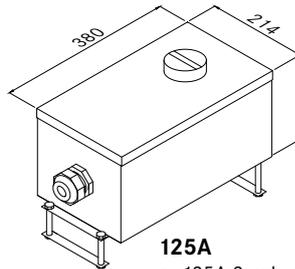
- 8 mod**
- 8-mod hinged window
  - MCCB 's
  - 2 x socket
  - 3 x Schuko socket
  - Models with type A and B residual current circuit breakers available



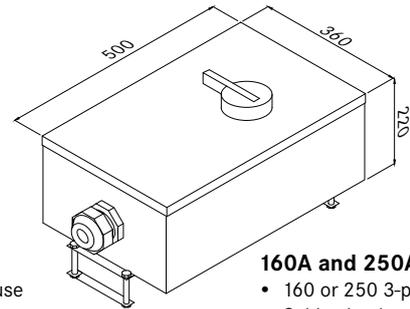
- 6 mod**
- 6-mod hinged window
  - MCCB 's
  - 6 x Schuko socket
  - Models with type A and B residual current circuit breakers available



- 6 mod**
- 6-mod hinged window
  - MCCB 's
  - 3 x socket
  - Models with type A and B residual current circuit breakers available

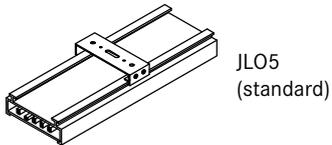


- 125A**
- 125A 3-pole switch fuse
  - Cable gland

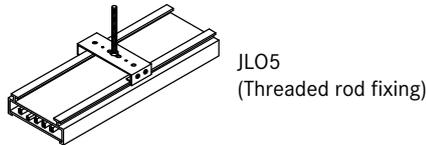


- 160A and 250A**
- 160 or 250 3-pole switch fuse
  - Cable gland

DISTRIBUTING BUSBAR BRACKET FIXING OPTIONS



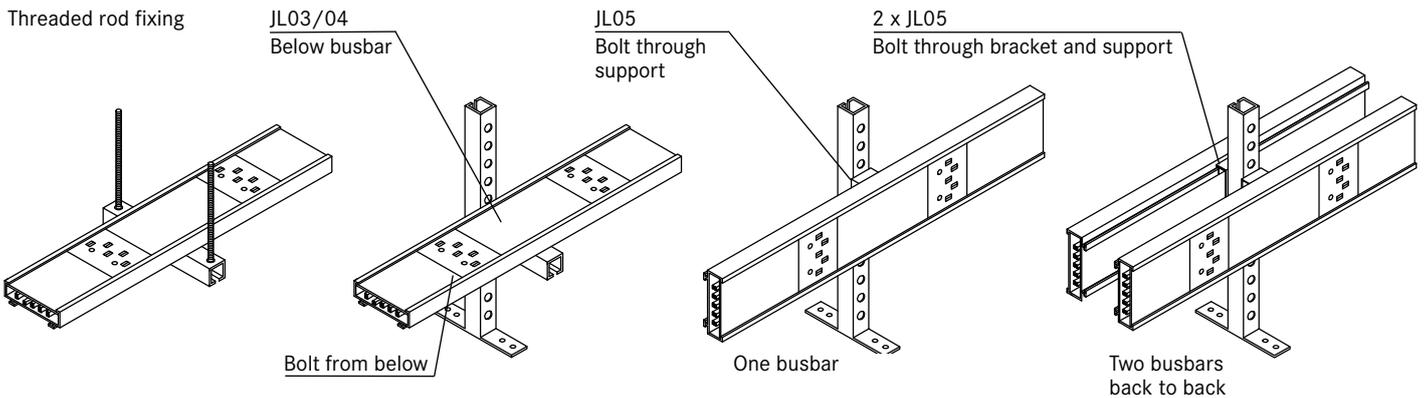
JL05 (standard)



JL05 (Threaded rod fixing)

Adjustable floor/roof/wall bracket

Threaded rod fixing



JL03/04 Below busbar

JL05 Bolt through support

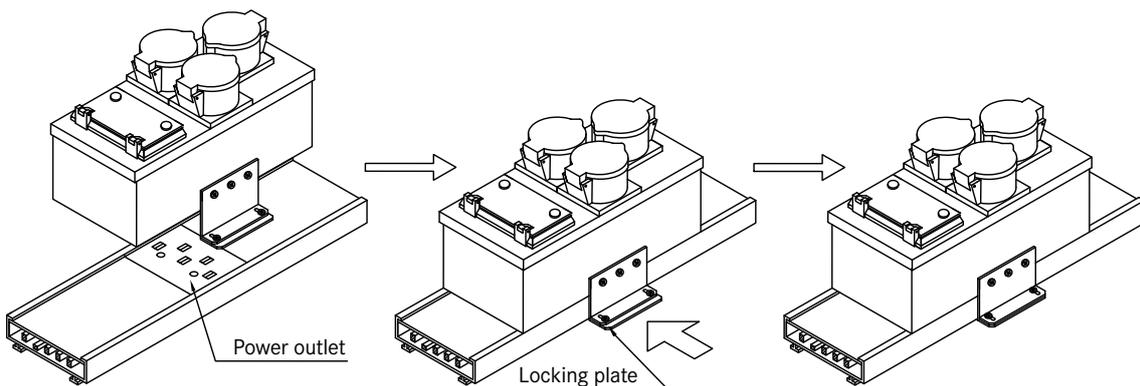
2 x JL05 Bolt through bracket and support

Bolt from below

One busbar

Two busbars back to back

INSTALLABLE POWER OUTLETS INSTRUCTIONS

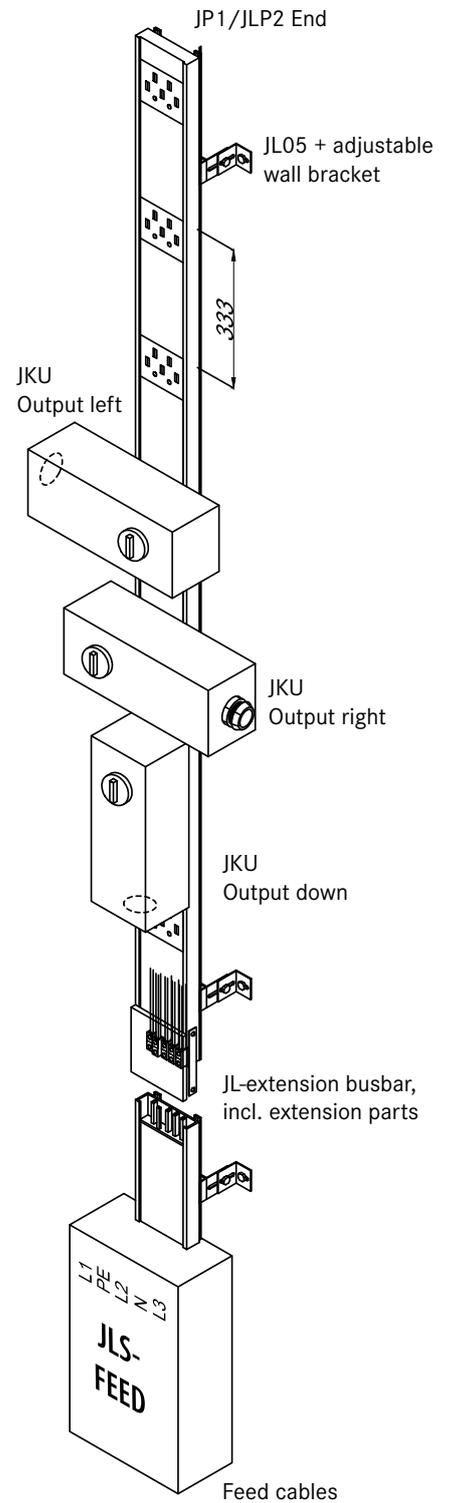


Power outlet

Locking plate



JL630-vertical riser busbars



JL-vertical riser busbar

JL BUSBARS

Rated current [A]	125	160	250	400	630
<b>Busbar</b>					
JL125-800 extension busbar 3m <sup>*)</sup>	JL125	JL160	JL250	JL400	JL630
<b>Feed units</b>					
Feed unit	JLS125	JLS160	JLS250	JLS400	JLS630
Feed unit, mirror image	JLSP125	JLSP160	JLSP250	JLSP400	JLSP630
Feed unit with switch	JLS125-PK	JLS160-PK	JLS250-PK	JLS400-PK	JLS630-PK
Feed unit, mirror image with switch	JLSP125-PK	JLSP160-PK	JLSP250-PK	JLSP400-PK	JLSP630-PK
Flanged feed center	JLE125	JLE160	JLE250	JLE400	JLE630
Flanged feed center, mirror image	JLEP125	JLEP160	JLEP250	JLEP400	JLEP630
Flanged feed center with switch	JLE125-PK	JLE160-PK	JLE250-PK	JLE400-PK	JLE630-PK
Flanged feed center, mirror image with switch	JLEP125-PK	JLEP160-PK	JLEP250-PK	JLEP400-PK	JLEP630-PK
Flanged end feed	-	-	-	JLL400	JLL630
Flanged end feed, mirror image	-	-	-	JLLP400	JLLP630
<b>Angles</b>					
Flat angle right	JLK125	JLK160	JLK250	JLK400	JLK630
Flat angle left	JLV125	JLV160	JLV250	JLV400	JLV630
Angle down	JLA125	JLA160	JLA250	JLA400	JLA630
Angle up	JLY125	JLY160	JLY250	JLY400	JLY630
Intersection	JLR125	JLR160	JLR250	JLR400	JLY630
T-joint	JLT125	JLT160	JLT250	JLT400	JLY630
<b>Fittings</b>					
End cap	JLP1	JLP1	JLP1	JLP2	JLP2
Universal fixing bracket	JLO1	JLO1	JLO1	JLO2	JLO2
Threaded rod fixing	JLO3/JLO4	JLO3/JLO4	JLO3/JLO4	JLO3/JLO4	JLO3/JLO4
Joint cover, spare	JK1	JK1	JK1	JK1	JK1
Extension connector	JLJ1	JLJ2	JLJ3	JLJ4	JLJ5
IP 54 outlet protection	JLU	JLU	JLU	JLU	JLU

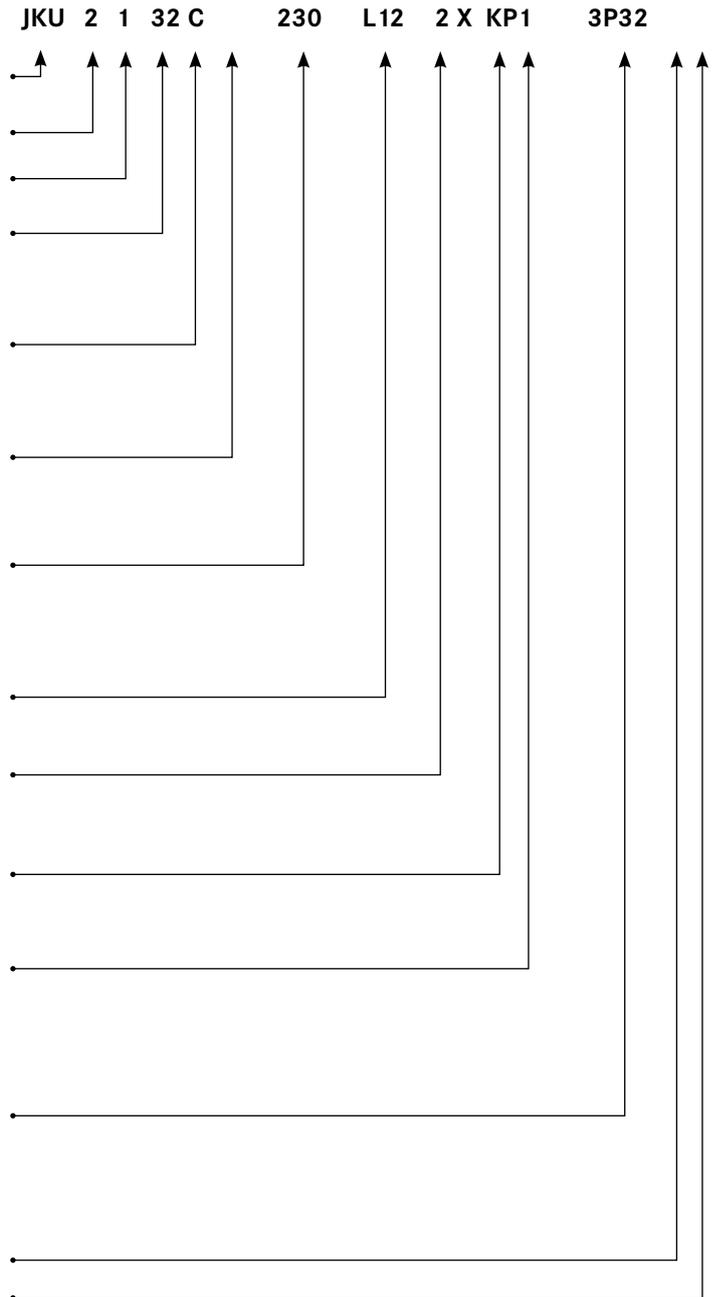
\*) Cut-to-length busbars and internal fire barriers on request.

Busbar, feed and angles are standard features in IP 4X, if text IP 54 is after the title, it increases IP classification. For example "JL125" is IP 4X and "JL125 IP 54" is IP 54.

Installable power outlets	3 outlets/m; 8 outlets/3m busbar
Enclosure degree of protection	IP 4X standard, IP54 on request
Support insulation	Power outlets, covers and support insulation made of glassfibre reinforced flame-retardant (UL-94 class V-0) polyester.
Internal fire barriers	On request
Support spacing	Recommended fixing point interval 1,5-2m
Standards	EN 61439-6, BSEN 61439-6, IEC 61439-6

TYPE TABLE FOR JKU POWER OUTLETS

JKU = Power outlet for JL busbars
Number of MCBs Empty = No MCBs
Number of MCB poles
Current rating [A] 6, 10, 16, 20, 25, 32, 40, 63, 80, 125, 160, 250, 400
B = MCB Trip curve B (fast), short circuit strength 6kA as standard C = MCB Trip curve C (normal), short circuit strength 6kA as standard D = MCB Trip curve D (slow), short circuit strength 6kA as standard KV = Switch fuse KVOO = 00 base and handle fuse (includes switch as standard)
R = Fault current protection 30mA, A = A-Type, B = B-Type, Y = Combination, K = Switch Empty = None
Voltage 24 = 24VDC 48 = 48VDC 230 = 230VAC 400 = 400VAC 2/4 = 230/400VAC
Phases in use: L1 = L1-phase in use, L2 = L2-phase in use, L3 = L3-phase in use L12 = L1- ja L2-phases in use, L23 = L2- ja L3-phases in use Empty = All used
Number of cable glands or sockets (indicated if more than one)
KM = Plastic cable gland with metric or KG = PG-thread MM = Metallic cable gland with metric or MG = PG-thread KP = Cable gland with PVC KK = Cable gland with rubber cable KJ = Cable gland with conducting wires KX = Cable gland with special cable or conducting wires
Cable or wire length [m]
Socket types (examples) pieces before type; 2 x, 3 x, etc. 5P16 = CEE16A5P6H400V (3P+N+PE) 5P32 = CEE32A5P6H400V (3P+N+PE) 5P63 = CEE32A5P6H400V (3P+N+PE) 3P16 = CEE16A3P6H230V (1P+N+PE) 3P32 = CEE32A3P6H230V (1P+N+PE) SCH = single Schuko (1P+N+PE) 2SCH = twin Schuko, 3SCH = triple Schuko, etc. (These Shukos have a common MCB) Empty = No sockets
M = Meter with eg display and kWh metering
X = Special power outlet



JKU-POWER OUTLETS ALWAYS ACCORDING TO THE CUSTOMER'S NEEDS

JL-distributing busbars meant for JKU-Power outlets are classified according to the table above.

JKU-power outlets are always delivered according to the customer's specifications. Current ratings are 6, 10, 16, 20, 25, 32, 40, 63, 80, 125, 160, 250 and 400A.

Power outlets can be equipped with different MCBs, switches, on/off switches, sockets, kWh meterings, fault current protectors, cable glands, cables, connectors, conductors etc.

With classificationtable the assembly is easy to determine. The adjacent image has composition according to the table above.



JKU 2132C 230 L12 2XKP1-3P32

- 2 x 1-pole 32A MCBs, Trip curve C, 6kA
- 2 x 1m PVC-cables with 32A 1-phase connectors

EXAMPLES OF JKU POWER OUTLETS

16A 230VAC



**JKU 6116C 230 6XSCH**

- 6 x 1-pole 16A MCBs, Trip curve C, 6kA
- 6 x Schuko socket



**JKU 6116C 230 6XSCH MX**

- 6 x 1-pole 16A MCBs, Trip curve C, 6kA
- 6 x Schuko socket
- Digital display meter for eg kWh metering
- Connectors for remote reading

16A 230VAC / 32A 230VAC



**JKU 2116C 2RAY 230 2X3P16**

- 2 x 1-pole 16A MCBs, Trip curve C, 6kA
- Fault current protection combinations A-Type 30mA
- 2 x 16A 1-phase sockets

**JKU 2132C 2RAY 230 2X3P32**

- 2 x 1-pole 32A MCBs, Trip curve C, 6kA
- Fault current protection combinations A-Type 30mA
- 2 x 32A 1-phase sockets

16A 230VAC / 32A 230VAC



**JKU 1116C 230 3P16**

- 1-pole 16A MCBs, Trip curve C, 6kA
- 16A 1-phase socket

**JKU 1132C 230 3P 32**

- 1-pole 32A MCBs, Trip curve C, 6kA
- 32A 1-phase socket



**JKU 2116C 230 2X3P16**

- 2 x 1-pole 16A MCBs, Trip curve C, 6kA
- 2 x 16A 1-phase sockets

**JKU 2132C 230 2X3P 32**

- 2 x 1-pole 32A MCBs, Trip curve C, 6kA
- 2 x Phase sockets 32A



**JKU 2116C 230 2X3P16 MX**

- 2 x 1-pole 16A MCBs, Trip curve C, 6kA
- 2 x 16A 1-phase sockets
- Digital display meter for eg kWh metering
- Connectors for remote reading

**JKU 2132C 230 2X3P 32 MX**

- 2 x 1-pole 32A MCBs, Trip curve C, 6kA
- 2 x 32A 1-phase sockets
- Digital display meter for eg kWh metering
- Connectors for remote reading

16A 230VAC / 32A 230VAC



**JKU 1116C 230 KM20**

- 1-pole 16A MCBs, Trip curve C, 6kA
- Plastic M20-cable gland

**JKU 1132C 230 KM25**

- 1-pole 16A MCBs, Trip curve C, 6kA
- Plastic M25-cable gland



**JKU 3116C 230 3X3P16**

- 3 x 1-pole 16A MCBs, Trip curve C, 6kA
- 3 x 16A 1-phase sockets

**JKU 3132C 230 3X3P 32**

- 3 x 1-pole 32A MCBs, Trip curve C, 6kA
- 3 x 32A 1-phase sockets



**JKU 3116C 230 3KP1 3P16**

- 3 x 1-pole 16A MCBs, Trip curve C, 6kA
- 3 x 1m PVC-cables with 16A 1-phase connectors

**JKU 3132C 230 3KP1 3P32**

- 3 x 1-pole 32A MCBs, Trip curve C, 6kA
- 3 x 1m PVC-cables with 32A 1-phase connectors

16A 400VAC / 32A 400VAC



**JKU 1316C 400 5P16**

- 3-pole 16A MCB, Trip curve C, 6kA
- 16A 3-phase socket

**JKU 1332C 400 5P32**

- 3-pole 32A MCB, Trip curve C, 6kA
- 32A 3-phase socket



**JKU 2316C 400 2X5P16**

- 2 x 3-pole 16A MCBs, Trip curve C, 6kA
- 2 x 16A 3-phase sockets

**JKU 2332C 400 2X5P32**

- 2 x 3-pole 32A MCBs, Trip curve C, 6kA
- 2 x 32A 3-phase sockets



**JKU 3316C 400 3X5P16**

- 3 x 3-pole 16A MCBs, Trip curve C, 6kA
- 3 x 16A 3-phase sockets

**JKU 3332C 400 3X5P32**

- 3 x 3-pole 32A MCBs, Trip curve C, 6kA
- 3 x 32A 3-phase sockets



**JKU 3316C 400 3XKP1 5P16**

- 3 x 3-pole 16A MCBs, Trip curve C, 6kA
- 3 x 1m PVC-cables with 16A 3-phase connectors

**JKU 3332C 400 3XKP1 5P32**

- 3 x 3-pole 32A MCBs, Trip curve C, 6kA
- 3 x 1m PVC-cables with 32A 3-phase connectors

16A 400VAC / 32A 400VAC



**JKU 2316C 400 2X5P16 MX**

- 2 x 3-pole 16A MCBs, Trip curve C, 6kA
- 2 x 16A 3-phase sockets
- Digital display meter for eg kWh metering
- Connectors for remote reading

**JKU 2332C 400 2X5P32 MX**

- 2 x 3-pole 32A MCBs, Trip curve C, 6kA
- 2 x 32A 3-phase sockets
- Digital display meter for eg kWh metering
- Connectors for remote reading



**JKU 2316C 2RAY 400 2X5P16**

- 2 x 3-pole 16A MCBs, Trip curve C, 6kA
- Fault current combinations 30mA A-Type
- 2 x 16A 3-phase sockets

**JKU 2332C 2RAY 400 2X5P32**

- 2 x 3-pole 32A MCBs, Trip curve C, 6kA
- Fault current combinations 30mA A-Type
- 2 x 32A 3-phase sockets

16A 400VAC



**JKU 1316C 400 KM20 X**

- 3-pole 16A MCBs, Trip curve C, 6kA
- M20 Plastic cable gland
- Without lockable hinged window

32A 400VAC



**JKU 1332C 400 KM32 X**

- 3-pole 32A MCBs, Trip curve C, 6kA
- M32 Plastic cable gland
- Without lockable hinged window

16A 230/400VAC / 32A 230/400VAC (SEPARATE 1-POLE MCBs)



**JKU 6116C 2/4 2X5P16**

- 6 x 1-pole 16A MCBs, Trip curve C, 6kA
- 2 x 16A 3-phase sockets

**JKU 6132C 2/4 2X5P32**

- 2 x 1-pole 32A MCBs, Trip curve C, 6kA
- 2 x 32A 3-phase sockets



**JKU 9116C 2/4 3X5P16**

- 9 x 1-pole 16A MCBs, Trip curve C, 6kA
- 3 x 16A 3-phase sockets

**JKU 9132C 2/4 3X5P32**

- 9 x 1-pole 32A MCBs, Trip curve C, 6kA
- 3 x 32A 3-phase sockets



**JKU 9116C 2/4 3XKP1 5P16**

- 9 x 3-pole 16A MCBs, Trip curve C, 6kA
- 3 x 1m PVC-cables with 16A 3-phase connectors

**JKU 9132C 2/4 3XKP1 5P32**

- 9 x 1-pole 32A MCBs, Trip curve C, 6kA
- 3 x 1m PVC-cables with 32A 3-phase connectors



**JKU 6116C 2/4 2X5P16 MX**

- 6 x 3-pole 16A MCBs, Trip curve C, 6kA
- 2 x 16A 3-phase sockets
- Digital display meter for eg kWh metering
- Connectors for remote reading

**JKU 6132C 2/4 2X5P32 MX**

- 6 x 1-pole 32A MCBs, Trip curve C, 6kA
- 2 x 32A 3-phase sockets
- Digital display meter for eg kWh metering
- Connectors for remote reading

10A 230VAC



- JKU 6110C 230 6XC14**
- 6 x 10A 1P MCBs, Trip curve C, 6kA
  - 6 x C14-sockets

16/32A 400VAC



- JKU 1316C-3116C 400 5P16-5P32**
- 3-pole 16A MCBs, Trip curve C, 6kA
  - 3-pole 32A MCBs, Trip curve C, 6kA
  - 16A 3-phase sockets
  - 32A 3-phase sockets

16A 230/400VAC



- JKU 2316C 3116C 2/4 2X5P16 3XSCH**
- 2 x 3-pole 16A MCBs, Trip curve C, 6kA
  - 3 x 1-pole 16A MCBs, Trip curve C, 6kA
  - 2 x 16A 3-phase sockets
  - 3 x Schuko socket



- JKU 2316C 1116C 2/4 2X5P16 2SCH**
- 2 x 3-pole 16A MCBs, Trip curve C, 6kA
  - 1-pole 16A MCBs, Trip curve C, 6kA
  - 2 x 16A 3-phase sockets
  - Twin Schuko socket

63A 400VAC



- JKU 1363C 400 5P63**
- 3-pole 63A MCBs, Trip curve C, 6kA
  - 63A 3-phase socket

63A 4VDC



- JKU 2263C 48 2XSB175A**
- 2 x 2-pole 63A MCBs, Trip curve C, 6kA
  - 2 x SB175A-sockets

125A 400VAC



- JKU 125 400 KVKE KM50**
- 125A 3P switch fuse
  - M50 Plastic cable gland



- JKU 125 KV00 400 KM50**
- 125A switch
  - Fuse base
  - M50 plastic cable gland

125A 400VAC



- JKU 125 K 400 KM50**
- 125A compact circuit breaker
  - M50 plastic cable gland



- JKU 13125C 400 5P125**
- 3-pole 125A MCBs, Trip curve C, 6kA
  - 125A 3-phase socket

160A 400VAC / 250A 400VAC



- JKU 160 KVKE 400 MM63**
- 160A 3-pole switch fuse
  - Metallic M63 cable gland
- JKU 250 KVKE 400 MM63**
- 250A 3-pole switch fuse
  - Metallic M63 cable gland



MJ busbars are used for high power electricity distribution and energy transfer in industrial applications, as vertical risers and transfer in buildings, as well as for supplying smaller busbar trunking systems. They are typically installed as busducts between transformers and main switchboards, and between switchboards.

The structure of MJ busbars lends itself to easy modifications. This is why the busbars are most often designed and manufactured specifically for each customer.

MJ busbar trunking systems are offered as turnkey deliveries, either installed or as material deliveries. It is also possible to install fixed power outlets with switch fuses or MCCBs to the busbars.

The busbar has a steel housing with an aluminium cover. The standard degree of protection is IP31. The range includes 4- and 5-bar models with aluminium conductors for 800-4-000A ratings.



MJ transformer flexible joints



Open, flexible transformer connection with MJ busduct



MJ fittings with XMAV mountings

TECHNICAL DATA

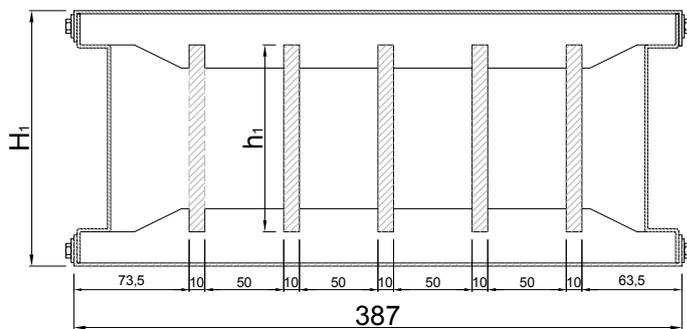
Product name	MJ800	MJ1000	MJ1250	MJ1600	MJ2000	MJ2500	MJ3150	MJ4000	MJ4000X
Rated current [A]	800	1000	1250	1600	2000	2500	3150	4000	4000
Rated voltage [V]	690	690	690	690	690	690	690	690	690
Weight [kg/m, indicative]	15	20	20	25	30	35	40	45	46
<b>Short circuit strength</b>									
• short-time withstand current (1s) [kA]	40	43	60	60	60	75	82	82	100
• peak [kA]	105	105	132	132	132	168	182	182	220

Installable power outlets	Fixed
Enclosure degree of protection	IP 31
Support insulation	Support insulation made of glassfibre reinforced flame-retardant (UL-94 class V-0) polyester.
Thermal expansion	Taken into account in design.
Internal fire barriers	Made on order. Internal fire barrier EII20. ISOVER SKOL-80 fire insulation board. Polyester tape, s =0.063 mm. Fire barrier length 120 mm.
Transformer connection	With flexible connection busducts.
Support spacing	Maximum fixing point interval 2 metres.
Standard	EN/IEC 61439-1/6

MJ 800 - 2500 (4P /5P)

Dimensional drawings, with aluminium conductors

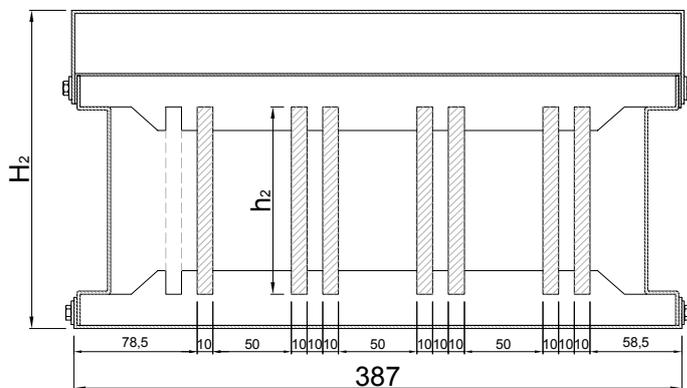
Type	Rated current	H <sub>1</sub>	h <sub>1</sub>	PEN /4P	N /5P	PE /5P
MJ 800	800A	104	60	100 %	100 %	100 %
MJ 1000	1000A	124	80	100 %	100 %	100 %
MJ 1250	1250A	144	100	100 %	100 %	100 %
MJ 1600	1600A	164	120	100 %	100 %	100 %
MJ 2000	2000A	204	160	100 %	100 %	100 %
MJ 2500	2500A	244	200	100 %	100 %	100 %

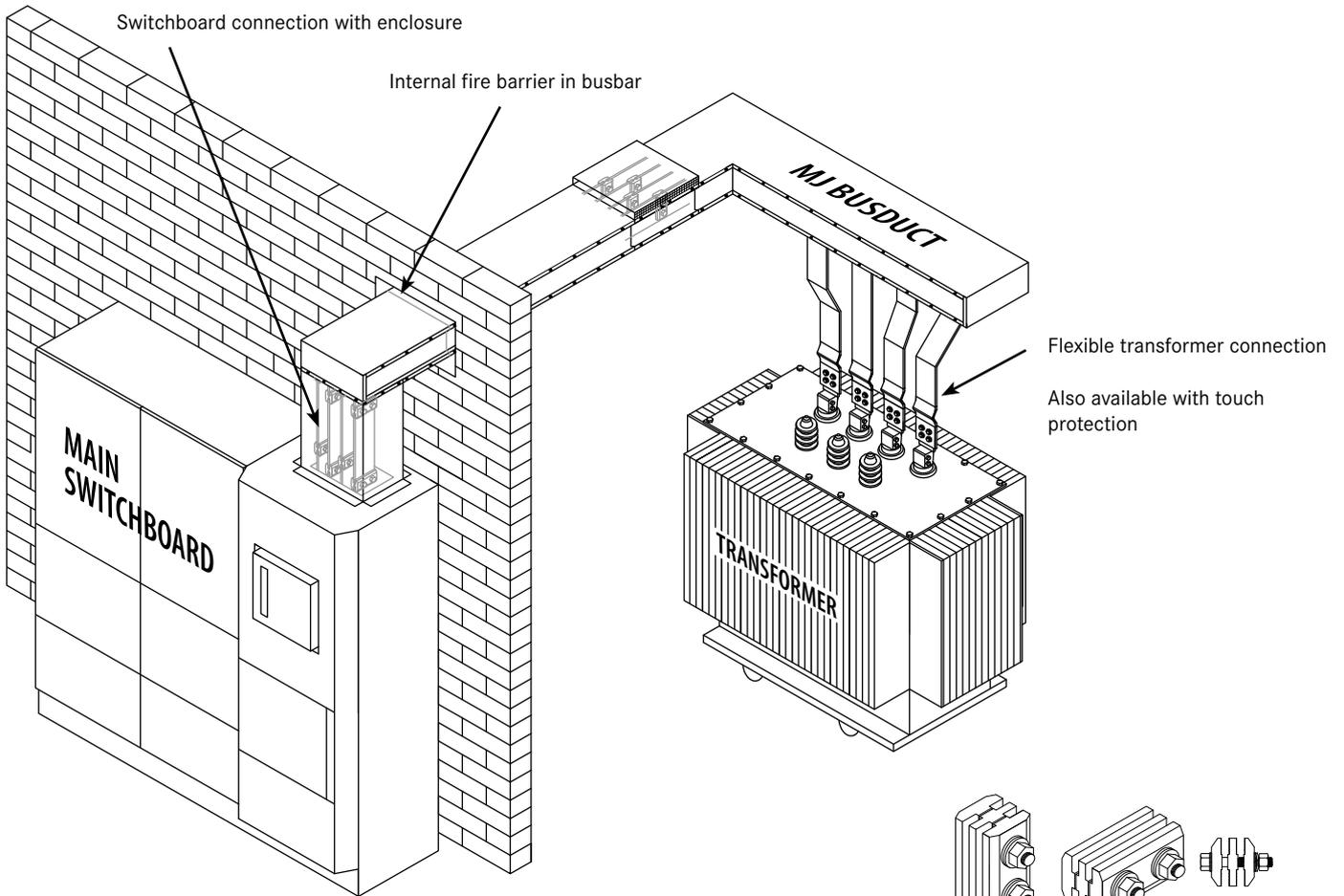


MJ 1000 - 4000 (4P)

Dimensional drawings, with aluminium conductors

Type	Rated current	H <sub>2</sub>	h <sub>2</sub>	PEN
MJ 1000	1000A	144 (104)	60	50 / 100 %
MJ 1250	1250A	144 (104)	60	50 / 100 %
MJ 1600	1600A	164 (124)	80	50 / 100 %
MJ 2000	2000A	184 (144)	100	50 / 100 %
MJ 2500	2500A	204 (164)	120	50 / 100 %
MJ 3150	3150A	244 (204)	160	50 / 100 %
MJ 4000	4000A	284 (244)	200	50 / 100 %





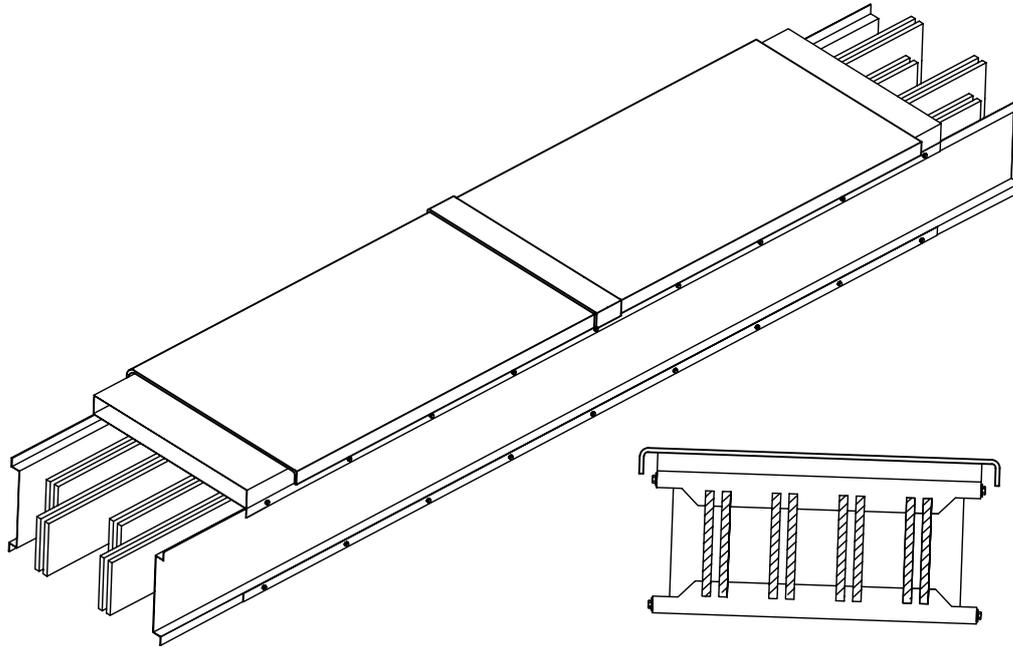
Busduct between main switchboard and transformer.

**XMAV MOUNTINGS**

Busbar size	Busbar mounting XZAP SFS 931	Hex bolt XZAM SFS 934	Hex nut DIN 3738	Bottom plate DIN 679	Pressure plate	Torque
1x10x60	XMAV 1x60	M10x55	M10	4 pcs	2 pcs	44 Nm
2x10x60	XMAV 2x60	M10x75	M10	4 pcs	2 pcs	44 Nm
1x10x80	XMAV 1x80	M12x60	M12	4 pcs	2 pcs	75 Nm
2x10x80	XMAV 2x80	M12x80	M12	4 pcs	2 pcs	75 Nm
1x10x100	XMAV 1x100	M16x60	M16	4 pcs	2 pcs	190 Nm
2x10x100	XMAV 2x100	M16x80	M16	4 pcs	2 pcs	190 Nm
1x10x120	XMAV 1x120	M16x60	M16	4 pcs	2 pcs	190 Nm
2x10x120	XMAV 2x120	M16x80	M16	4 pcs	2 pcs	190 Nm
1x10x160	XMAV 1x160	M16x60	M16	6 pcs	3 pcs	190 Nm
2x10x160	XMAV 2x160	M16x80	M16	6 pcs	3 pcs	190 Nm
1x10x200	XMAV 1x200	M16x60	M16	6 pcs	3 pcs	190 Nm
2x10x200	XMAV 2x200	M16x80	M16	6 pcs	3 pcs	190 Nm

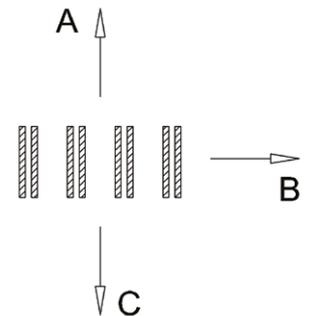
### EMC PROTECTION

The electromagnetic fields of MJ busducts can be reduced by using EMC protection. The EMC cover provides significant reduction in the magnetic field.



### VALUES OF ELECTROMAGNETIC FIELDS

		1000A	1250A	1600A	2000A	2500A	3150A	4000A
<b>Up (A)</b>	From edge of busbar	[ $\mu$ T]						
Without EMC cover	0,5m	21,1	6,4	33,8	42,3	52,8	66,5	84,5
Without EMC cover	1m	5,9	7,3	9,4	11,8	14,7	18,5	23,5
With top EMC cover	0,5m	5,5	6,9	8,8	11,0	13,8	17,3	22,0
With top EMC cover	1m	1,6	2,0	2,6	3,2	4,0	5,0	6,4
With top EMC cover	2m	0,6	0,7	0,7	1,2	1,4	1,8	2,3
<b>To the side (B)</b>	From edge of busbar	[ $\mu$ T]						
Without EMC cover	0,5m	19,1	23,9	30,6	38,2	47,8	60,2	76,4
Without EMC cover	1m	7,2	9,0	11,5	14,4	18,0	22,7	28,8
With top EMC cover	0,5m	9,4	11,7	15,0	18,8	23,4	29,5	37,5
With top EMC cover	1m	3,9	4,8	6,2	7,7	9,6	12,1	15,4
With top EMC cover	2m	1,6	1,9	2,5	3,1	3,9	4,9	6,2
<b>Down (C)</b>	From edge of busbar	[ $\mu$ T]						
Without EMC cover	0,5m	16,0	20,0	25,6	32,0	40,0	50,4	64,0
Without EMC cover	1m	3,3	4,2	5,3	6,7	8,3	10,5	13,3
With top EMC cover	0,5m	7,8	9,7	12,4	15,5	19,4	24,4	31,0
With top EMC cover	1m	1,6	2,0	2,6	3,2	4,0	5,0	6,4



Test reports available on request.

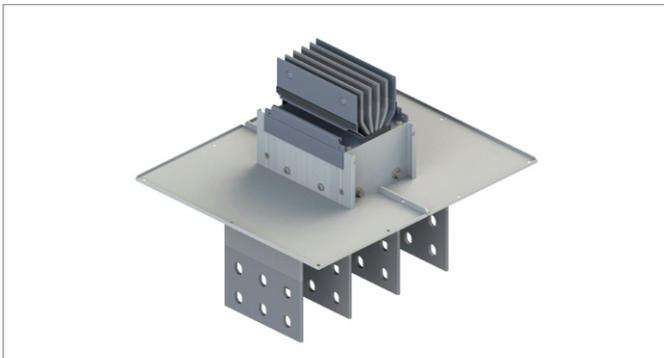
Compact busbars are low impedance sandwich construction compact busbars. The range includes busbars for 500-6300A ratings with aluminium or copper conductors. They are available with 4- and 5 poles. The compact busbars are suitable for a wide variety of applications and have attractive design.

Compact busbars can be used, for example, as busducts between transformers and main switchboards, between switchboards or as a distributing busbar in vertical risers and distribution networks. They can also be used to supply power to the MJ and JL.

Compact busbars find typical use in, for example, machine rooms, hospitals, commercial and industrial buildings, offices and factories.

Its compact structure gives the compact busbar a high short circuit strength and causes an extremely low electromagnetic field. The housing is made of aluminium with simple jointing, which makes the busbar lightweight and easily installable. The compact structure does not take up much space and is perfect for small spaces. Protection class IP55 is standard.

Compact busbars can be equipped with power outlets on both sides of the busbar. A wide range of plug-in outlets can be used. The compact busbar system is offered as a turnkey delivery, either installed or as a material delivery.



Flanged end feed



Distributing busbars structure



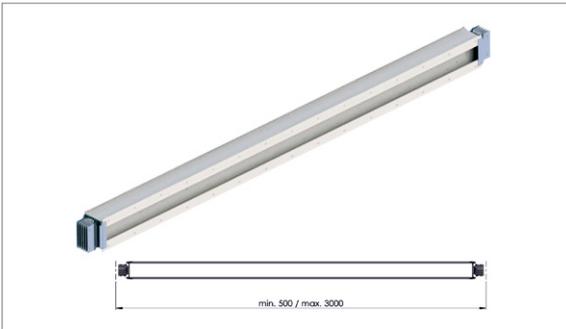
Busbar with power outlet opening



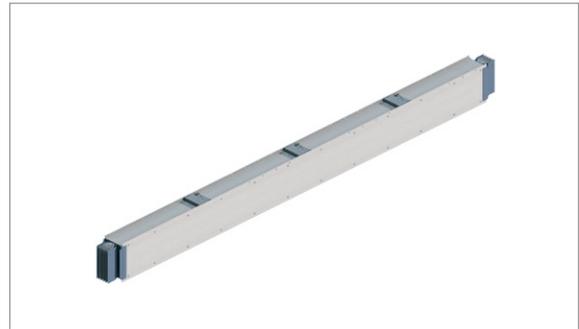
Power outlet with fuse base

BUSBARS

Busbar standard length 3m. Other dimensions on request.



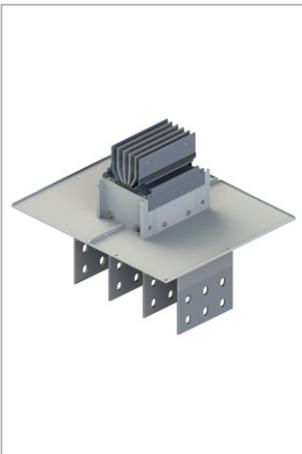
Extension busbar



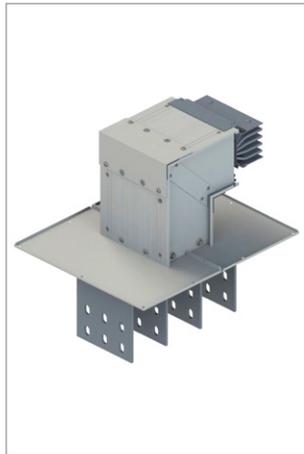
Extension busbar with power outlet opening

- Busbar can have 4 power outlets per side
- Max 8 power outlets per busbar

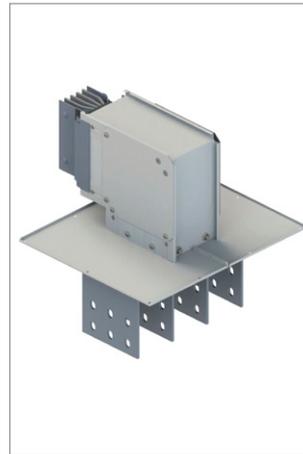
FEED UNITS



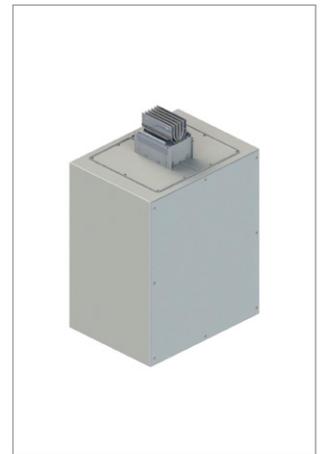
Flanged end feed  
The standard distance between the poles is 100 mm



Flanged feed with horizontal angle  
The standard distance between the poles is 100 mm



Flanged feed with vertical angle  
The standard distance between the poles is 100 mm



Feed unit

ANGLES

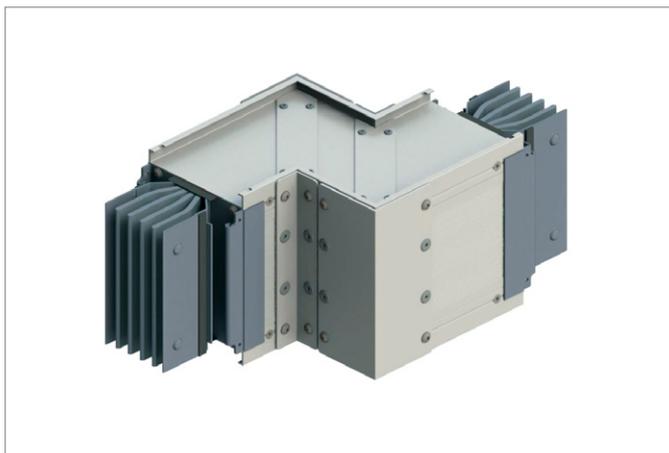


Horizontal angle

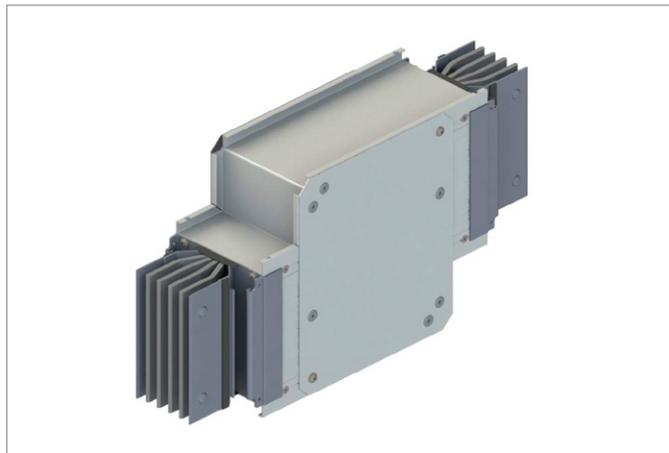


Vertical angle

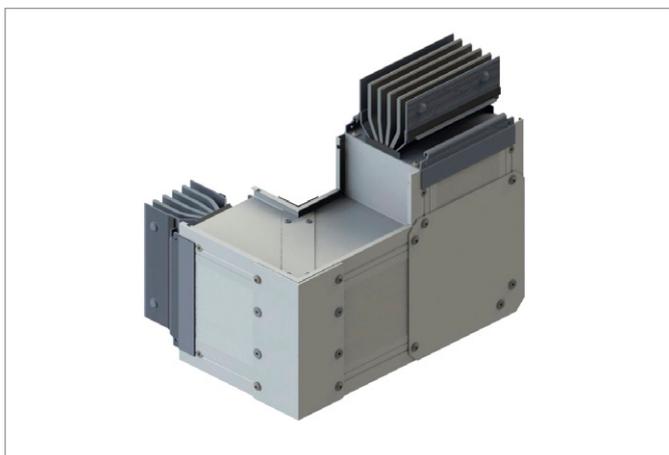
SPECIAL ELEMENTS



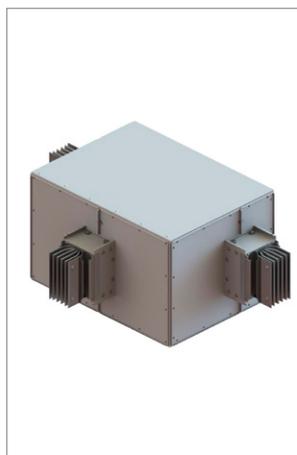
Z-element horizontal



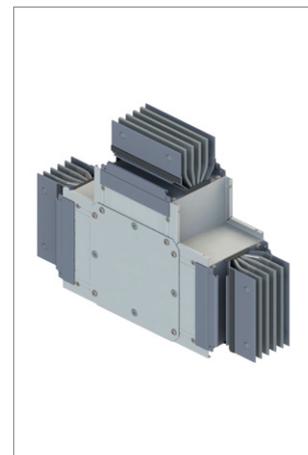
Z-element vertical



Vertical angle with horizontal angle



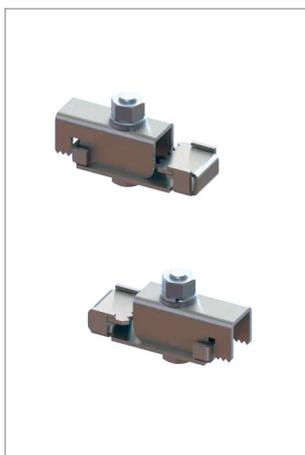
T-joint horizontal



T-joint vertical

FITTINGS AND OTHER PARTS

Other dimensions on request.



Universal fixing brackets



End cap



Transformer connection

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