wöhner

MANUAL 2020

US

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INNOVATION
IS OUR
POWER.

Wöhner develops system solutions for the electro-technical market.

For over 90 years, the Wöhner name has been synonymous with impressive technical achievements and innovations. Today, the Wöhner Group is established worldwide as a specialist for international fuse and busbar systems in the field of power distribution, control technology and renewable energies. Innovations, short response times and the best possible customer service are the factors which enable us to compete in the international market. To help us meet these challenges, we are investing worldwide and continuously searching for skilled employees.

Wöhner offers in excess of 2400 different products.
The naming structure consists of a combination of basic system
and product family names. The individual products
can be used for one or more systems.

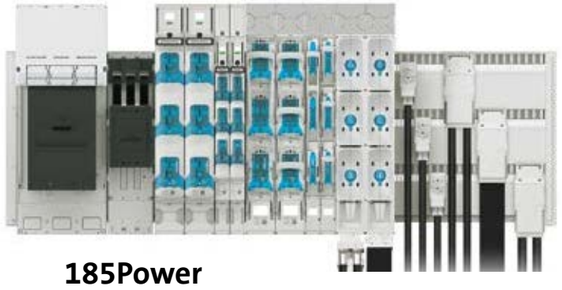
BASIC SYSTEMS

CrossBoard®

Panel

30Compact

60Classic



185Power

PRODUCT FAMILY

AMBUS®
Busbar mounted fuse-holder

BROOME10®
Power supply unit

CAPUS®
Switch-disconnector

CRITO®
Connection terminal plate

EQUES®
Busbar adapter

MOTUS®
Hybrid motor starter

OMUS®
Hybrid switch

QUADRON®
Class J fuse-holder

SECUR®
D0 switch-disconnector
with fuses

Order hotline

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Would you like to order our products? You can reach us by phone or e-mail: **orders@woehner.com**

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PRETTY SMART! OUR CONFIGURATOR.

Configurator

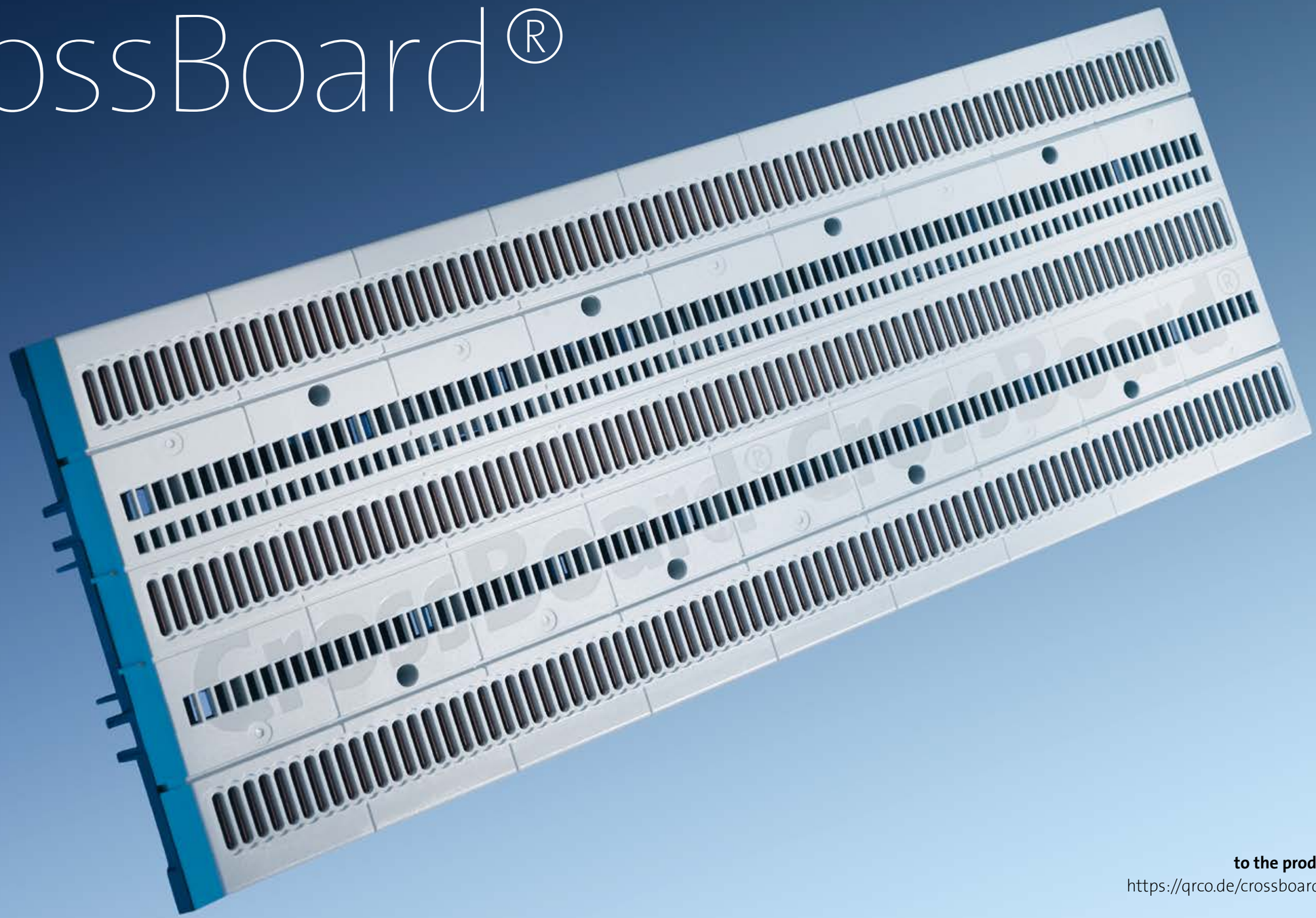
+ 3D planning tool with realistic appearance
+ Guidance by technical parameters
+ Technical documentation

Augmented Reality

+ Presentation of a virtual control cabinet in a real room
+ Import of projects planned by yourself in the configurator is possible

New product

CrossBoard®



to the product:
https://qrco.de/crossboard-en

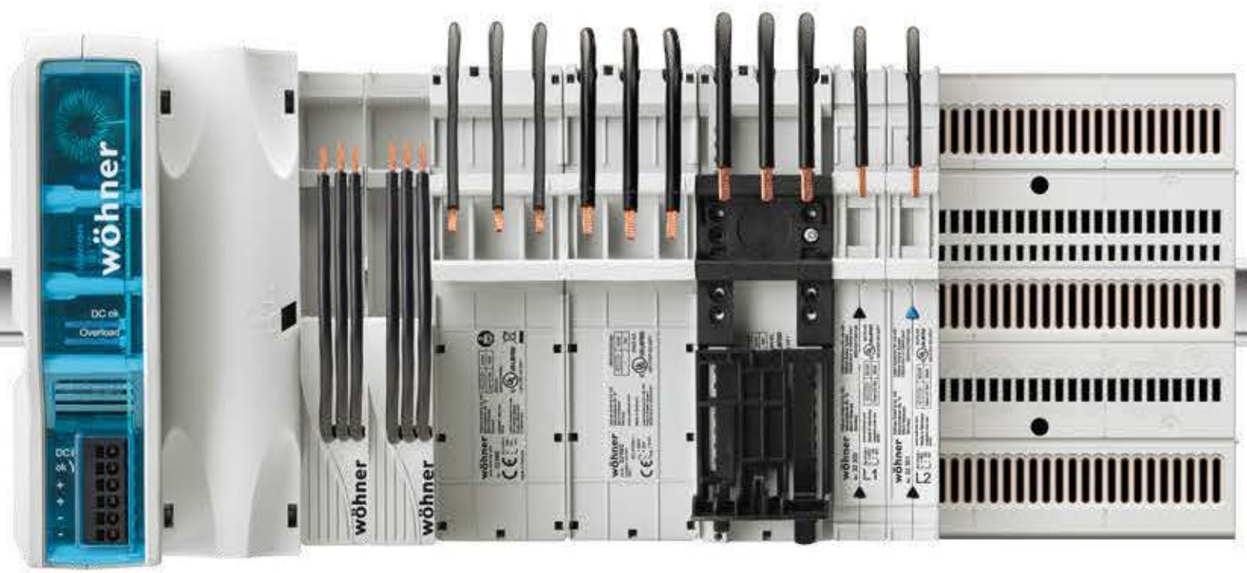
POWER DISTRIBUTION SYSTEM

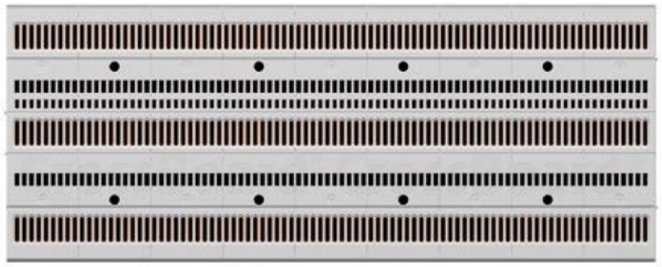
CrossBoard®

CrossBoard® – the global basic system

Tool-free mounting combined with outstanding safety thanks to integrated touch-safe protection makes CrossBoard® by Wöhner the ideal system solution for power distribution equipment up to 100 A. The user can quickly and easily snap components onto the global basic system. The feeding of the system can be achieved via connection modules or the NH fuse-switch-disconnector size 000. CrossBoard® is suitable mainly for applications in machine tool and plant engineering.

The modular structure ensures that the systems are clearly structured and, when necessary, easy to change or expand. Motors of up to 4 kW can be supplied directly from the CrossBoard® using the MOTUS® hybrid motor starter. The OMUS® hybrid switch is available for resistive loads with its low power dissipation and high life expectancy thanks to hybrid switch technology. The power supply for supplying the devices with control voltage can be integrated directly on the CrossBoard®.





CrossBoard®

Basic system - connection and mounting platform for all components.
- rated current 100 A
- equipment width: 225 or 405 mm
- height 160 mm
- rated voltage:
  690 V AC / 600 V DC (IEC)
  600 V AC / 600 V DC (UL)
- UL listed

CRITO® CrossBoard

Connection modules for CrossBoard®. Particularly simple, safe and convenient mounting.
- rated current: 48 A or 100 A
- equipment width: 22.5 or 45 mm
- connection range: AWG 14 - 6 or AWG 10 - 1
- equipment width 22.5 m with spring clamp technology for tool-free mounting of cables with CRITO® 22.5 mm
- UL listed

EQUES® CrossBoard

The EQUES® universal adapter can be used to mount measuring and monitoring relays.
- rated current 16 A
- equipment width 22.5 mm
- connection leads AWG 14
- for 1- to 3-pole devices
- fuse compartment for 10x38 Class CC fuses up to max. 16 A
- UL listed

EQUES® CrossBoard

Adapter of 18 mm width, suitable for mounting miniature circuit breakers from various manufacturers.
- rated current: 16 A or 63 A
- equipment width 18 mm
- 1 fixed mounting rail
- connection leads: AWG 14 or 8
- can be combined into 1- to 4-pole adapters via accessories
- UL listed

EQUES® CrossBoard

Adapter for mounting motor protection devices with a fixed DIN rail.
- rated current up to 30 A
- equipment width 45 mm
- connection leads: AWG 14 or 10
- UL listed

EQUES® CrossBoard

The EQUES®CrossBoard adapters are available for simple mounting of motor starter combinations from various manufacturers.
- rated current up to 45 A
- equipment width 45 mm
- adjustable mounting rail
- connection leads:
  AWG 14, 12, 10 or 8
- accessories for mounting of contactors
- UL listed

EQUES® CrossBoard

Adapter, 90 mm wide, to accept circuit breakers of different manufacturers.
- rated current 125 A
- equipment width 90 mm
- fixing adjustable to the circuit breaker
- tool-free mounting of the adapter
- UL listed

OMUS® CrossBoard

Hybrid switch for switching resistive loads. The hybrid switch technology minimises power dissipation.
- continuous current up to 20 A
- equipment width 36 mm
- 4 integrated functions:
  energy supply, fuse protection, monitoring and switching
- 3-pole or 1-pole switching
- UL listed

MOTUS® CrossBoard

Hybrid motor starter with integrated functions: direct and reversing starter, overload protection and emergency stop function. Significantly reduced space requirements and wiring costs.
- 3 design versions: up to 0.6 A, up to 2.4 A and up to 9 A
- equipment width 22.5 mm
- hybrid switch technology
- up to 30 mil. switching cycles
- versions with IO-Link interface
- UL listed

BROOME10® CrossBoard

Power supply for direct connection on the CrossBoard®.
- rated voltage 24 V DC
- nominal output current 10 A
- equipment width 45 mm
- no back-up fuse required
- series and parallel connection to expand the current and voltage range
- UL listed

CrossBoard® - CRITO® - QUADRON® - BROOME10®

3-pole

CrossBoard® basic system, touch-safe protected with CrossLink® interface

Type	Rated current	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
CrossBoard®225	100 A	225	160	1	79.8	06		11225
CrossBoard®405		405		1	137.2	06		11405

CRITO®CrossBoard connection module, 3-pole, with spring clamp technology, cover cap and CrossLink® interface

Type	Rated current	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
with integrated spring terminals 1.5 - 16 mm², AWG 14 - 6	48 A	22.5	160	1	21.5	07		01592
with box terminals 6 - 50 mm² / AWG 10 - AWG 1	100 A	45	160	1	25.0	07		01593

BROOME10®CrossBoard power supply, with CrossLink® interface

Type	Nominal output current	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
24 V DC, with push-in terminals	10 A	45	160	1	71.8	21		36200

parallel connection for increased current and series connection for increased voltage possible

MOTUS®CrossBoard - OMUS®CrossBoard

hybrid switches for switching of inductive and resistive loads

MOTUS®CrossBoard hybrid motor starter, 3-pole, with reversing function and CrossLink® interface

Type	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
electronic unit 0.075 - 0.6 A direct and reversing starter	22.5	160	1	50.9	21		36109
electronic unit 0.18 - 2.4 A direct and reversing starter			1	50.7	21		36110
electronic unit 1.5 - 6.5 A direct and reversing starter			1	51.4	21		36111

MOTUS®CrossBoard hybrid motor starter IO-Link, 3-pole, with reversing function, CrossLink® interface and communication interface

Type	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
electronic unit IO-Link 0.18 - 3 A direct and reversing starter	22.5	160	1	51.4	21		36130
electronic unit IO-Link 1.5 - 6.5 A direct and reversing starter			1	51.4	21		36131

Replacement fuse, for MOTUS®CrossBoard

Type	Pack size	Weight kg/100 u.	PG		Part No.
fuse 16 A for version 0.6 A and 2.4 A	3	2.8	21		31567
fuse 20 A for version 6.5 A	3	2.8	21		31568
fuse 30 A for version 6.5 A for motors with heavy-duty starting	3	2.8	21		31569

OMUS®CrossBoard hybrid switch, 3- or 1-pole switchable, for resistive loads, with CrossLink® interface

Type	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
electronic unit, 20 A (UL)	36	160	1	55.2	21		36159

supplied with both load and control plug

Replacement component, for OMUS®CrossBoard

Type	Pack size	Weight kg/100 u.	PG		Part No.
3-pole load plug with spring terminals	1	1.5	21		36916
3-pole load plug with screw terminals	1	1.4	21		36918
12-pole control plug with spring terminals	1	0.6	21		36917

Replacement fuse, for OMUS®CrossBoard

cylindr. fuse link 30 A, time delay	10	0.8	22		31252

EQUES®CrossBoard - Adapters 16 A - 63 A

1-pole, 3-pole

CrossLink® TECHNOLOGY

EQUES®CrossBoard adapter and component support, 1-pole, for MCBs, with **CrossLink® interface**

Type	Rated current	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
phase L1, 1 fixed mounting rail, with leads AWG 14 (2.5 mm²)	16 A	18	160	6	6.0	05		32300
phase L2, 1 fixed mounting rail, with leads AWG 14 (2.5 mm²)	16 A			6	6.0	05		32301
phase L3, 1 fixed mounting rail, with leads AWG 14 (2.5 mm²)	16 A			6	6.0	05		32302
phase L1, 1 fixed mounting rail, with leads AWG 8 (10 mm²)	63 A			6	6.6	05		32307
phase L2, 1 fixed mounting rail, with leads AWG 8 (10 mm²)	63 A			6	6.6	05		32308
phase L3, 1 fixed mounting rail, with leads AWG 8 (10 mm²)	63 A			6	6.6	05		32309
without electrical connection, 1 fixed mounting rail				6	3.3	05		32311

CrossLink® TECHNOLOGY

EQUES®CrossBoard adapter with fuse-carrier, with leads AWG 14 (2,5 mm²), with **CrossLink® Interface**

Type	Rated current	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
1 fixed mounting rail, with fuse-carrier 10x38 / Class CC	12.5 A	22.5	160	1	12.9	05		36009

CrossLink® TECHNOLOGY

EQUES®CrossBoard adapter, basic version, with **CrossLink® interface**

Type	Rated current	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
1 fixed mounting rail, with leads AWG 14 (2.5 mm²)	16 A	45	160	1	12.4	05		32666
1 fixed mounting rail, with leads AWG 10 (6 mm²)	32 A			1	14.0	05		32682

EQUES®CrossBoard - Adapters 12 A - 125 A

1-pole, 3-pole

CrossLink® TECHNOLOGY

EQUES®CrossBoard adapter and component support, comfort version, with **CrossLink® interface**

Type	Rated current	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
1 adjustable mounting rail, with leads AWG 14 (2.5 mm²)	16 A	45	160	1	14.0	05		32668
1 adjustable mounting rail, with leads AWG 14 (2.5 mm²) 160 mm long, for devices with spring terminal technology	16 A			1	10.6	05		32669
2 adjustable mounting rails, with double-leads 2x AWG 12 (2x 4 mm²) 101 / 258 mm long	25 A			1	14.0	05		32677
1 adjustable mounting rail, with leads AWG 12 (4 mm²)	25 A			1	14.5	05		32676
1 adjustable mounting rail, with leads AWG 10 (6 mm²)	32 A			1	15.6	05		32684
1 adjustable mounting rail, with leads AWG 10 (6 mm²) 160 mm long, for devices with spring terminal technology	32 A			1	12.4	05		32686
1 adjustable mounting rail, with leads AWG 8 (10 mm²)	45 A			1	18.0	05		32692
without electrical connection, 1 adjustable mounting rail				9	9.0	05		32665

Extension component, for adapter comfort version

Article	Type	Width	Pack size	Weight kg/100 u.	PG		Part No.
extension module for direct starters	40 mm extension	45	8	2.2	05		32933
extension set for reversing starters		90	4	7.3	05		32934

Accessories, for adapter comfort version

mounting rail 45 mm	10	1.4	05		32947
positioning piece for Siemens S00 and S0	10	1.7	05		32952
positioning piece for Eaton PKZ	10	1.2	05		32979

CrossLink® TECHNOLOGY

EQUES®CrossBoard adapter, with **CrossLink® interface**

Type	Rated current	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
ABB Tmax XT1, Allen-Bradley 140G-G, Siemens 3VA10, 3VA11, 3VA51	160 A	90	160	1	40.0	05		32690
ABB Tmax XT2, Allen-Bradley 140G-H, Eaton NZM1	160 A			1	40.0	05		32691

30Compact

to the product:
https://qrco.de/30compact-en

30 MM / 60 MM BUSBAR SYSTEM

30Compact

Compact busbar system for control technology and power distribution equipment up to 300 A

The 30Compact busbar system is the ideal solution for distribution boards with a rated current up to 300 A. The installation height of just 160 mm allows a particularly compact system to be realised. The 30Compact busbar system offers a clear space advantage compared to the 60Classic busbar system. Especially with smaller systems and their lower power requirements, valuable space can be saved within the cabinet. For such applications the 30Compact is the ideal system.

Busbars
30Compact

– 12 x 5 mm for 3- and 5-pole applications
– 12 x 10 mm for 3-pole applications
– tin-plated versions
– proven load current capacity
– proven short-circuit capacity
– UL listed

Busbar support
30Compact

Busbar support for easy and safe installation. 3-pole with 60 mm distance between busbar centers, also for UL-compliant applications.
– 3-pole busbar support
– for 12 x 5 and 12 x 10 mm busbars
– with end cover
– UL listed, in connection with 3-pole installation

CRITO®
30Compact

Connection module with spring terminals for 30Compact allows especially simple, safe and convenient mounting.
– rated current max. 48 A
– equipment width 20 mm
– connection range AWG 16 - 6
– spring-loaded technology for quick conductor connection
– UL listed

CRITO®
30Compact

Connection terminal plates. Convenient terminals for drill-less connection technology. Integrated touch-safe protection, complies with air and creepage distances as per UL.
– rated current up to 285 A
– equipment width: 54 or 90 mm
– connection range AWG 2 - 300 MCM
– lam. Cu bars
– UL listed

BROOME10®
30Compact

Power supply for direct connection, including adapter with CrossLink® Technology.
– rated voltage 24 V DC
– nominal output current 10 A
– equipment width 45 mm
– no back-up fuse required
– series and parallel connection to expand the current and voltage range
– UL listed

EQUES®
30Compact

The EQUES®30Compact busbar adapters are available for easy mounting of motor starter combinations from various manufacturers.
– rated current: up to 65 A
– equipment width: 45 or 54 mm
– adjustable mounting rail
– connection leads: AWG 10 or 8
– side-mounted module, 9 mm wide
– UL listed

MOTUS®
30Compact

Hybrid motor starter with integrated functions: direct and reversing starter, overload protection and emergency stop function. Significantly reduced space requirements and wiring costs.
– 3 design versions: 0.6 A, 2.4 A and 9 A
– equipment width 22.5 mm
– hybrid switch technology
– up to 30 mil. switching cycles
– versions with IO-Link interface
– UL listed

OMUS®
30Compact

Hybrid switch for switching resistive loads. The hybrid switch technology minimises power dissipation.
– continuous current up to 20 A
– equipment width 36 mm
– 4 integrated functions: energy supply, fuse protection, monitoring and switching
– 3-pole or 1-pole switching
– UL listed

30Compact - Busbar systems

3-pole systems, system height 160 mm

Busbar support, with end cover

For busbar	Pack size	Weight kg/100 u.	PG		Part No.
for busbar 3-pole 12 x 5 and 12 x 10	10	6.8	06		01272

UL spacer

Type	Pack size	Weight kg/100 u.	PG		Part No.
suitable for 01272	10	5.2	06		01374

BROOME10®30Compact power supply, with CrossLink®Technology

Type	Nominal output current	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
24 V DC, with push-in terminals	10 A	45	160	1	71.8	21		36201

parallel connection for increased current and series connection for increased voltage possible

Copper busbar, flat busbar, tin-plated

Type	Length	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
12 x 5	2400	150 A	1	128.4	06		01618
12 x 10	2400	300 A	1	257.0	06		01623

partial lengths on request

Cover section, for 3-pole busbar systems

0.70 m long	2	42.0	06		01314

Mount for cover section, for 3-pole busbar systems

for 01314	10	1.8	06		01317

Busbar cover

for 12 x 5 busbar, 1 m long	10	3.2	06		78463
for 12 - 30 x 5 busbar, 1 m long	10	8.7	06		01244
for 12 - 30 x 10 busbar, 1 m long	10	10.1	06		01245

CRITO®30Compact - Connection technology

1-pole and 3-pole, system height 160 mm

Universal connection terminal, 1.5 - 120 mm², AWG 16 - 250 MCM

For busbar	Connection min. – max.	Terminal space W x H	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
flat busbars 5 mm	1.5 - 16 mm², AWG 16 - 6	7 x 7	65 A	100	2.1	07		01284
	4 - 35 mm², AWG 10 - 2	10 x 11	115 A	50	4.6	07		01285
	16 - 70 mm², AWG 14 - 2/0	14 x 14	175 A	25	7.1	07		01287
	16 - 120 mm², AWG 4 - 250 MCM	17 x 15	255 A	25	10.6	07		01068
flat busbars 10 mm	1.5 - 16 mm², AWG 16 - 6	7 x 7	65 A	100	2.3	07		01289
	4 - 35 mm², AWG 10 - 2	10 x 11	115 A	50	4.7	07		01290
flat busbars 10 mm and section busbars	16 - 70 mm², AWG 14 - 2/0	14 x 14	175 A	25	7.5	07		01292
	16 - 120 mm², AWG 4 - 250 MCM	17 x 15	255 A	25	10.9	07		01203

Cover cap, for universal connection terminals

terminal cover, for 01284 and 01289	20	0.5	07		01093

Brace terminal, up to 150 mm² / 300 MCM, for round conductors

For busbar		Connection min. - max.	Terminal space W x H	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
12, 15, 20 x 5, 10	*	35 - 150 mm², AWG 2 - 300 MCM, lam. Cu. 15 - 20 x 5 - 10	20 x 22	285 A	6	10.2	07		01135

* when using aluminium conductors, observe the maintenance instructions (see chapter 8.2 - Appendix, subsection "Conductor connections")

Connection module, 3-pole, with spring terminals, with cover cap

For busbar	Connection	Width	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
12 x 5, 10	with integrated spring terminals 1.5 - 16 mm², AWG 14 - 6	20	48 A	6	16.0	07		01562

Connection terminal plate, 3-pole, with cover cap

12 x 5, 10	6 - 50 mm², AWG 10 - 2/0, lam. Cu. 7 - 9 x 4 - 10	54	175 A	1	20.6	07		01401
12 x 5, 10	35 - 150 mm², AWG 2 - 300 MCM, lam. Cu. 15 - 20 x 5 - 10	90	285 A	1	57.5	07		01165

EQUES®30Compact - MOTUS®30Compact - OMUS®30Compact

busbar adapters and hybrid switches for switching of inductive and resistive loads

CrossLink® TECHNOLOGY

Busbar adapter with fuse carrier, 16 A, with **removable top section,** with leads AWG 14 (2.5 mm²)

Type	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
1 fixed mounting rail, with fuse-carrier 10x38 / Class CC	22.5	160	1	18.0	05		36001

Busbar adapter, 32 A, with leads AWG 10 (6 mm²)

1 adjustable mounting rail	45	160	4	19.8	05		32590

Busbar adapter, 63 A, with leads AWG 8 (10 mm²)

1 adjustable mounting rail	54	160	4	21.8	05		32591

Side-mounted module, for busbar adapters 32 A to 63 A

for 32590 and 32591	9	160	10	2.0	05		32912

Hybrid motor starter, MOTUS®30Compact, 3-pole, with reversing function and **CrossLink®Technology**

0.075 - 0.6 A direct and reversing starter	22.5	160	1	55.3	21		36101
0.18 - 2.4 A direct and reversing starter	22.5	160	1	55.8	21		36104
1.5 - 6.5 A direct and reversing starter	22.5	160	1	55.9	21		36107

Replacement component, for MOTUS®30Compact

electronic unit 0.075 - 0.6 A direct and reversing starter	1	50.9	21		36109
electronic unit 0.18 - 2.4 A direct and reversing starter	1	50.7	21		36110
electronic unit 1.5 - 6.5 A direct and reversing starter	1	51.4	21		36111
busbar adapter base with CrossLink® interface	1	9.3	05		36113
fuse 16 A for version 0.6 A and 2.4 A	3	2.8	21		31567
fuse 20 A for version 6.5 A	3	2.8	21		31568
fuse 30 A for version 6.5 A for motors with heavy-duty starting	3	2.8	21		31569

Hybrid switch, OMUS®30Compact, 3- or 1-pole switchable, for resistive loads, with **CrossLink®Technology**

Type	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
20 A (UL)	36	160	1	45.2	21		36157

Replacement component, for OMUS®30Compact

electronic unit, 20 A (UL)	1	55.2	21		36159
busbar adapter base with CrossLink® interface	1	10.6	05		36155
3-pole load plug with spring terminals	1	1.5	21		36916
3-pole load plug with screw terminals	1	1.4	21		36918
12-pole control plug with spring terminals	1	0.6	21		36917

Replacement fuse-link, for OMUS®30Compact

cylindr. fuse link 30 A, time delay	10	0.8	22		31252

60Classic

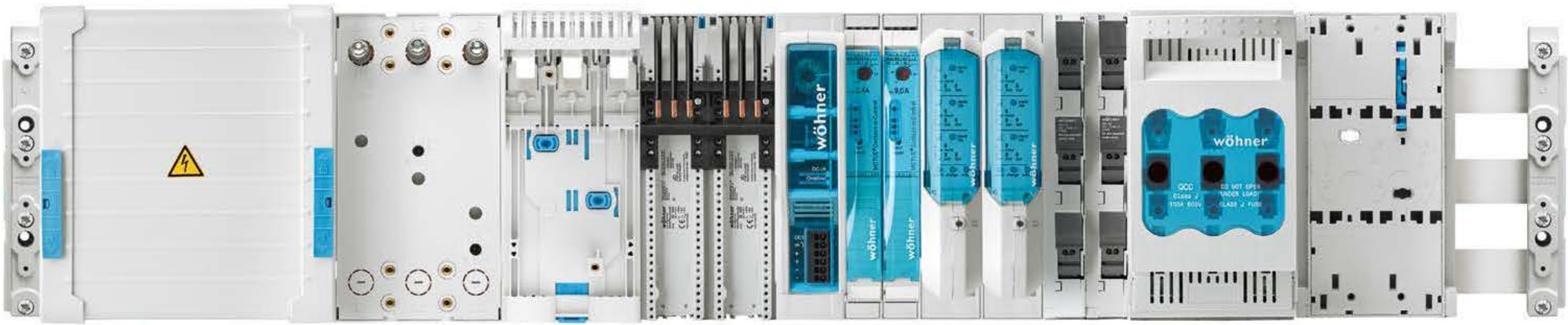
to the product:
https://qrco.de/60classic-en

60 MM BUSBAR SYSTEM

60Classic

Busbar system with a large selection of components for international use

A busbar center distance of 60 mm is the standard in most low-voltage distribution applications today. Developed by Wöhner, this standard has been implemented in the 60Classic system and has become the most common busbar system in many countries. 60Classic is space-saving and provides a huge selection of components, with a maximum rating up to 2500 A. Listed to UL 508, the system meets the requirements for use in the USA and Canada.

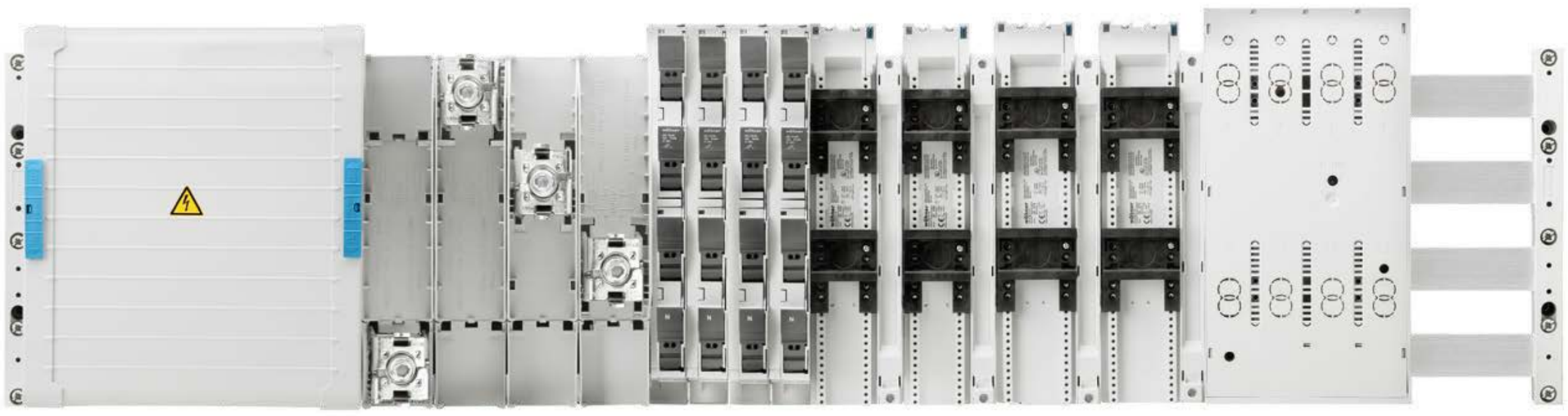


60 MM BUSBAR SYSTEM

60Classic

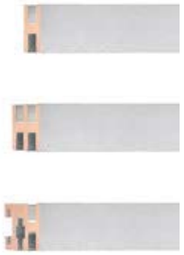
Multipole possibilities in the 60 mm busbar system

A whole range of 4-pole components are available: Connection options for different conductor types and cover systems, holders for cylindrical fuses and a selection of adapters for switching devices, also as PE/N adapter module. A 4-pole system can also be set up with double T-bars at a distance of 60 mm between busbar centres. The 4th busbar is mainly used for the N conductor, alternatively it can be used as PE and as a supplement to the 5-pole-system.



Busbars 60Classic

- 12, 15, 20, 30 x 5, 10 mm
- tin-plated versions
- proven load current capacity
- proven short-circuit capacity
- UL listed



Double-T, triple-T, TCC section busbars 60Classic

- double-T section busbars in 500 mm² and 720 mm²
- triple-T section busbars with 1140 mm²
- TCC section busbars 1600 mm²
- UL listed double-T and triple-T bars

Busbar support 60Classic

Busbar support for easy and safe construction of systems with 60 mm distance between busbar centers.

- 1-, 2-, 3- and 4-pole versions
- adjustable for busbars 12 x 5 - 30 x 10 mm
- versions for double-T and triple-T bars
- versions in connection with spacer or base plate
- UL listed

Busbar support 60Classic

Busbar support for section busbars in the 60Classic system.

- 1- and 3-pole versions
- versions for double-T, triple-T and TCC section busbars
- UL listed double-T and triple-T bars

CRITO®60Classic

Connection module for 60Classic. Particularly simple, safe and convenient mounting. With spring terminals.

- rated current 80 A
- equipment width 20 mm
- connection range AWG 16 - 6
- spring terminal technology for quick conductor connection
- UL listed

CRITO®60Classic

Connection technology for many different conductor types up to MCM 600 cross-section and up to 32 mm wide lam. Cu bars.

- rated current up to 800 A
- equipment width: 54, 81, 135, 153, 204 mm
- connection range AWG 10 - 600 MCM with different conductor connection terminals
- UL listed

EQUES®60Classic

The EQUES® busbar adapters are available for simple mounting of motor starter combinations from various manufacturers.

- rated current up to 80 A
- equipment width from 45 to 90 mm
- moveable DIN rails
- connection leads: terminals up to AWG 6
- versions with CrossLink®Technology
- UL listed

EQUES®60Classic

Busbar adapters for circuit breakers up to 640 A.

- 3- and 4-pole versions
- versions for all commercially available switching devices
- size aligned to the circuit breaker
- easy and convenient mounting
- integrated connection for the respective switching device
- UL listed

MOTUS®
60Classic

Hybrid motor starter with integrated functions: direct and reversing starter, overload protection and emergency stop function. Significantly reduced space requirements and wiring costs.
- 3 design versions: 0.6 A, 2.4 A and 9 A
- equipment width 22.5 mm
- hybrid switch technology
- up to 30 mil. switching cycles
- versions with IO-Link interface
- UL listed

OMUS®
60Classic

Hybrid switch for switching resistive loads. The hybrid switch technology minimises power dissipation.
- continuous current up to 20 A
- equipment width 36 mm
- 4 integrated functions: energy supply, fuse protection, monitoring and switching
- 3-pole or 1-pole switching
- UL listed

AMBUS®
60Classic

Busbar mounted fuse-holder for Class CC or 10x38 fuses up to 32 A. Snap-on mounting on busbars, convenient connection with springtype terminals on outgoing side.
- equipment width 27 mm
- 2-, 3- and 4-pole versions
- versions with LED display
- 1-pole version for photovoltaic applications
- UL listed

CRITO®

Brace terminals for round or flat conductor. Simple and convenient connection due to overlap of the busbar and conductor.
- conductor connection possible from top and bottom
- looping possible
- for round conductors AWG 2 - 600 MCM
- for flat conductors 50 - 100 mm wide
- UL listed

BROOME10®
60Classic

Power supply for direct connection, including adapter with CrossLink® Technology.
- rated voltage 24 V DC
- nominal output current 10 A
- equipment width 45 mm
- no back-up fuse required
- series and parallel connection to expand the current and voltage range
- UL listed

QUADRON®
60Classic

Class J busbar mounted fuse-holder with CrossLink®Technology. Spring-loaded for secure connection, tool-free installation, easily change outgoing direction.
- for Class J fuses up to 400 A
- integrated fuse adaptor for ease of use
- UL listed

60Classic - Busbar systems

1-, 2-, 3- , 4-pole systems, system height 200 mm

UL busbar support, without end cover

Type	Busbar	Pack size	Weight kg/100 u.	PG		Part No.
3-pole, with internal screw holes	12, 20, 30 x 5, 10	10	14.0	06		01508
4-pole, with internal screw holes		10	19.7	06		01357

UL spacer, for UL busbar supports

suitable for 01508		10	9.1	06		01358
suitable for 01357		10	13.1	06		01359

Base plate, for UL busbar supports 01508, 01231, 01232

240 x 1100		2	73.7	06		01518
240 x 700		2	46.9	06		01515

PE/N busbar support, incl. PE and N labels

Type	Busbar	Pack size	Weight kg/100 u.	PG		Part No.
2-pole, indiv. mountable *	12, 15, 20, 25, 30 x 5, 10	10	9.5	06		01356
1-pole, indiv. mountable	12, 20, 30 x 5, 10	1	5.9	06		01601

* stepped busbars

End cover, for universal busbar supports, to cover the busbar ends

Type	Pack size	Weight kg/100 u.	PG		Part No.
for busbar support 01356 and 01601	10	0.7	06		**01325**
for busbar support 01602	1	1.5	06		**01363**
for busbar supports 01484, 01495, 01500, 01508 and 01603	10	2.0	06		01573
for busbar supports 01357 and 01485 (1x 01131 = 1 left + 1 right cover)	5	5.6	06		01131

CrossLink® TECHNOLOGY

BROOME10®60Classic power supply, with **CrossLink®Technology**

Type	Nominal output current	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
24 V DC, with push-in terminals	10 A	45	200	1	71.8	21		36202

parallel connection for increased current and series connection for increased voltage possible

60Classic - Busbar systems with section busbars

1-, 3-, 4-pole systems

Busbar support, for double-T section, without end cover

Type	Pack size	Weight kg/100 u.	PG		Part No.
1-pole, to be attached to 01231 and individually mountable	4	13.0	06		01116
3-pole, with internal screw holes	3	59.1	06		01231

Busbar support, for triple-T section, without end cover

1-pole, to be attached to 01232 and individually mountable	4	15.0	06		01132
3-pole, with internal screw holes	2	69.7	06		01232

Busbar support, for TCC section, without end cover

3-pole, with internal screw holes	2	69.7	06		**01422**

End cover, for busbar support for section busbars

for busbar supports 01116 and 01132	4	1.8	06		01373
for busbar supports 01231 and 01232	4	4.8	06		01234
for busbar support 01422	4	5.3	06		**01425**

End cover, for universal busbar supports, to cover the busbar ends

Type	Pack size	Weight kg/100 u.	PG		Part No.
for busbar support 01356 and 01601	10	0.7	06		**01325**
for busbar supports 01484, 01495, 01500, 01508 and 01603	10	2.0	06		01573
for busbar supports 01357 and 01485 (1x 01131 = 1 left + 1 right cover)	5	5.6	06		01131

60Classic - Busbar systems

standard copper busbars and section busbars

Copper busbar, flat, tin-plated

Type	Length	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
busbar 12 x 5	2400	150 A	1	128.4	06		01618
busbar 20 x 5	2400	362 A	1	214.4	06		01620
busbar 30 x 5	2400	500 A	1	321.4	06		01622
busbar 12 x 10	2400	300 A	1	257.0	06		01623
busbar 20 x 10	3600	564 A	1	650.0	06		01140
busbar 20 x 10	2400	564 A	1	428.6	06		01624
busbar 30 x 10	3600	630 A	1	970.0	06		01204
busbar 30 x 10	2400	630 A	1	643.2	06		01625

rated current for busbar 30 x 10 in 60Classic system up to 756 A
partial lengths on request

Section copper busbar, tin-plated

Type	Length	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
double-T section busbar 500 mm²	3600	1200 A	1	1596.0	06		01224
double-T section busbar 500 mm²	2400	1200 A	1	1062.0	06		01609
double-T section busbar 720 mm²	3600	1400 A	1	2334.0	06		01190
double-T section busbar 720 mm²	2400	1400 A	1	1554.0	06		01608
triple-T section busbar 1140 mm²	3600	1800 A	1	3693.6	06		01227
triple-T section busbar 1140 mm²	2400	1800 A	1	2462.4	06		01187
TCC section busbar 1600 mm²	2400		1	3416.0	06		01610

partial lengths on request

60Classic - Covering systems

1-, 3- and 4-pole versions

Busbar cover, for 1-pole busbars

Type	Pack size	Weight kg/100 u.	PG		Part no.
for 12 - 30 x 5 busbar, 1 m long	10	8.7	06		01244
for 12 - 30 x 10 busbar, 1 m long	10	10.1	06		01245
for double-T and triple-T section, 1m long	5	38.0	06		01252
for 12 x 5 busbar, 1 m long	10	3.2	06		78463

independent from system, for individual busbars

Cover section, for 3-pole busbar systems

700 x 195	2	75.0	06		01025

Mount, for cover section for 3-pole busbar systems

depth 32 mm, for 01025	10	3.9	06		01026
depth 107 mm, for 01025, 01236, 01237, 01238	8	12.0	06		01320

snaps directly onto busbars 12, 15, 20, 25, 30 x 5, 10, double-T and triple-T section

Holder set, for cover sections for 3-pole busbar systems

set consisting of left and right holder, for covers 01554, 01555 and 01417	1	18.0	07		01136

Cover section, for holder set for 3-pole busbar systems

front mounted, 1.10 m long, for holder 01136	1	45.1	07		01554
top / bottom, 1.10 m long, for holders 01136 or 01137	2	27.1	07		01555
top / bottom, slotted, 1.10 m long, for holders 01136 or 01137	2	23.0	06		01417

snaps directly onto busbars 12, 15, 20, 25, 30 x 5, 10, double-T and triple-T section

Holder set, for cover sections for 4-pole busbar systems

set consisting of left and right holder, for covers 01599, 01555 and 01417	1	21.0	07		01137

Cover section, for holder set for 4-pole busbar systems

front mounted, 1.10 m long, for holder 01137	1	58.0	07		01599
top / bottom, 1.10 m long, for holders 01136 or 01137	2	27.1	07		01555
top / bottom, slotted, 1.10 m long, for holders 01136 or 01137	2	23.0	06		01417

Compartment section, for adjusting the installation depth for double-T and triple-T section busbar systems

48 mm deep, 2.40 m long	1	70.0	06		01236
76 mm deep, 2.40 m long	1	105.0	06		01237
106 mm deep, 2.40 m long	1	140.0	06		01238

CRITO®60Classic - Connection technology

3- and 4-pole versions

Connection module, 3-pole, for 12, 15, 20, 25, 30 x 5, 10 busbars and section busbars, with spring terminals, **with cover cap**

Type	Rated current	Width	Pack size	Weight kg/100 u.	PG		Part No.
with integrated spring terminals 1.5 - 16 mm², AWG 14 - 6	48 A	20	8	18.1	07		01563

Connection terminal plate, 3-pole, for 12 x 5 - 30 x 10 busbars and section busbars, **with cover cap**

6 - 50 mm², AWG 10 - 2/0, lam. Cu. 7 - 9 x 4 - 10	175 A	54	1	45.1	07		01240
35 - 120 mm², AWG 2 - 250 MCM, lam. Cu. 9 - 15.5 x 2,4 - 10	250 A	81	1	53.5	07		01243

Accessories, single cover for terminals

Type	Pack size	Weight kg/100 u.	PG		Part No.
for terminal plate 01240	3	0.4	07		01300
for terminal plate 01243	3	0.5	07		01301

Connection set, 3-pole, for 20 x 5 – 30 x 10 and section busbars, **without cover cap**

Type		Rated current	Width	Pack size	Weight kg/100 u.	PG		Part No.
95 - 300 mm², AWG 3/0 - 600 MCM	*	420 A	153	1	155.5	07		01537
lam. Cu. 20 - 32 x 3 - 15		800 A	153	1	132.5	07		01538

* when using aluminium conductors, observe the maintenance instructions (see chapter 8.2 - Appendix, subsection "Conductor connections")

Connection set, 4-pole, for 20 x 5 – 30 x 10 and section busbars, **without cover cap**

95 - 300 mm², AWG 3/0 - 600 MCM	*	420 A	204	1	210.0	07		01147
lam. Cu. 20 - 32 x 3 - 15		800 A	204	1	180.0	07		**01162**

* when using aluminium conductors, observe the maintenance instructions (see chapter 8.2 - Appendix, subsection "Conductor connections")

Cover cap, 3-pole, can also be used as a reserve section cover

For busbar	W x H X D	Pack size	Weight kg/100 u.	PG		Part No.
12, 15, 20, 25, 30 x 5, 10 and section busbars	54 x 200 x 55	1	14.7	07		**01590**
12, 15, 20, 25, 30 x 5, 10 and section busbars	84 x 200 x 55	10	14.9	07		**01413**
20, 25, 30 x 5, 10 and section busbars	135 x 200 x 90	1	29.5	07		01756
12, 15, 20, 25, 30 x 5, 10 and section busbars	180 x 200 x 90	1	33.0	07		01539
12, 15, 20, 25, 30 x 5, 10 and section busbars	228 x 200 x 90	1	37.3	07		01596
12, 15, 20, 25, 30 x 5, 10 and section busbars	250 x 200 x 90	1	39.3	07		01540
20, 25, 30 x 5, 10 and section busbars	270 x 200 x 90	1	64.7	07		01757

Cover cap, 4-pole, can also be used as a reserve section cover

12, 15, 20, 25, 30 x 5, 10 and section busbars	228 x 260 x 90	1	45.0	07		01597

CRITO® - Conductor connection terminals

1-pole terminals and 3-pole terminal covers

Universal connection terminal, 1.5 - 120 mm2, AWG 16 - 250 MCM

For busbar	Connection min. - max.	Terminal space W x H	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
flat busbars 5 mm	1.5 - 16 mm², AWG 16 - 6	7 x 7	65 A	100	2.1	07		**01284**
	4 - 35 mm², AWG 10 - 2	10 x 11	115 A	50	4.6	07		**01285**
	16 - 70 mm², AWG 14 - 2/0	14 x 14	175 A	25	7.1	07		**01287**
	16 - 120 mm², AWG 4 - 250 MCM	17 x 15	255 A	25	10.6	07		**01068**
flat busbars 10 mm	1.5 - 16 mm², AWG 16 - 6	7 x 7	65 A	100	2.3	07		**01289**
	4 - 35 mm², AWG 10 - 2	10 x 11	115 A	50	4.7	07		**01290**
flat busbars 10 mm and section busbars	16 - 70 mm², AWG 14 - 2/0	14 x 14	175 A	25	7.5	07		**01292**
	16 - 120 mm², AWG 4 - 250 MCM	17 x 15	255 A	25	10.9	07		**01203**

Cover cap, for universal connection terminals

Type	Pack size	Weight kg/100 u.	PG		Part No.
terminal cover, for 01284 and 01289	20	0.5	07		**01093**

Brace terminal, 300 mm² / 600 MCM, **for round conductors**

For busbar		Connection	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
12, 15, 20 x 5, 10	*	35 - 150 mm², AWG 2 - 300 MCM, lam. Cu. 15 - 20 x 5 - 10	285 A	6	10.2	07		01135
20, 25, 30 x 5, 10 and section busbars		Cu 95 - 185 mm², AWG 3/0 - 350 MCM	310 A	6	31.2	07		**01318**
20, 25, 30 x 5, 10 and section busbars	*	Cu 95 - 300 mm², 250 - 600 MCM	420 A	3	42.5	07		**01760**

* when using aluminium conductors, observe the maintenance instructions (see chapter 8.2 - Appendix, subsection "Conductor connections")

Brace terminal, 30 to 105 wide, **for flat conductors**

For busbar	Terminal space	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
20, 25, 30 x 5, 10 and section busbars	30 x 20	800 A	6	30.3	07		**01319**
	32 x 20	800 A	3	34.7	07		**01759**
30 x 10 and section busbars	55 x 10 - 28	1200 A	3	50.0	07		01069
	68 x 10 - 28	1400 A	3	63.0	07		01070
	105 x 10 - 28	1800 A	3	84.0	07		01071

Cover cap, 3-pole, can also be used as a reserve section cover

For busbar	W x H X D	Pack size	Weight kg/100 u.	PG		Part No.
20, 25, 30 x 5, 10 and section busbars	135 x 200 x 90	1	29.5	07		01756
12, 15, 20, 25, 30 x 5, 10 and section busbars	180 x 200 x 90	1	33.0	07		01539
12, 15, 20, 25, 30 x 5, 10 and section busbars	228 x 200 x 90	1	37.3	07		01596
12, 15, 20, 25, 30 x 5, 10 and section busbars	250 x 200 x 90	1	39.3	07		01540
20, 25, 30 x 5, 10 and section busbars	270 x 200 x 90	1	64.7	07		01757

Cover cap, 4-pole, can also be used as a reserve section cover

12, 15, 20, 25, 30 x 5, 10 and section busbars	228 x 260 x 90	1	45.0	07		01597

CRITO® - Conductor connection terminals

1-pole profile terminals for round and flat conductors

Profile terminal, for double-T section busbars

Connection cross-section	Rated current	Terminal space	Pack size	Weight kg/100 u.	PG		Part No.
320 - 800 mm²	1200 A	41 x 20 - 42	3	67.0	07		**01185**
500 - 750 mm²	1200 A	51 x 5 - 28	3	70.5	07		**01906**
600 - 900 mm²	1400 A	64 x 5 - 28	3	84.0	07		**01907**
500 - 1000 mm²	1200 A	51 x 20 - 42	3	73.5	07		**01936**
600 - 1200 mm²	1400 A	64 x 20 - 42	3	85.9	07		**01911**
800 - 1600 mm²	1800 A	81 x 20 - 42	3	101.1	07		**01934**
1000 - 2000 mm²	1800 A	101 x 20 - 42	3	113.7	07		**01935**

for the connection of flat busbars and flexible copper busbars

Profile terminal, for triple-T section busbars

320 - 800 mm²	1200 A	41 x 23 - 45	3	105.0	07		**01513**
500 - 1260 mm²	1400 A	64 x 23 - 45	3	124.0	07		**01008**
1200 - 3600 mm²	1800 A	101 x 23 - 45	3	172.7	07		**01186**

for the connection of flat busbars and flexible copper busbars

Brace terminal, for busbars 30 x 10 and section busbars

500 - 1000 mm²	1200 A	55 x 10 - 28	3	50.0	07		**01069**
600 - 1200 mm²	1400 A	68 x 10 - 28	3	63.0	07		**01070**
1000 - 2000 mm²	1800 A	105 x 10 - 28	3	84.0	07		**01071**

for the connection of flat busbars and flexible copper busbars

CRITO® - Longitudinal busbar connectors

for flat conductors and section busbars

Busbar connecting terminal, for same-size busbars

For busbar	Length	System spacing	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
20, 25, 30 x 5, 10	40	9 - 20 mm	756 A	6	23.3	07		**01990**
	40	13 - 20 mm	756 A	6	25.2	07		**01823**
	95	50 - 60 mm	756 A	3	54.4	07		**01141**
	150	100 - 110 mm	756 A	3	86.6	07		**01886**
double-T section	50	9 - 20 mm	1400 A	6	49.4	07		**01827**
	95	50 - 60 mm	1400 A	3	94.3	07		**01145**
	150	100 - 110 mm	1400 A	3	146.1	07		**01829**
triple-T section	95	50 - 60 mm	1800 A	3	120.6	07		**01274**
	150	100 - 110 mm	1800 A	3	178.0	07		**01275**

3 pieces are required for a 3-pole connection, use 01026 or 01320 as well as 01025 as covers (see 3.4)
for a UL-compliant design of the longitudinal busbar connector, one of the UL separation blocks described below must be used

UL separator set, 3-pole, for longitudinal busbar connector

Type		Width	Pack size	Weight kg/100 u.	PG		Part No.
for longitudinal connecting terminals 01990, 01823, 01827	*	105	1	17.2	06		**01360**
for longitudinal connecting terminals 01141, 01145, 01274	*	145	1	19.6	06		**01361**
for longitudinal connecting terminals 01886, 01829, 01275		200	1	21.8	06		**01362**

* the depth gauge must be tailored to fit

EQUES®60Classic CrossLink®Technology - Busbar adapters 16 A - 45 A

removable top section with CrossLink® interface, the touch-protected base remains on the busbar system

CrossLink® TECHNOLOGY

Busbar adapter with fuse-carrier, 16 A, with removable top section, with leads AWG 14 (2.5 mm²)

Type	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
1 fixed mounting rail, with fuse-carrier 10x38 / Class CC	22.5	200	1	20.0	05		36003

Busbar adapter, 16 A, with removable top section, with leads AWG 14 (2.5 mm²)

for direct starter Allen-Bradley 140M-RC2E, Eaton PKZM0, Siemens S00, Schneider Electric GV2 with spring terminals	45	200	4	42.7	05		32401

Busbar adapter, 25 A, with removable top section, with leads AWG 12 (4 mm)²

2 adjustable mounting rails	45	200	4	42.7	05		32400
2 adjustable mounting rails		260	4	45.0	05		32402

Busbar adapter, 32 A, with removable top section, with leads AWG 10 (6 mm²)

2 adjustable mounting rails	54	200	4	49.2	05		32404
2 adjustable mounting rails		260	4	54.4	05		32408

Busbar adapter, 45 A, with removable top section, with leads AWG 8 (10 mm²)

2 adjustable mounting rails	54	200	4	52.9	05		32412
2 adjustable mounting rails		260	4	56.7	05		32416

Busbar component support, with removable top section, without electrical connection

2 adjustable mounting rails	45	200	4	34.9	05		32420
2 adjustable mounting rails	54		4	38.8	05		32421
2 adjustable mounting rails	45	260	4	36.2	05		32425
2 adjustable mounting rails	54		4	42.1	05		32426

Side-mounted module, for busbar adapters with removeable top section

attachable to both sides	9	200	10	4.3	05		32964

Accessories, for CrossLink® busbar adapters

Type	Pack size	Weight kg/100 u.	PG		Part No.
mounting rail 45 mm	10	1.4	05		32947
mounting rail 54 mm	10	1.5	05		32948
mounting rail 63 mm	10	1.8	05		32949
mounting rail 72 mm	10	2.0	05		32950
mounting rail 81 mm	10	2.1	05		32951
mounting rail end stop	50	0.1	05		32969
connecting element, universal	50	0.1	05		32954
8-pole connector, with support, 250 V	10	3.4	05		32511
10-pole connector, with support, 250 V	10	4.0	05		32513
micro switch for CrossLink® adapter	10	0.9	05		32956

all devices can be mounted directly on busbars 12, 15, 20, 25, 30 x 5, 10 and section busbars

EQUES®60Classic - Busbar adapters 25 A - 80 A

universal version

Busbar adapter, 25 A, with leads AWG 12 (4 mm²)

Type	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
1 adjustable mounting rail	45	200	4	32.5	05		32430
2 adjustable mounting rails			4	32.6	05		32431
2 adjustable mounting rails	90		2	57.1	05		32432
2 adjustable mounting rails	45	260	4	35.7	05		32433

Busbar adapter, 25 A, without leads, with screw terminals 6 mm² / AWG 10 from rear

2 adjustable mounting rails	45	200	4	32.2	05		32436
		260	4	35.2	05		32439

UL terminal cap

for busbar adapters 32436 and 32439	45	15	4	0.8	05		32973

Busbar adapter, 32 A, with leads AWG 10 (6 mm²)

1 adjustable mounting rail	45	200	4	33.3	05		32655
1 adjustable mounting rail	54		4	36.6	05		32441
2 adjustable mounting rails			4	38.0	05		32442
1 adjustable mounting rail	63		4	44.5	05		32443
1 adjustable mounting rail	72		4	44.3	05		32444
2 adjustable mounting rails	81		4	49.5	05		32446
2 adjustable mounting rails	54	260	4	43.3	05		32449

Busbar adapter, 63 A, with leads AWG 8 (10 mm²)

1 adjustable mounting rail	54	200	4	39.2	05		32454
2 adjustable mounting rails			4	41.0	05		32455
1 adjustable mounting rail	63		4	44.9	05		32456
1 adjustable mounting rail	72		4	47.6	05		32457
2 adjustable mounting rails	81		4	51.3	05		32459
2 adjustable mounting rails	54	260	4	43.0	05		32461

Busbar adapter, 80 A, without leads, with screw terminals 16 mm² / AWG 6 from rear

1 adjustable mounting rail	54	200	4	37.3	05		32466
2 adjustable mounting rails			4	38.9	05		32467
1 adjustable mounting rail	72		4	45.0	05		32469
2 adjustable mounting rails	54	260	4	43.8	05		32472

UL terminal cap

for busbar adapters 32466, 32467, 32469 and 32472	54	15	4	0.8	05		32974

all devices can be mounted directly on busbars 12, 15, 20, 25, 30 x 5, 10 and section busbars

EQUES®60Classic - Busbar component supports

universal version

Busbar component support, without electrical connection

Type	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
2 adjustable mounting rails	45	200	4	24.8	05		32477
1 adjustable mounting rail and 1 positioner for Siemens S00	45		4	24.8	05		32635
for direct starter Siemens 3RA6	45		4	24.8	05		32589
2 adjustable mounting rails	54		4	27.7	05		32478
2 adjustable mounting rails	45	260	4	27.9	05		32484
1 adjustable mounting rail and 1 positioner for Siemens S00 and S0	45		4	27.9	05		32636
2 adjustable mounting rails	54		4	38.5	05		32485

Side-mounted module, for busbar adapter

attachable to both sides	9	200	10	2.3	05		32963

PE/N adapter module, with connection terminals 16 mm2 / AWG 6 top and bottom

attachable to busbar adapter on both sides	18	242	4	14.1	05		32146

Accessories, for adapter

Type		Pack size	Weight kg/100 u.	PG		Part No.
mounting rail 45 mm		10	1.4	05		32947
mounting rail 54 mm		10	1.5	05		32948
mounting rail 63 mm		10	1.8	05		32949
mounting rail 72 mm		10	2.0	05		32950
mounting rail 81 mm		10	2.1	05		32951
mounting rail end stop		50	0.1	05		32969
connecting element, universal		50	0.1	05		32954
8-pole connector, with support, 250 V		10	3.4	05		32511
10-pole connector, with support, 250 V		10	4.0	05		32513
lead AWG 14 (2.5 mm²), 105 mm long	*	24	0.3	05		32921
lead AWG 10 (6 mm²), 130 mm long	*	24	0.7	05		32907
lead AWG 4 (25 mm²), 210 mm long	*	24	5.1	05		32914
double-lead 2x AWG 10 (2x 6 mm²), 130 / 280 mm long	*	24	2.5	05		32915

* ultrasonic-welded lead ends

all devices can be mounted directly on busbars 12, 15, 20, 25, 30 x 5, 10 and section busbars

EQUES®60Classic - Busbar adapters 16 A - 100 A

aligned to motor starters

Busbar adapter, 16 A, with leads AWG 14 (2.5 mm²)

Type	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
for direct starter Allen-Bradley 140M-RC2E, Eaton PKZM0, Siemens S00, Schneider Electric GV2 with spring terminals	45	200	4	31.0	05		32429
for reversing starter Allen-Bradley 140M-RC2E, Eaton PKZM0, Siemens S00, Schneider Electric GV2 with spring terminals	90		2	57.0	05		32440

Busbar adapter, 25 A, with leads AWG 12 (4 mm²)

for direct starter Eaton PKZM01, PKE12	45	200	4	33.0	05		32450
for reversing starter Eaton PKZM01, PKE12	90		2	54.6	05		32452
for direct starter Siemens S00 with screw connection	45		4	33.0	05		32445
for direct starter Siemens S00 with spring terminal connection	45	260	4	30.7	05		32637
for reversing starter Siemens S00 with screw connection	90	200	2	54.1	05		32448
for direct starter Siemens S00 with spring terminal connection	45		4	33.0	05		32650

Busbar adapter, 32 A, with leads AWG 10 (6 mm²)

for direct starter ABB MS116/132	45	200	4	36.4	05		32498
for direct starter Eaton PKZM0, PKE32	45		4	36.4	05		32451
for reversing starter Eaton PKZM0, PKE32	90		2	61.2	05		32453
for direct starter Allen-Bradley 140MC/D	45		4	32.5	05		32533
for reversing starter Allen-Bradley 140M-C/D	54		4	38.0	05		32534
for direct starter Schneider Electric GV2-M/P	45		4	33.3	05		32434
for direct starter Schneider Electric GV2-M/P	45	260	4	36.2	05		32438
for direct starter Schneider Electric LUB12, LUB32	45	200	4	32.2	05		32427
for reversing starter Schneider Electric LUB12/32	45	260	4	35.1	05		32428
for direct starter Siemens S0 with screw connection	45		4	33.3	05		32639
for direct starter Siemens S0 with spring terminal connection	45	200	4	32.1	05		32659
for direct starter Siemens S0 with spring terminal connection	45	260	4	32.1	05		32638
for direct starter Siemens 3RA6	45	200	4	44.0	05		32588

Busbar adapter, 63 A, with leads AWG 8 (10 mm²)

for direct starter ABB MS45x, Eaton PKZM4, Siemens S2	55	260	4	43.2	05		32460
for direct starter Allen-Bradley 140M-F	54	200	4	43.0	05		32535
for direct starter ABB MS45x and Eaton PKZ5	72	260	2	51.4	05		32463

Busbar adapter, 80 A, with leads AWG 4 (25 mm²)

for circuit breaker Siemens Sirius frame size S2, 200 mm long	54	200	1	52.1	05		32662
for direct starter Siemens Sirius frame size S2, 260 mm long	54	260	1	59.1	05		32663
for reversing starter Siemens Sirius frame size S2, 260 mm long	117		1	87.3	05		32664
for Siemens NGG, HGG, LGG (up to 80 A)	81	200	2	66.0	05		32029

Busbar adapter, 100 A, with leads AWG 4 (25 mm²)

for circuit breaker ABB MS49x and Siemens Sirius frame size S3, 200 mm long	72	200	1	66.0	05		32981
for Schneider Electric GV4	81	200	1	66.0	05		32034

all devices can be mounted directly on busbars 12, 15, 20, 25, 30 x 5, 10 and section busbars

EQUES®60Classic - Busbar adapters 160 A - 250 A

aligned to circuit breakers

CrossLink® TECHNOLOGY

Busbar adapter, 160 A, 3-pole

Type	Rated current	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
for ABB T-max T1, XT1, T2, XT2, GE FD160, Schneider El. NS80, NSX80, top connection to the system	160 A	90	200	1	81.0	05		32575
for ABB T-max T1, XT1, XT2, Allen-Bradley 140G-G and H, top connection to system	160 A	90		1	81.0	05		32018
for ABB T-max T1, XT1, XT2, Allen-Bradley 140G-G and H, bottom connection to the system	160 A	90		1	81.0	05		32020
for Schneider Electric NSXm 160 and NG125, top connection to system	160 A	90		1	81.0	05		32068
for Schneider Electric HL150	150 A	105	190	1	93.8	05		32600
for Allen-Bradley 140U-H, top connection to the system	160 A	90	200	1	81.0	05		32577
for Eaton NZM1, connection top / bottom	160 A	92		1	81.0	05		32570
for Siemens 3VA10, 11, top connection to the system	160 A	76		1	81.0	05		32660
for Siemens 3VA10, 3VA11, 3VA51 and Siemens NGG, LGG, HGG, top connection to the system	125 A	90		1	81.0	05		32028
for Siemens 3VA10, 3VA11, 3VA51 and Siemens NGG, LGG, HGG, bottom connection to the system	125 A	90		1	81.0	05		32030
for Siemens 3VL1	250 A	105	190	1	95.3	05		32976

Busbar adapter, 250 A, 3-pole, connection to system at the top / bottom

Type	Rated current	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
for ABB T-max T4 and Siemens 3RV1063 *	250 A	105	240	1	122.0	05		32601
for ABB T-max XT4, Allen-Bradley 140G-J	250 A	105	190	1	122.0	05		32023
for Eaton JG	250 A	105		1	90.0	05		32137
for Eaton NZM2-XKR4O and NZM2-XKR4U	250 A	105		1	90.1	05		32140
for Siemens 3VL2, 3VL3	250 A	105		1	95.3	05		32977
for Siemens 3VA12, 20, 21, 22, 52, 61, 62	250 A	105	240	1	102.0	05		32017
for Schneider Electric NSX100-NSX250, GV7, J250	250 A	105	190	1	93.8	05		32156
for Terasaki S250-NJ *	250 A	105	240	1	102.0	05		32592

* connection to system only at the top

Busbar adapter, 250 A, 4-pole, connection to system at the top

Type	Rated current	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
for ABB Tmax T4	250 A	140	270	1	180.0	05		32584
for ABB XT3, XT4, Allen-Bradley 140G-J	250 A	140		1	180.0	05		32586
for Siemens 3VA12, 20, 21, 22, 61, 62	250 A	140		1	153.0	05		32067
for Schneider Electric NSX100-NSX250 *	250 A	140	251	1	118.6	05		32642
for Eaton NZM2-XKR4O	250 A	140	270	1	180.0	05		32580
for Siemens 3VL2, 3VL3	250 A	140		1	180.0	05		32578

* top / bottom connection to the system

all devices can be mounted directly on busbars 12, 15, 20, 25, 30 x 5, 10 and section busbars

EQUES®60Classic - Busbar adapters 630 A

aligned to switchgear or universal busbar adapters

Busbar adapter, 630 A, 3-pole, phase pitch 43 - 45 mm, connection to system at the top / bottom

Type	Rated current	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
for ABB T-max T5, Allen-Bradley 140G-K and Siemens 3RV1073	630 A	140	300	1	252.0	05		32593
for Allen-Bradley 140U-K, 140U-L, 140M-L	630 A		272	1	212.0	05		32138
for Schneider Electric NS400/630, NSX 400/630	630 A			1	222.6	05		32157
for Eaton NZM3-XKR13O and NZM3-XKR13U	630 A		300	1	250.0	05		32978
for Siemens 3VL4	540 A		295	1	222.4	05		32975
for Siemens 3VA13, 14, 23, 24, 53, 54, 63, 64	630 A		300	1	250.0	05		32031
for Siemens 3VT37, OEZ BH630	630 A			1	250.0	05		32641

Busbar adapter, 650 A, 3-pole, phase pitch 70 mm, connection to system at the top

Type	Rated current	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
for ABB T-max T6, Allen-Bradley 140G-M and Siemens 3RV1073	640 A	238	300	1	285.6	05		32064

Busbar adapter, 630 A, 4-pole, phase pitch 43 - 45 mm, connection to system at the top

Type	Rated current	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
for ABB Tmax T5, Allen-Bradley 140G-K	630 A	185	300	1	360.0	05		32585
for Schneider Electric NSX400-NSX630 *	520 A		284	1	283.1	05		32643
for Eaton NZM3-XKR13O	630 A		300	1	350.0	05		32581
for Siemens 3VA13, 14, 23, 24, 53, 54, 63, 64	630 A			1	350.0	05		32033
for Siemens 3VL400	630 A			1	350.0	05		32579

* connection to the system at the top / bottom

all devices can be mounted directly on busbars 12, 15, 20, 25, 30 x 5, 10 and section busbars

MOTUS®60Classic - OMUS®60Classic

for switching of inductive and resistive loads

CrossLink® TECHNOLOGY

Hybrid motor starter, MOTUS®60Classic, 3-pole, with reversing function and **CrossLink®Technology**

Type	Width	Height	Depth	Pack size	Weight kg/100 u.	PG		Part No.
0.075 - 0.6 A direct and reversing starter	22.5	200	156	1	56.1	21		36102
0.18 - 2.4 A direct and reversing starter				1	56.5	21		36105
1.5 - 6.5 A direct and reversing starter				1	56.6	21		36108

Hybrid motor starter IO-Link, MOTUS®60Classic, 3-pole, with reversing function, **CrossLink®Technology and communication interface**

Type	Width	Height	Depth	Pack size	Weight kg/100 u.	PG		Part No.
IO-Link 0.18 - 3 A direct and reversing starter	22.5	200	156	1	56.6	21		36125
IO-Link 1.5 - 6.5 A direct and reversing starter				1	56.6	21		36128

Replacement component, for MOTUS®60Classic

Type	Pack size	Weight kg/100 u.	PG		Part No.
electronic unit 0.075 - 0.6 A direct and reversing starter	1	50.9	21		36109
electronic unit 0.18 - 2.4 A direct and reversing starter	1	50.7	21		36110
electronic unit 1.5 - 6.5 A direct and reversing starter	1	51.4	21		36111
busbar adapter base with CrossLink® interface	1	11.0	05		36114
fuse 16 A for version 0.6 A and 2.4 A	3	2.8	21		31567
fuse 20 A for version 6.5 A	3	2.8	21		31568
fuse 30 A for version 6.5 A for motors with heavy-duty starting	3	2.8	21		31569

Hybrid switch, OMUS®60Classic, 3- or 1-pole switchable, for resistive loads, with **CrossLink®Technology**

Type	Width	Height	Depth	Pack size	Weight kg/100 u.	PG		Part No.
20 A (UL)	36	200	144	1	45.8	21		36158

supplied with both load and control plug

Replacement component, for OMUS®60Classic

Type	Pack size	Weight kg/100 u.	PG		Part No.
electronic unit, 20 A (UL)	1	55.2	21		36159
busbar adapter base with CrossLink® interface	1	10.8	05		36156
3-pole load plug with spring terminals *	1	1.5	21		36916
3-pole load plug with screw terminals	1	1.4	21		36918
12-pole control plug with spring terminals	1	0.6	21		36917

* maximum load current 20 A

Replacement fuse, for OMUS®60Classic

cylindr. fuse link 30 A, time delay	10	0.8	22		31252

all devices can be mounted directly on busbars 12, 15, 20, 25, 30 x 5, 10 and section busbars

AMBUS®60Classic - SECUR®60Classic - Fuse-holders

for cylindrical fuses 10x38

Busbar mounted fuse-holder, 1-pole

Type	For busbar	Rated current	Rated voltage	Width	Pack size	Weight kg/100 u.	PG		Part No.
for fuses 10x38	30 x 5, 10	30 A	1000 V	22.5	12	6.1	01		31570
for fuses 10x38, with LED 110 - 690 V AC / DC	30 x 5, 10	30 A	1000 V	22.5	12	6.6	01		31571
for fuses 10x38	20 x 5, 10	30 A	1000 V	22.5	12	6.3	01		31572

Busbar mounted fuse-holder, 3-pole, with spring terminals

Type	For busbar	Rated current	Rated voltage	Width	Pack size	Weight kg/100 u.	PG		Part No.
for fuses 10x38	12, 15, 20, 25, 30 x 5, 10 and section busbars	30 A	600 V	27	4	18.5	01		31954
for fuses 10x38, with LED 110 - 690 V AC / DC		30 A	600 V	27	4	18.7	01		31955

all devices can be mounted directly on busbars 12, 15, 20, 25, 30 x 5, 10 and section busbars

AMBUS®60Classic - QUADRON®60Classic - Fuse-holders

for fuses according to UL 248

CrossLink® TECHNOLOGY

Busbar mounted fuse-holder, 30 A Class CC, AMBUS®60Classic, 3-pole, with spring terminals

Type	Rated current	Rated voltage	Width	Pack size	Weight kg/100 u.	PG		Part No.
for fuses Class CC	30 A	600 V	27	4	18.6	01		31958
for fuses Class CC, with LED 110 - 690 V AC / DC	30 A	600 V		4	18.8	01		31959

for busbars 12, 20, 30 x 5, 10 and section busbars

Busbar mounted fuse-holder, 30 A - 200 A Class J, QUADRON®60Classic, 3-pole, connection at top / bottom

for fuses Class J 1 - 30 A		30 A	600 V	106	1	138.0	16		33421
for fuses Class J 35 - 60 A		60 A	600 V		1	135.0	16		33422
for fuses Class J 70 - 100 A	*	100 A	600 V		1	129.0	16		33402
for fuses Class J 110 - 200 A	*	200 A	600 V	184	1	278.0	16		33403

for busbars 12, 20, 20 x 5,10 and section busbars
* do not use fuse links with sharp-edged blades

Busbar mounted fuse-holder, 30 A / 60 A Class J, AMBUS®60Classic, complete solution on busbar adapter, 3-pole

for fuses Class J 1 - 30 A, with LED	30 A	600 V	108	1	110.0	16		31968
for fuses Class J 35 - 60 A, with LED	60 A	600 V	126	1	131.0	16		31970

for busbars 12, 20, 20 x 5,10 and section busbars

Busbar mounted fuse-holder, 400 A Class J, QUADRON®60Classic, 3-pole, connection at top or bottom

for fuses Class J 225 - 400 A	400 A	600 V	256	1	690.0	16		33311

for busbars 30x10 and section busbars

CrossLink® TECHNOLOGY

NH busbar mounted fuse-switch-disconnector, size 000 - 3, connection at top / bottom, 3-pole

Type		Rated current	Size	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
box terminal		125 A	NH 000	49.5	200	1	53.5	09		33802
box terminal				89		1	113.0	09		33216
box terminal		160 A	NH 00	106		1	100.0	09		33198
screw M8						1	103.0	09		33398
box terminal		250 A	NH 1	184	243	1	266.0	09		33600
screw M10						1	266.0	09		33601
screw M10	*	400 A	NH 2	210	288	1	522.0	09		33602
screw M12	**	630 A	NH 3	256	300	1	756.0	09		33603

NH busbar mounted fuse-switch-disconnector size 00 with short connection module for 5-pole busbar systems, distribution boards / insulated distribution boards; see 33075 or 33079
* for size 2 the conversion kit 33148 is required for mounting on 5 mm busbars
** size 3 is not suitable for 5 mm busbars

Conversion kit, for mounting on busbars 12, 15, 20, 25 and 30 x 5, only for size 2

for 5 mm busbars	2	1	6.5	09		**33148**

185Power

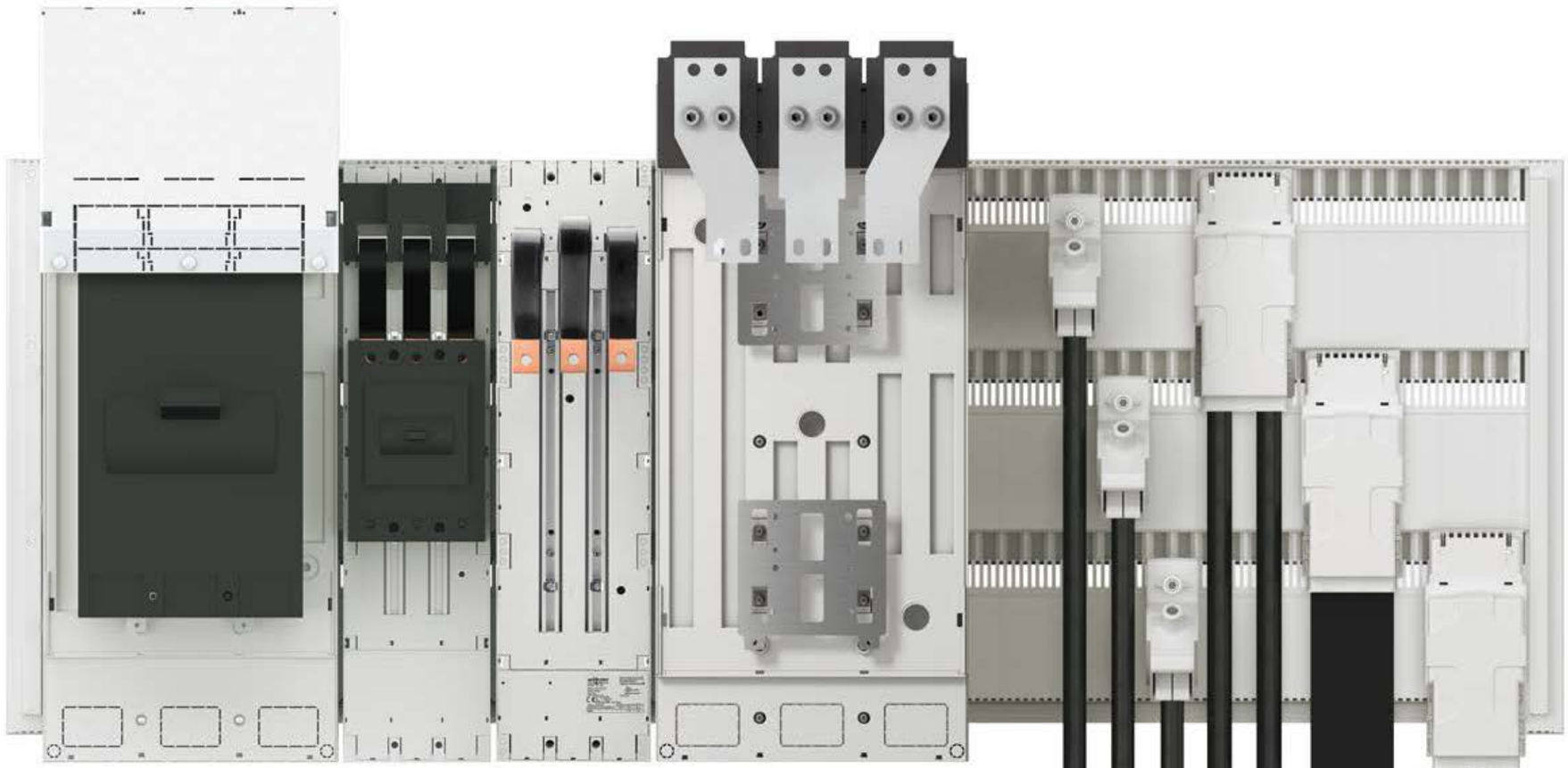
to the product:
https://qrco.de/185power-en

185 MM BUSBAR SYSTEM

185Power

Powerful system solution with 185 mm busbar spacing

The 185Power busbar system by Wöhner is a modular system for low-voltage power distribution. All the components – busbar supports, CrossLink® covers, EQUES® adapters and connection modules – fit together perfectly. When integrating circuit breakers into the system, EQUES® adapters are available for all commercially available circuit breakers for currents from 400 A up to 1200 A. The 185Power allows the user to quickly realize cost-efficient low-voltage distribution systems. The modular structure and compatibility of the components contribute to efficient use of space within the cabinet. Systems based on the 185Power can easily be expanded or modified.



Busbars 185Power

– 30, 40, 60, 80, 100, 120 x 10 mm
– tin-plated versions
– proven load current capacity
– proven short-circuit capacity

Busbar support 185Power

Busbar support for easy and safe construction of systems with 185 mm distance between busbar centers.
– can be aligned on busbars 30, 40, 60, 80, 100, 120 x 10
– end and center cover as accessories

CrossLink®185Power covering system

In the 185Power system the CrossLink® 185Power covering modules, base plate profile and busbar support cover provide optimal all-around touch-safe protection for the busbar system.
– 50 mm and 100 mm width versions
– reliable connection to each other and to the middle and end cover

CRITO®185Power connection module

The compact connection up to 500 A with complete touch-safe protection allows a space-saving arrangement on top of each other.
– V-box terminal for connection of cross-sections of AWG 8 to 500 MCM
– mounting on the CrossLink® touch-safe protection modules or directly on the busbar

CRITO®185Power connection module

Modules for direct connection of cables and flexible copper.
– versions with box terminal, for cable lugs and flat copper up to 80 x 10
– connection top/bottom
– mounting on the CrossLink® touch-safe protection modules or directly on the busbar

EQUES®185Power adapter

The universal busbar adapters for fast and compact mounting of commercially available circuit-breakers.
– rated current: 400 A, 630 A
– equipment width 150 mm
– fast and safe mounting with clamp terminals on the CrossLink® touch-safe protection modules
– optional screw mounting

EQUES®185Power adapter

The busbar adapters are used for fast and simple installation of all commercially available circuit-breakers.
– rated current: 630 A - 1200 A
– equipment width 300 mm
– fast and safe mounting with clamp terminals on the CrossLink® touch-safe protection modules
– optional screw mounting

185Power CrossLink®Technology - Busbar systems

3-pole systems

Busbar support and CrossLink® busbar support cover

Article	Type	Pack size	Weight kg/100 u.	PG		Part No.
universal busbar support	for undrilled flat bars 30, 40, 60, 80, 100, 120 x 10	4	50.0	06		01430
end cover for busbar support 01430	set for one left and one right busbar support	1	39.0	06		01431
centre cover for busbar support 01430	when using the busbar support as a centre support	2	17.0	06		01432

additional busbar supports for drilled busbars and section busbars can be found at www.woehner.com

Copper busbar and busbar cover

Article	Type	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
busbar 30 x 10	length 2.40 m, tinned	630 A	1	643.2	06		01625
busbar 40 x 10	length 2.40 m, tinned	700 A	1	856.8	06		01626
busbar 60 x 10	length 2.40 m, tinned	1100 A	1	1294.0	06		01628
busbar 80 x 10	length 2.40 m, tinned	1300 A	1	1728.0	06		01765
busbar 100 x 10	length 2.40 m, tinned	1550 A	1	2174.0	06		01766
busbar 120 x 10	length 2.40 m, tinned	1800 A	1	2572.8	06		01767
busbar cover	for 12 - 30 x 10 busbar, 1 m long		10	10.1	06		01245

partial lengths on request

CrossLink®185Power - system cover at front

		Pack size	Weight kg/100 u.	PG		Part No.
CrossLink® touch-safe protection cover module	50 mm wide	8	16.0	06		01433
CrossLink® touch-safe protection cover module	100 mm wide	4	34.0	06		01434
completion section	499 mm long	2	5.6	06		01440
completion section	649 mm long	2	7.6	06		01444

the lengths of the completion sections are matched to the lengths of the rear system shrouding;
completion section, length 499 mm, suitable for 01420; completion section, length 649 mm, suitable for 01436

CrossLink®185Power - system cover at rear

		Pack size	Weight kg/100 u.	PG		Part No.
system shrouding, rear *	set for busbar support distance 550 mm (centre to centre)	1	91.3	06		01420
system shrouding, rear *	set for busbar support distance 700 mm (centre to centre)	1	110.0	06		01436
spacer **	set, suitable for 01430	1	13.1	06		01421

* eight spacers are included with the system partitioning
** set consisting of 4 distance pieces, as an accessory when using a centre bar with system partitioning

Busbar connecting terminal, for same-size busbars

		Pack size	Weight kg/100 u.	PG		Part No.
longitudinal busbar connector	40 mm	3	48.0	07		01480
longitudinal busbar connector	60 mm	3	72.0	07		01481
touch-safe protection shroud for longitudinal connectors	3-pole, front and rear mounting, cover width 100 mm	1	29.5	06		01482
touch-safe protection shroud for longitudinal connectors	3-pole, front and rear mounting, cover width 150 mm	1	45.0	06		01416

one longitudinal busbar connecting terminal 01480 is required for the connection of 30 x 10 busbars;
two longitudinal busbar connecting terminals 01480 are required for the connection of 80 x 10 busbars;
one longitudinal busbar connecting terminal 01480 and 01481 each is required for the connection of 100 x 10 busbars;
two longitudinal busbar connecting terminals 01481 are required for the connection of 120 x 10 busbars

system mounting instruction: www.woehner.com/en/products/01430.html

CRITO®185Power CrossLink® - EQUES®185Power CrossLink® 630 A

universal solutions

Connection module, 1-pole, CrossLink® clamp connection for drill-free mounting on the busbar system

Article	Type	Width	Pack size	Weight kg/100 u.	PG		Part No.
connection module	for direct cable connection, with 2 box terminals 300 mm²	98	1	133.0	07		01441
connection module	for lam. Cu max. 2x 80 x 10	98	1	94.5	07		01442
connection module	for 4 cable lugs M12	98	1	165.0	07		01443

Cover cap, for connection module 98 mm wide, 1-pole

cover cap incl. rear touch protection cover	130	1	28.0	07		01437

Busbar adapter, 630 A, clamp connection for drill-free mounting on the busbar system, with and without CrossLink®185Power touch-safe protection module

Type	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
connection at top, CrossLink® clamp connection	630 A	1	590.0	05		32741
connection at bottom, CrossLink® clamp connection	630 A	1	700.0	05		32745

all devices can be mounted directly on busbars 30, 40, 60, 80, 100, 120 x 10

EQUES®185Power CrossLink® - Busbar adapters 1200 A

aligned to circuit breakers

Busbar adapter 1200 A, connection to the system at the top, clamp connection for drill-free mounting on the busbar system, with and without **CrossLink®185Power** touch-safe protection module

ABB

Type	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
ABB Tmax T6, T7 (800 A), Emax E2 (800 A), Siemens 3VA27 (800 A)	800 A	1	2120.0	05		32767
ABB Tmax T7 (1000 A), Emax E2 (1000 A), Siemens 3VA27 (1000 A)	800 A	1	2100.0	05		32766
ABB Tmax T7 (1250 A), Emax E2 (1250 A), Siemens 3VA27 (1250 A)	1200 A	1	3010.0	05		32765
ABB Tmax T7 (1600 A), Emax E2 (1600 A), Siemens 3VA27 (1600 A)	1200 A	1	3150.0	05		32807

Eaton

Eaton NZM4 (630 A, 800 A, 1000 A)	800 A	1	2300.0	05		32763
Eaton NZM4 (1250 A)	1200 A	1	2900.0	05		32762
Eaton NZM4 (1600 A), Siemens 3VL8 (1600 A)	1200 A	1	3060.0	05		32761

Schneider Electric

Schneider Electric NS630B, NS800, NS1000	800 A	1	2620.0	05		32758
Schneider Electric NS1250	1200 A	1	3000.0	05		32757
Schneider Electric NS1600	1200 A	1	3100.0	05		32756

Siemens

Eaton NZM4 (1600 A), Siemens 3VL8 (1600 A)	1200 A	1	3060.0	05		32761
Siemens 3VL5 (630 A)	800 A	1	2100.0	05		32769
Siemens 3VL6 (630 A, 800 A)	800 A	1	1950.0	05		32754
Siemens 3VL7 (1000 A)	800 A	1	2200.0	05		32755
Siemens 3VL7 (1250 A)	1200 A	1	2850.0	05		32753
Siemens 3VA25 (630 A, 800 A, 1000 A)	800 A	1	2200.0	05		32707
ABB Tmax T6, T7 (800 A), Emax E2 (800 A), Siemens 3VA27 (800 A)	800 A	1	2120.0	05		32767
ABB Tmax T7 (1000 A), Emax E2 (1000 A), Siemens 3VA27 (1000 A)	800 A	1	2100.0	05		32766
ABB Tmax T7 (1250 A), Emax E2 (1250 A), Siemens 3VA27 (1250 A)	1200 A	1	3010.0	05		32765
ABB Tmax T7 (1600 A), Emax E2 (1600 A), Siemens 3VA27 (1600 A)	1200 A	1	3150.0	05		32807

Socomec

Socomec Sirco 1250 A (Socomec-Nr. 26003U21), Sirco 1600 A (Socomec-Nr. 26003U61)	1200 A	1	3350.0	05		32752

all devices can be mounted directly on busbars 30, 40, 60, 80, 100, 120 x 10
for further information on current carrying capacity, see product specifications at www.woehner.com

EQUES®185Power CrossLink® - Busbar adapters 1200 A

aligned to circuit breakers

Busbar adapter 1200 A, connection to the system at the bottom, clamp connection for drill-free mounting on the busbar system, with and without **CrossLink®185Power** touch-safe protection module

ABB

Type	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
ABB Tmax T6, T7 (800 A), Emax E2 (800 A), Siemens 3VA27 (800 A)	800 A	1	2300.0	05		32730
ABB Tmax T7 (1000 A), Emax E2 (1000 A), Siemens 3VA27 (1000 A)	800 A	1	2300.0	05		32729
ABB Tmax T7 (1250 A), Emax E2 (1250 A), Siemens 3VA27 (1250 A)	1200 A	1	3028.0	05		32726
ABB Tmax T7 (1600 A), Emax E2 (1600 A), Siemens 3VA27 (1600 A)	1200 A	1	3100.0	05		32797

Eaton

Eaton NZM4 (630 A, 800 A, 1000 A)	800 A	1	2400.0	05		32733
Eaton NZM4 (1250 A)	1200 A	1	3180.0	05		32732
Eaton NZM4 (1600 A), Siemens 3VL8 (1600 A)	1200 A	1	2800.0	05		32731

Schneider Electric

Schneider Electric NS630B, NS800, NS1000	800 A	1	2400.0	05		32747
Schneider Electric NS1250	1200 A	1	3200.0	05		32737
Schneider Electric NS1600	1200 A	1	3350.0	05		32734

Siemens

Eaton NZM4 (1600 A), Siemens 3VL8 (1600 A)	1200 A	1	2800.0	05		32731
Siemens 3VL5 (630 A)	800 A	1	2150.0	05		32796
Siemens 3VL6 (630 A, 800 A)	800 A	1	2350.0	05		32795
Siemens 3VL7 (1000 A)	800 A	1	2200.0	05		32783
Siemens 3VL7 (1250 A)	1200 A	1	3100.0	05		32771
Siemens 3VA25 (630 A, 800 A, 1000 A)	800 A	1	2200.0	05		32708
ABB Tmax T6, T7 (800 A), Emax E2 (800 A), Siemens 3VA27 (800 A)	800 A	1	2300.0	05		32730
ABB Tmax T7 (1000 A), Emax E2 (1000 A), Siemens 3VA27 (1000 A)	800 A	1	2300.0	05		32729
ABB Tmax T7 (1250 A), Emax E2 (1250 A), Siemens 3VA27 (1250 A)	1200 A	1	3028.0	05		32726
ABB Tmax T7 (1600 A), Emax E2 (1600 A), Siemens 3VA27 (1600 A)	1200 A	1	3100.0	05		32797

Socomec

Socomec Sirco 1250 A (Socomec-Nr. 26003U21), Sirco 1600 A (Socomec-Nr. 26003U61)	1200 A	1	3350.0	05		32764

all devices can be mounted directly on busbars 30, 40, 60, 80, 100, 120 x 10
for further information on current carrying capacity, see product specifications at www.woehner.com

EQUES®185Power CrossLink® - Busbar adapters 1200 A

aligned to circuit breakers

Busbar adapter 1200 A, connection to the system at the bottom, phase rotation, clamp connection for drill-free mounting on the busbar system, with and without **CrossLink®185Power** touch-safe protection module

ABB

Type	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
ABB Tmax T7 (1250 A), Emax E2 (1250 A), Siemens 3VA27 (1250 A)	1200 A	1	3000.0	05		32723
ABB Tmax T7 (1600 A), Emax E2 (1600 A), Siemens 3VA27 (1600 A)	1200 A	1	3230.0	05		32722

Eaton

Eaton NZM4 (1250 A)	1200 A	1	3200.0	05		32788
Eaton NZM4 (1600 A)	1200 A	1	3300.0	05		32787

Schneider Electric

Schneider Electric NS1250	1200 A	1	3000.0	05		32719
Schneider Electric NS1600	1200 A	1	3230.0	05		32718

Siemens

Siemens 3VL7 (1250 A)	1200 A	1	3222.0	05		32739
Siemens 3VL8 (1600 A)	1200 A	1	3432.0	05		32738
ABB Tmax T7 (1250 A), Emax E2 (1250 A), Siemens 3VA27 (1250 A)	1200 A	1	3000.0	05		32723
ABB Tmax T7 (1600 A), Emax E2 (1600 A), Siemens 3VA27 (1600 A)	1200 A	1	3230.0	05		32722

Accessories, cover IP20

Article	Type	Pack size	Weight kg/100 u.	PG		Part No.
IP20 Protection cover (front) for adapter, incl. 3 top covers	for ABB Tmax T6, T7	1	125.6	05		32700
	for Eaton NZM4, Legrand DPX³ 1600, GE FK1600	1	123.8	05		32701
	for Schneider Electric NS630B - NS1600	1	122.8	05		32702
IP20 Protection cover (front) for adapter, incl. 3 top covers	for Siemens 3VL7, 3VL8	1	123.0	05		32703
	for Siemens 3VL5, 3VL6	1	128.0	05		32706
touch-safe protection shroud IP20 (rear installation)	for all adapters	1	9.0	05		32704

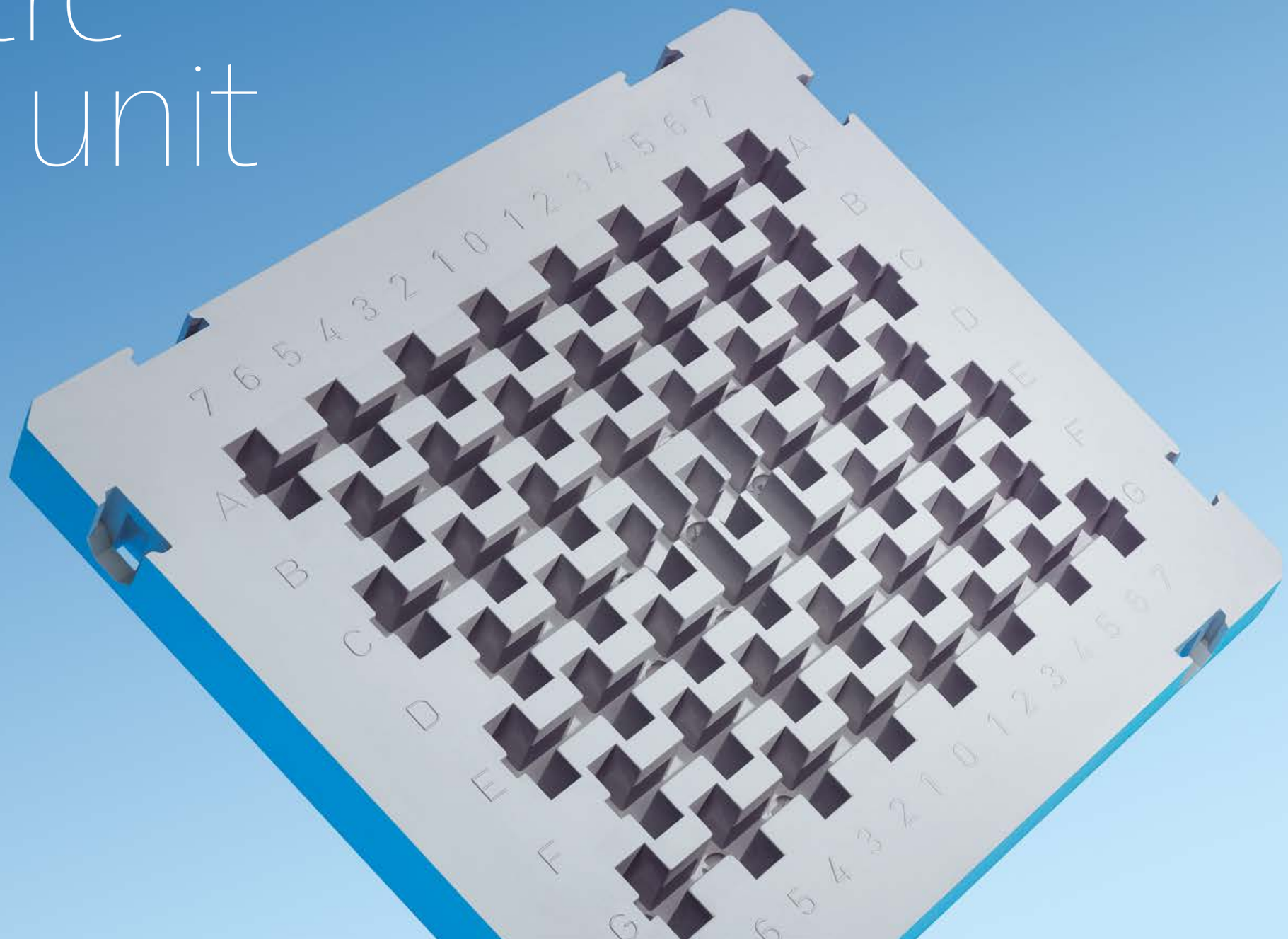
Accessories, current transformer, accuracy class 1

Type	Rated apparent power	Pack size	Weight kg/100 u.	PG		Part No.
current transformer 630 A / 5 A	5.00 VA	1	14.0	23		32983
current transformer 800 A / 5 A	5.00 VA	1	14.0	23		32984
current transformer 1000 A / 5 A	5.00 VA	1	14.0	23		32985
current transformer 1250 A / 5 A	5.00 VA	1	14.0	23		32986
current transformer 1600 A / 5 A	5.00 VA	1	14.0	23		32987

depending on the adapter type, 1 or 2 current transformers can be used per phase; see adapter product description at www.woehner.com

all devices can be mounted directly on busbars 30, 40, 60, 80, 100, 120 x 10
for further information on current carrying capacity, see product specifications at www.woehner.com

Centre feed unit

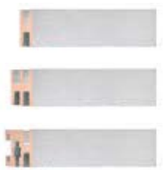


FEEDING SYSTEM

Centre feed unit

Feeding system with high variability and connection convenience

Centre feed unit up to 3000 A combines the advantages of high short-circuit capacity, drill-less mounting, brace terminal technology and a clearly structured design. The fuseless equipment practice of this feeding system puts high requirements on the short-circuit capacity. The busbar supports have been designed specifically for this purpose. This also concerns the large number of connection options for copper and aluminium conductors – whether for round conductors or laminated and solid flat conductor connections. Industrial production and type tests ensure compliance with the required safety standards. The current rating and short-circuit capacity up to 100 kA determined via the type test meet the demanding requirements for this feeding system.



Double-T, triple-T and TCC section busbars

These well-established section busbars provide safe transmission of currents up to 3000 A. Double-T and triple-T section busbars can be connected on both sides.
Versions:
– double-T section busbar
– triple-T section busbar
– TCC section busbar

CRITO® connection technology

These solutions provide for convenient connection of round conductors, flat conductors and cable lugs. Currents up to 3000 A can be brought to the busbar by the individual components.
– brace terminal technology
– round sector and flat conductor
– UL listed

Busbar supports multi-pole

The busbar supports are suitable for 3- or 4-pole systems.
– variable configurations
– double-T and triple-T sections busbars can be used

Busbar support 1-pole

The 1-pole lateral busbar support can also accommodate the TCC section busbars.
– variable configurations
– double-T, triple-T and TCC section busbars can be used

Centre feed units

with double-T and Triple-T section busbar

Centre feed unit

Cabinet width	Mounting dimensions	Busbar length	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
for cabinet width 600 mm	488 - 563	453	1200 A	1	1434.0	11		**35007**
for cabinet width 800 mm	688 - 763	653	1200 A	1	1716.0	11		**35006**
for cabinet width 600 mm	488 - 563	453	1400 A	1	1716.0	11		**35005**
for cabinet width 800 mm	688 - 763	653	1400 A	1	2488.0	11		**35004**
for cabinet width 600 mm	488 - 563	453	1800 A	1	2200.0	11		**35015**
for cabinet width 800 mm	688 - 763	653	1800 A	1	2940.0	11		**35016**

Universal conductor connection terminal 16 mm² to 120 mm², AWG 6 - 250 MCM

For busbar	Connection min. – max.	Terminal space W x H	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
flat busbars 10 mm and section busbars	16 - 120 mm², AWG 4 - 250 MCM	17 x 15	255 A	25	10.9	07		**01203**

Brace terminal for round conductors up to 300 mm² / 600 MCM

For busbar	Connection min. - max.	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
20, 25, 30 x 5, 10 and section busbars	Cu 95 - 185 mm², AWG 3/0 - 350 MCM	310 A	6	31.2	07		**01318**
20, 25, 30 x 5, 10 and section busbars *	Cu 95 - 300 mm², 250 - 600 MCM	420 A	3	42.5	07		**01760**

* when using aluminium conductors, observe the maintenance instructions (see chapter 8.2 - Appendix, subsection "Conductor connections")

Profile terminal, for double-T section busbar, connection at front and back of section busbar

Connection cross-section	Rated current	Terminal space W x H	Pack size	Weight kg/100 u.	PG		Part No.
320 - 800 mm²	1200 A	41 x 20 - 42	3	67.0	07		**01185**
500 - 750 mm²	1200 A	51 x 5 - 28	3	70.5	07		**01906**
600 - 900 mm²	1400 A	64 x 5 - 28	3	84.0	07		**01907**
500 - 1000 mm²	1200 A	51 x 20 - 42	3	73.5	07		**01936**
600 - 1200 mm²	1400 A	64 x 20 - 42	3	85.9	07		**01911**
800 - 1600 mm²	1800 A	81 x 20 - 42	3	101.1	07		**01934**
1000 - 2000 mm²	1800 A	101 x 20 - 42	3	113.7	07		**01935**

Profile terminal, or triple-T-section busbar, connection at front and back of section busbar

320 - 800 mm²	1200 A	41 x 23 - 45	3	105.0	07		**01513**
500 - 1260 mm²	1400 A	64 x 23 - 45	3	124.0	07		**01008**
1200 - 3600 mm²	1800 A	101 x 23 - 45	3	172.7	07		**01186**

for the connection of flat busbars and laminated copper busbars

Centre feed units

with double-T and triple-T section busbar

Brace terminal, 55 to 105 mm wide, for flat conductors

For busbar	Terminal space	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
30 x 10 and section busbars	55 x 10 - 28	1200 A	3	50.0	07		**01069**
30 x 10 and section busbars	68 x 10 - 28	1400 A	3	63.0	07		**01070**
30 x 10 and section busbars	105 x 10 - 28	1800 A	3	84.0	07		**01071**

for the connection of flat busbars and laminated copper busbars

Component, for individual mounting

Article	Type	Pack size	Weight kg/100 u.	PG		Part No.
busbar support, lateral	for centre feed unit with double T and triple T busbars	2	458.0	11		**35008**
busbar support, 4-pole, centre	for centre feed unit with double T busbars	1	458.0	11		**35009**
busbar support, 3-pole, centre	for centre feed unit with triple T busbars	1	458.0	11		**35001**
additional cover holder	for centre feed unit	4	1.4	11		**35017**

Section busbar, copper

Article	Type	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
double-T section busbar 500 mm²	length 453 mm, tinned	1200 A	1	200.6	06		**01225**
double-T section busbar 500 mm²	length 650 mm, tinned	1200 A	1	288.1	06		**01226**
double-T section busbar 720 mm²	length 453 mm, tinned	1400 A	1	293.3	06		**01838**
double-T section busbar 720 mm²	length 653 mm , tinned	1400 A	1	424.0	06		**01831**
triple-T section busbar 1140 mm²	length 453 mm, tinned	1800 A	1	464.0	06		**01188**
triple-T section busbar 1140 mm²	length 653 mm, tinned	1800 A	1	672.3	06		**01189**

for current carrying capacity of the busbars visit www.woehner.com

Centre feed units

Components for TCC section busbars

Busbar holder, 1-pole, lateral

Type	Pack size	Weight kg/100 u.	PG		Part No.
for section busbars	6	11.0	06		**01369**

Section busbar, copper, tin-plated

Type	Length	Pack size	Weight kg/100 u.	PG		Part No.
TCC section busbar 1600 mm²	2400	1	3416.0	06		**01610**

for the connection of flat busbars and laminated copper busbars

Connection screw, with nut and spring washer for TCC section busbars

Type	Connection	Pack size	Weight kg/100 u.	PG		Part No.
hammer-head screw for TCC-profile, with nut and spring washer	M10 x 45	12	5.1	07		**01379**
bolt for TCC-profile, with nut and spring washer	M12 x 60	12	9.1	07		**01380**

Brace terminal, 3/0 to 600 MCM, for round conductors

For busbar	Connection	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
20, 25, 30 x 5, 10 and section busbars *	Cu 95 - 185 mm², AWG 3/0 - 350 MCM	310 A	6	31.2	07		**01318**
20, 25, 30 x 5, 10 and section busbars *	Cu 95 - 300 mm², 250 - 600 MCM	420 A	3	42.5	07		**01760**

for the connection of flat busbars and laminated copper busbars
* when using aluminium conductors, observe the maintenance instructions (see chapter 8.2 - Appendix, subsection "Conductor connections")

Brace terminal, 30 to 105 mm wide, **for flat conductors**

For busbar	Terminal space	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
20, 25, 30 x 5, 10 and section busbars	30 x 20	800 A	6	30.3	07		**01319**
	32 x 20	800 A	3	34.7	07		**01759**
30 x 10 and section busbars	55 x 10 - 28	1200 A	3	50.0	07		**01069**
	68 x 10 - 28	1400 A	3	63.0	07		**01070**
	105 x 10 - 28	1800 A	3	84.0	07		**01071**

Panel


wöhner
AES 10x38/PV
LED 1000V 10x38
31 973 1P
Do not operate
under load
30A 1000V DC
IEC 60269-2

DEVICES FOR PANEL MOUNTED AND DIN RAIL

Panel

Components for conventional mounting

For conventional wiring, Wöhner provides a comprehensive range of components for DIN rail or mounting plate assembly. The fuse technology and associated connection technology meet the high safety and quality requirements set by international standards.

Thanks to their snap-action switch mechanisms, the switching devices offer high switching capacity and special protection via operator-independent switching. Selected products are ideal for special applications in the field of photovoltaics.

CAPUS®Panel

Product series of small load switches.
– switch-disconnectors from 16 A - 160 A
– 3-pole version
– optional door coupling rotary drives
– UL listed

SECUR®Panel

The SECUR® fuse-holder especially for photovoltaic applications allows convenient fuse changes by means of a removable fuse carrier. Contacts in the carrier also feature touch-safe protection.
– for 10x85 (14x85) fuses up to 1500 V DC
– equipment width 22.5 mm
– UL listed

AMBUS®Panel

The holder for cylindrical fuses is available in 1-, 2- and 3-pole versions as well versions with a neutral conductor, LED, auxiliary switch and for semiconductor protection.
– 32 A (10x38), 50 A (14x51), 100 A (22x58)
– rated voltage to 690 V
– touch-safe protection
– photovoltaic versions to 1000 V DC are also UL listed

AMBUS®Panel UL version

Versions for Class CC to 30 A and Class J to 60 A fuses according to UL 248-4 / -8. All products are provided with touch-safe protection and convenient connection technology.
– short-circuit capacity up to 200 kA
– rated voltage 600 V
– versions available with LED as fuse indicator

QUADRON®Panel

Class J fuse-holder with CrossLink® Technology. Springloaded for secure connection, tool-free installation, easily change outgoing direction.
– for Class J fuses up to 400 A
– integrated fuse adaptor for ease of use
– UL listed

MOTUS®Panel

The MOTUS® hybrid motor starter can supply motors up to 4 kW.
The integrated functions - direct and reversing starter, overload protection and emergency switch-off - lead to a significant reduction in space and wiring requirements.
– 3 design versions: 0.6 A, 2.4 A and 9 A
– equipment width 22.5 mm
– up to 30 mil. switching cycles
– versions with IO-Link interface
– UL listed

MOTUS®Panel - Hybrid motor starters

for switching of inductive loads

Hybrid motor starter, with reversing function and CrossLink®Technology, 22.5 mm wide
for mounting on mounting rails TH35 acc. to EN 60715

Type	Width	Height	Depth	Pack size	Weight kg/100 u.	PG		Part No.
0.075 - 0.6 A direct and reversing starter	22.5	175	138	1	58.1	21		36100
0.18 - 2.4 A direct and reversing starter	22.5	175	138	1	58.5	21		36103
1.5 - 6.5 A direct and reversing starter	22.5	175	138	1	59.2	21		36106

Hybrid motor starter IO-Link, 3-pole, with reversing function, **CrossLink®Technology and communication interface,** 22.5 mm wide, for mounting on mounting rails TH35 acc. to IEC / EN 60715

Type	Width	Height	Depth	Pack size	Weight kg/100 u.	PG		Part No.
IO-Link 0.18 - 3 A direct and reversing starter	22.5	175	138	1	59.2	21		36123
IO-Link 1.5 - 6.5 A direct and reversing starter				1	59.2	21		36126

Accessories

connecting plug with cable connection, 2 units	1	7.6	21		36902
connecting plug with cable connection, 3 units	1	9.0	21		36903
connecting plug with cable connection, 4 units	1	10.9	21		36904

Replacement component

electronic unit 0.075 - 0.6 A direct and reversing starter	1	50.9	21		36109
electronic unit 0.18 - 2.4 A direct and reversing starter	1	50.7	21		36110
electronic unit 1.5 - 6.5 A direct and reversing starter	1	51.4	21		36111
adapter for MOTUS®Panel	1	12.8	05		36112
fuse 16 A for version 0.6 A and 2.4 A	3	2.8	21		31567
fuse 20 A for version 6.5 A	3	2.8	21		31568
fuse 30 A for version 6.5 A for motors with heavy-duty starting	3	2.8	21		31569

Power distribution blocks

Type	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
1x line AWG 14 - 3, 6x load AWG 14 - 8	36	90	1	11.9	08		02321
1x line AWG 14 - 1, 6x load AWG 14 - 4	36	90	1	11.3	08		02322
1x line AWG 14 - 2/0, 4x load AWG 14 - 2	36	99	1	14.4	08		02323
1x line AWG 2 - 250 MCM, 6x load AWG 14 - 2	54	114	1	27.4	08		02324
1x line AWG 2/0 - 500 MCM, 6x load AWG 14 - 2	54	114	1	32.6	08		02325

AMBUS®Panel - Fuse-holders for fuses Class CC

type AES with box terminals, with touch-safe protection in accordance with EN 50274, for fuses that conform to UL 248-4

Class CC fuse-holder

Type	Poles	Connection	Width	Pack size	Weight kg/100 u.	PG		Part No.
30 A / 600 V	1-pole	0.75 - 25 mm² / AWG 18 - 4	18	12	5.5	17		31295
	2-pole		36	6	11.3	17		31296
	3-pole		54	4	17.0	17		31297

Class CC fuse-holder, with LED 110 - 690 V AC / DC

30 A / 600 V	1-pole	0.75 - 25 mm² / AWG 18 - 4	18	12	6.2	17		31298
30 A / 600 V	2-pole		36	6	12.3	17		31299
30 A / 600 V	3-pole		54	4	18.5	17		31300

LED signals open fuse

Class CC fuse-holder, with LED 12 - 72 V AC / DC

30 A / 12 - 72 V	1-pole	0.75 - 25 mm² / AWG 18 - 4	18	12	6.2	17		31929

LED signals open fuse

Comb-type busbar, length 1 m

Type	Cross-section mm²	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
comb-type busbar, 1-pole, bridge type, pitch 18 mm	25	100 A	10	47.5	06		31548
comb-type busbar, 2-pole, bridge type, pitch 18 mm		100 A	10	81.0	06		31561
comb-type busbar, 3-pole, bridge type, pitch 18 mm		100 A	10	113.3	06		31549

Feeder terminal, 1 pol

Article	Type	Connection	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
dircet feeding of the comb-type busbar	31548, 31549, 31561	6 - 35	115 A	10	3.0	07		31562

Connection terminal, for comb-type busbars

Type	Connection	Pack size	Weight kg/100 u.	PG		Part No.
for 31548	6 - 35 mm² / AWG 10 - 1/0	10	3.0	07		31039
for 31549, 31561	6 - 35 mm², AWG 10 - 1/0	10	3.5	07		31550

a connection terminal is required for each phase

End cover, for comb-type busbars

Type	Pack size	Weight kg/100 u.	PG		Part No.
for 1-pole comb-type busbars 25 mm²	20	0.1	06		31042
for 2-pole and 3-pole comb-type busbars 25 mm²	20	0.2	06		31552

AMBUS®Panel - QUADRON®Panel - Fuse-holders for fuses Class J

with touch-safe protection, for fuses that comply with UL 248-4

Class J fuse-holder, AMBUS®Panel, DIN rail mounted

Type	Poles	Connection	Width	Pack size	Weight kg/100 u.	PG		Part No.
30 A / 600 V	1-pole	0.75 - 50 mm² / AWG 18 - 1	36	6	15.8	16		31284
	2-pole		72	3	32.2	16		31285
	3-pole		108	2	48.6	16		31287
60 A / 600 V	1-pole	2.5 - 50 mm² / AWG 14 - 1	40	6	18.2	16		31920
	2-pole		80	3	37.0	16		31921
	3-pole		120	2	55.9	16		31922

Class J fuse-holder, AMBUS®Panel, DIN rail mounted, **with LED 110 - 600 V AC / DC**

30 A / 600 V	1-pole	0.75 - 50 mm² / AWG 18 - 1	36	6	15.8	16		31932
	2-pole		72	3	32.2	16		31933
	3-pole		108	2	48.6	16		31934
60 A / 600 V	1-pole	2.5 - 50 mm² / AWG 14 - 1	40	6	18.2	16		31923
	2-pole		80	3	37.0	16		31924
	3-pole		120	2	55.9	16		31925

Class J fuse-holder, QUADRON®Panel, for screwing onto mounting plate

100 A / 600 V *	3-pole	4 - 50 mm² / AWG 14 - 2/0	106	1	107.0	16		33408
200 A / 600 V *		35 - 150 mm² / AWG 2 - 300 MCM	184	1	203.0	16		33409
400 A / 600 V		25 - 300 mm² / AWG 4 - 600 MCM	256	1	672.0	16		33308

* do not use fuse links with sharp-edged blades

AMBUS®Panel - Fuse-holders for IEC cylindrical fuses

type AES with box terminals, for fuse-links acc. to IEC / HD 60269-2, with touch-safe protection in accordance with EN 50274

Fuse-holder for cylindrical fuses, **standard version**

Type	Rated current	Poles	Connection	Width	Pack size	Weight kg/100 u.	PG		Part No.
10x38	30 A	1-pole	0.75 - 25 mm² / AWG 18 - 4	18	12	5.2	17		31110
		2-pole		36	6	10.3	17		31112
		3-pole		54	4	15.5	17		31113
14x51	50 A	1-pole	1.5 - 35 mm² / AWG 14 - 2	27	6	9.7	17		31115
		2-pole		54	3	20.2	17		31117
		3-pole		81	2	30.4	17		31118
22x58	80 A	1-pole	4 - 50 mm² / AWG 10 - 1/0	36	6	15.8	17		31120
		2-pole		72	3	32.2	17		31122
		3-pole		108	2	48.6	17		31123

Fuse-holder for cylindrical fuses, **standard version** with **LED 110 - 690 V AC / DC**

10x38	30 A	1-pole	0.75 - 25 mm² / AWG 18 - 4	18	12	5.7	17		31130
		2-pole		36	6	11.3	17		31132
		3-pole		54	4	17.0	17		31133
14x51	50 A	1-pole	1.5 - 35 mm² / AWG 14 - 2	27	6	9.8	17		31135
		3-pole		81	2	30.5	17		31138
22x58	80 A	1-pole	4 - 50 mm² / AWG 10 - 1/0	36	6	15.9	17		31140
		3-pole		108	2	48.7	17		31143

Fuse-holder for cylindrical fuses, **standard version** with **LED 12 - 72 V AC / DC**

10x38	30 A	1-pole	0.75 - 25 mm² / AWG 18 - 4	18	12	5.7	17		31930

LED signals open fuse

Fuse-holder for cylindrical fuses, **standard version,** neutral conductor on right

10x38	30 A	1-pole+N	0.75 - 25 mm² / AWG 18 - 4	36	6	11.3	17		31111
		3-pole+N		72	3	21.7	17		31114
14x51	50 A	1-pole+N	1.5 - 35 mm² / AWG 14 - 2	54	3	21.8	17		31116
		3-pole+N		108	1	42.7	17		31119
22x58	80 A	1-pole+N	4 - 50 mm² / AWG 10 - 1/0	72	3	35.8	17		31121
		3-pole+N		144	1	67.5	17		31124

Fuse-holder for cylindrical fuses, **standard version,** neutral conductor on left

14x51	50 A	3-pole+N	1.5 - 35 mm² / AWG 14 - 2	108	1	42.7	17		31168
22x58	80 A	3-pole+N	4 - 50 mm² / AWG 10 - 1/0	144	1	67.5	17		31171

N-module

10x38	30 A	N	0.75 - 25 mm² / AWG 18 - 4	18	12	6.2	17		31258

AMBUS®Panel - Fuse-holders for IEC cylindrical fuses

type AES with box terminals, for fuse-links acc. to IEC / HD 60269-2 -4, -6, with touch-safe protection in accordance with EN 50274

Fuse-holder for cylindrical fuses, **version for semiconductor protection fuses**

Type	Rated current	Poles	Connection	Width	Pack size	Weight kg/100 u.	PG		Part No.
10x38	30 A	1-pole	0.75 - 25 mm² / AWG 18 - 4	18	12	5.2	17		31275
		2-pole		36	6	10.3	17		31276
		3-pole		54	4	15.5	17		31277
14x51	50 A	1-pole	1.5 - 35 mm² / AWG 14 - 2	27	6	9.7	17		31278
		2-pole		54	3	20.2	17		31279
		3-pole		81	2	30.4	17		31280
22x58	80 A	1-pole	4 - 50 mm² / AWG 10 - 1/0	36	6	15.8	17		31281
		2-pole		72	3	32.2	17		31282
		3-pole		108	2	48.6	17		31283

Fuse-holder for cylindrical fuses, **version for semiconductor protection fuses, with pilot switch**

14x51	50 A	1-pole	1.5 - 35 mm² / AWG 14 - 2	27	6	11.6	17		31940
14x51		2-pole		54	3	23.5	17		31972
14x51		3-pole		81	2	34.6	17		31941
22x58	80 A	1-pole	4 - 50 mm² / AWG 10 - 1/0	36	6	18.1	17		31942
22x58		2-pole		72	3	36.6	17		31957
22x58		3-pole		108	2	54.1	17		31943

pilot switch indicates when no fuse is inserted, holder is open, or fuse (with striker) is open

AMBUS®Panel - QUADRON®Panel - Photovoltaic fuse holders and fuse bases

for PV

Fuse-holder for cylindrical fuses, **photovoltaic version,** 1000 V

10x38 / 1P	30 A	1-pole	0.75 - 25 mm² / AWG 18 - 4	18	12	5.2	17		31971
10x38 / 1P / LED *		1-pole		18	12	5.7	17		31973
10x38 / 2P		2-pole		36	6	10.3	17		31974

* LED indicates open fuse, operating range 400 - 1000 V

Fuse-holder for cylindrical fuses, **photovoltaic version,** 1500 V

10x85 *	30 A	1-pole	0.75 - 25 mm² / AWG 18 - 4	22.5	5	9.2	17		31555
22x58	80 A	1-pole	4 - 50 mm² / AWG 10 - 1/0	36	6	15.8	17		31021

* also suitable for 14x85 fuses

NH fuse-base for photovoltaic, 1-pole, with touch-safe protection**, screw on both sides,** 1000 V AC / 1500 V DC

Type	Rated current	Rated voltage	Size	Pack size	Weight kg/100 u.	PG		Part No.
both sides screw M10	250 A	1500 V	NH 1XL	3	51.0	10		03290
both sides screw M12 *	600 A		NH 2XL / 3L	3	106.0	10		03294

* for fuse-link NH 2XL or NH 3L in accordance with IEC 60269-6 with max. 100 W power dissipation

NH fuse-base for photovoltaic, 1-pole, with touch-safe protection, 1000 V AC / 1500 V DC

incoming connection screw M10, outgoing connection to busbar 2x 30 x 10	250 A	1500 V	NH 1XL	3	58.0	10		03289
incoming connection screw M10, outgoing connection to busbar 2x 40 x 10 *	600 A	1500 V	NH 2XL / 3L	3	110.0	10		03293

* for fuse-link NH 2XL or NH 3L in accordance with IEC 60269-6 with max. 100 W power dissipation; information on rated load factors with regard to current carrying capacity is available on request or at www.woehner.com

CAPUS®Panel - Switch-disconnectors 3-pole 16 A - 160 A

type SD1, SD2, SD3; clip-on mounting on rail TH 35 mm to EN 60715

Switch-disconnector, 3-pole, **rotary handle graphite grey**

Article	Type	Rated current	Dimensions	Pack size	Weight kg/100 u.	PG		Part No.
box terminal 2.5 - 16 mm² / AWG 16 - 6, graphite grey handle	SD1-3-16	16 A	36 x 81 x 79	1	15.5	14		33808
box terminal 2.5 - 16 mm² / AWG 16 - 6, graphite grey handle	SD1-3-25	25 A	36 x 81 x 79	1	15.5	14		33812
box terminal 2.5 - 16 mm² / AWG 16 - 6, graphite grey handle	SD1-3-32	32 A	36 x 81 x 79	1	15.5	14		33816
box terminal 2.5 - 16 mm² / AWG 16 - 6, graphite grey handle	SD1-3-40	40 A	36 x 81 x 79	1	15.5	14		33820
box terminal 16 - 50 mm² / AWG 6 - 1, graphite grey handle	SD2-3-63	63 A	52 x 100 x 80	1	26.5	14		33868
box terminal 16 - 50 mm² / AWG 6 - 1, graphite grey handle	SD2-3-80	80 A	52 x 100 x 80	1	26.5	14		33872
box terminal 16 - 50 mm² / AWG 6 - 1, graphite grey handle	SD2-3-100	100 A	52 x 100 x 80	1	26.5	14		33876
box terminal 50 - 70 mm² / AWG 1 - 3/0, graphite grey handle	SD3-3-125	125 A	66 x 113 x 81	1	39.5	14		33027
box terminal 50 - 70 mm² / AWG 1 - 3/0, graphite grey handle	SD3-3-160	160 A	66 x 113 x 81	1	39.5	14		33031

Switch-disconnector, 3-pole, **with rotary handle red-yellow**

box terminal 2.5 - 16 mm² / WG 16 - 6, yellow-red handle	SD1-3-16		36 x 81 x 79	1	15.5	14		33838
box terminal 2.5 - 16 mm² / WG 16 - 6, yellow-red handle	SD1-3-25		36 x 81 x 79	1	15.5	14		33842
box terminal 2.5 - 16 mm² / WG 16 - 6, yellow-red handle	SD1-3-32		36 x 81 x 79	1	15.5	14		33846
box terminal 2.5 - 16 mm² / WG 16 - 6, yellow-red handle	SD1-3-40		36 x 81 x 79	1	15.5	14		33850
box terminal 16 - 50 mm² / AWG 6 - 1, yellow-red handle	SD2-3-63		52 x 100 x 80	1	26.5	14		33884
box terminal 16 - 50 mm² / AWG 6 - 1, yellow-red handle	SD2-3-80		52 x 100 x 80	1	26.5	14		33888
box terminal 16 - 50 mm² / AWG 6 - 1, yellow-red handle	SD2-3-100		52 x 100 x 80	1	26.5	14		33892
box terminal 50 - 70 mm² / AWG 1 - 3/0, yellow-red handle	SD3-3-125		66 x 113 x 81	1	39.5	14		33035
box terminal 50 - 70 mm² / AWG 1 - 3/0, yellow-red handle	SD3-3-160		66 x 113 x 81	1	39.5	14		33040

CAPUS®Panel - Handles and accessories

for switch-disconnector type SD1, SD2, SD3

Rotary handle

Article	Type	Pack size	Weight kg/100 u.	PG		Part No.
black, with door inter-locking	SD1, SD2, SD3	1	5.5	14		33665
red-yellow, with door inter-locking	SD1, SD2, SD3	1	5.5	14		33666
black, with defeatable door inter-locking	SD1, SD2, SD3	1	10.5	14		33669
red-yellow, with defeatable door inter-locking	SD1, SD2, SD3	1	10.5	14		33670

Extension shaft

extension shaft, length 100 mm	SD1, SD2, SD3	1	2.0	14		33680
extension shaft, length 200 mm	SD1, SD2, SD3	1	3.6	14		33681
extension shaft, length 300 mm	SD1, SD2, SD3	1	5.4	14		33682

Pilot switch, for monitoring the switch setting

1 n/c + 1 n/o, screw terminal	SD1, SD2, SD3	1	4.3	14		33692

Connection space cover

set connection space cover 3-pole	SD1-3, SD1-4	1	1.8	14		33694
set connection space cover 3-pole	SD2-3, SD2-4	1	2.2	14		33695
set connection space cover 3-pole	SD3-3, SD3-4	1	3.4	14		33696

Accessories

Laminated copper busbars

Laminated copper busbar, tin-plated, insulated (105°C), length 3 m

Dimensions (number of laminates x width x thickness)	Cross-section mm²	Rated current for 50 K	Rated current for 65 K	Pack size	Weight kg/100 u.	PG		Part No.
2x 9 x 0.8	14.4	135 A	160 A	1	67.6	06		**01503**
3x 9 x 0.8	21.6	165 A	195 A	1	87.0	06		**01083**
6x 9 x 0.8	43.2	255 A	295 A	1	150.6	06		**01084**
9x 9 x 0.8	64.8	330 A	385 A	1	213.2	06		**01504**
2x 13 x 0.5	13	140 A	160 A	1	70.3	06		**01505**
3x 13 x 0.5	19.5	170 A	195 A	1	88.5	06		**01506**
4x 13 x 0.5	26	200 A	230 A	1	107.0	06		**01521**
6x 13 x 0.5	39	250 A	285 A	1	143.3	06		**01146**
10x 13 x 0.5	65	330 A	385 A	1	217.3	06		**01522**
2x 15.5 x 0.8	24.8	200 A	230 A	1	107.0	06		**01523**
3x 15.5 x 0.8	37.2	250 A	290 A	1	142.9	06		**01524**
4x 15.5 x 0.8	49.6	295 A	340 A	1	177.4	06		**01089**
6x 15.5 x 0.8	74.4	375 A	430 A	1	246.8	06		**01090**
8x 15.5 x 0.8	99.2	430 A	500 A	1	316.2	06		**01525**
10x 15.5 x 0.8	124	510 A	590 A	1	385.6	06		**01091**
2x 20 x 1	40	280 A	320 A	1	156.5	06		**01446**
3x 20 x 1	60	345 A	400 A	1	211.8	06		**01062**
4x 20 x 1	80	410 A	470 A	1	267.2	06		**01447**
5x 20 x 1	100	465 A	535 A	1	322.5	06		**01448**
6x 20 x 1	120	515 A	595 A	1	377.8	06		**01063**
8x 20 x 1	160	585 A	685 A	1	489.0	06		**01449**
10x 20 x 1	200	705 A	810 A	1	599.6	06		**01064**
2x 24 x 1	48	325 A	375 A	1	186.0	06		**01450**
3x 24 x 1	72	400 A	465 A	1	252.2	06		**01451**
4x 24 x 1	96	470 A	545 A	1	317.1	06		**01452**
5x 24 x 1	120	535 A	615 A	1	382.8	06		**01075**
6x 24 x 1	144	590 A	680 A	1	449.1	06		**01453**
8x 24 x 1	192	700 A	810 A	1	581.1	06		**01519**
10x 24 x 1	240	800 A	925 A	1	712.1	06		**01076**
2x 32 x 1	64	410 A	475 A	1	242.2	06		**01454**
3x 32 x 1	96	510 A	585 A	1	330.2	06		**01455**
4x 32 x 1	128	595 A	685 A	1	416.9	06		**01456**
5x 32 x 1	160	670 A	775 A	1	503.9	06		**01095**
6x 32 x 1	192	740 A	855 A	1	591.0	06		**01457**
8x 32 x 1	256	870 A	1000 A	1	765.2	06		**01458**
10x 32 x 1	320	985 A	1135 A	1	939.8	06		**01096**

Version 1.5 m long on request;
the pure copper weight is given, this does not include the weight of the insulation.

Laminated copper busbars

Laminated copper busbar, tin-plated, insulated (105°C), length 3 m

Dimensions (number of laminates x width x thickness)	Cross-section mm²	Rated current for 50 K	Rated current for 65 K	Pack size	Weight kg/100 u.	PG		Part No.
2x 40 x 1	80	495 A	575 A	1	298.9	06		**01526**
3x 40 x 1	120	615 A	705 A	1	407.8	06		**01459**
4x 40 x 1	160	715 A	825 A	1	516.2	06		**01460**
5x 40 x 1	200	805 A	925 A	1	625.1	06		**01097**
6x 40 x 1	240	885 A	1020 A	1	733.0	06		**01461**
8x 40 x 1	320	1040 A	1195 A	1	949.8	06		**01462**
10x 40 x 1	400	1160 A	1340 A	1	1167.1	06		**01099**
3x 50 x 1	150	745 A	855 A	1	504.8	06		**01463**
4x 50 x 1	200	860 A	990 A	1	640.0	06		**01464**
5x 50 x 1	250	965 A	1110 A	1	775.2	06		**01112**
6x 50 x 1	300	1060 A	1220 A	1	910.8	06		**01465**
8x 50 x 1	400	1225 A	1410 A	1	1181.2	06		**01466**
10x 50 x 1	500	1375 A	1585 A	1	1451.9	06		**01113**
3x 63 x 1	189	905 A	1045 A	1	682.2	06		**01575**
4x 63 x 1	252	1045 A	1205 A	1	802.0	06		**01467**
5x 63 x 1	315	1165 A	1345 A	1	972.0	06		**01468**
6x 63 x 1	378	1275 A	1470 A	1	1142.1	06		**01469**
8x 63 x 1	504	1465 A	1685 A	1	1481.0	06		**01576**
10x 63 x 1	630	1630 A	1875 A	1	1821.2	06		**01123**
3x 80 x 1	240	1115 A	1285 A	1	797.0	06		**01584**
4x 80 x 1	60	1280 A	1475 A	1	1012.9	06		**01470**
5x 80 x 1	400	1425 A	1640 A	1	1227.9	06		**01471**
6x 80 x 1	480	1550 A	1785 A	1	1442.9	06		**01472**
8x 80 x 1	640	1775 A	2045 A	1	1873.8	06		**01520**
10x 80 x 1	800	1960 A	2260 A	1	2305.2	06		**01473**
4x 100 x 1	60	345 A	400 A	1	112.4	06		**01474**
5x 100 x 1	500	1720 A	1980 A	1	1530.4	06		**01475**
6x 100 x 1	600	1870 A	2155 A	1	1798.5	06		**01476**
8x 100 x 1	800	2110 A	2435 A	1	2336.0	06		**01477**
10x 100 x 1	1000	2330 A	2690 A	1	2874.0	06		**01478**

the pure copper weight is given, this does not include the weight of the insulation.

Holder for laminated busbars

Type	Pack size	Weight kg/100 u.	PG		Part No.
for 1x lam. Cu of 6x 15.5 x 0.8 to 10x 63 x 1	3	11.3	06		**01298**
for multiple fastening for lam. Cu of 5x 40 x 1 to 10x 100 x 1	4	16.6	06		**01299**

for mounting on standard C-rail

Cylindrical fuses Class CC

in accordance with UL 248-4

Fuse Class CC, time delay

Size	Rated current	Rated voltage	Rated breaking capacity	Pack size	Weight kg/100 u.	PG		Part No.
Class CC	0.5 A	600 V	200 kA	10	0.8	22		31394
	1 A	600 V		10	0.8	22		31244
	1.5 A	600 V		10	0.8	22		31395
	2 A	600 V		10	0.8	22		31245
	2.5 A	600 V		10	0.8	22		31396
	3 A	600 V		10	0.8	22		31397
	4 A	600 V		10	0.8	22		31246
	5 A	600 V		10	0.8	22		31398
	6 A	600 V		10	0.8	22		31247
	8 A	600 V		10	0.8	22		31399
	10 A	600 V		10	0.8	22		31248
	12 A	600 V		10	0.8	22		31400
	15 A	600 V		10	0.8	22		31249
	20 A	600 V		10	0.8	22		31250
	25 A	600 V		10	0.8	22		31251
	30 A	600 V		10	0.8	22		31252

Fuse Class CC, fast acting

Class CC	0.5 A	600 V	200 kA	10	0.8	22		31401
	1 A	600 V		10	0.8	22		31235
	2 A	600 V		10	0.8	22		31236
	3 A	600 V		10	0.8	22		31404
	4 A	600 V		10	0.8	22		31237
	5 A	600 V		10	0.8	22		31405
	6 A	600 V		10	0.8	22		31238
	8 A	600 V		10	0.8	22		31406
	10 A	600 V		10	0.8	22		31239
	12 A	600 V		10	0.8	22		31407
	15 A	600 V		10	0.8	22		31240
	20 A	600 V		10	0.8	22		31241
	25 A	600 V		10	0.8	22		31242
	30 A	600 V		10	0.8	22		31243

Cylindrical fuses Class J

in accordance with UL 248-8

Fuse Class J, time delay

Size	Rated current	Rated voltage	SCCR	Pack size	Weight kg/100 u.	PG		Part No.
Class J, 30 A frame	1 A	600 V	200 kA	10	5.0	22		31333
	2 A	600 V		10	5.0	22		31338
	3 A	600 V		10	5.0	22		31342
	4 A	600 V		10	5.0	22		31345
	6 A	600 V		10	5.0	22		31349
	8 A	600 V		10	5.0	22		31351
	10 A	600 V		10	5.0	22		31353
	12 A	600 V		10	5.0	22		31354
	15 A	600 V		10	5.0	22		31355
	20 A	600 V		10	5.0	22		31357
	25 A	600 V		10	5.0	22		31358
	30 A	600 V		10	5.0	22		31359
Class J, 60 A frame	35 A	600 V		10	8.5	22		31360
	40 A	600 V		10	8.5	22		31361
	45 A	600 V		10	8.5	22		31362
	50 A	600 V		10	8.5	22		31363
	60 A	600 V		10	8.5	22		31364
Class J, 100 A frame	70 A	600 V		1	14.5	22		03228
	80 A	600 V		1	14.5	22		03229
	90 A	600 V		1	14.5	22		03230
	100 A	600 V		1	14.5	22		03231
Class J, 200 A frame	125 A	600 V		1	35.5	22		03233
	150 A	600 V		1	35.5	22		03234
	175 A	600 V		1	35.5	22		03235
	200 A	600 V		1	35.5	22		03236
Class J, 400 A frame	250 A	600 V		1	67.0	22		03238
	300 A	600 V		1	67.0	22		03239
	350 A	600 V		1	67.0	22		03240
	400 A	600 V		1	67.0	22		03241

Cylindrical fuses Class J

in accordance with UL 248-8

Fuse Class J, fast acting

Size	Rated current	Rated voltage	SCCR	Pack size	Weight kg/100 u.	PG		Part No.
Class J, 30 A frame	10 A	600 V	200 kA	10	5.0	22		31323
	15 A	600 V		10	5.0	22		31324
	20 A	600 V		10	5.0	22		31325
	25 A	600 V		10	5.0	22		31326
	30 A	600 V		10	5.0	22		31327
Class J, 60 A frame	35 A	600 V		10	8.5	22		31511
	40 A	600 V		10	8.5	22		31512
	50 A	600 V		10	8.5	22		31514
	60 A	600 V		10	8.5	22		31515
Class J, 100 A frame	70 A	600 V		1	14.5	22		03214
	80 A	600 V		1	14.5	22		03215
	100 A	600 V		1	14.5	22		03217
Class J, 200 A frame	125 A	600 V		1	35.0	22		03219
	150 A	600 V		1	35.5	22		03220
	175 A	600 V		1	38.2	22		03221
	200 A	600 V		1	35.5	22		03222
Class J, 400 A frame	250 A	600 V		1	67.0	22		03224
	300 A	600 V		1	67.0	22		03225
	350 A	600 V		1	67.0	22		03226
	400 A	600 V		1	67.0	22		03227

Appendix

Terms of delivery and payment

The current terms of delivery and payment apply. Further information is available at **www.woehner.com** under the heading “Media / Downloads”.

Wöhner worldwide

Information to the Wöhner subsidiaries and agencies are available at **www.woehner.com** under the heading “Contact”.

General technical information

Wöhner busbar systems and components are the result of expert development based on many years of experience. They have been exhaustively tested and hold many approvals. The correct selection of busbars and components is the responsibility of the system designer. For parts used in “low-voltage switching device assemblies” as defined by the IEC or EN 61439 standards, the planning, construction requirements and the required design verification are mandatory. In order to safely exclude risks to people and property when handling electrical power, expert handling of the equipment and compliance with the applicable regulations are fundamental requirements.

In particular, installation, assembly, maintenance, modifications and retrofitting must only be carried out in compliance with the country-specific installation and safety regulations for work on power installations, as well as in consideration of the further customer-specific requirements.

Technical standards must be observed and the interaction of the components must be taken into account. It is essential that all accessible parts are electrically isolated during installation and maintenance. All connections must be correctly tightened with the specified torque (Md), correct gauges must be used and components that provide protection against accidental contact with live parts must be fitted. After transportation, all connections must be checked and, if necessary, re-tightened.

Products are to be used and operated correctly in the manner intended.

The technical information contained in the Manual and the installation instructions should be observed and retained for future modifications, maintenance or additions to the installation. Wöhner reserves the right to make modifications to its components, as the result of developments and technical advances.

Operating conditions

Unless special instructions are given, the information contained in the documentation applies for the recommended mounting position and the ambient conditions of indoor installation (contamination level 3; 2 in exceptional cases) according to IEC / EN 61439-1 / -2 / -3. The user must inform the manufacturer about any special operating conditions that deviate from this standard!

Plant-specific reduction factors must be considered, depending on the exact conditions of use. The assumed loading factors listed below represent guide values and refer to a maximum + 35 °C temperature of the air directly surrounding the products.

In products intended to hold fuse-links, please observe the requirements governing connected cross-sections from the relevant product standards. Comply with the stated temperature specifications of all plastics used. Some of the material properties described here refers to several products. In isolated cases, values may exceed the levels stated.

IEC 61439-2 Table 101	
Type of load	Assumed loading factor
Distribution – 2 and 3 circuits	0.9
Distribution – 4 and 5 circuits	0.8
Distribution – 6 to 9 circuits	0.7
Distribution – 10 or more circuits	0.6
Electric actuator	0.2
Motors ≤ 100 kW	0.8
Motors > 100 kW	1.0

IEC 61439-3 Table 101	
Number of outgoing circuits	Assumed loading factor
2 and 3	0.8
4 and 5	0.7
6 to 9 inclusive	0.6
10 and above	0.5

Further information for each article is available at **www.woehner.com** under the heading “Products”.

We recommend vertically mounting the device on a horizontal busbar system. All information and test values for busbar systems refer to the use of flat copper bars according to EN 13601:2013 or section busbars according to EN 13605:2013. For further information, see section “Use of busbars”.

The fixing handle must be placed on top for switchgears mounted vertically. For this mounting position, the assumed loading factors shown in table 101 apply for the components with the worst-case permissible power dissipation and the ambient conditions as per IEC / EN 61439-2 / -3, section 7.1.1.1.

In case of deviating mounting positions and conditions, all influencing factors are on maximum temperature must be accounted for by applying additional correction factors.
For example:
– power dissipation of the fuse-links and the devices in operation
– simultaneous full and partial load cycles
– arrangement in the system, mutual influence of the devices
– busbar cross-section, conductor cross-section
– ambient temperature, flow conditions, ventilation or cooling must be accounted for by applying additional correction factors

Mounting positions are prohibited where gravity and direction of mounting are opposed.

Air and creepage distances must be calculated in compliance with IEC / EN 60664-1 (VDE 0110 part 1). For values of 12 mm and greater, these requirements are automatically satisfied up to 690 V AC in compliance with IEC. Additional specifications, such as the minimum distance to earthed parts, must be observed. This is especially relevant for applications in compliance with UL.

Detrimental effects from chemical substances during storage, processing and operation must be prevented.

In order to ease the locking of the busbar components and the insertion of the NH fuse units, the spring clips will be lubricated with special grease during manufacturing. On other parts, especially on screw threads, it must be ensured that no supplementary change of the friction coefficient takes place.

Requirements for the dimensioning of parallel main circuits in a switchgear and control gear assembly

When planning a switchgear and control gear assembly, the interactions of the devices in parallel current paths must be considered.

The standard takes account of this situation by means of a switchgear assemblies rated diversity factor (RDF). This states the factor of the rated current to which all power circuits of a power distribution unit in a switchgear assembly can be permanently and simultaneously subjected. Here, the values from the table in the section operating conditions apply, in accordance with IEC / EN 61439-2 / -3.

If, for example, a SECUR®60Classic PowerLiner is equipped with 35 A - D02 fuses in a power distribution unit, the switchgear device will be able to carry its nominal current of 35 A continuously on its own. However, this value must be reduced through thermal interaction with neighbouring devices. The rated diversity factors must always be selected in conformity with the application of the switch fuse unit, inaccordance with IEC / EN 61439-2 / -3. See table in section operating conditions.

It must always be ensured that the assumed loading factor applies to the rated current of the applied fuse-link and not the rated current of the fuse-combination unit or fuse-base. It is also advisable to use fuse-links with silver-plated contacts. The size of the copper conductors must be in accordance with the applicable product standard, e.g. IEC / EN 60947-3 for SECUR®60Classic PowerLiner.

Non-compliance with these assumed loading factors leads to unacceptably high temperatures in switchgear assemblies. This may in turn result in damaged or spurious tripping of switchgear devices. Both fuse-links and cable insulation age rapidly when exposed to high temperatures.

For the correct design and layout of conductors, accumulation – as well as the ambient temperature – need to be taken into consideration. Here too, mutual thermal influence leads to raised temperatures and so to lower permitted currents. It is important to consider size and the corresponding factors.

Conductor connections

Specifications regarding conductor connection terminals apply for all copper conductors. The maintenance-free resistance to ageing for selected connections has been verified by testing.

The contact positions need to be checked, taking the operating conditions and applicable application-related specifications into account.

In case of unfavourable operating conditions or frequent temperature fluctuations at the contact positions, shorter inspection intervals may be necessary. Temperature measurement strips with a record of the maximum values can be placed in the immediate vicinity of the contact positions and used for an objective assessment during the regular tests.

All contact positions are suitable for connecting one conductor, unless expressly otherwise indicated on the device, in the installation instructions or in the technical description on our website. Devices with dual-function terminals have two separate contact positions.

In principle, the tightening torques specified on the device, in the installation instructions or in the technical description on our website are to be applied. Where no limits are specified, the tolerance on the tightening torque Md of screw and clamp connections may be maximum of + / - 20% of the nominal value.

If no range is specified for terminal cross-sections, the terminal range is limited downward to the next two smaller cross-sections.
If no information about the conductor type is present on the device, this can be found in the installation instructions or the technical description on our website.

The relationships between conductor cross-sections in mm² and AWG / MCM sizes are listed below:

0.75 mm²	AWG 18 = 0.82 mm²
1.5 mm²	AWG 16 = 1.3 mm²
2.5 mm²	AWG 14 = 2.1 mm²
4 mm²	AWG 12 = 3.3 mm²
6 mm²	AWG 10 = 5.3 mm²
10 mm²	AWG 8 = 8.4 mm²
16 mm²	AWG 6 = 13.3 mm²
25 mm²	AWG 4 = 21.2 mm²
35 mm²	AWG 2 = 33.6 mm²
50 mm²	AWG 0 = 53.5 mm²
70 mm²	AWG 2 / 0 = 67.4 mm²
95 mm²	AWG 3 / 0 = 85.0 mm²
120 mm²	250 MCM = 127 mm²
150 mm²	300 MCM = 152 mm²
185 mm²	350 MCM = 177 mm²
240 mm²	500 MCM = 253 mm²
300 mm²	600 MCM = 304 mm²

Conductor types are designated as follows:

Description	Short name	Standard designation
solid round	re	Class 1 (IEC / EN 60228)
stranded round	rm	Class 2 (IEC / EN 60228)
solid sectored	se	Class 1 (IEC / EN 60228)
stranded sectored	sm	Class 2 (IEC / EN 60228)
flexible	f	Class 5 (IEC / EN 60228)
stranded	str	Class B (UL 486E)

The following abbreviations are also used:

Laminated copper busbar	lam. Cu
Wire-end ferrule	AE

Wire-end ferrules are only permitted for applications in compliance with IEC / EN standards. Wöhner has tested the use of wire end ferrules. This does not result in a general approval for different ferrules and crimping methods. The maximum conductor cross-sections may need to be reduced. Conductor connections are to be set up with consideration given to the requirements as per IEC / EN 60999-1 / -2. Conductor connections are to be set up such that no load tension and no alternating bending load develop in the application.

Additional information on aluminium conductor connections

Optimum insertion and fastening of the cables is achieved through the shaping and dimensioning of the contact pieces in the contact position. The contours present in the contact pieces enable an electric connection with low contact resistance. Any impurity layers present to a limited extent following the proper pretreatment of aluminium conductors are penetrated by special crimping contours. When the specified tightening torques are observed, the required contact force is applied to the contact positions. Due to the elastic behaviour of the connection terminals, periodic retightening of the clamping screws is not necessary. Retightening of the clamping screws of the connection terminal during maintenance is expressly not recommended and can result in degradation of the clamp.

To achieve a high-quality connection of aluminium conductors with low contact resistances, proper pretreatment is essential. In addition, immediately after shortening and stripping, the surfaces on the ends of the conductors are to be freed of any present impurity or oxide layers. The impurity layers are to be removed with a suitable knife or a suitable wire brush; deposits of metal residues must absolutely be prevented. Immediately thereafter, the surfaces of the conductor ends must be protected against further oxidation by a generous application of a suitable grease (acid- and alkali-free) or an aluminium contact paste. The proper and – with sectored conductors – position-oriented connection in the contact positions must be performed immediately thereafter. Proper positioning of the conductor ends in the contact positions is to be ensured; the clamping screws are to be tightened once with the specified tightening torque.

Tests of electrical resistance to ageing were performed to verify the resistance to ageing of connection terminals for aluminium conductors. The aluminium conductors were pretreated prior to starting the tests according to the relevant recommendations for the removal of impurity and oxide layers. Immediately thereafter, the surfaces on the conductor ends were protected against further oxidation by means of grease and connected in the contact positions. The clamping screws were tightened with the respective, specified tightening torque. During the conducted test certifications, the maximum temperatures that occur in normal operation were taken into account. The clamping screws of the test objects were not retightened at any point during the entire loading period. Each of the cyclical current loadings was performed under constant test conditions.

To ensure proper operation of switching device combinations, inspections must be performed at defined intervals. The necessary intervals between these inspections depend largely on the given installation and operating conditions. The inspections of contact positions with aluminium conductors are, for practical reasons, performed by way of visual examinations and, if necessary, temperature measurements. A high contact quality is ensured by observing the specifications for the proper connection of aluminium conductors. In addition to selecting appropriate connection terminals for the aluminium conductors with respect to conductor cross-sections and conductor types, the specifications for the pretreatment of aluminium conductors must be observed. Make certain that the required work steps up to tightening of the clamping screws are performed with the specified tightening torques in immediate succession. Subsequent tightening of the clamping screws results in no improvement of the contact quality and may even have a negative impact.

Special requirements for sizing AC string collectors

When AC string collectors are used, a few strings supply one inverter. The power of several string inverters is pooled on the alternating current side, e.g. via a 60 mm busbar system.

When dimensioning components for a busbar system of this kind, the direction of the energy – which is inverted to that of industrial applications – is unimportant. The same types of fuse (gG) are also used. It is the cables and leads going to the inverter that have to be protected from overload and short circuit. However, the rated diversity factor of the switchgear and the simultaneity factor (of 1) for this application do not match.

This means, for example, that from 10 devices or more, the SECUR® 60Classic PowerLiner (rated current 63 A) with side-mounted module and 35 A fuse-links may be operated at 21 A maximum. Here, the rated current of the fuse is reduced to 60 %. If the maximum current of the inverter does not exceed this value, and if fuse protection at 35 A is permitted by the wiring and the inverter datasheet, the dimensions are correct. If higher power ratings with correspondingly higher currents need to be pooled, there are two choices for adaptation:

With the right conductor dimensions, the nominal current of the fuse-links can be increased. However, this must fit in with the requirements for inverter fuse protection. In this example the use of a 50 A fuse permits a maximum current of 30 A.

Alternatively, the thermal influence of the switchgear is reduced by modifying the layout. With the SECUR®60Classic PowerLiner fuse-switch-disconnector, in a test with 6 power circuits, a distance equal to the width of two devices (54 mm) between the switchgear devices increased the rated diversity factor from 0.7 to 0.9. This is only possible because the distance considerably reduces the thermal influence of the fuse-links. Based on the example with the 35 A fuse, the new arrangement would enable an inverter current of 31 A.

If the conductors to the inverters in the AC string collector are routed in a cable duct (routing method F), and ambient temperatures of 50 °C are anticipated there, when 6 conductors are used the permitted current capacity reduces to less than 50 % of the nominal current.

When cables and fuses have the correct dimensions, they also produce less dissipation, and therefore less waste heat. This in turn makes both cabinet selection and thermal management easier.

NH (busbar mounted) fuse-switch-disconnectors and NH in-line fuse-switch-disconnectors

NH fuses are only intended for use by authorized electricians or trained electrical personnel, see IEC / EN 60269-2.

When switching devices observe the following instructions:
- only electricians or personnel trained in electrical engineering are permitted to operate the equipment (disconnect, switch on, switch off or change fuses) in accordance with VDE 0105-100
- quick activation of fuse cover using the relevant operating handle
- before switching on, care must be taken that the fuse lid is located correctly in the open position
- the specifications for the IP protection class only apply when the fuse lid is closed

Use of busbars

To ensure safe mounting and connection of the single and multi-pole busbar components, the busbars used must comply with the adjacent tolerances. The busbars supplied by Wöhner meet these requirements.

Tensile strength: min. 300 N / mm²
Permitted tolerances:
Radius R 0.3 ... 0.7
Width: + 0.1 / - 0.5
Thickness: + 0.1 / - 0.1
Centre distance:
+ 0.5 / - 0.5 (60 mm system)
+ 1.0 / - 1.0 (100 mm system, 185 mm system)
Deviation in the contact level: 0.4

Use of comb-type busbars

A range of Wöhner fuse-holders and switches are suitable for use with comb-type busbars. We recommend the use of the comb-type busbars listed at the relevant places in the current Wöhner Manual (pollution degree 2 in accordance with IEC / EN 61439-1 / -2). Ensure that the required air and creepage distances left in standard installation positions are observed (comb-type busbars are angled towards the operator). Power must be supplied via the connection terminals sold separately by Wöhner. The additional connection terminal is not required for Wöhner products with double-function terminals. Connect terminals using the maximum torque stated on the fuse-holder.

Machining and use of plastic sections

The sections listed in the Wöhner Manual as covers for busbars or busbar systems and bottom troughs have been optimised with regard to their mechanical, thermal and electrical properties. Take particular care when mechanically cutting the profiles to avoid the formation of cracks (narrow saw blade, high speed of cutting, low tooth advance and strong saw guiding).

The cutting of profiles with a circular saw and an AKE circular saw blade for plastics is reliable with the following specific values:

D = 300 mm, B = 2.2 mm, Z = 120 W
with 5° negative tooth change (w),
cutting speed of 50 - 65 m / s,
tooth feed 0.05 - 0.1 mm.
The plastic parts must be clamped in order to exclude vibrations.

When processing and using plastic profiles, contact with oil, grease and other chemicals must be avoided.

Dimensions

All specified length dimensions are always in mm unless otherwise indicated. Mounting rails of adapters and clip-on fixings generally comply with IEC / EN 60715.

CE marking

In association with the 2006 / 95 / EG low voltage directive, Wöhner products are subject to the CE marking commitment. The CE mark is applied via the label on the packaging and on the products themselves in compliance with the provisions of the Low Voltage Directive. Wöhner thus confirms its compliance with the directive.

The corresponding EU Declarations of Conformity for each article are available at **www.woehner.com** under the heading “Products”.

Directives

RoHS Directive

Currently, Wöhner products do not come under the scope of RoHS Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment, or WEEE Directive 2012/19/EU governing waste electrical and electronic equipment. Irrespective of these directives, measures have been initiated, which ensure that the use of pollutant-free plastics Complies with the RoHS Directive. The metallic surface coatings shall correspond to the substance ban in accordance with the RoHS Directive. Fuse-links may contain function-specific components which do not comply with the RoHS Directive.

REACH Regulation

Our products are “products” within the meaning of the REACH Regulation (EC) No. 1907/2006. The information requirements under Article 33 regarding substances in products applies only to so-called substances of very high concern which meet the criteria listed Article 57. Wöhner reviews and updates the REACH Regulation in accordance with Annex VII of the Candidate List (SVHC list).

WEEE Directive

The products from Wöhner are marked accordingly with the crossed-out dustbin symbol.

Certificates are available at **www.woehner.com** under the heading “Media/Downloads”.

Insulation coordination

All specifications apply for overvoltage category III in accordance with IEC/EN 61439-1. The usability for other overvoltage categories can be derived based on the rated impulse withstand voltage U_{imp}.
The following clearances must be maintained:

Rated impulse withstand voltage U_{imp}	**Minimum clearance**
4 kV	3.0 mm
6 kV	5.5 mm
8 kV	8.0 mm
12 kV	14 mm

All specifications apply for pollution degree 3 in accordance with IEC/EN 61439-1 (Wöhner uses insulating parts made from materials in material class IIIa).
The following creepage distances must be maintained:

Rated insulation impulse withstand voltage U_i	**Creepage distance**
400 V AC/DC	6.3 mm
500 V AC/DC	8.0 mm
690 V AC/DC	10.0 mm
800 V AC/DC	12.5 mm
1000 V AC/DC	16.0 mm
1250 V DC	20.0 mm
1500 V DC	25.0 mm

The user is responsible for maintaining the proper clearances and creepage distances, taking the installation conditions into account. The maximum permitted power dissipation of the fuse-links must be taken into account with components having fuses. Short circuit data for DC applications is available upon request.

You can find an overview of the applicability of Wöhner products in terms of the operation voltage (according to IEC standards) at **www.woehner.com/insulation_coordination**

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Part no.	Chapter.Page	Pack size
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36903	6.1	1
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36917	1.2, 2.3, 3.15	1
36918	1.2, 2.3, 3.15	1
78463	2.1, 3.4	10

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