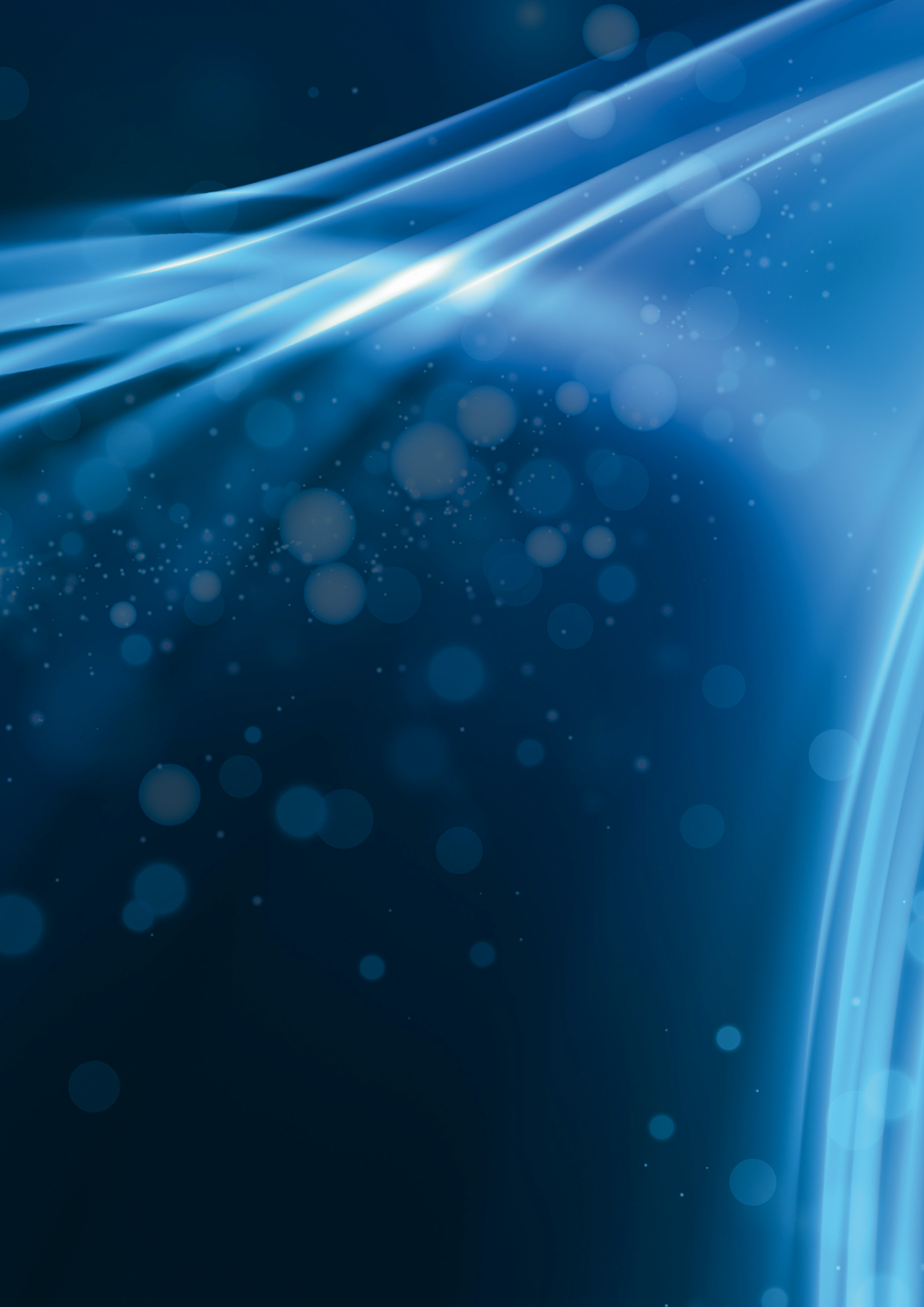


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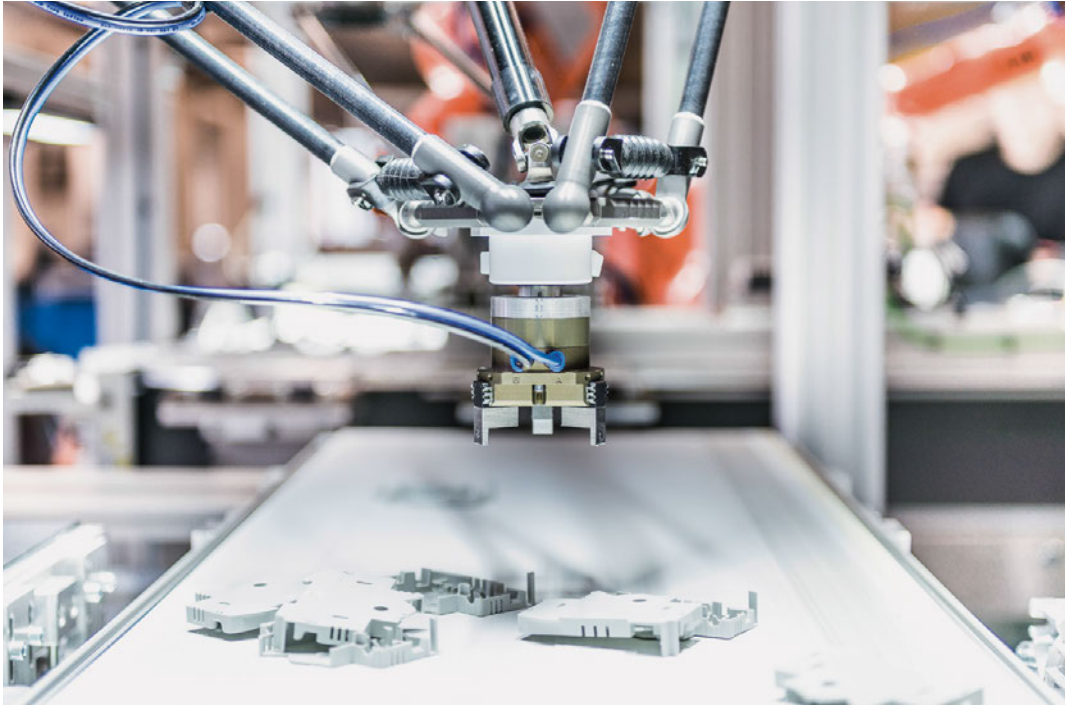
MANUAL 2018











DEVELOPED IN RÖDENTAL, SUCCESSFUL WORLDWIDE

Wöhner develops system solutions for the electro-technical market.

For over 88 years, the Wöhner name has been synonymous with impressive technical achievements and innovations. Today, the Wöhner Group is established worldwide as a specialist in electro-technical systems in the field of power distribution, control technology and renewable energy. Innovations, short response times and the fastest possible customer service are the challenges by which we make a name for ourselves in the global market. To help us continue this, we are investing in the Rödental site 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



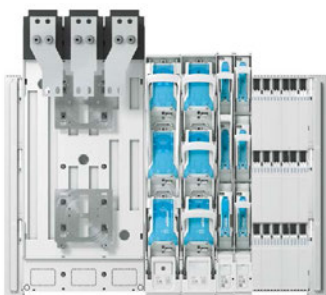
CrossBoard®



30Compact



60Classic



185Power



Panel

PRODUCT FAMILY



AMBUS®
bus-mounting fuse holder



BROOME10®
power supply



CAPUS®
switch disconnecter



CRITO®
connection terminal



CUSTO®
bus-mounting fuse base



EQUES®
busbar adapter



MOTUS®
hybrid motor starter



OMUS®
hybrid switch



QUADRON®
NH fuse-switch disconnecter



SECUR®
D0 Bus-mounting
switch-disconnector

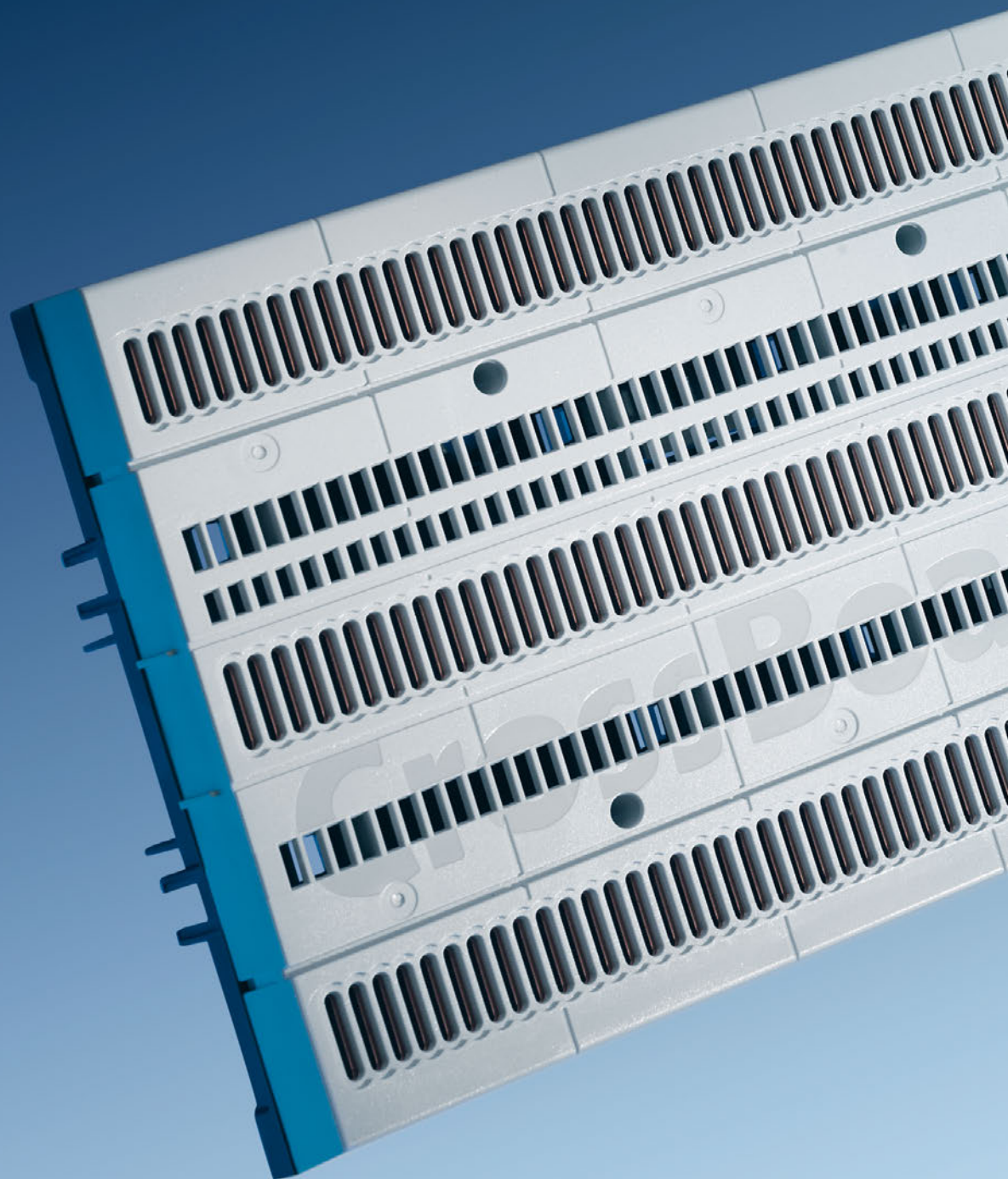


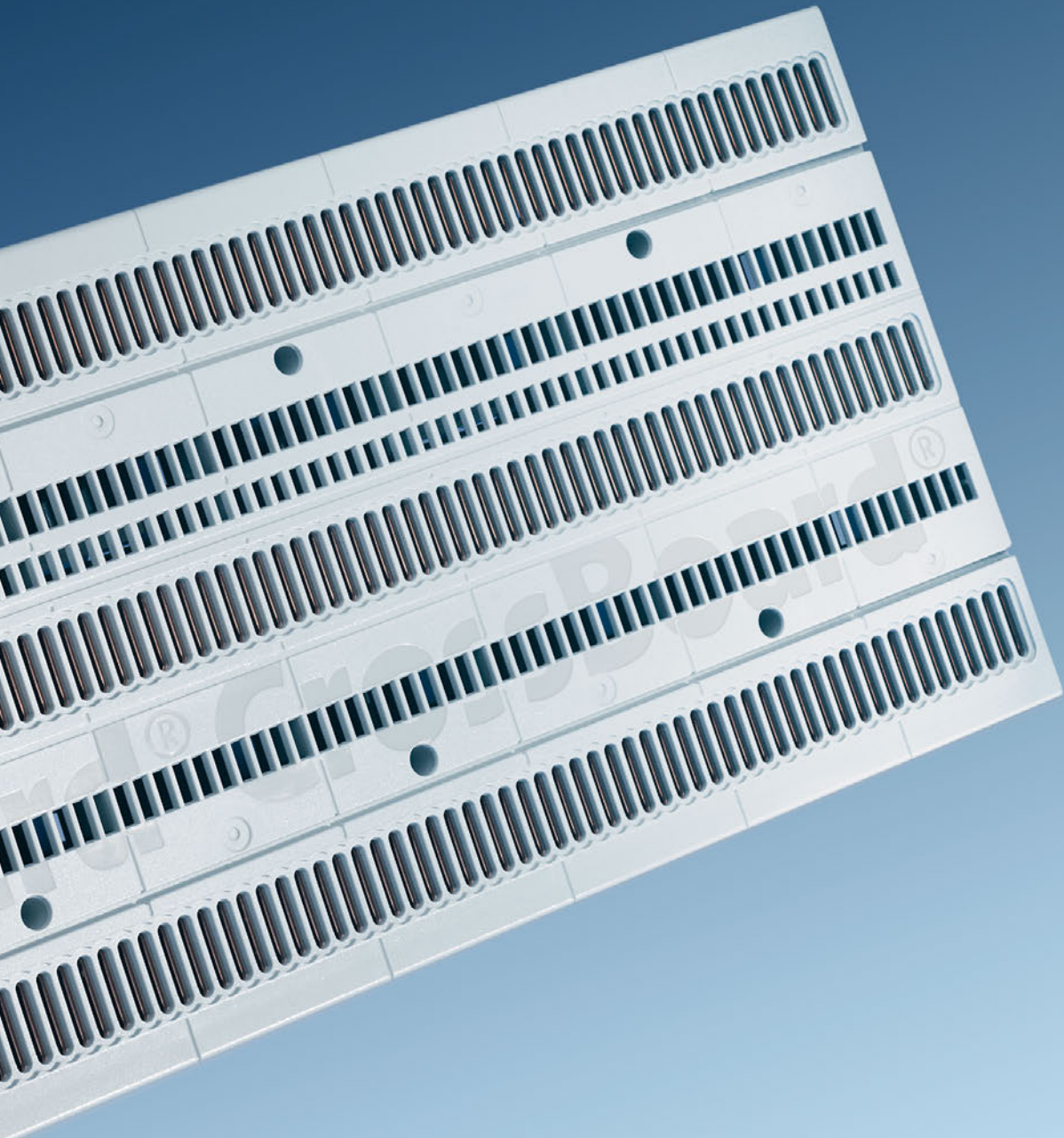
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D-fuse base

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CrossBoard®

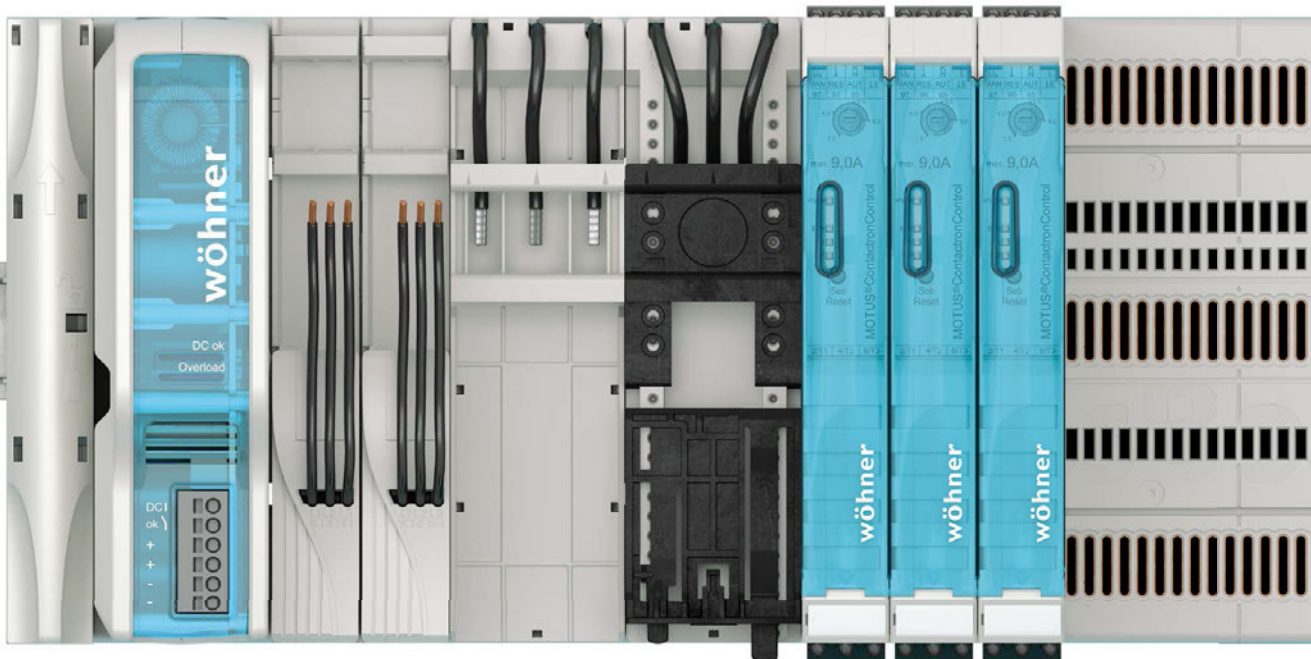
125 A





CrossBoard® TECHNOLOGY

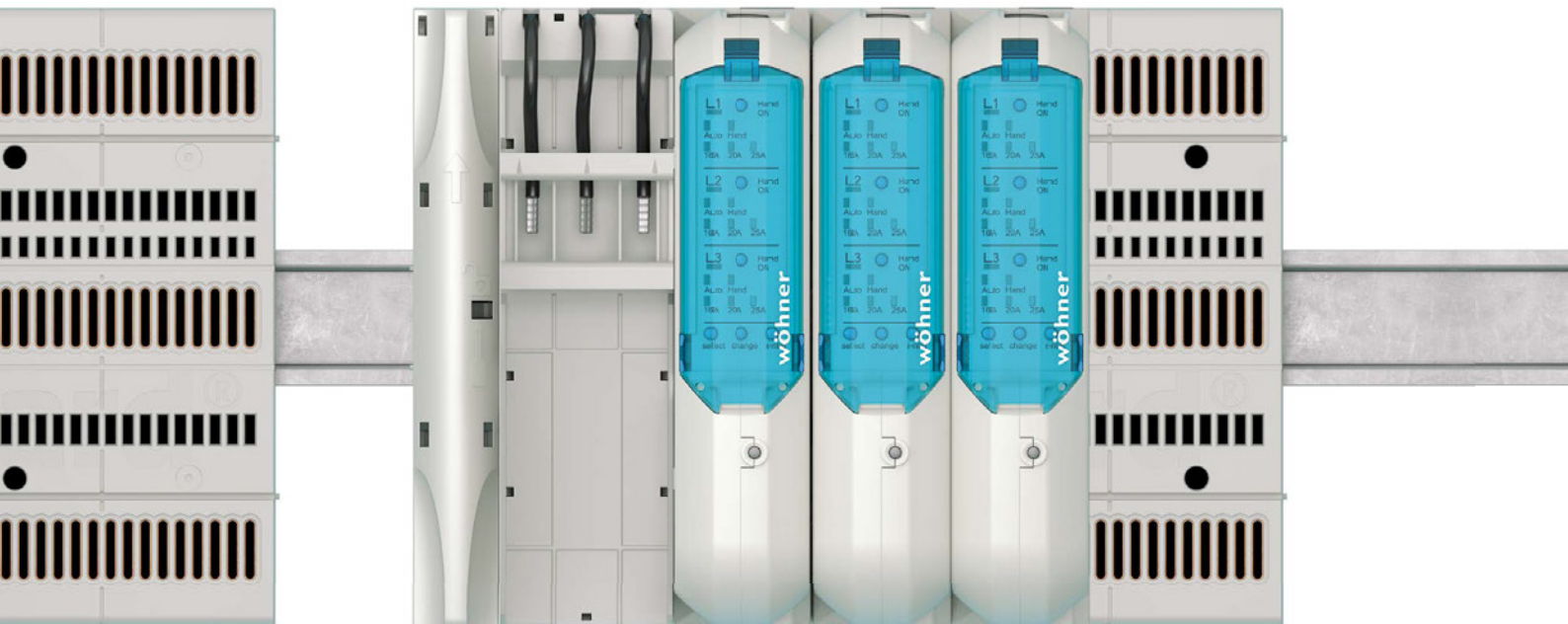
CrossBoard®

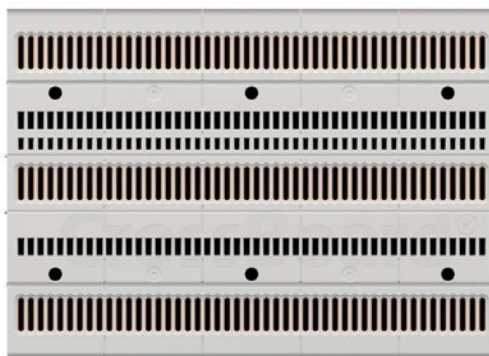


CrossBoard® – the new basic system

Tool-free mounting combined with high safety due to the integrated touch-safe protection make CrossBoard® by Wöhner the ideal system solution for power distribution equipment up to 125 A. The user can quickly and easily snap components onto the new base system. CrossBoard® is suitable mainly for applications in machine and plant

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





CrossBoard®225

Connection and mounting platform for all components.

- rated current 125 A
- equipment width 225 mm
- height 160 mm
- short-circuit capacity
I_{pk} = 25 kA
- rated voltage 690 V AC / 600 V DC (IEC), 600 V AC / 600 V DC (UL)
- UL listed



CRITO® CrossBoard

Connection module for CrossBoard®. Particularly safe, simple and comfortable mounting. With spring terminal.

- rated current max. 80 A
- equipment width 22.5 mm
- connection area 1.5 - 16 mm²
- SnapLock technology for tool-free conductor connection
- UL listed



EQUES® CrossBoard

The EQUES® universal adapter in a width of 22.5 mm can be used for mounting measuring and monitoring relays.

- rated current 16 A
- conductor cross-section 2.5 mm²
- for 1- to 3-pole devices
- fuse size for 10x38
- Class CC fuses up to max. 16 A
- UL listed



OMUS® CrossBoard

Hybrid switch for switching resistive loads. The hybrid switching technology minimises power dissipation.

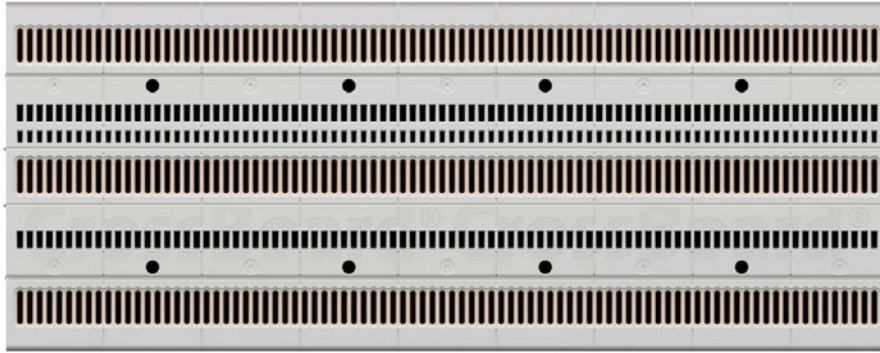
- continuous current up to 25 A
- equipment width 36 mm
- 4 integrated functions:
energy supply, fuse protection, monitoring and switching
- switchable in a choice of 3-pole or 1-pole
- UL listed



MOTUS® CrossBoard

Hybrid motor starter with additional features. Integrated functions: direct and reversing starter, overload protection and emergency stop. Space requirement and wiring cost significantly reduced.

- 3 design versions: up to 0.6 A, up to 2.4 A and up to 9 A
- equipment width 22.5 mm
- hybrid switching technology
- up to 30 mil. switching cycles
- UL listed



CrossBoard®405

Connection and mounting platform for all components.

- rated current 125 A
- equipment width 405 mm
- height 160 mm
- short-circuit capacity
I_{pk} = 25 kA
- rated voltage 690 V AC /
600 V DC (IEC), 600 V AC /
600 V DC (UL)
- UL listed



EQUES® CrossBoard

Busbar adapter for mounting motor protection devices. With a fixed mounting rail.

- rated current up to 32 A
- equipment width 45 mm
- connection cables 2.5 mm²,
6 mm²
- UL listed



EQUES® CrossBoard

In order to simply mount motor starter combinations of different manufacturers, the EQUES® CrossBoard adapter is available in a special comfort version.

- rated current up to 45 A
- equipment width 45 mm
- moveable mounting rail
- connection cables 2.5 mm²,
4 mm², 6 mm² or 10 mm²
- UL listed



BROOME10® CrossBoard

Power supply for direct connection on the CrossBoard®

- equipment width 45 mm
- nominal output current up to 10 A
- up to 4 devices cascable (40 A)
- integrated fuse protection

CrossBoard® - Basic systems

3-pole up to 125 A



CrossBoard® modular power distribution system, with touch-safe protection and CrossLink® interface

Type	Rated current	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
CrossBoard®225	125 A	225	160	1	79.8	06		11225
CrossBoard®405		405		1	137.2	06		11405



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

Type	For use up to max.	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
with integrated spring terminals 1.5 - 16 mm ² , AWG 14 - 6	80 A	22.5	160	1	21.5	07		01592



BROOME10®CrossBoard power supply, for direct contacting, 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 switch for switching of inductive and resistive loads



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

Type	Rated current	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
electronic unit 0.075 - 0.6 A direct and reversing starter	0.6 A	22.5	160	1	50.9	21		36109
electronic unit 0.18 - 2.4 A direct and reversing starter	2.4 A			1	50.9	21		36110
electronic unit 1.5 - 9 A direct and reversing starter	9 A			1	50.9	21		36111

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 9 A	3	2.8	21		31568
fuse 30 A for version 9 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	Rated current	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
electronic unit, 25 A (IEC)	25 A	36	160	1	55.2	21		36154
electronic unit, 20 A (UL)	20 A			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 32 A	10	0.6	22		31189
cylindr. fuse link 30 A, time delay	10	0.8	22		31252



EQUES®CrossBoard - Adapters 16 A - 45 A

3-pole



EQUES®CrossBoard adapter, 16 A, with fuse carrier, with CrossLink® interface, with leads AWG 14 (2.5 mm²)

Type	Rated current	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
1 fixed mounting rail, with fuse carrier 10x38 / Class CC	16 A	22.5	160	1	12.9	05		36009



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 mm ²)	16 A	45	160	1	12.4	05		32666
1 fixed mounting rail, with leads AWG 10 (6 mm ²)	32 A			1	14.0	05		32682



EQUES®CrossBoard adapter, 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 mm ²)	16 A	45	160	1	14.0	05		32668
1 adjustable mounting rail, with leads 160 mm long AWG 14 (2.5 mm ²), for devices with spring terminal technology	16 A			1	10.6	05		32669
1 adjustable mounting rail, with leads AWG 14 (2.5 mm ²)	25 A			1	14.5	05		32676
1 adjustable mounting rail, with leads AWG 10 (6 mm ²)	32 A			1	15.6	05		32684
1 adjustable mounting rail, with leads 160 mm long AWG 10 (6 mm ²), for devices with spring terminal technology	32 A			1	12.4	05		32686
1 adjustable mounting rail, with leads AWG 8 (10 mm ²)	45 A			1	18.0	05		32692

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



30 Compact

200 A / 360 A





wöhner

BUSBAR SYSTEM TECHNOLOGY

30 Compact



Compact busbar system for control systems and power distribution up to 360 A

The 30Compact busbar system is the ideal solution for distribution boards with a rated current up to 360 A. With an installation height of just 160 mm a particularly compact system can be realized. 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.





Busbar support 30Compact

Busbar support for easy and safe installation. 3-pole with 60 mm distance between busbar centres, also for use in UL applications.

- 3- to 5-pole busbar support
- for 12 x 5 and 12 x 10 mm (3-pole only) busbar
- with end cover
- UL listed, with 3-pole installation



CRITO® 30Compact

Connection module with spring terminals for 30Compact for particularly simple and comfortable mounting.

- rated current max. 80 A
- equipment width 20 mm
- connection area 1.5 - 16 mm²
- spring-loaded technology for tool-free conductor connection
- UL listed



QUADRON® 30Compact

NH busbar mounted fuse-switch-disconnector Compact equipment practice, for size NH 000 fuses.

CrossLink® Technology: tool-free mounting, spring-loaded contact and offering a particularly safe connection, changing the direction of outgoing connection is easy and safe.

- rated current up to 125 A
- equipment width 90 mm
- connection area 2.5 - 50 mm²



EQUES® 30Compact

In order to mount motor starter combinations of different manufacturers, the EQUES® 30Compact busbar adapter is available.

- rated current up to 63 A
- equipment width 45 or 54 mm
- moveable mounting rail
- connection cables 6 or 10 mm²
- side-mounted module 9 mm wide
- UL listed



CRITO® 30Compact

Connection terminal plates. Comfortable terminals for drill-free connection technology. Integrated touch-safe protection, compliance with air and creepage distances for UL.

- rated current up to 480 A
- equipment width 54 or 90 mm
- connection area 6 - 150 mm²
- flexible copper bars
- UL listed



CUSTO® 30Compact

Bus mounting fuse base for D02 fuses

- rated current up to 63 A
- equipment width 36 mm
- connection area 1.5 - 25 mm²



MOTUS® 30Compact

Hybrid motor starter with additional features. Integrated functions: direct and reversing starter, overload protection and emergency stop. Space requirement and wiring cost significantly reduced.

- 3 design versions: up to 0.6 A, up to 2.4 A and up to 9 A
- equipment width 22.5 mm
- hybrid switching technology
- up to 30 mil. switching cycles
- UL listed



OMUS® 30Compact

Hybrid switch for switching resistive loads. By means of Hybrid switch technology the power dissipation is minimised

- continuous current up to 25 A
- equipment width 36 mm
- 4 integrated functions: energy supply, fuse protection, monitoring and switching
- switchable in a choice of 3-pole or 1-pole
- 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



Copper busbar, flat, tin-plated

Type	Length	Cross-section mm ²	Pack size	Weight kg/100 u.	PG	Part No.
12 x 5	2400	60	1	128.4	06	01618
12 x 10	2400	120	1	257.0	06	01623

For current carrying capacity of the busbars visit www.woehner.de; partial lengths on request

Cover section, for 3-pole busbar systems

0.70 m long	2	42.0	06	01314
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Mount for cover section, for 3-pole busbar systems

for 01314	10	1.8	06	01317
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Busbar cover, 1 m long

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 technologies

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



Universal connection terminal, 1.5 to 120 mm²

For busbar	Connection min. – max.	Terminal space W x H	For use up to max.	Pack size	Weight kg/100 u.	PG		Part No.
flat busbars 5 mm	1.5 - 16 mm ² , AWG 14 - 6	7 x 7	180 A	100	2.1	07		01284
	4 - 35 mm ² , AWG 10 - 2	10 x 11	270 A	50	4.6	07		01285
	16 - 70 mm ² , AWG 14 - 2/0	14 x 14	400 A	25	7.1	07		01287
	16 - 120 mm ² , AWG 4 - MCM 250	17 x 15	440 A	25	10.6	07		01068
flat busbars 10 mm	1.5 - 16 mm ² , AWG 14 - 6	7 x 7	180 A	100	2.3	07		01289
	4 - 35 mm ² , AWG 10 - 2	10 x 11	270 A	50	4.7	07		01290
flat busbars 10 mm and section busbars	16 - 70 mm ² , AWG 14 - 2/0	14 x 14	400 A	25	7.5	07		01292
	16 - 120 mm ² , AWG 4 - MCM 250	17 x 15	440 A	25	10.9	07		01203

Cover cap, for universal connection terminal

terminal cover, for 01284 and 01289	20	0.5	07					01093
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Brace terminal, up to 150 mm², for round conductors

For busbar	Connection min. - max.	Terminal space W x H	For use up to max.	Pack size	Weight kg/100 u.	PG		Part No.
12, 15, 20 x 5, 10	* 35 - 150 mm ² , AWG 2 - MCM 300, lam. Cu. 15 - 20 x 5 - 10	20 x 22	480 A	6	10.2	07		01135

* When using aluminium conductors, observe the maintenance instructions (see 8.2)

Connection module, 3-pole, with spring terminals, with cover cap, for busbars 12 x 5 and 12 x 10

Connection	Width	For use up to max.	Pack size	Weight kg/100 u.	PG		Part No.
with integrated spring terminals 1.5 - 16 mm ² , AWG 14 - 6	20	80 A	6	16.0	07		01562

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

6 - 50 mm ² , AWG 10 - 2/0, lam. Cu. 7 - 9 x 4 - 10	54	300 A	1	20.6	07		01401
35 - 150 mm ² , AWG 2 - MCM 300, lam. Cu. 15 - 20 x 5 - 10	90	480 A	1	57.5	07		01165

Busbar connecting terminal, for identical busbars

For busbar	System spacing	Width	For use up to max.	Pack size	Weight kg/100 u.	PG		Part No.
12, 15, 20 x 5, 10	5 - 10	55	520 A	12	19.2	07		01166
12, 15, 20 x 5, 10	100 - 110	150	520 A	3	52.4	07		01193

3 pieces required for a 3-pole connection, use 01317 and 01314 as cover



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

Busbar adapter and hybrid switch for switching of inductive and resistive loads, system height 160 mm



Busbar adapter, 16 A, with fuse carrier, 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
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Busbar adapter, 63 A, with leads AWG 8 (10 mm²)

1 adjustable mounting rail	54	160	4	21.8	05	32591
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Busbar adapter, 160 A, connection to system at the top

for Siemens 3VA10, 11 and 3VT160	76	160	1	78.0	05	32661
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Side-mounted module, for busbar adapters 32 A to 63 A

for 32590 and 32591	9	160	10	2.0	05	32912
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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	61.9	21	36101
0.18 - 2.4 A direct and reversing starter	22.5	160	1	61.9	21	36104
1.5 - 9 A direct and reversing starter	22.5	160	1	61.9	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	50.9	21	36110
electronic unit 1.5 - 9 A direct and reversing starter	1	50.9	21	36111
busbar adapter base with CrossLink® interface	1	9.3	21	36113
fuse 16 A for version 0.6 A and 2.4 A	3	2.8	21	31567
fuse 20 A for version 9 A	3	2.8	21	31568
fuse 30 A for version 9 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.
25 A (IEC)	36	160	1	45.2	21	36152
20 A (UL)	36	160	1	45.2	21	36157

Replacement component, for OMUS®30Compact

electronic unit, 25 A (IEC)	1	55.2	21	36154
electronic unit, 20 A (UL)	1	55.2	21	36159
busbar adapter base with CrossLink® interface	1	10.6	21	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 32 A	10	0.6	22	31189
cylindr. fuse link 30 A, time delay	10	0.8	22	31252



CUSTO®30Compact - QUADRON®30Compact

3-pole fuse base and fuse-switch-disconnector, system height 160 mm



D0 busbar mounted fuse base, with touch-safe protection

Type	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
E 18 / 63 A	36	160	6	13.0	01		31554

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

Type	Rated current	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
box terminal	125 A	90	160	1	70.3	10		03316

Accessories for NH bases

Type	Pack size	Weight kg/100 u.	PG		Part No.
grip lug cover	4	2.7	10		03287

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

Type	Rated current	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
box terminal	125 A	90	160	1	90.0	09		33416



Pilot switch, for monitoring the disconnector lid position

Type	Pack size	Weight kg/100 u.	PG		Part No.
changeover 250V AC/5A, 30V DC/4A	1	1.1	09		33156



30Compact - Busbar systems 5-pole (N/PE)

5-pole systems, system height 160 mm



Intermediate busbar brace, 2 mm wide

Type	Pack size	Weight	PG	Part No.
to increase the mechanical strength	10	1.5	06	01376

Busbar support, with end cover

for busbars 5-pole 12 x 5 and 12 x 10, N + PE 12 x 5	10	6.8	06	01272
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Copper busbar, flat busbars, tin-plated

busbar 12 x 5	1	128.4	06	01618
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For current carrying capacity of the busbars visit www.woehner.de

Cover section, for 3- to 5-pole busbar systems

700 x 160	2	42.0	06	01314
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Mount for cover section, for 3- to 5-pole busbar systems

for 01314	10	1.8	06	01317
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Base plate

700 x 160	2	26.7	06	01371
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Connection set, 10 to 120 mm², with cover cap

Type	Width	Height	Pack size	Weight kg/100 u.	PG	Part No.
connection set, 3-pole L1-L2-L3	90	160	1	60.0	07	01370
connection module N	30	160	1	21.5	07	01364
connection module PE	30	160	1	21.5	07	01367
connection set, 3-pole L1-L2-L3	60	160	1	51.5	07	01426
connection module PE + N	30	160	1	30.0	07	01427

NH busbar mounted fuse-switch-disconnector, size 000, 3-pole

Type	Rated current	Width	Height	Pack size	Weight kg/100 u.	PG	Part No.
box terminal	*	125 A	90	1	90.0	09	33416

* Can only be used in 3-pole systems

Busbar adapter, 160 A, 4-pole

for Schneider Electric INS 100/125/160, top connection to the system	141	160	1	64.0	05	32640
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EQUES®30Compact - Busbar adapters 32 A - 63 A

1-pole, for miniature circuit breakers, system height 160 mm



Busbar adapter, 32 A, 1-pole, connection to system at the top

Type	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
1 fixed mounting rail	18	160	12	6.0	05		32629

Connection adjustable to L₁, L₂, L₃ or N

Busbar adapter, 63 A, 1-pole, connection to system at the top

1 fixed mounting rail	18	160	12	6.6	05		32630
1 fixed mounting rail, for Schneider Electric iC60, iC65 and C60	18	160	12	7.0	05		32628

Connection adjustable to L₁, L₂, L₃ or N

Busbar support, without electrical connection

1 fixed mounting rail	18	160	6	3.3	05		32631
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PE/N adapter module, with terminal 16 mm²

module PE	9	160	12	4.4	05		32634
module N	*	9	160	12	4.4	05	32632

* Without their own locking on the busbar system. Must be plugged onto busbar adapter

Side-mounted module, for adapters

for single pole busbar adapters	9	160	12	1.2	05		32633
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Accessories

Type	Pack size	Weight kg/100 u.	PG		Part No.
connector to create multipole adapters (100 pieces)	*	1	2.0	05	31390

* For 50 device connections

60Classic

630 A / 800 A / 2500 A





BUSBAR SYSTEM TECHNOLOGY

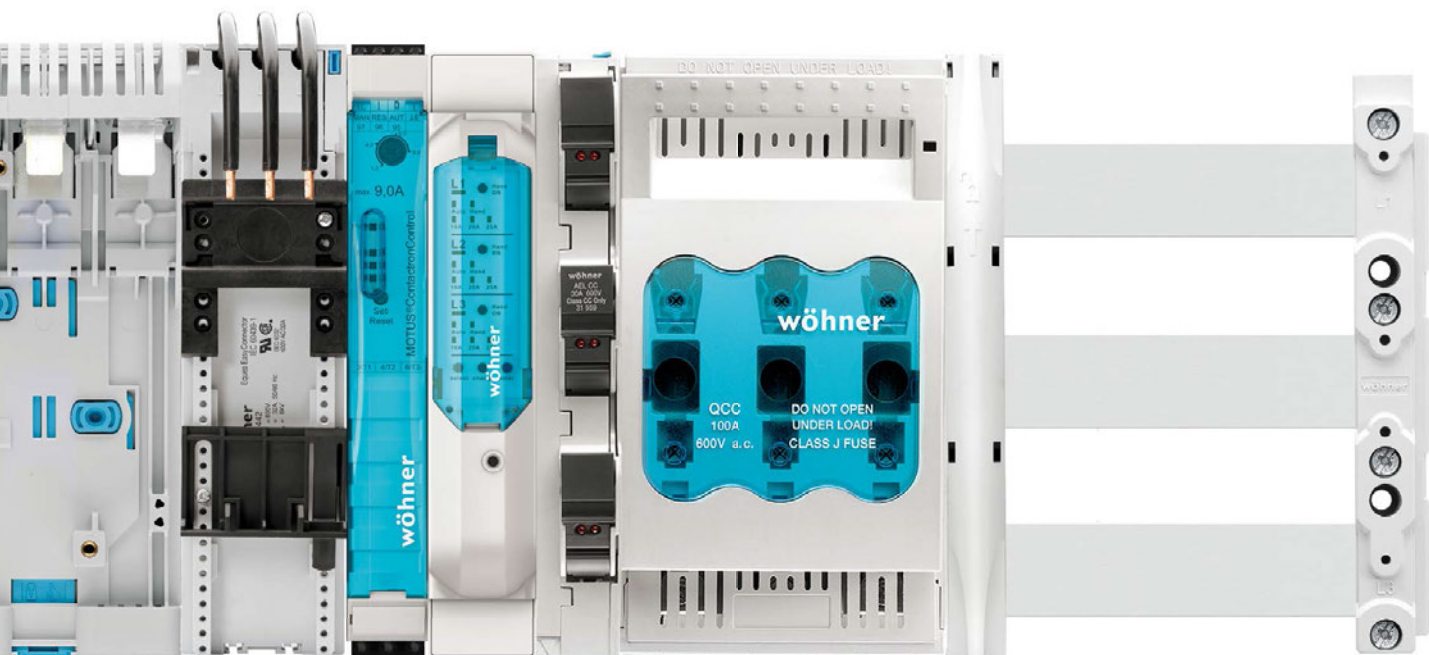
60Classic



Busbar system with a large selection of components for many applications

A busbar centre 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 sectors. Two main reasons for its success:

60Classic is particularly space-saving and provides a huge selection of components. Depending on requirements, busbars of various cross sections can be used; currents up to a maximum of 2500 A are possible.





Busbar 60Classic

- 12, 15, 20, 25 and 30 x 5 and 10 mm
- double and triple-T section busbar for increased current requirements
- tin-plated versions
- proven load current
- proven short-circuit capacity
- UL listed



Busbar support 60Classic

- Busbar support for easy and safe installation of systems with 60 mm distance between busbar centres.
- 1-, 2-, 3- and 4-pole versions
 - adjustable for busbar 12 x 5 - 30 x 10 mm
 - versions for double and triple T bars
 - versions in connection with spacer or base plate
 - UL listed



CUSTO® 60Classic

- 3-pole bus-mounting fuse base for D and D0 fuses.
- covers also available for double widths
 - Versions with integrated touch-safe protection
 - rated current up to 63 A
 - equipment width 27 to 57 mm
 - connection area: 1.5 - 25 mm² / 35 mm²
 - D base option available for gauge ring and screw-in gauge ring



SECUR® 60Classic PowerLiner

- D0 busbar mounted switch-disconnector with fuses with tried and tested drawer-type method was designed for higher requirements. All phase conductors are comfortably guided downwards.
- captive fuse carrier for commercial gauge rings
 - optional side-mounted module, LED display and auxiliary switch
 - 3-pole version



QUADRON® 60Classic

- NH busbar mounted fuse-switch-disconnector up to 630 A. With CrossLink®Technology: spring-loaded contacts offer safe, tool-free mounting, simple change of outgoing conductor direction.
- for size NH 000 to 3 fuse links
 - versions with fuse monitoring
 - various accessories for connections and shrouding



QUADRON® 60Classic

- Class J bus-mounting fuse base. With CrossLink®Technology: spring-loaded contacts offer safe, tool-free mounting, simple change of outgoing conductor direction.
- for Class J to 30, 60 and 100 A as well as 200 A and 400 A fuses
 - integrated fuse adaptor for ease of use
 - UL listed



CRITO®60Classic

Connection module for 60Classic. Particularly simple, safe and comfortable mounting. With spring terminal.

- rated current max. 80 A
- equipment width 20 mm
- connection area 1.5 - 16 mm²
- spring terminal technology for tool-free conductor connection
- UL listed



CRITO®60Classic

Connection technology for many different conductor types up to 300 mm² cross-section and up to 32 mm wide flexible copper bars.

- rated current up to 800 A
- connection area up to 300 mm²
- equipment width: 54, 81, 135, 153, 204 mm
- flexible copper bars
- UL listed



SECUR®60Classic EasyLiner

D0 busbar mounted switch-disconnector with fuses with Snap-Lock Technology. Flat design, especially suitable for use in distribution boards.

- captive fuse carrier for commercial gauge rings
- optional side-mounted module, LED indicator and auxiliary switch
- 3-pole version
- lockable



AMBUS® 60Classic

Busbar mounted fuse holder for Class CC fuses or 10x38 to 32 A, snap-on mounting on busbars, easy outgoing conductor connection with spring terminals

- equipment width 27 mm
- 2-, 3- and 4-pole versions
- versions with LED indicator
- 1-pole version for photovoltaic applications
- UL listed



QUADRON® 60Classic Speed

NH busbar mounted switch-disconnector with fuses is the highlight. Its snap-action switch mechanism enables safe, operator-independent switching.

- CrossLink®Technology: snap-on mounting in the 60Classic system
- double interruption
- lockable in off-position
- versions with rotary drive or fuse monitoring



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 45 - 90 mm
- moveable mounting rail
- connection cables 2.5 to 10 mm², terminals to 16 mm²
- versions with CrossLink® Technology
- UL listed



EQUES® 60Classic

- Busbars adapter for circuit breakers up to 630 A
- 3- and 4-pole versions
 - versions for all commercial available switching devices
 - size aligned to circuit breaker
 - simple and comfortable mounting
 - integrated connection for the respective switching device
 - UL listed



MOTUS® 60Classic

- Hybrid motor starter with additional features. Integrated functions: direct and reversing starter, overload protection and emergency stop. Space requirement and wiring cost significantly reduced.
- 3 design versions: up to 0.6 A, up to 2.4 A and up to 9 A
 - equipment width 22.5 mm
 - hybrid switching technology
 - up to 30 mil. switching cycles
 - UL listed



OMUS® 60Classic

Hybrid switch for switching resistive loads. The hybrid switching technology minimises power dissipation.

- continuous current up to 25 A
- equipment width 36 mm
- 4 integrated functions:
 - energy supply, fuse protection, monitoring and switching
- switchable in a choice of 3-pole or 1-pole
- UL listed



CRITO®

Brace terminals for round or flat conductors. Simple and convenient connection of conductors and busbars.

- conductor connection possible from above and below
- looping possible
- for round conductors 35 - 300 mm²
- for flat conductors 50 - 100 mm wide
- UL listed

60Classic - Busbar systems

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



Universal busbar support, without end cover

Type	Busbar	Pack size	Weight kg/100 u.	PG		Part No.
2-pole with internal screw holes	12, 20, 30 x 5, 10	1	8.3	06		01602
3-pole with internal screw holes	12, 15, 20, 25, 30 x 5, 10	10	12.7	06		01495
3-pole with additional external screw holes		10	13.7	06		01500
4-pole with internal screw holes		10	26.6	06		01485

UL busbar support, without end cover

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 support

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 busbar



Connection busbar support, without end cover

Type	Busbar	Pack size	Weight kg/100 u.	PG		Part No.
3-pole, with integrated terminals 1.5 - 16 mm ²	12, 15, 20, 25, 30 x 5, 10	10	25.6	06		01484

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, consists of 5 left and 5 right covers	5	5.6	06		01131



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
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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



60Classic - Busbar systems

Standard copper busbars and section busbars



Copper busbar, flat, tin-plated

Type	Length	Cross-section mm ²	Pack size	Weight kg/100 u.	PG		Part No.
busbar 12 x 5	2400	60	1	128.4	06		01618
busbar 15 x 5	2400	75	1	160.6	06		01619
busbar 20 x 5	2400	100	1	214.4	06		01620
busbar 25 x 5	2400	125	1	267.8	06		01621
busbar 30 x 5	2400	150	1	321.4	06		01622
busbar 12 x 10	2400	120	1	257.0	06		01623
busbar 20 x 10	3600	200	1	650.0	06		01140
busbar 20 x 10	2400	200	1	428.6	06		01624
busbar 30 x 10	3600	300	1	970.0	06		01204
busbar 30 x 10	2400	300	1	643.2	06		01625

For current carrying capacity of the busbars visit www.woehner.de; partial lengths on request



Section copper busbar, tin-plated

Type	Length	Cross-section mm ²	Pack size	Weight kg/100 u.	PG		Part No.
double-T section busbar 500 mm ²	3600	500	1	1596.0	06		01224
double-T section busbar 500 mm ²	2400	500	1	1062.0	06		01609
double-T section busbar 720 mm ²	3600	720	1	2334.0	06		01190
double-T section busbar 720 mm ²	2400	720	1	1554.0	06		01608
triple-T section busbar 1140 mm ²	3600	1140	1	3693.6	06		01227
triple-T section busbar 1140 mm ²	2400	1140	1	2462.4	06		01187
TCC section busbar 1600 mm ²	2400	1600	1	3416.0	06		01610

For current carrying capacity of the busbars visit www.woehner.de; partial lengths on request

Section copper busbar, plain

double-T section busbar 500 mm ²	3600	500	1	1596.0	06		01223
double-T section busbar 500 mm ²	2400	500	1	1060.0	06		01250
double-T section busbar 720 mm ²	3600	720	1	2332.0	06		01229
double-T section busbar 720 mm ²	2400	720	1	1556.0	06		01249

For current carrying capacity of the busbars visit www.woehner.de; 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

For individual busbars

Cover section, for 3-pole busbar systems

700 x 195	2	75.0	06		01025
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Mount, for cover sections, 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
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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	07		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
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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	07		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 technologies

3- and 4-pole versions



Connection busbar support, 3-pole, for 12, 15, 20, 25, 30 x 5, 10 busbars, with cover cap

Type	For use up to max.	Width	Pack size	Weight kg/100 u.	PG		Part No.
3-pole, with integrated terminals 1.5 - 16 mm ²	80 A	20	10	25.6	06		01484

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

with integrated spring terminals 1.5 - 16 mm ² , AWG 14 - 6	80 A	20	8	18.1	07		01563
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Connection terminal plate, 3-pole, for 12 x 5 - 30 x 10 busbars and section busbars, with cover cap

6 - 50 mm ² , AWG 10 - 2/0, lam. Cu. 7 - 9 x 4 - 10	300 A	54	1	45.1	07		01240
35 - 120 mm ² , AWG 2 - MCM 250, lam. Cu. 12 - 15.5 x 4 - 10	440 A	81	1	53.5	07		01243

Accessory, 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 terminal plate, 3-pole, for 20 x 5 - 30 x 10 and double-T and section busbars, with cover cap

Type	For use up to max.	Width	Pack size	Weight kg/100 u.	PG		Part No.
95 - 185 mm ²	* 460 A	135	1	132.2	07		01199
95 - 300 mm ²	* 560 A	135	1	165.7	07		01754
lam. Cu. 20 - 32 x 3 - 15	** 800 A	135	1	144.7	07		01753

* When using aluminium conductors, observe the maintenance instructions (see 8.2)

** Observe the minimum terminal space (see specifications at www.woehner.de)

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

95 - 300 mm ² , AWG 3/0 - MCM 600	* 560 A	153	1	155.5	07		01537
lam. Cu. 20x3 ... 32x15	800 A	153	1	132.5	07		01538

* When using aluminium conductors, observe the maintenance instructions (see 8.2)

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

95 - 300 mm ² , AWG 3/0 - MCM 600	* 560 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 8.2)



CRITO® - Conductor connection terminals

1-pole and covers

**Universal connection terminal, 1.5 mm² to 120 mm²**

For busbar	Connection min. - max.	Terminal space W x H	For use up to max.	Pack size	Weight kg/100 u.	PG		Part No.
flat busbars 5 mm	1.5 - 16 mm ² , AWG 14 - 6	7 x 7	180 A	100	2.1	07		01284
	4 - 35 mm ² , AWG 10 - 2	10 x 11	270 A	50	4.6	07		01285
	16 - 70 mm ² , AWG 14 - 2/0	14 x 14	400 A	25	7.1	07		01287
	16 - 120 mm ² , AWG 4 - MCM 250	17 x 15	440 A	25	10.6	07		01068
flat busbars 10 mm	1.5 - 16 mm ² , AWG 14 - 6	7 x 7	180 A	100	2.3	07		01289
	4 - 35 mm ² , AWG 10 - 2	10 x 11	270 A	50	4.7	07		01290
flat busbars 10 mm and section busbars	16 - 70 mm ² , AWG 14 - 2/0	14 x 14	400 A	25	7.5	07		01292
	16 - 120 mm ² , AWG 4 - MCM 250	17 x 15	440 A	25	10.9	07		01203

Cover cap, for universal connection terminal

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

Brace terminal, up to 300 mm², for round conductors

For busbar	Connection	For use up to max.	Pack size	Weight kg/100 u.	PG		Part No.
12, 15, 20 x 5, 10	* 35 - 150 mm ² , AWG 2 - MCM 300, lam. Cu. 15 - 20 x 5 - 10	480 A	6	10.2	07		01135
20, 25, 30 x 5, 10 and section busbars	* Cu / Al 95 - 185 mm ²	500 A	6	31.2	07		01318
20, 25, 30 x 5, 10 and section busbars	* Cu / Al 95 - 300 mm ²	600 A	3	42.5	07		01760

* When using aluminium conductors, observe the maintenance instructions (see 8.2)

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

For busbar	Terminal space	End feed	Centre feed	Pack size	Weight kg/100 u.	PG		Part No.
20, 25, 30 x 5, 10 and section busbars	30 x 20	630 A	750 A	6	30.3	07		01319
	32 x 20	630 A	800 A	3	34.7	07		01759
30 x 10 and section busbars	55 x 10 - 28	1600 A	2000 A	3	50.0	07		01069
	68 x 10 - 28	1600 A	2000 A	3	63.0	07		01070
	105 x 10 - 28	1600 A	2800 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.
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

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	228 x 260 x 90	1	45.0	07		01597



CRITO® - Conductor connection terminals

1-pole and busbar connecting terminals



Screw-type terminal, attachable, for DIN 46234 cable lugs

Type	Terminal space	For use up to max.	Pack size	Weight kg/100 u.	PG		Part No.
flat busbars 5 mm	M5 x 8	360 A	25	4.8	07		01747
	M8 x 8	490 A	20	16.0	07		01748
	M10 x 10	630 A	6	35.8	07		01749
flat busbars 10 mm	M5 x 8	360 A	25	5.0	07		01512
12, 15, 20, 25, 30 x 10 and section busbars	M8 x 8	490 A	20	16.5	07		01514
	M10 x 10	630 A	6	36.2	07		01047

Busbar connector, for connection of flat busbars and laminated copper bar

Type	Terminal space	max. height	Pack size	Weight kg/100 u.	PG		Part No.
connection of busbar 25 wide with lam. Cu 20 wide	25 x 20	45	10	14.9	07		01996
connection of busbar 30 wide with lam. Cu 20 wide	30 x 20	50	10	16.2	07		01997
connection of busbar 30 wide with lam. Cu 30 wide	30 x 30	50	10	19.8	07		01586
connection of busbar 35 wide with lam. Cu 30 wide	35 x 30	55	10	21.5	07		01587
connection of busbar 40 wide with lam. Cu 20 wide	40 x 20	40	10	17.8	07		01206
connection of busbar 40 wide with lam. Cu 32 wide	40 x 32	60	6	27.6	07		01616

Busbar connection terminals, in longitudinal direction with wedge clamp terminal

Busbar	Round conductor min – max	Flat conductor W x H	Pack size	Weight kg/100 u.	PG		Part No.
20 x 5, 10	120 - 240 mm ²	21 x 4 - 20	3	11.0	07		01201
25 x 5	150 - 300 mm ²	25 x 5 - 20	3	13.4	07		01202

Busbar connecting terminal, in longitudinal direction with brace terminal, for laminated copper bar

the terminal is able to connect flexible copper 32 x 10 in longitudinal direction	32 x 1 - 15	3	50.0	07		01069
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CRITO® - Conductor connection terminals

1-pole profile terminals for flat conductors



Profile terminal, for double-T section busbars

Connection cross-section	End feed	Centre feed	Terminal space W x H	Pack size	Weight kg/100 u.	PG		Part No.
320 - 800 mm ²	1600 A	1600 A	41 x 20 - 42	3	67.0	07		01185
500 - 750 mm ²	1600 A	1600 A	51 x 5 - 28	3	70.5	07		01906
600 - 900 mm ²	1600 A	1600 A	64 x 5 - 28	3	84.0	07		01907
500 - 1000 mm ²	1600 A	2000 A	51 x 20 - 42	3	73.5	07		01936
600 - 1200 mm ²	1600 A	2000 A	64 x 20 - 42	3	85.9	07		01911
800 - 1600 mm ²	1600 A	2500 A	81 x 20 - 42	3	101.1	07		01934
1000 - 2000 mm ²	1600 A	2800 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 mm ²	1600 A	1600 A	41 x 23 - 45	3	105.0	07		01513
500 - 1260 mm ²	2000 A	2500 A	64 x 23 - 45	3	124.0	07		01008
1200 - 3600 mm ²	2500 A	3200 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 mm ²	1600 A	2000 A	55 x 10 - 28	3	50.0	07		01069
600 - 1200 mm ²	1600 A	2000 A	68 x 10 - 28	3	63.0	07		01070
1000 - 2000 mm ²	1600 A	2800 A	105 x 10 - 28	3	84.0	07		01071

For the connection of flat busbars and flexible copper busbars

Connection terminal

Busbar	For use up to max.	Connection	Pack size	Weight kg/100 u.	PG		Part No.
30 x 10 and section busbars	630 A	95 - 300 mm ²	3	85.7	07		01094
30 x 10 and section busbars	1250 A	40 x 25	3	81.7	07		01092

Flexible copper busbar, plain, insulated, length 2 m

Dimensions (number of laminates x width x thickness)	Rated current at 30 K	Rated current at 50 K	Cross-section mm ²	Pack size	Weight kg/100 u.	PG		Part No.
10 x 40 x 1	774 A	1053 A	400	1	746.0	06		01615
10 x 50 x 1	914 A	1244 A	500	1	932.0	06		01509
10 x 63 x 1	1088 A	1481 A	630	1	1180.0	06		01510
10 x 80 x 1	1305 A	1777 A	800	1	1490.0	06		01061
10 x 100 x 1	1550 A	2110 A	1000	1	1870.0	06		01273

You will find more flexible copper busbars in the accessories section



CRITO® - Longitudinal busbar connectors

for flat conductors and section busbars



Busbar connecting terminal, for same-size busbar

For busbar	Length	System spacing	For use up to max.	Pack size	Weight kg/100 u.	PG		Part No.
12, 15, 20 x 5, 10	55	5 - 10 mm	520 A	12	19.2	07		01166
	150	100 - 110 mm	520 A	3	52.4	07		01193
20, 25, 30 x 5, 10	40	9 - 20 mm	630 A	6	23.3	07		01990
	40	13 - 20 mm	630 A	6	25.2	07		01823
	95	50 - 60 mm	630 A	3	54.4	07		01141
	150	100 - 110 mm	630 A	3	86.6	07		01886
double-T section	50	9 - 20 mm	1600 A	6	49.4	07		01827
	95	50 - 60 mm	1600 A	3	94.3	07		01145
	150	100 - 110 mm	1600 A	3	146.1	07		01829
triple-T section	95	50 - 60 mm	2500 A	3	120.6	07		01274
	150	100 - 110 mm	2500 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

Connection set, 3-pole, for section busbars

For busbar	Type	For use up to max.	Pack size	Weight kg/100 u.	PG		Part No.
double-T section	* 150 mm, flexible longitudinal connection	1600 A	1	536.0	07		30322
double-T section	* 130 mm, flexible corner connection		1	638.0	07		30473
triple-T section	* 200 mm, flexible longitudinal connection	2500 A	1	940.0	07		01295

* Supplied as a 3-pole connection set



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

**Busbar adapter, 16 A, with removable top section, with lead 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	42.7	05		32401

Busbar adapter, 16 A, with fuse holder, with removable top section, with lead AWG 14 (2.5 mm²)

1 fixed mounting rail, with fuse carrier 10x38 / Class CC	22.5	200	1	20.0	05		36003
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Busbar adapter, 25 A, with removable top section, with lead AWG 12 (4 mm²)

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 lead 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 lead 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 adapter, 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 CrossLink® busbar adapters

attachable to both sides	9	200	10	4.3	05		32964
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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 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	0.7	05		32973
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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 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
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All devices can be mounted directly on busbars 12, 15, 20, 25, 30 x 5, 10 and section busbars



EQUES® 60Classic - Busbar adapters 32 A - 80 A

universal

**Busbar adapter, 32 A, without leads, with spring terminal 1.5 - 6 mm² from front**

Type	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
1 adjustable mounting rail	45	200	4	32.5	05		32486
2 adjustable mounting rails		260	4	35.5	05		32487

Busbar adapter, 80 A, without leads, with screw terminals 1.5 – 16 mm² from front

1 adjustable mounting rail	54	200	4	37.3	05		32464
2 adjustable mounting rails		260	4	41.2	05		32465

Busbar component support, without electrical connection

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
2 adjustable mounting rails	54	260	4	27.7	05		32478
2 adjustable mounting rails	45		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
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PE/N adapter module, with connection terminal 16 mm², top and bottom

attachable to busbar adapter to both sides	18	242	4	14.1	05		32146
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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 mm ²), 105 mm long	* 24	0.3	05		32921
lead AWG 10 (6 mm ²), 130 mm long	* 24	0.7	05		32907
lead AWG 4 (25 mm ²), 210 mm long	* 24	5.1	05		32914
double-lead 2x AWG 10 (2x 6 mm ²), 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 switchgear



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 PKZ0/BG1	45	200	4	33.0	05		32450
for reversing starter Eaton PKZ0/BG1	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		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 PKZ0/BG2	45		4	36.4	05		32451	
for reversing starter Eaton PKZ0/BG2	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 LUB12/32	45	4		32.2	05		32427	
for reversing starter Schneider Electric LUB12/32	45	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	4		32.1	05		32638	
for direct starter Siemens S0 with spring terminal connection	45	200		4	32.1	05		32659
for direct starter Siemens 3RA6	45			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 Siemens Sirius circuit breaker frame size S2, 200 mm long	54	200	1	52.1	05		32662
for Siemens Sirius direct starter frame size S2, 260 mm long	54	260	1	59.1	05		32663
for Siemens Sirius reversing starter frame size S2, 260 mm long	117		1	87.3	05		32664
for Siemens NGG, HGG, LGG (up to 80 A)	72	200	2	66.0	05		32029

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

for ABB circuit breaker MS49x and Siemens Sirius circuit breaker frame size S3, 200 mm long	72	200	1	66.0	05		32981
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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 switchgear and universal busbar adapters

**Busbar adapter, 160 A, 3-pole, phase pitch 23 - 30 mm**

Type	Rated current	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
for Siemens 3VA10, 11 and 3VT160, top connection to the system	160 A	76	200	1	81.0	05		32660
for Siemens 3VA51 and Siemens NGG, LGG, HGG, top connection to the system	160 A	90		1	81.0	05		32028
for Eaton NZM1, connection top / bottom	160 A	92		1	81.0	05		32570
for Allen-Bradley 140U-H, top connection to the system	160 A	90		1	81.0	05		32577
for ABB T-max T1, XT1, T2, XT2, GE FD160, Schneider El. NS80, NSX80, top connection to the system	160 A	90		1	81.0	05		32575
for ABB T-max T1, XT1, XT2, Allen-Bradley 140G-G and H, for circuit breakers with terminals for flexible copper, 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, for circuit breakers with connections for flexible copper, bottom connection to the system	160 A	90		1	81.0	05		32020

Busbar adapter, 250 A, 3-pole, phase pitch 35 - 36 mm, connection to system at the top / bottom

for ABB Tmax T4, Siemens 3VM/3VA *	290 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 Allen-Bradley 140U-J and 140M-J	250 A	105		1	90.0	05		32137
for Schneider Electric NSX100-NSX250, GV7	250 A	105		1	93.8	05		32156
for Eaton NZM2-XKR40 and NZM2-XKR4U	250 A	105		1	90.1	05		32140
for Siemens 3VL1 UL	160 A	105		1	95.3	05		32976
for Siemens 3VL2, 3VL3 UL	250 A	105		1	95.3	05		32977
for Siemens 3VT250, OEG BD250 *	250 A	105	240	1	102.0	05		32651
for Siemens 3VA12, 20, 21, 22, 52, 61, 62	250 A	105		1	102.0	05		32017
for Terasaki S250-NJ *	250 A	105		1	102.0	05		32592

* connection to system only at the top

Busbar adapter, 250 A, 4-pole, phase pitch 35 - 36 mm, connection to system at the top

for ABB Tmax T4, Allen-Bradley 140G-K	250 A	140	270	1	180.0	05		32584
for ABB XT3/XT4	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 *	230 A	140	251	1	118.6	05		32642
for Eaton NZM2-XKR40	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

Universal busbar adapter, 200 A - 250 A, 3-pole

terminals 70 mm ² at top	200 A	108	222	1	84.2	05		32214
terminals 70 mm ² at bottom	200 A	108		1	86.0	05		32215
terminals 35 - 120 mm ² at top	250 A	110	320	1	160.4	05		32168
terminals 35 - 120 mm ² at bottom	250 A	110		1	164.0	05		32216

For all commercially available switchgear with M4 fixing screws (see accessory for M5 screws)

Accessories, slide nut M5, for universal busbar adapters

Type	Pack size	Weight kg/100 u.	PG	Part No.
for 32168, 32214, 32215, 32216	4	0.4	05	32937

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

tailored to the products of the switchgear manufacturers and 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 and Allen-Bradley 140G-K	580 A	140	300	1	252.0	05		32593
for Allen-Bradley 140U-K, 140U-L, 140M-L	600 A		272	1	212.0	05		32138
for Schneider Electric NS400/630, NSX 400/630	570 A			1	222.6	05		32157
for Eaton NZM3-XKR13O and NZM3-XKR13U	630 A		300	1	250.0	05		32978
for Siemens 3VL4	400 A		295	1	222.4	05		32975
for Siemens 3VA23, 24, 63, 64	590 A		300	1	250.0	05		32031
for Siemens 3VT630, OEZ BH630	600 A			1	250.0	05		32641

Busbar adapter, 630 A, 3-pole, phase pitch 63 mm, connection to system at the top

for Siemens 3VL5	580 A	184	325	1	276.0	05		32980
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Busbar adapter, 650 A, 3-pole, phase pitch 70 mm, connection to system at the top

for ABB T-max T6 and Allen-Bradley 140G-M	650 A	238	300	1	285.6	05		32064
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Busbar adapter, 630 A, 4-pole, phase pitch 43 - 45 mm, connection to system at the top

for ABB Tmax T5, Allen-Bradley 140G-K	500 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	500 A		300	1	350.0	05		32581
for Siemens 3VA23, 24, 63, 64	590 A			1	350.0	05		32033
for Siemens 3VL400	400 A			1	350.0	05		32579

* connection at the system at the top/bottom

Universal busbar adapter, 630 A, 3-pole

connection screws M12 (top / bottom)	630 A	184	320	1	278.0	05		32004
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Accessories, mounting set, adjustable for various MCCB

for adapter 32004		180	315	1	82.0	05		32982
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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

**Hybrid motor starter, MOTUS®Classic3-pole, 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	62.6	21		36102
0.18 - 2.4 A direct and reversing starter				1	62.6	21		36105
1.5 - 9 A direct and reversing starter				1	62.6	21		36108

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	50.9	21		36110
electronic unit 1.5 - 9 A direct and reversing starter	1	50.9	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 9 A	3	2.8	21		31568
fuse 30 A for version 9 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.
25 A (IEC)	36	200	144	1	45.8	21		36153
20 A (UL)				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, 25 A (IEC)	1	55.2	21		36154
electronic unit, 20 A (UL)	1	55.2	21		36159
busbar adapter base with CrossLink® interface	1	10.8	21		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

Replacement fuse, for OMUS®60Classic

cylindr. fuse link 32 A	10	0.6	22		31189
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



CUSTO®60Classic - D busbar mounted fuse bases

3-pole DII and DIII fuse holders



D busbar mounted fuse base with touch-safe protection incl. strip cover, for gauge rings

Type	Width	Height	Pack size	Weight kg/100 u.	PG	Part No.
E 27 / 3P	42	200	8	29.7	01	31946
E 33 / 3P	57	200	6	39.8	01	31947

D busbar mounted fuse base with touch-safe protection incl. strip cover, for screw-in gauge rings

E 27 / 3P	42	200	8	28.7	01	31950
E 33 / 3P	57	200	6	38.7	01	31951

D busbar mounted fuse base without strip cover, for gauge rings

E 27 / 3P			10	23.3	01	31918
E 33 / 3P			10	32.0	01	31919

D busbar mounted fuse base without strip cover, for screw-in gauge rings

E 27 / 3P			10	22.3	01	31441
E 33 / 3P			10	30.9	01	31442

D strip cover

Type	Width	Height	Pack size	Weight kg/100 u.	PG	Part No.
E 27	42	200	10	4.9	01	31070
E 33	57	200	10	6.2	01	31071
E 27	84	200	5	8.4	01	31072
E 33	114	200	5	10.8	01	31073

Shock protection cover, for all strip covers

lateral attachable			10	1.3	01	79663
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All devices can be mounted directly on busbars 12, 15, 20, 25, 30 x 5, 10 and section busbars

SECUR®60Classic - CUSTO®60Classic

3-pole switch disconnecter and D0 fuse holder

**Busbar mounted switch disconnecter** with fuses, **PowerLiner**, tall version, 3-pole, 3-pole / 1-pole switching

Type	Rated current	Rated voltage	Utilization category	Depth	Pack size	Weight kg/100 u.	PG	Part No.
for fuse links D01 and D02	* 63 A	400 V	AC-23A (400 V)	104	1	75.9	01	31158
for fuses 10x38	* 32 A	690 V	AC-23A (400 V) AC-22A (690 V)	104	1	76.0	01	31232

* For continuous loads above 35 A the use of side-mounted module 31901 is recommended; fuse links not included

Busbar mounted switch disconnecter with fuses, SECUR®60Classic **PowerLiner**, tall version, 3-pole, 1-pole switching

Type	Rated current	Rated voltage	Utilization category	Depth	Pack size	Weight kg/100 u.	PG	Part No.
for D01 and D02 fuses, with LED	* 63 A	400 V	AC-23A (400 V)	104	1	76.5	01	31525

* For continuous loads above 35 A the use of side-mounted module 31901 is recommended; fuse links not included

Accessory for SECUR®60Classic PowerLiner

Type	Pack size	Weight kg/100 u.	PG	Part No.
pilot switch	1	0.7	01	31903
side-mounted module	5	6.1	01	31901
reducer D02 for D01 fuses 2 - 16 A	20	0.1	01	31902

D0 busbar mounted fuse base, CUSTO®60Classic, touch-safe protection incl. strip cover

Type	Width	Height	Pack size	Weight kg/100 u.	PG	Part No.
E 18 / 63 A	* 27	200	8	14.4	01	31935
E 18 / 63 A	36		6	16.1	01	31936

* The 36 mm-wide version allows optimal cable routing and heat removal

D0 busbar mounted fuse base, without strip cover

Type	Width	Height	Pack size	Weight kg/100 u.	PG	Part No.
E 18 / 3P	* 27	200	10	14.7	01	01647
E 18 / 3P	36		10	15.5	01	01498

* The 36 mm-wide version allows optimal cable routing and heat removal

D0 strip cover

Type	Width	Height	Pack size	Weight kg/100 u.	PG	Part No.
E 18	27	200	10	2.6	01	01980
	36		10	3.1	01	01424
	54		10	4.0	01	01981

Shock protection cover, for all strip covers

Type	Pack size	Weight kg/100 u.	PG	Part No.
lateral attachable	10	1.3	01	79663

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

SECUR®60Classic - QUADRON®60Classic

3-pole D0 and NH fuse-switch disconnectors



D0 busbar mounted switch disconnector with fuses, 3-pole, 3-pole switching, **EasyLiner**, flat version, for the 3-pole busbar system, with SnapLock connection technology

Type	Rated current	Rated voltage	Utilization category	Depth	Pack size	Weight kg/100 u.	PG	Part No.
for D01 and D02 fuses *	63 A	400 V	AC-22B (400V)	80	1	33.0	01	31574
for D01 and D02 fuses, with LED *	63 A	400 V	AC-22B (400V)	80	1	33.0	01	31575

Fuse links not included

* For continuous loads above 35 A, use of the 9 mm side-mounted module is recommended, EN 61439-2

D0 busbar mounted switch disconnector, with fuses, 3-pole, 3-pole switching, **EasyLiner**, flat version, for the 5-pole busbar system, with SnapLock connection technology

for D01 and D02 fuses *	63 A	400 V	AC-22B (400V)	80	1	33.0	01	31578
for D01 and D02 fuses, for busbar systems 250 A, 400 A and 630 A of company Hensel *	63 A	400 V	AC-22B (400V)	80	1	33.0	01	31588
for D01 and D02 fuses, with LED *	63 A	400 V	AC-22B (400V)	80	1	33.0	01	31579

Fuse links not included

* For continuous loads above 35 A, use of the 9 mm side-mounted module is recommended, EN 61439-2

Accessories for D0 busbar mounted switch disconnector

Type	Pack size	Weight kg/100 u.	PG	Part No.
pilot switch	1	0.7	01	31976
9 mm side module for 31574 and 31575	5	6.1	01	31914
9 mm side module for 31578 and 31579	5	6.1	01	31915
reducer D02 for D01 fuses 2 - 16 A	20	0.1	01	31902

NH busbar mounted fuse-switch disconnector, size 00 to 1, connection at top / bottom, 3-pole with short connection module for **5-pole** busbar systems, distribution boards/insulated distribution boards

Type	Size	Width	Height	Pack size	Weight kg/100 u.	PG	Part No.
box terminal	NH 00	106	200	1	100.0	09	33075
screw M8	NH 00	106	200	1	100.0	09	33079
screw M10	NH 1	184	220	1	357.0	09	33194



Busbar support, 60mm system, **5-pole**, for the VMS (GE) and AKi (Spelsberg) range of boxes

Type	Pack size	Weight kg/100 u.	PG	Part No.
for busbars 3x (12, 20, 30 x 10) and 2x (12, 20, 25 x 5, 10)	30	16.7	06	01138

Reducer, for 5 mm busbars

reducer for busbar support 01138	100	0.1	06	01170
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All devices can be mounted directly on busbars 12, 15, 20, 25, 30 x 5, 10 and section busbars



AMBUS®60Classic - Fuse holders

for cylindrical fuses

**Busbar mounted fuse holder, 1-pole, 1-pole disconnecting**

Type	For busbar	Rated current	Rated voltage	Width	Pack size	Weight kg/100 u.	PG		Part No.
for fuses 10x38 IEC 60269-6	30 x 5, 10	30 A	1000 V	22.5	12	5.0	01		31570
for fuses 10x38 IEC 60269-6, with LED 110 - 690 V AC / DC	30 x 5, 10			22.5	12	5.0	01		31571
for fuses 10x38 IEC 60269-6	20 x 5, 10			22.5	12	5.0	01		31572

Busbar mounted fuse holder, 2-pole, 2-pole disconnecting, with spring terminals

for fuses 10x38 IEC 60269-2	12, 15, 20, 25, 30 x 5, 10 and section busbars	32 A	690 V	27	6	12.2	01		31961
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Busbar mounted fuse holder, 3-pole, 3-pole disconnecting, with spring terminals

for fuses 10x38 IEC 60269-2	12, 15, 20, 25, 30 x 5, 10 and section busbars	32 A	690 V	27	4	18.5	01		31954
for fuses 10x38 IEC 60269-2, with LED 110 - 690 V AC / DC				27	4	18.7	01		31955

Busbar mounted fuse holder, 3-pole +N, all-pole disconnecting, with spring terminals

for fuses 10x38 IEC 60269-2	12, 15, 20, 25, 30 x 5, 10 and section busbars	32 A	690 V	27	4	25.2	01		31963
for fuses 10x38 IEC 60269-2, with LED 110 - 690 V AC / DC				27	4	25.2	01		31964

Busbar mounted switch disconnecter with fuses, 3-pole, PowerLiner, tall version, 3-pole, 3-pole/1-pole switching

for fuses 10x38	12, 15, 20, 25, 30 x 5, 10 and section busbars	32 A	690 V	27	1	76.0	01		31232
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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 QCB NH fuse-switch disconnecter, size 000 to 3



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

Type	Rated current	Rated voltage	Width	Pack size	Weight kg/100 u.	PG	Part No.
for fuses Class CC UL248-4	30 A	600 V	27	4	18.6	01	31958
for fuses Class CC UL 248-4, with LED 110 - 690 V AC / DC				4	18.8	01	31959

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

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

Type	Rated current	Rated voltage	Width	Pack size	Weight kg/100 u.	PG	Part No.
for fuse links Class J 1 - 30 A (21x57)	30 A	600 V	106	1	138.0	16	33421
for fuse links Class J 35 - 60 A (27x60)	60 A			1	135.0	16	33422
for fuse links Class J 70 - 100 A (29x117)	* 100 A			1	129.0	16	33402
for fuse links Class J 110 - 200 A (41x146)	* 200 A		184	1	278.0	16	33403

For busbars 12, 20, 30 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, 3-pole disconnecting

Type	Rated current	Rated voltage	Width	Pack size	Weight kg/100 u.	PG	Part No.
for fuse links Class J 1 - 30 A (21x57), with LED	30 A	600 V	108	1	110.0	16	31968
for fuse links Class J 35 - 60 A (27x60), with LED	60 A	600 V	126	1	131.0	16	31970

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

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

Type	Rated current	Rated voltage	Width	Pack size	Weight kg/100 u.	PG	Part No.
for fuse links Class J 225 - 400 A (54x181)	400 A	600 V	256	1	690.0	16	33311

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



QUADRON®60Classic - NH busbar mounted fuse bases, size 00 - 2

QCC for NH fuses

**NH busbar mounted fuse base, size 00 - 1, with touch-safe protection, 3-pole connection at top / bottom**

Type	Rated current	Size	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
box terminal	160 A	NH 00	106	200	1	87.0	10		03199
screw M8					1	87.0	10		03299
box terminal	250 A	NH 1	184	210	1	210.5	10		03300
screw M10					1	198.5	10		03301

NH busbar mounted fuse base, size 00, with touch-safe protection, 3-pole connection at top

Type	Rated current	Size	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
terminal 70 mm ²	160 A	NH 00	99	200	4	66.5	10		03654
screw M8				200	4	64.5	10		03656

NH busbar mounted fuse base, size 2, with touch-safe protection, 3-pole connection at bottom

Type	Rated current	Size	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
screw M10	400 A	NH 2	206	195	1	291.2	10		03693

Accessories, for NH bases

Type	Size	Pack size	Weight kg/100 u.	PG		Part No.
grip lug cover	*	00	30	1.2	10	79448
grip lug cover for CrossLink® NH fuse base		1	3	2.5	10	33916
grip lug cover	**	1 - 3	30	1.5	10	79449
connection for auxiliary line, for box terminal		00	3	0.6	09	33915
prism terminal, single, for Cu and Al cables	***	00	3	3.0	09	33224
tunnel terminal for screw connection M8		00	3	4.2	09	01182
cover for cable lugs, attachable top / bottom		00	1	2.8	09	79811

* 1 piece required per fuse

** 2 pieces required per fuse

*** When using aluminium conductors, observe the maintenance instructions (see 8.2)

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

QUADRON®60Classic - NH fuse-switch-disconnectos, size 000 - 3

QCB for NH fuses



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	89	200	1	113.0	09		33216
box terminal	160 A	NH 00	106		1	100.0	09		33198
screw M8	160 A	NH 00			1	103.0	09		33398
box terminal	250 A	NH 1	184	243	1	266.0	09		33600
screw M10	250 A	NH 1			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 and 1 with short connection module for 5-pole busbar systems, distribution boards / insulated distribution boards, see page 3.19

* For size 2, the conversion kit 33148 is required for mounting on 5 mm busbars

** Size 3 is not suitable for 5 mm busbars

NH busbar mounted fuse-switch-disconnector, size 00 - 3, connection at top / bottom, 3-pole, with electronic fuse monitoring

box terminal	160 A	NH 00	106	200	1	117.0	09		33324
screw M8	160 A	NH 00			1	117.0	09		33394
screw M10	250 A	NH 1	184	243	1	223.0	09		33325
screw M10	* 400 A	NH 2	210	288	1	572.0	09		33326
screw M12	** 630 A	NH 3	256	300	1	796.0	09		33327

Circuit diagram for fuse monitoring can be found online at www.woehner.de

* For size 2, the conversion kit 33148 is required for mounting on 5 mm busbars

** Size 3 is not suitable for 5 mm busbars

NH busbar mounted fuse-switch-disconnector, size 00 - 3, connection at top / bottom, 3-pole, with electromechanical fuse monitoring

box terminal	160 A	NH 00	106	200	1	180.0	09		33206
screw M8	160 A	NH 00			1	180.0	09		33420
screw M10	250 A	NH 1	184	243	1	333.0	09		33160
screw M10	* 400 A	NH 2	210	288	1	574.0	09		33161
screw M12	** 630 A	NH 3	256	300	1	824.0	09		33162

Circuit diagram for fuse monitoring can be found online at www.woehner.de

* For size 2, the conversion kit 33148 is required for mounting on 5 mm busbars

** Size 3 is not suitable for 5 mm busbars

Accessories, busbar adapter base with CrossLink® interface

Type	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
busbar adapter base with CrossLink® interface	106	200	2	36.5	09		32594
busbar adapter base with CrossLink® interface	184	210	2	75.5	09		32595



QUADRON® 60Classic - Accessories

for NH fuse-switch disconnectors QCB, size 000 - 3



Pilot switch, for monitoring the disconnector lid position

Type	Size	Pack size	Weight kg/100 u.	PG	Part No.
changeover 250V AC/5A, 30V DC/4A	000 - 3	1	1.1	09	33156
changeover 250 V AC / 5 A, 30 V DC / 4 A	1	1	1.3	09	33917

33156 not suitable for size 1 fuse-switch disconnectors

Disconnecter lid interlock

for sealing wire	000	10	0.1	09	33051
	00	10	0.2	09	03849
for sealing wire or 3 padlocks with shackle of 4 - 7 mm	1 - 3	10	0.5	09	33157

Barrier for handle

for closing of handle area from rear	1 - 3	10	2.2	09	33155
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Arc chamber

retrofit package for higher utilisation category	1	3	10.7	09	33918
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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
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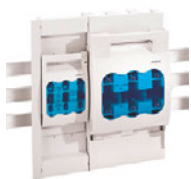
Connection accessories

Type	Connection	Size	Pack size	Weight kg/100 u.	PG	Part No.
connection for auxiliary line, for box terminal	6.3 x 0.8	00	3	0.6	09	33915
box terminal for Cu cables	35 - 185 mm ² / 24 x 3 - 21	1	3	10.0	09	33909
clamp connector for Cu cables	70 - 150 mm ² / 18 x 2 - 14	1	1	6.3	09	33163
clamp connector for Cu cables	120 - 240 mm ² / 21 x 1 - 14	2	1	10.6	09	33164
clamp connector for Cu cables	150 - 300 mm ² / 25 x 1 - 13	3	1	12.5	09	33165
prism terminal, single, for Cu and Al cables	* 16 - 70 mm ²	00	3	3.0	09	33224
prism terminal, single, for Cu and Al cables	* 35 - 150 mm ²	1	1	11.6	09	33166
prism terminal, single, for Cu and Al cables	* 50 - 240 mm ²	2	1	19.9	09	33167
prism terminal, single, for Cu and Al cables	* 150 - 300 mm ²	3	1	24.7	09	33168
prism terminal, double, for Cu cables	2x 35 - 70 mm ²	1	1	16.6	09	33145
prism terminal, double, for Cu cables	2x 70 - 120 mm ²	2	1	27.8	09	33146
prism terminal, double, for Cu cables	2x 150 mm ²	3	1	36.8	09	33147
prism terminal, double, for Cu cables	2x 185 mm ²	3	1	36.8	09	33385
tunnel terminal for screw connection M8	1x 2.5 - 16 mm ² + 2x 2.5 - 25 mm ²	00	3	4.2	09	01182

* When using aluminium conductors, observe the maintenance instructions (see 8.2)

QUADRON®60Classic - Accessories

for NH fuse-switch disconnectors QCB, size 00 - 3



Equalising trim, to balance the installation depth

Type	Dimensions W x H x D	Size	Pack size	Weight kg/100 u.	PG		Part No.
trim cover, 2 parts	106 x 350 x 83	00	1	12.4	09		33315
trim strip, attachable at side	20 x 350 x 35	00	2	6.0	09		33317
cover for cable lugs, top / bottom attachable	183 x 65 x 68	1	2	10.7	09		33142
trim cover, 2 parts	210 x 350 x 83	2	1	21.1	09		33316

For trim cut-out 300 to 340 high, 83 in front of the busbar front edge



Cover

Type	Size	Pack size	Weight kg/100 u.	PG		Part No.
cover for cable lugs, attachable top / bottom	00	1	2.8	09		79811
cover for cable lugs, top / bottom attachable	1	2	10.7	09		33142
	2	2	10.9	09		33143
	3	2	15.6	09		33144
connection shroud	2	2	4.0	09		33418
	3	2	5.4	09		33419

QUADRON® 60Classic Speed - NH fuse-switch-disconnectors 125 A / 160 A

QCB with snap-action switch mechanism, modul width 106

**NH busbar mounted switch-disconnector with fuses, size 00, 3-pole, with multifunction handle** (snap-action switch mechanism)

Type	Rated current	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
box terminal, connection bottom	125 A	106	200	1	219.0	15		33500
box terminal, connection top				1	219.0	15		33501
box terminal, connection bottom, with electronic fuse monitoring				1	236.0	15		33506

Fuses not included

Circuit diagram for fuse monitoring can be found online at www.woehner.de**NH bus mounting switch-disconnector with fuses, size 00, 3-pole, with door coupling rotary drive** (snap-action switch mechanism)

box terminal, connection bottom, for door coupling rotary handle	125 A	106	200	1	208.0	15		33503
box terminal, connection top, for door coupling rotary handle				1	208.0	15		33504

Fuses not included

Additional extension shaft and door coupling rotary handle required

Additional QCS for door coupling rotary handle with lateral actuation on request

Busbar mounted switch-disconnector, 3-pole, with multifunction handle (snap-action switch mechanism)

Type	Rated current	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
box terminal, connection bottom *	160 A	106	200	1	216.0	14		33540
box terminal, connection top *				1	216.0	14		33541

* As main switch or emergency off switch only with the following maximum operating current: 125 A / 690 V DC

Busbar mounted switch-disconnector, 3-pole, with door coupling rotary drive (snap-action switch mechanism)

box terminal, connection bottom, for door coupling rotary handle *	160 A	106	200	1	208.0	14		33543
box terminal, connection top, for door coupling rotary handle *				1	208.0	14		33544

Additional extension shaft and door coupling rotary handle required

* As main switch or emergency off switch only with the following maximum operating current: 125 A / 690 V DC

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

QUADRON® 60Classic Speed - NH switch-disconnectors with fuses 250 A / 320 A

QCB with snap-action switch mechanism, modul width 184



NH busbar mounted switch-disconnector with fuses, size 1, 3-pole, with multifunction handle (snap-action switch mechanism)

Type	Rated current	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
screw M10, connection bottom	250 A	184	286	1	567.0	15		33510
screw M10, connection top	250 A	184	314	1	589.0	15		33511
screw M10, connection bottom, with electronic fuse monitoring	250 A	184	286	1	625.0	15		33516

Fuses not included

Circuit diagram for fuse monitoring can be found online at www.woehner.de

NH busbar mounted switch-disconnector with fuses, size 1, 3-pole, with door coupling rotary drive (snap-action switch mechanism)

screw M10, connection bottom, for door coupling rotary handle	250 A	184	286	1	555.0	15		33513
screw M10, connection top, for door coupling rotary handle	250 A	184	314	1	577.0	15		33514

Fuses not included

Additional extension shaft and door coupling rotary handle required

Busbar mounted switch-disconnector, 3-pole, with multifunction handle (snap-action switch mechanism)

screw M10, connection bottom	*	320 A	184	286	1	565.0	14		33550
screw M10, connection top	*	320 A	184	314	1	587.0	14		33551

* As main switch or emergency off switch only with the following maximum operating current: 280 A / 400 V AC, 250 A / 690 V AC

Busbar mounted switch-disconnector, 3-pole, with door coupling rotary drive (snap-action switch mechanism)

screw M10, connection bottom, for door coupling rotary handle	*	320 A	184	286	1	543.0	14		33553
screw M10, connection top, for door coupling rotary handle	*	320 A	184	314	1	565.0	14		33554

Additional extension shaft and door coupling rotary handle required

* As main switch or emergency off switch only with the following maximum operating current: 280 A / 400 V AC, 250 A / 690 V AC

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

QUADRON®60Classic - Accessories

for QCS module width 106 and 184



Accessories

Type	Usable for version	Pack size	Weight kg/100 u.	PG		Part No.
connecting terminal 120 mm ²	QCS-NH00, QCS 160 A	3	12.1	14		33914
connection for auxiliary line, for box terminal	QCB-NH00, QCS-NH00, QCS 160 A	3	0.6	09		33915
pilot switch for monitoring the switch position	QCS-NH00 / 1, QCS 160 A / 320 A	1	1.1	14		33908
cover for cable lugs, top / bottom attachable	QCB-NH1, QCS-NH1, QCS 320 A	2	10.7	09		33142
door coupling rotary handle, black, without shaft *	QCS-NH00 / 1, QCS 160 A / 320 A	1	57.0	14		33910
door coupling rotary handle, red-yellow, without shaft *		1	57.0	14		33911
extension shaft, 290 mm long		1	13.0	14		33912
extension shaft, 490 mm long		1	22.0	14		33913

* Switch can also be installed 90° left/right, always with the same handle position



Connection accessories

Type	Connection	Usable for version	Pack size	Weight kg/100 u.	PG		Part No.
box terminal for Cu cables	35 - 185 mm ² / 24 x 3 - 21	QCB-NH1, QCS-NH1, QCS 320 A	3	10.0	09		33909
prism terminal, single, for Cu and Al cables	35 - 150 mm ²		1	11.6	09		33166
prism terminal, double, for Cu cables	2x 35 - 70 mm ²		1	16.6	09		33145
clamp connector for Cu cables	70 - 150 mm ² / 18 x 2 - 14	QCB-NH1, QCS-NH1, LTS-F 250, LTS 400	1	6.3	09		33163

QUADRON®60Classic - In-line fuse disconnectors, size 00

for snapping onto the busbar system



NH in-line fuse disconnector, size 00, 3-pole switchable, connection at top / bottom

Type	Rated current	Size	Width	Height	Pack size	Weight kg/100 u.	PG		Part No.
screw M8 / clamp 70 mm ²	160 A	NH 00	50	455	1	146.0	12		33234

With terminal compartment cover

NH in-line fuse disconnector, size 00, 3-pole switchable, connection at top / bottom

screw M8 / clamp 70 mm ² , with fuse monitoring	160 A	NH 00	50	610	1	146.0	12		33285
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with terminal compartment cover

Circuit diagram for fuse monitoring can be found online at www.woehner.de



Pilot switch, for monitoring of the disconnector lid position

Type	Size	Pack size	Weight kg/100 u.	PG		Part No.
changeover 250V AC/5A, 30V DC/4A	000 - 3	1	1.1	09		33156

Flat push-on connector 2.8 x 0.5 (DIN 46244-A)

Connection accessories

Type	Connection	Size	Pack size	Weight kg/100 u.	PG		Part No.
clamp connector	1.5 - 70 mm ² / 12 x 1 - 10	00	3	1.5	09		03727
M8 screw connector	70	00	3	1.4	09		30894
prism terminal, single, for Cu and Al cables	* 16 - 70 mm ²	00	3	3.0	09		33224

* When using aluminium conductors, observe the maintenance instructions (see 8.2)

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

Special solutions for busbar systems



Busbar support, 60 mm system, 3, 4, 5-pole, for VMS (GE) and AKi (Spelsberg) range of boxes

Type	Pack size	Weight kg/100 u.	PG	Part No.
for busbars 3x (12, 20, 30 x 10) and 2x (12, 20, 25 x 5, 10)	30	16.7	06	01138

Reducer, for 5 mm busbars

reducer for busbar support 01138	100	0.1	06	01170
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3 pieces are required for a busbar support

Busbar support, fits the Striebel & John system

Type	For busbar	Pack size	Weight kg/100 u.	PG	Part No.
3-pole with internal screw holes	12, 20, 30 x 5, 10	10	10.0	06	01603
1-pole, attachable to 01603 or individual mounting, with integrated end cover		1	4.1	06	01355

End cover

for busbar supports 01484, 01495, 01500, 01508 and 01603	10	2.0	06	01573
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QUADRON®60Classic, NH busbar mounted fuse-switch disconnecter, outgoing terminal at top / bottom, 3-pole with short connection module for 5-pole busbar systems, distribution boards / insulated distribution boards

Type	Size	Rated current	Pack size	Weight kg/100 u.	PG	Part No.
box terminal	NH 00	160 A	1	100.0	09	33075
screw M8	NH 00	160 A	1	100.0	09	33079
screw M10	NH 1	250 A	1	357.0	09	33194

Cover frame

for boxes VMS	10	16.6	06	01139
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Reserve section cover, for use only with cover frame 01139

54 x 195, pitch 3 x 18 mm	10	4.5	06	79738
variable, 36 to 64 x 195, with 2 pieces	10	3.2	06	79859

Connection strap with brace terminal, for device connections

Type	For use up to max.	Pack size	Weight kg/100 u.	PG	Part No.
for flat busbars up to 30 x 20	630 A	3	32.3	07	01888
for cables Cu and Al 120 - 300 mm ²	* 600 A	3	36.6	07	01890

* When using aluminium conductors, observe the maintenance instructions (see 8.2)

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

185Power

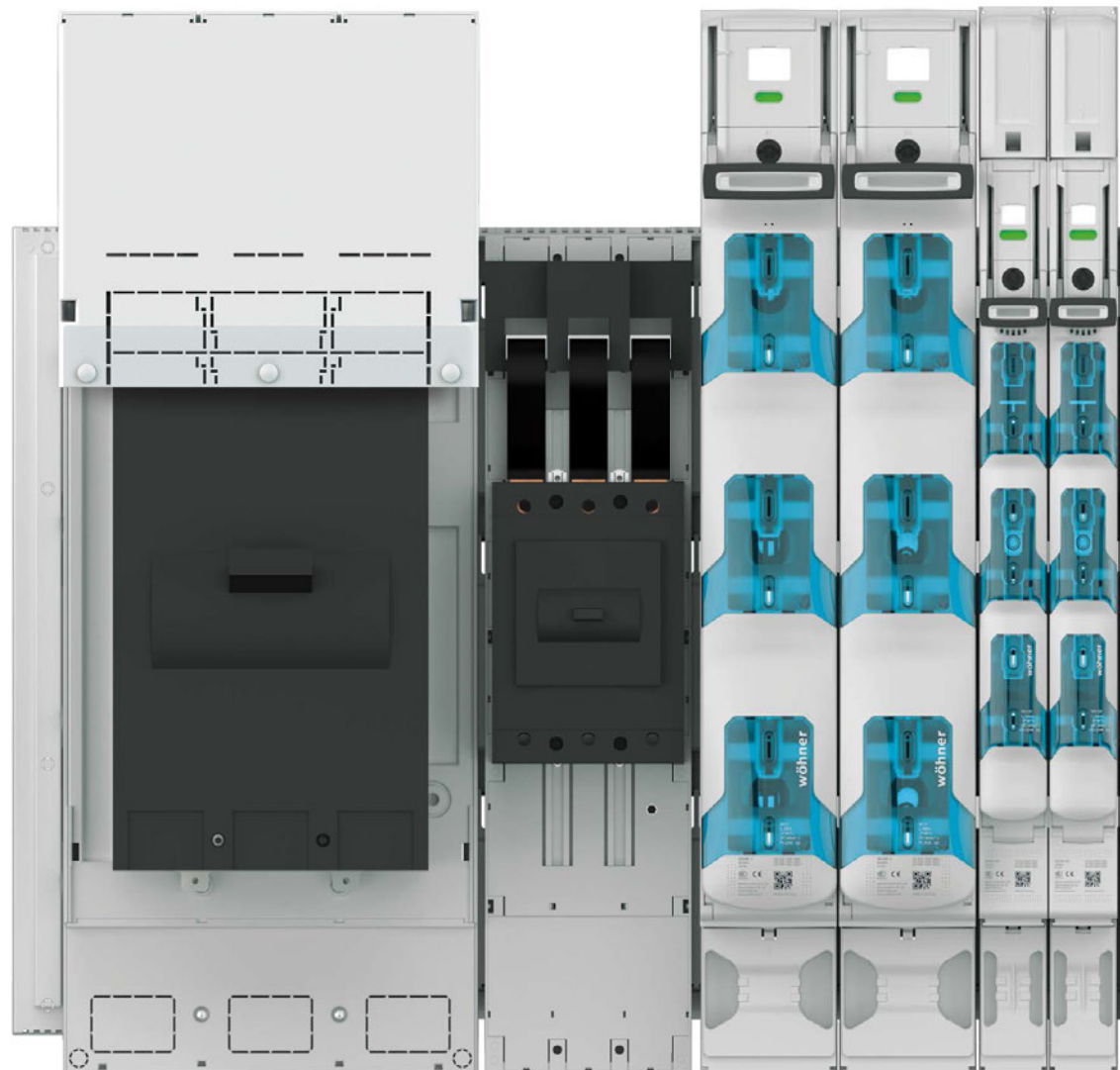
2500 A





BUSBAR SYSTEM TECHNOLOGY

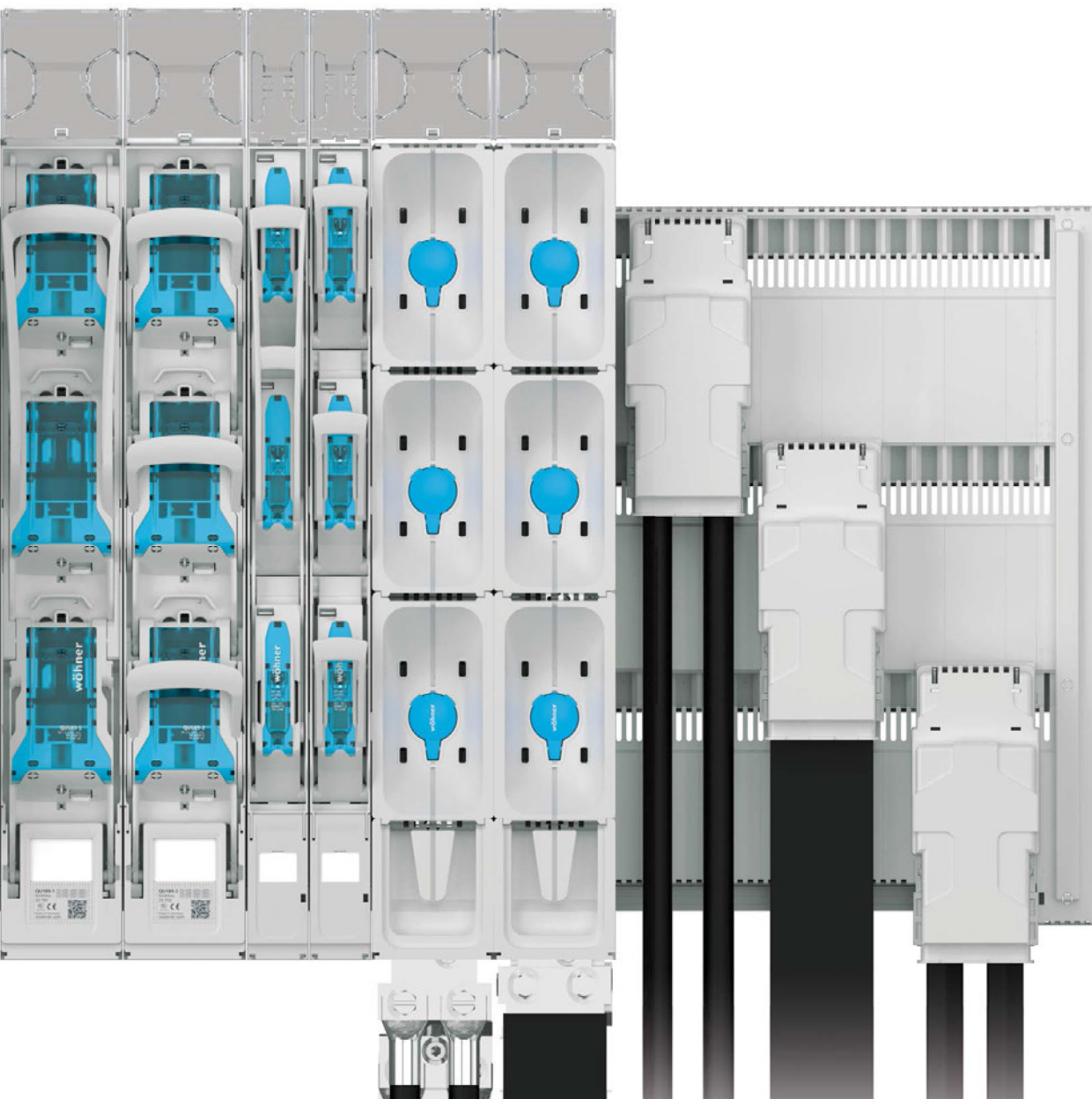
185Power



High-performance system solution with 185 mm busbar spacing

The 185Power busbar system by Wöhner is a modular system for low-voltage distribution with 185 mm spacing of the busbars. All the components (i.e. busbar supports, CrossLink® covers, NH in-line fuse switch-disconnector, NH in-line switch-disconnector with fuses, busbar adapters for circuit breakers, connection rails and connection modules) fit together perfectly. The NH in-line switch-disconnector with fuses is the special highlight. This version, with the “Speed” suffix, allows reliable and operator-independent switching.

Circuit breakers from 400 A to 1600 A can easily be integrated into the system by means of EQUES® adapters. The 185Power allows the user quick and cost-efficient realization of low voltage distribution systems. The modular structure and compatibility of the components among each other contribute to efficient use of space within the cabinet. Systems on the basis of 185Power can easily be expanded or modified.





Busbar 185Power

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



Busbar support

- Busbar support for easy and safe installation of systems with 185 mm distance between busbar centres
- can be aligned with busbars 30, 40, 60, 80, 100, 120 x 10
 - end and centre cover as accessories



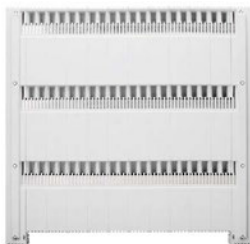
CRITO®185Power Connection rail

The connection rails allow convenient connection of round and flat conductors as well as cable lugs up to 1400 A at just 100 mm wide. Mounting is possible using terminal clamps on the CrossLink® touch-safe protection modules, or by using bolts directly on the busbar.



QUADRON® 185Power

- Coming in sizes 00 to 3, the NH in-line switch-disconnectors allow quick, easy and safe mounting.
- mounting with terminal clamps on CrossLink® touch-safe protection modules or direct bolt mounting
 - integrated current transformer
 - innovative ventilation duct



CrossLink® 185Power Covering system

In the 185Power system the CrossLink®185Power covering modules, base plate profiles as well as the busbar support cover provide optimum all-around touch-safe protection of the busbar system

- versions in 50 and 100 mm width
- reliable connection to each other and to the middle and end cover



CRITO®185Power Connection modules

These modules are available in three versions: with a box terminal, for cable lugs, or flat copper to 80 x 10. The connection modules can be aligned according to the position of the incoming conductors. The mounting is possible on the CrossLink® touch-safe protection modules or directly on the busbar.



QUADRON® 185Power Speed

In-line switch-disconnector with fuses NH in sizes 00 to 3 allow operator-independent switching

- snap-action switch mechanism with double interruption
- safer fuse technology
- faster and safer mounting with terminal clamp and insulated screw extension
- traditional bolt mounting



EQUES® 185Power Adapter

The busbar adapter serves the purpose of quickly and easily mounting any commercially available circuit breaker. The busbar mounting is done via screw type terminal or drill-free terminal clamps on the touch-safe protection system.

- 400 - 630 A, 150 mm wide
- 630 - 1600 A, 300 mm wide

185Power - Busbar systems

3-pole systems



Busbar support and 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.de

Copper busbar, tin-plated, length 2.40 m

Article	Cross-section mm ²	Pack size	Weight kg/100 u.	PG		Part No.
busbar 30 x 10	300	1	643.2	06		01625
busbar 40 x 10	400	1	856.8	06		01626
busbar 60 x 10	600	1	1294.0	06		01628
busbar 80 x 10	800	1	1728.0	06		01765
busbar 100 x 10	1000	1	2174.0	06		01766
busbar 120 x 10	1200	1	2572.8	06		01767
busbar cover		5	17.6	06		01251

partial lengths on request

CrossLink®185Power, system cover at front

Article	Type	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
front cover IP40	for CrossLink® covers	3	3.0	06		01435
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

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 distance pieces 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 busbar

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	07		01482
touch-safe protection shroud for longitudinal connectors		3-pole, front and rear mounting, cover width 150 mm	1	45.0	07		01416

* Two longitudinal Busbar connecting terminal 01480 are required for the connection of 80 x 10 mm bars;
One longitudinal Busbar connecting terminal 01480 and 01481 each is required for the connection of 100 x 10 mm bars;
Two longitudinal Busbar connecting terminal 01481 are required for the connection of 120 x 10 mm bars

System mounting instruction: www.woehner.de/en/products/01430.html

CRITO®185Power - Connection technology

1-pole and 3-pole



Connection rail, 3-pole, screw connection for drilled busbars

Article	Type	Rated current	Width	Pack size	Weight kg/100 u.	PG		Part No.
screw M12	* 3-pole	800 A	100	1	484.0	07		01438
for 3 cable lugs 300mm ² (offset arrangement), for 4 cable lugs 240 mm ² or flex. copper 80 x 10	** 3-pole	1400 A	100	1	1050.0	07		01439

terminal clamps for drill-free mounting with CrossLink® touch-safe protection cover, see accessories

* Transformer, can be integrated into connection rail, see 4.12

** Current carrying capacity 1400 A with screw connection, 1200 A with terminal clamp connection, see product description at www.woehner.de

Accessory for clamp connection, for drill-free mounting on the busbar system

Article	Type	Size	Pack size	Weight kg/100 u.	PG		Part No.
terminal clamp	for busbar systems without system covers	1 - 3	3	10.0	12		33740
CrossLink® terminal clamp	for busbar systems with CrossLink® touch-safe protection	1 - 3	3	15.0	12		33738



Current transformer module, for connection rails

Article	Type	Size	Pack size	Weight kg/100 u.	PG		Part No.
universal current transformer module	for mounting in the connection compartment	1 - 3	1	170.0	18		33762

can only be used with connection rail 01438; for matching transformers see page 4.16

Connection module, 1-pole, clamp connection for drill-free mounting on undrilled busbars

connection module	for direct cable connection, with 2 box terminals 300 mm ²	1	133.0	07		01441
connection module	for flex. copper max. 2x 80 x 10	1	94.5	07		01442
connection module	for 4 cable lugs M12	1	165.0	07		01443

Accessories, cover for connection module, 1-pole

cover cap incl. rear touch protection cover	1	28.0	07		01437
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All devices can be mounted directly on busbars 30, 40, 60, 80, 100, 120 x 10



EQUES®185Power - Busbar adapters 630 A

universal version



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	*	1	590.0	05	32741
connection at bottom, CrossLink® clamp connection	*	1	700.0	05	32745

* For rated currents see product description at www.woehner.de

Busbar adapter, 630 A, clamp connection for drill-free mounting on the busbar system, flat installation situation

connection at top, flat clamp connection	*	1	640.0	05	32742
connection at bottom, flat clamp connection	*	1	700.0	05	32746

when installing the adapter incl. circuit breaker, the same installation depth (150 mm supporting edge) is possible as with NH in-line fuse switch disconnectors

* For rated currents see product description at www.woehner.de

Busbar adapter, 630 A, screw connection for drilled busbars

connection at top / bottom, screw connection	*	1	620.0	05	32743
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* For rated currents see product description at www.woehner.de

Accessories, current transformer, accuracy class 1

Type	Rated apparent power	Pack size	Weight kg/100 u.	PG	Part No.
current transformer 300 A / 5 A	2.50 VA	1	20.9	23	32988
current transformer 400 A / 5 A	2.50 VA	1	21.0	23	32989
current transformer 600 A / 5 A	1.25 VA	1	19.0	23	32990

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.de



EQUES®185Power - Busbar adapters 1600 A

aligned to switchgear



Busbar adapter 1600 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.
for ABB Tmax T7/T6 800 A or T7/T6 630 A	800 A	1	2120.0	05		32767
for ABB Tmax T7 1000 A	1000 A	1	2100.0	05		32766
for ABB Tmax T7 1250 A	1250 A	1	3010.0	05		32765
for ABB Tmax T7, Emax2 1600 A	1320 A	1	3150.0	05		32807

for rated currents see product description at www.woehner.de

Eaton

for Eaton NZM4 1000 A, 800 A, 630 A	1000 A	1	2300.0	05		32763
for Eaton NZM4 1250 A	1250 A	1	2900.0	05		32762
for Siemens 3VL8 1600 A, Eaton NZM4 1600 A	1440 A	1	3060.0	05		32761

for rated currents see product description at www.woehner.de

Schneider Electric

for Schneider Electric NS1000, NS800 or NS630B	1000 A	1	2620.0	05		32758
for Schneider Electric NS1250	1250 A	1	3000.0	05		32757
for Schneider Electric NS1600	1450 A	1	3100.0	05		32756

for rated currents see product description at www.woehner.de

Siemens

for Siemens 3VL5 630 A	630 A	1	2100.0	05		32769
for Siemens 3VL6 800 A or 630 A	720 A	1	1950.0	05		32754
for Siemens 3VL7 1000 A	1000 A	1	2200.0	05		32755
for Siemens 3VL7 1250 A	1150 A	1	2850.0	05		32753
for Siemens 3VL8 1600 A, Eaton NZM4 1600 A	1440 A	1	3060.0	05		32761

for rated currents see product description at www.woehner.de

Socomec

for Socomec Sirco 1250 A or 1600 A	1550 A	1	3350.0	05		32752
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for rated currents see product description at www.woehner.de

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.de



EQUES®185Power - Busbar adapters 1600 A

aligned to switchgear



Busbar adapter 1600 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.
for ABB Tmax T7/T6 800 A or T7/T6 630 A	800 A	1	2300.0	05		32730
for ABB Tmax T7 1000 A	1000 A	1	2300.0	05		32729
for ABB Tmax T7 1250 A	1220 A	1	3028.0	05		32726
for ABB Tmax T7, Emax2 1600 A	1320 A	1	3100.0	05		32797

for rated currents see product description at www.woehner.de

Eaton

for Eaton NZM4 1000 A, 800 A or 630 A	1000 A	1	2400.0	05		32733
for Eaton NZM4 1250 A	1200 A	1	3180.0	05		32732
for Siemens 3VL8 1600 A or Eaton NZM4 1600 A	1400 A	1	2800.0	05		32731

for rated currents see product description at www.woehner.de

Schneider Electric

for Schneider Electric NS1000, NS800 or NS630B	900 A	1	2400.0	05		32747
for Schneider Electric NS1250	1200 A	1	3200.0	05		32737
for Schneider Electric NS1600	1400 A	1	3350.0	05		32734

for rated currents see product description at www.woehner.de

Siemens

for Siemens 3VL5 630A	630 A	1	2150.0	05		32796
for Siemens 3VL6 800 A or 630 A	650 A	1	2350.0	05		32795
for Siemens 3VL7 1000 A	1000 A	1	2200.0	05		32783
for Siemens 3VL7 1250 A	1150 A	1	3100.0	05		32771
for Siemens 3VL8 1600 A or Eaton NZM4 1600 A	1400 A	1	2800.0	05		32731

for rated currents see product description at www.woehner.de

Socomec

for Socomec Sirco 1250 A or 1600 A	1500 A	1	3350.0	05		32764
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for rated currents see product description at www.woehner.de

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.de



EQUES®185Power - Busbar adapters 1600 A

aligned to switchgear



Busbar adapter 1600 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.
for ABB Tmax T7 1250 A	1220 A	1	3000.0	05		32723
for ABB Tmax T7, Emax2 1600 A	1320 A	1	3230.0	05		32722

for rated currents see product description at www.woehner.de

Eaton

for Eaton NZM4 1250 A	1200 A	1	3200.0	05		32788
for Eaton NZM4 1600 A	1400 A	1	3300.0	05		32787

for rated currents see product description at www.woehner.de

Schneider Electric

for Schneider Electric NS 1250	1200 A	1	3000.0	05		32719
for Schneider Electric NS 1600	1400 A	1	3230.0	05		32718

for rated currents see product description at www.woehner.de

Siemens

for Siemens 3VL7 1250 A	1150 A	1	3222.0	05		32739
for Siemens 3VL8 1600 A	1320 A	1	3432.0	05		32738

for rated currents see product description at www.woehner.de

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.de



EQUES®185Power - Busbar adapters 1600 A

aligned to switchgear



Busbar adapter 1600 A, connection to the system at the top and bottom, screw connection for drilled busbars

ABB

Type	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
for ABB Tmax T7/T6 800 A or T7/T6 630 A	800 A	1	2150.0	05		32786
for ABB Tmax T7 1000 A	1000 A	1	2620.0	05		32785
for ABB Tmax T7 1250 A	1220 A	1	2800.0	05		32784
for ABB Tmax T7, Emax2 1600 A	1320 A	1	2950.0	05		32808

for rated currents see product description at www.woehner.de

Eaton

for Eaton NZM4 1000 A, 800 A, 630 A	1000 A	1	2200.0	05		32779
for Eaton NZM4 1250 A	1200 A	1	2600.0	05		32781
for Siemens 3VL8 1600 A, Eaton NZM4 1600 A	1400 A	1	2950.0	05		32780

for rated currents see product description at www.woehner.de

Legrand

for Legrand DPX ³ 1600 or GE FK1600	*	1440 A	1	2950.0	05		32809
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for rated currents see product description at www.woehner.de

* Only connection to system at the top possible

Schneider Electric

for Schneider Electric NS1000, NS800 or NS630B	900 A	1	2200.0	05		32777
for Schneider Electric NS1250	1200 A	1	2900.0	05		32776
for Schneider Electric NS1600	1400 A	1	3010.0	05		32775

for rated currents see product description at www.woehner.de

Siemens

for Siemens 3VL5 630 A	630 A	1	2000.0	05		32770
for Siemens 3VL6 800 A or 630 A	650 A	1	2080.0	05		32774
for Siemens 3VL7 1000 A	1000 A	1	2800.0	05		32773
for Siemens 3VL7 1250 A	1150 A	1	2800.0	05		32772
for Siemens 3VL8 1600 A, Eaton NZM4 1600 A	1400 A	1	2950.0	05		32780

for rated currents see product description at www.woehner.de

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.de



EQUES®185Power - Busbar adapters 1600 A

aligned to switchgear



Busbar adapter, 1600 A, connection to the system at bottom, phase rotation, screw connection for drilled busbars

ABB

Type	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
for ABB Tmax T7 1250 A	1220 A	1	2900.0	05		32725
for ABB Tmax T7, Emax2 1600 A	1320 A	1	3140.0	05		32724

for rated currents see product description at www.woehner.de; adapters with phase rotation can also be used with connection to the system at the top

Eaton

for Eaton NZM4 1250 A	1200 A	1	3000.0	05		32790
for Eaton NZM4 1600 A	1400 A	1	3150.0	05		32789

for rated currents see product description at www.woehner.de; adapters with phase rotation can also be used with connection to the system at the top

Schneider Electric

for Schneider Electric NS 1250	1200 A	1	2900.0	05		32721
for Schneider Electric NS 1600	1400 A	1	3140.0	05		32720

for rated currents see product description at www.woehner.de; adapters with phase rotation can also be used with connection to the system at the top

Siemens

for Siemens 3VL7 1250 A	1150 A	1	3172.0	05		32749
for Siemens 3VL8 1600 A	1320 A	1	3382.0	05		32748

for rated currents see product description at www.woehner.de; adapters with phase rotation can also be used with connection to the system at the top

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 DPX ³ 1600, GE FK1600	1	123.8	05		32701
	for Schneider Electric NS1600 – NS630B	1	122.8	05		32702
IP20 Protection cover (front) for adapter, incl. 3 top covers	for Siemens 3VL7 1000 A / 1250 A, 3VL8 1600 A	1	123.0	05		32703
	for Siemens 3VL5 630 A and 3VL6 800 A / 630 A	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.de

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.de



QUADRON®185Power - NH in-line fuse switch-disconnectors, size 00

3-pole, 1-pole switchable and open version



NH in-line fuse switch-disconnector, size 00, 3-pole switchable, screw connection

for drilled busbars, connection at bottom / top

Type	Size	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
screw M8, high version *	NH 00	160 A	1	261.5	12		33700
box terminal 70 mm ² , high version *	NH 00	160 A	1	261.8	12		33770
screw M8, flat version	NH 00	160 A	1	218.2	12		33704
box terminal 70 mm ² , flat version	NH 00	160 A	1	217.4	12		33773

terminal clamps for drill-free mounting with or without CrossLink® touch-safe protection cover, see accessories

* Current transformer (can be integrated)

NH in-line fuse switch-disconnector, size 00, 3-pole switchable, screw connection, with fuse monitoring

for drilled busbars, connection at bottom / top

screw M8, high version *	NH 00	160 A	1	270.0	12		33720
box terminal 70 mm ² , high version *	NH 00	160 A	1	270.0	12		33771
screw M8, flat version	NH 00	160 A	1	220.0	12		33724
box terminal 70 mm ² , flat version	NH 00	160 A	1	220.0	12		33774

terminal clamps for drill-free mounting with or without CrossLink® touch-safe protection cover, see accessories

* Current transformer (can be integrated)

NH in-line fuse switch-disconnector, size 00, 1-pole switchable, screw connection

for drilled busbars, connection at bottom / top

screw M8, high version *	NH 00	160 A	1	255.5	12		33715
box terminal 70 mm ² , high version *	NH 00	160 A	1	256.3	12		33772
screw M8, flat version	NH 00	160 A	1	211.4	12		33719
box terminal 70 mm ² , flat version	NH 00	160 A	1	212.0	12		33775

terminal clamps for drill-free mounting with or without CrossLink® touch-safe protection cover, see accessories

* Current transformer (can be integrated)

NH fuse base, size 00, open version, screw connection

for drilled busbars, connection at bottom / top

screw M8, flat version	NH 00	160 A	1	190.0	12		33705
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terminal clamps for drill-free mounting with or without CrossLink® touch-safe protection cover, see accessories



Accessories for clamp connection, for drill-free mounting on the busbar system

Article	Type	Size	Pack size	Weight kg/100 u.	PG		Part No.
CrossLink® terminal clamp	for busbar systems with touch-safe protection	00	3	4.0	12		33737
CrossLink® terminal clamp IP20	for busbar systems with touch-safe protection	00	3	4.4	12		33765
terminal clamp	for busbar systems without system covers	00	3	14.0	12		33739

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

QUADRON®185Power - Accessories, size 00

3-pole, 1-pole switchable and open version

**Accessories**

Article	Type	Size	Pack size	Weight kg/100 u.	PG		Part No.
clamp connector	* for Cu 16 - 70 mm ²	00	3	1.5	09		33755
wedge clamp terminal	* for Cu and Al 10 - 95 mm ²	00	3	3.0	09		33734
terminal compartment cover, high version, connection bottom	for 33700, 33770, 33720, 33771, 33715, 33772 and QUADRON®185Power Speed size 00	00	1	18.2	12		33732
terminal compartment cover, flat version, connection bottom	for 33704, 33773, 33724, 33774, 33719, 33775, 33705	00	1	13.4	12		33725
terminal compartment cover, high version, connection top	for 33700, 33770, 33720, 33771, 33715, 33772	00	1	13.4	12		33726
terminal compartment cover, flat version, connection top	for 33704, 33773, 33724, 33774, 33719, 33775	00	1	13.4	12		33727
pilot switch	changeover 250V AC/5A, 30V DC/4A	000 - 3	1	1.1	09		33156
lateral bearing strip	for front covers	00 - 3	2	10.7	12		33758
lateral cover support	for front covers	00 - 3	4	0.5	12		33113
grip lug cover	** for NH base and 33705	00	30	1.2	10		79448
plug support with mounting rail	for CT wiring	00	1	2.8	12		33766
component support with mount. rails	for fuse monitoring and CT wiring	00	1	5.5	12		33767

When using aluminium conductors, observe the maintenance instructions (see 8.2)

* Can only be used for size 00, connection screws M8

** 1 piece required per fuse

Current transformer (can be integrated), accuracy class 1

Type	Rated apparent power	Size	Pack size	Weight kg/100 u.	PG		Part No.
current transformer 80 A / 5 A	2.50 VA	00	1	14.0	23		33741
current transformer 150 A / 5 A	2.50 VA	00	1	14.0	23		33742

Current transformer (can be integrated), accuracy class 0.5

current transformer 100 A / 5 A	1.50 VA	00	1	28.0	23		33749
current transformer 150 A / 5 A	2.50 VA	00	1	28.0	23		33751

Current transformer (can be integrated), accuracy class 0.5; tested in accordance with the conformity procedure

current transformer 100 A / 5 A, with declar. of conformity	1.50 VA	00	1	28.0	23		33750
current transformer 150 A / 5 A, with declar. of conformity	2.50 VA	00	1	28.0	23		33752

national laws must be observed; in addition to the net price of the transformer, the following cost are charged per transformer for the declaration of conformity, the costs cannot be discounted: Transformers up to 500 A: EUR 37; transformers from 500 A to 1000 A: EUR 54

Double adapter, for NH in-line fuse switch-disconnector, size 00

for 2 devices size NH 00		00	1	55.0	12		33728
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Current transformer for double adapter, accuracy class 1

current transformer 150 A / 5 A	1.50 VA	00 - 3	1	14.0	23		33744
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Current transformer for double adapter, accuracy class 0.5

current transformer 150 A / 5 A	1.50 VA	00 - 3	1	28.0	23		33753
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Current transformer for double adapter, accuracy class 0.5; tested in accordance with the conformity procedure

current transformer 150 A / 5 A, with declar. of conformity	1.50 VA	00 - 3	1	28.0	23		33754
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national laws must be observed; in addition to the net price of the transformer, the following cost are charged per transformer for the declaration of conformity, the costs cannot be discounted: Transformers up to 500 A: EUR 37; transformers from 500 A to 1000 A: EUR 54

QUADRON®185Power – NH in-line fuse switch-disconnectors, size 1 - 3

3-pole, 1-pole switchable and open version



NH in-line fuse switch-disconnector, size 1 - 3, 3-pole switchable, screw connection

for drilled busbars, connection at top / bottom

Type	Size	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
screw M12	NH 1	250 A	1	480.0	12		33701
screw M12	NH 2	400 A	1	480.0	12		33702
screw M12	NH 3	630 A	1	582.3	12		33703

Terminal clamps for drill-free mounting with or without CrossLink® – touch-safe protection modules available under accessories

NH in-line fuse switch-disconnector, size 1 - 3, 3-pole switchable, screw connection, with fuse monitoring

for drilled busbars, connection at top / bottom

screw M12	NH 1	250 A	1	540.0	12		33721
screw M12	NH 2	400 A	1	540.0	12		33722
screw M12	NH 3	630 A	1	640.0	12		33723

Terminal clamps for drill-free mounting with or without CrossLink® – touch-safe protection modules available under accessories

NH in-line fuse switch-disconnector, size 1 - 3, 1-pole switchable, screw connection

for drilled busbars, connection at top / bottom

screw M12	NH 1	250 A	1	495.0	12		33716
screw M12	NH 2	400 A	1	502.0	12		33717
screw M12	NH 3	630 A	1	574.0	12		33718

Terminal clamps for drill-free mounting with or without CrossLink® – touch-safe protection modules available under accessories

Double NH in-line fuse switch-disconnector, 1250 A, 3-pole switchable, screw connection

for drilled busbars

screw M12, incl. terminal compartment cover	NH 3	1250 A	1	1556.0	12		33731
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Terminal clamps for drill-free mounting with or without CrossLink® – touch-safe protection modules available under accessories

NH in-line fuse base, size 1 - 3, open version, screw connection for drilled busbars, connection at bottom / top

screw M12	NH 1	250 A	1	365.0	12		33706
screw M12	NH 2	400 A	1	375.1	12		33707
screw M12	NH 3	630 A	1	450.0	12		33708

Terminal clamps for drill-free mounting with or without CrossLink® – touch-safe protection modules available under accessories



Accessories for clamp connection, for drill-free mounting on the busbar system

Article	Type	Size	Pack size	Weight kg/100 u.	PG		Part No.
CrossLink® terminal clamp	for busbar systems with CrossLink® touch-safe protection	1 - 3	3	15.0	12		33738
terminal clamp	for busbar systems without system covers	1 - 3	3	10.0	12		33740

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

QUADRON®185Power - Accessories, size 1 - 3

3-pole, 1-pole switchable and open version



Accessories

Article	Type	Size	Pack size	Weight kg/100 u.	PG		Part No.
box terminal	* for Cu and Al 70 - 240 mm ²	1 - 3	3	14.5	12		33735
box terminal	* for Cu and Al 120 - 300 mm ²	1 - 3	3	25.5	12		33736
terminal compartment cover	universal for NH-rails size 1 - 3 and connection rail 800 A	1 - 3	1	30.0	12		33733
pilot switch	changeover 250V AC/5A, 30V DC/4A	000 - 3	1	1.1	09		33156
lateral bearing strip	for front covers	00 - 3	2	10.7	12		33758
lateral cover support	for front covers	00 - 3	4	0.5	12		33113
grip lug cover	for 33706, 33707, 33708	00	6	57.5	12		33759
rear touch-safe protection cover	** rear protection for Phase L1	1 - 3	10	0.0	12		33761
plug support with mounting rail	for CT wiring	1 - 3	1	8.8	12		33768
component support with mounting rails	for fuse monitor and CT wiring	1 - 3	1	9.0	12		33769

* When using aluminium conductors, observe the maintenance instructions (see 8.2)

** To get rear finger safety in combination with CrossLink® touch-safe protection modules

Current transformer (can be integrated), accuracy class 1

Article	Rated apparent power	Size	Pack size	Weight kg/100 u.	PG		Part No.
current transformer 150 A / 5 A	* 1.50 VA	00 - 3	1	14.0	23		33744
current transformer 200 A / 5 A	1.50 VA	1 - 3	1	14.0	23		33745
current transformer 250 A / 5 A	2.50 VA	1 - 3	1	14.0	23		33746
current transformer 400 A / 5 A	2.50 VA	1 - 3	1	14.0	23		33747
current transformer 600 A / 5 A	2.50 VA	1 - 3	1	14.0	23		33748

Can also be used for connection rail 01438

* can only be used with size 00 with the double adapter for NH in-line fuse switch disconnectors, size 00

Current transformer (can be integrated), accuracy class 0.5

current transformer 150 A / 5 A	* 1.50 VA	00 - 3	1	28.0	23		33753
current transformer 200 A / 5 A	1.50 VA	1 - 3	1	28.0	23		33292
current transformer 250 A / 5 A	2.50 VA	1 - 3	1	28.0	23		33294
current transformer 400 A / 5 A	2.50 VA	1 - 3	1	28.0	23		33298

Can also be used for connection rail 01438

* can only be used with size 00 with the double adapter for NH in-line fuse switch disconnectors, size 00

Current transformer (can be integrated), accuracy class 0.5; tested in accordance with the conformity procedure

current transformer 150 A / 5 A, with declar. of conformity	1.50 VA	00 - 3	1	28.0	23		33754
current transformer 200 A / 5 A, with declaration of conformity	1.50 VA	1 - 3	1	28.0	23		33293
current transformer 250 A / 5 A, with declaration of conformity	2.50 VA	1 - 3	1	28.0	23		33295
current transformer 400 A / 5 A, with declaration of conformity	2.50 VA	1 - 3	1	28.0	23		33299

Can also be used for connection rail 01438. National laws must be observed; in addition to the net price of the transformer, the following costs are charged per transformer for the declaration of conformity, the costs cannot be discounted: Transformers up to 500A: EUR 37; transformers from 500A to 1000A: EUR 54

Current transformer module for NH in-line fuse switch disconnectors size 1 - 3

universal current transformer module	for mounting in the connection compartment	1 - 3	1	170.0	18		33762
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For matching transformer see page 4.16

QUADRON®185Power Speed - NH fuse-switch disconnectors, size 00

with snap-action switch mechanism



In-line switch-disconnector with fuses NH, size 00, 3-pole switchable, clamp connection for drill-free mounting **with and without CrossLink® touch-safe protection modules**, connection screw M8

Type		Size	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
high version, connection bottom	*	NH 00	160 A	1	504.0	18		33614
high version, connection top	*	NH 00	160 A	1	459.0	18		33616
flat version, connection bottom		NH 00	160 A	1	455.3	18		33610
flat version, connection top		NH 00	160 A	1	467.0	18		33612

With three terminal clamps with insulated screw extension for mounting on the busbar system

* Current transformer, can be integrated; combinable with sizes 1 - 3

In-line switch-disconnector with fuses NH, size 00, 3-pole switchable, with fuse monitoring clamp connection for drill-free mounting **with and without CrossLink® touch-safe protection modules**, connection screw M8

high version, connection bottom	*	NH 00	160 A	1	481.5	18		33624
high version, connection top	*	NH 00	160 A	1	480.0	18		33626
flat version, connection bottom		NH 00	160 A	1	449.0	18		33620
flat version, connection top		NH 00	160 A	1	454.0	18		33622

With three terminal clamps with insulated screw extension for mounting on the busbar system

* Current transformer, can be integrated; combinable with sizes 1 - 3

In-line switch-disconnector with fuses NH, size 00, 3-pole switchable

screw connection for **drilled busbars**, connection screw M8

high version, connection bottom	*	NH 00	160 A	1	462.5	18		33615
high version, connection top	*	NH 00	160 A	1	450.0	18		33617
flat version, connection bottom		NH 00	160 A	1	409.0	18		33611
flat version, connection top		NH 00	160 A	1	415.5	18		33613

With three screws for mounting on the busbar system

* Current transformer, can be integrated; combinable with sizes 1 - 3

In-line switch-disconnector with fuses NH, size 00, 3-pole switchable

screw connection for **drilled busbars**, connection screw M8, with fuse monitoring,

high version, connection bottom	*	NH 00	160 A	1	485.0	18		33625
high version, connection top	*	NH 00	160 A	1	483.5	18		33627
flat version, connection bottom		NH 00	160 A	1	443.0	18		33621
flat version, connection top		NH 00	160 A	1	448.0	18		33623

With three screws for mounting on the busbar system

* Current transformer, can be integrated; combinable with sizes 1 - 3

All devices can be mounted directly on busbars 30, 40, 60, 80, 100, 120 x 10;
Fuse links are not included in the scope of delivery

QUADRON®185Power Speed - Accessories, size 00



Accessories

Article	Type	Size	Pack size	Weight kg/100 u.	PG		Part No.
terminal compartment cover, high version, connection bottom	for 33700, 33770, 33720, 33771, 33715, 33772 and QUADRON®185Power Speed size 00	00	1	18.2	12		33732
rear touch-safe protection	* for terminal compartment	00	1	7.0	18		33653
clamp connector	* for Cu 16 - 70 mm ²	00	3	1.5	09		33755
wedge clamp terminal	* for Cu and Al 10 - 95 mm ²	00	3	3.0	09		33734
bearing area extension, top	for front covers	00	1	0.9	18		33645
lateral bearing strip	for front covers	00 - 3	2	10.7	12		33758
lateral cover support	for front covers	00 - 3	4	0.5	12		33113
pilot switch	changeover 250 V AC / 5 A, 30 V DC / 4 A	00 - 3	1	2.9	18		33642

When using aluminium conductors, observe the maintenance instructions (see 8.2)

* Can only be used for size 00, connection screws M8

Current transformer (can be integrated), precision class 1

Article	Rated apparent power	Size	Pack size	Weight kg/100 u.	PG		Part No.
current transformer 80 A / 5 A	2.50 VA	00	1	14.0	23		33741
current transformer 150 A / 5 A	2.50 VA	00	1	14.0	23		33742

Current transformer (can be integrated), accuracy class 0.5

current transformer 100 A / 5 A	1.50 VA	00	1	28.0	23		33749
current transformer 150 A / 5 A	2.50 VA	00	1	28.0	23		33751

Current transformer (can be integrated), accuracy class 0.5; tested in accordance with the conformity procedure

current transformer 100 A / 5 A, with declar. of conformity	1.50 VA	00	1	28.0	23		33750
current transformer 150 A / 5 A, with declar. of conformity	2.50 VA	00	1	28.0	23		33752

national laws must be observed; in addition to the net price of the transformer, the following cost are charged per transformer for the declaration of conformity, the costs cannot be discounted: Transformers up to 500 A: EUR 37; transformers from 500 A to 1000 A: EUR 54

Double adapter for QUADRON®185Power Speed - In-line switch-disconnector with fuses NH 00

for 2 devices size NH 00		00	1	55.0	12		33728
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Current transformer for double adapter, accuracy class 1

current transformer 150 A / 5 A	1.50 VA	00 - 3	1	14.0	23		33744
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Current transformer for double adapter, accuracy class 0.5

current transformer 150 A / 5 A	1.50 VA	00 - 3	1	28.0	23		33753
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Current transformer for double adapter, accuracy class 0.5; tested in accordance with the conformity procedure

current transformer 150 A / 5 A, with declar. of conformity	1.50 VA	00 - 3	1	28.0	23		33754
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national laws must be observed; in addition to the net price of the transformer, the following cost are charged per transformer for the declaration of conformity, the costs cannot be discounted: Transformers up to 500 A: EUR 37; transformers from 500 A to 1000 A: EUR 54

QUADRON®185Power Speed - NH switch-disconnector fuse, size 1 - 3

with snap-action switch mechanism



In-line switch-disconnector with fuses NH, size 1 - 3, 3-pole switchable

screw connection for drilled busbars, connection screw M12

Type	Size	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
connection bottom	NH 1	250 A	1	1176.0	18		33630
connection top	NH 1	250 A	1	1194.0	18		33631
connection bottom	NH 2	400 A	1	1250.0	18		33632
connection top	NH 2	400 A	1	1361.0	18		33633
connection bottom	NH 3	630 A	1	1421.0	18		33634
connection top	NH 3	500 A	1	1481.0	18		33635

Terminal clamps for mounting on CrossLink® touch-safe protection modules or screws for mounting on the busbar system are required – available under accessories

In-line switch-disconnector with fuses NH, size 1 - 3, 3-pole switchable, with fuse monitoring

screw connection for drilled busbars, connection screw M12

connection bottom	NH 1	250 A	1	1267.0	18		33636
connection top	NH 1	250 A	1	1285.0	18		33637
connection bottom	NH 2	400 A	1	1420.0	18		33638
connection top	NH 2	400 A	1	1452.0	18		33639
connection bottom	NH 3	630 A	1	1512.0	18		33640
connection top	NH 3	500 A	1	1572.0	18		33641

Terminal clamps for mounting on CrossLink® touch-safe protection modules or screws for mounting on the busbar system are required – available under accessories

Accessories for mounting on the busbar system

Article	Type	Size	Pack size	Weight kg/100 u.	PG		Part No.
mounting set with 3 terminal clamps	for drill-less mounting on the busbar system, with and without CrossLink® touch-safe protection covers	1 - 3	1	51.0	18		33651
mounting set with 3 bolts	for busbar connection on drilled busbars, including positioner	1 - 3	1	31.4	18		33650
insulated screw extension for terminal clamp	for safe live working with standard tools	1 - 3	3	5.8	18		33652

Accessories

terminal compartment cover	universal for NH-rails size 1 - 3 and connection rail 800 A	1 - 3	1	30.0	12		33733
rear cover for terminal compartment cover		1 - 3	1	16.0	18		33647
connection set box terminal 70 mm ² - 240 mm ²	including rear cover	1 - 3	1	86.8	18		33648
connection set box terminal 120 mm ² - 300 mm ²	including rear cover	1 - 3	1	88.2	18		33649
bearing area extension, top		1 - 3	1	1.7	18		33646
lateral bearing strip	for front covers	00 - 3	2	10.7	12		33758
lateral cover support	for front covers	00 - 3	4	0.5	12		33113
pilot switch	changeover 250 V AC / 5 A, 30 V DC / 4 A	00 - 3	1	2.9	18		33642

All devices can be mounted directly on busbars 30, 40, 60, 80, 100, 120 x 10;
Fuse links are not included in the scope of delivery

QUADRON®185Power Speed - Accessories, size 1 - 3



Current transformer module, for QUADRON®185Power Speed - NH switch-disconnector fuse, size 1 - 3

Article	Type	Size	Pack size	Weight kg/100 u.	PG		Part No.
universal current transformer module	for mounting in the connection compartment	1 - 3	1	170.0	18		33762

including front and rear cover

Current transformer (can be integrated into transformer module), accuracy class 1

Type	Rated apparent power	Pack size	Weight kg/100 u.	PG		Part No.
current transformer 250 A / 5 A	5.00 VA	1	28.0	23		33782
current transformer 400 A / 5 A	5.00 VA	1	28.0	23		33785
current transformer 600 A / 5 A	5.00 VA	1	28.0	23		33788
current transformer 750 A / 5 A	5.00 VA	1	28.0	23		33791

Current transformer (can be integrated into transformer module), accuracy class 0.5

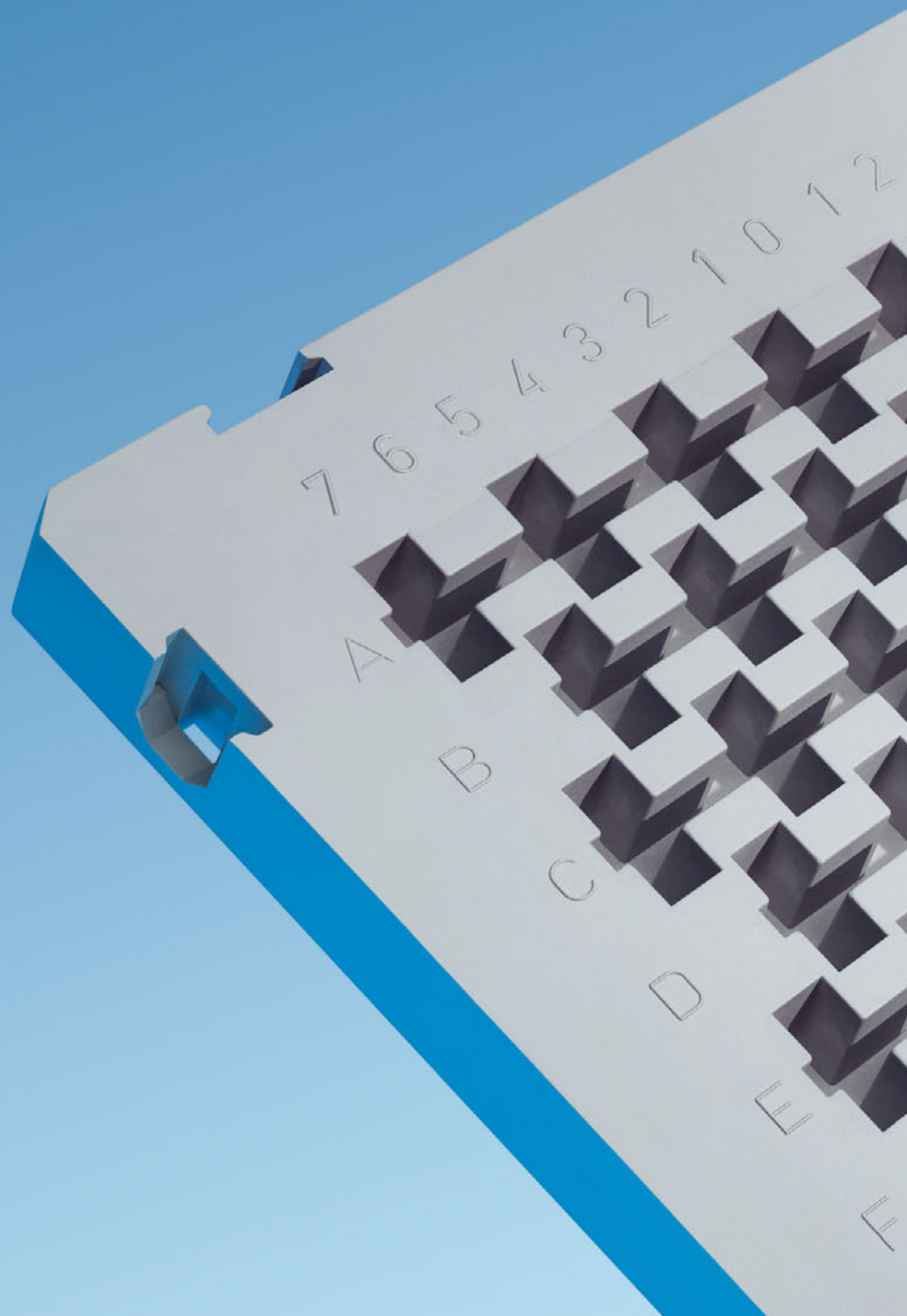
current transformer 250 A / 5 A	5.00 VA	1	28.0	23		33780
current transformer 400 A / 5 A	5.00 VA	1	28.0	23		33783
current transformer 600 A / 5 A	5.00 VA	1	28.0	23		33786
current transformer 750 A / 5 A	5.00 VA	1	28.0	23		33789

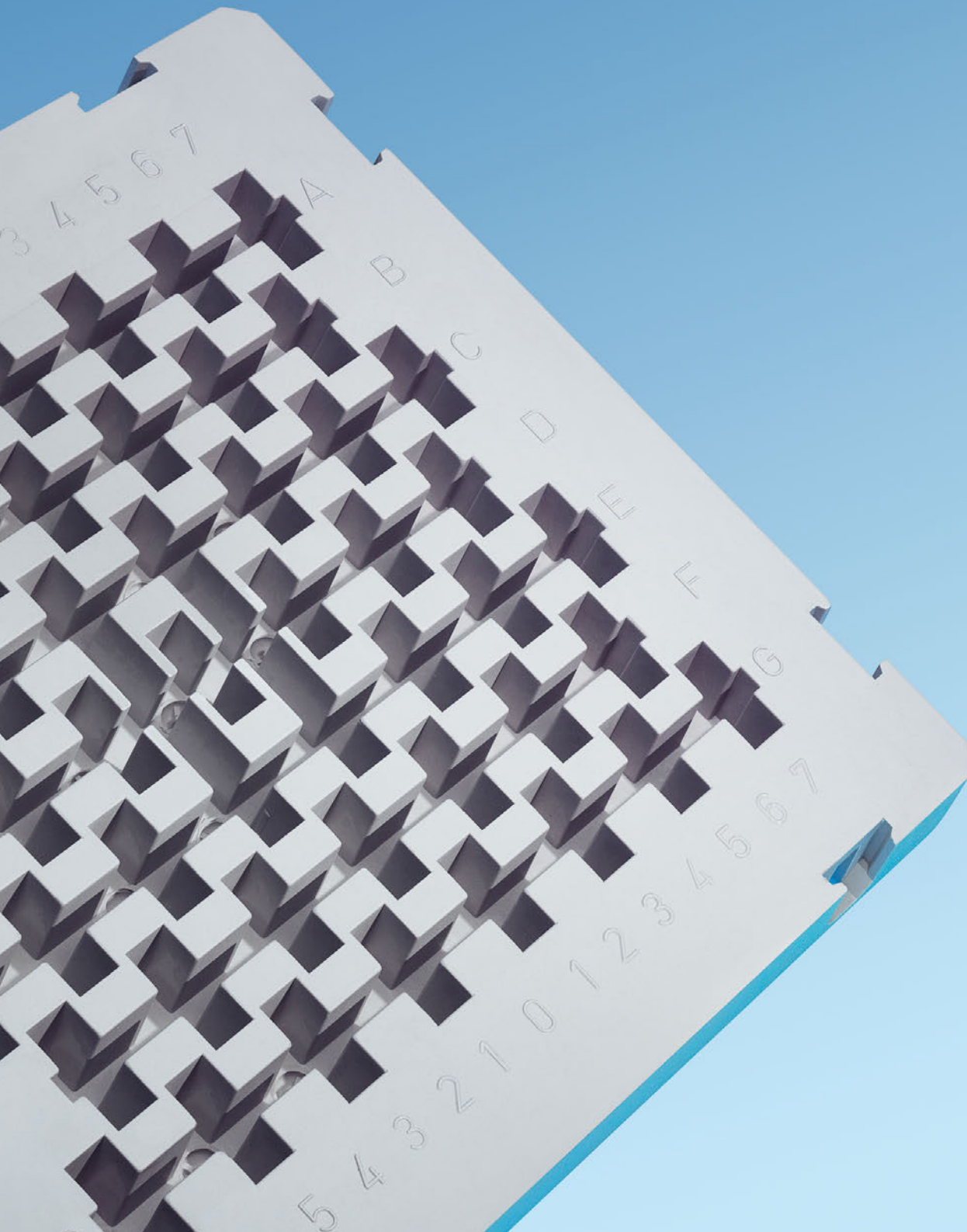
Current transformer (can be integrated into transformer module), accuracy class 0.5; tested in accordance with the conformity procedure

current transformer 250 A / 5 A, with declaration of conformity	5.00 VA	1	28.0	23		33781
current transformer 400 A / 5 A, with declaration of conformity	5.00 VA	1	28.0	23		33784
current transformer 600 A / 5 A, with declaration of conformity	5.00 VA	1	28.0	23		33787
current transformer 750 A / 5 A, with declaration of conformity	5.00 VA	1	28.0	23		33790

national laws must be observed; in addition to the net price of the transformer, the following cost are charged per transformer for the declaration of conformity, the costs cannot be discounted: Transformers up to 500 A: EUR 37; transformers from 500 A to 1000 A: EUR 54

Centre feed unit



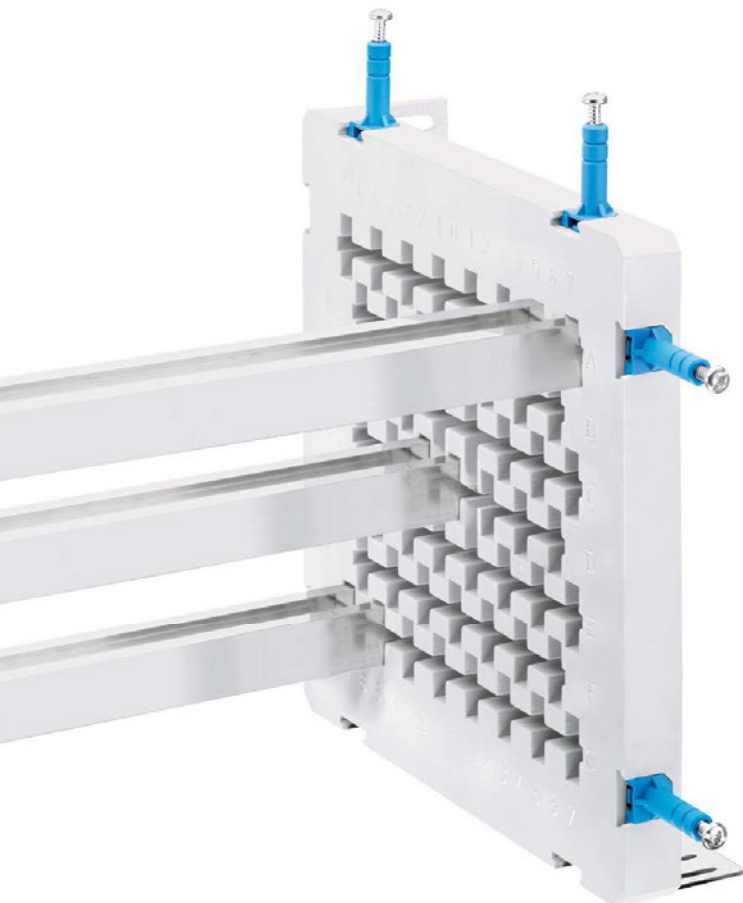


Centre feed unit



Centre feed unit up to 4000 A combines the advantages of high short-circuit capacity, drill-free mounting, brace terminal technology and clearly structured design. The fuseless equipment practice of this system puts high requirements on the short circuit capacity. The busbar supports and centre feed units have been designed specifically for this purpose. This also concerns the large number of different

connection options for copper and aluminium conductors, no matter if they are round conductors or laminated or large flat conductor connections. Industrial production and type tests ensure compliance with the required safety standards. The current rating and short-circuit capacity up to 120 kA determined by means of the type test meet the high requirements put on this system.





Double-T and triple-T and TCC section busbars

The profiled section busbars offer safe distribution of currents up to 4000 A, double-T and triple-T section busbars can be connected on both sides.

Versions:

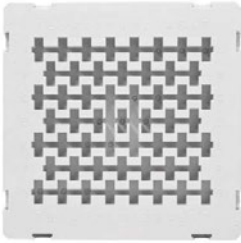
- double-T section busbars
- triple-T section busbars
- TCC section busbars



CRITO® Connection technology

These solutions provide for convenient connection of round conductors, flat conductors and cable lugs. Currents up to 3200 A can be brought to the busbar by the individual components.

- brace terminal technology
- round, sectored and flat conductors
- UL listed



Busbar support multi-pole

The busbar supports are suitable for 3- or 4-pole installations. Busbars from 300 - 1140 mm² can be used.

- variable build up
- 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.

Busbars from 500 to 1600 mm² can be used.

- variable build up
- double-T, triple-T, and TCC section busbars can be used

Centre feed units

TT and TTT section busbars



Centre feed unit

Cabinet width	Mounting dimensions	Busbar length	Cross-section mm ²	Pack size	Weight kg/100 u.	PG		Part No.
for cabinet width 600 mm	488 - 563	453	500	1	1434.0	11		35007
for cabinet width 800 mm	688 - 763	653		1	1716.0	11		35006
for cabinet width 600 mm	488 - 563	453	720	1	1716.0	11		35005
for cabinet width 800 mm	688 - 763	653		1	2488.0	11		35004
for cabinet width 600 mm	488 - 563	453	1140	1	2200.0	11		35015
for cabinet width 800 mm	688 - 763	653		1	2940.0	11		35016

Universal conductor connection terminal 16 mm² to 300 mm²

For busbar	Connection min. – max.	Terminal space W x H	For use up to max.	Pack size	Weight kg/100 u.	PG		Part No.
flat busbars 10 mm and section busbars	16 - 120 mm ² , AWG 4 - MCM 250	17 x 15	440 A	25	10.9	07		01203
30 x 10 and section busbars	95 - 300 mm ²	41 x 25	630 A	3	85.7	07		01094

Brace terminal for round conductors up to 300 mm²

For busbar	Connection min. - max.	For use up to max.	Pack size	Weight kg/100 u.	PG		Part No.
20, 25, 30 x 5, 10 and section busbars	* Cu / Al 95 - 185 mm ²	500 A	6	31.2	07		01318
20, 25, 30 x 5, 10 and section busbars	* Cu / Al 95 - 300 mm ²	600 A	3	42.5	07		01760

* When using aluminium conductors, observe the maintenance instructions (see 8.2)

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

Connection cross-section	End feed	Centre feed	Terminal space W x H	Pack size	Weight kg/100 u.	PG		Part No.
320 - 800 mm ²	1600 A	1600 A	41 x 20 - 42	3	67.0	07		01185
500 - 750 mm ²			51 x 5 - 28	3	70.5	07		01906
600 - 900 mm ²			64 x 5 - 28	3	84.0	07		01907
500 - 1000 mm ²	2000 A	2000 A	51 x 20 - 42	3	73.5	07		01936
600 - 1200 mm ²			64 x 20 - 42	3	85.9	07		01911
800 - 1600 mm ²	2500 A	2500 A	81 x 20 - 42	3	101.1	07		01934
1000 - 2000 mm ²			2800 A	101 x 20 - 42	3	113.7	07	

For the connection of flat busbars and laminated copper busbars

Profil terminal, for tripple-T-section busbar

Connection cross-section	End feed	Centre feed	Terminal space W x H	Pack size	Weight kg/100 u.	PG		Part No.
320 - 800 mm ²	1600 A	1600 A	41 x 23 - 45	3	105.0	07		01513
500 - 1260 mm ²	2000 A	2500 A	64 x 23 - 45	3	124.0	07		01008
1200 - 3600 mm ²	2500 A	3200 A	101 x 23 - 45	3	172.7	07		01186

For the connection of flat busbars and laminated copper busbars



Centre feed units

TT and TTT section busbars



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

For busbar	Terminal space W x H	End feed	Centre feed	Pack size	Weight kg/100 u.	PG		Part No.
30 x 10 and section busbars	55 x 10 - 28	1600 A	2000 A	3	50.0	07		01069
30 x 10 and section busbars	68 x 10 - 28			3	63.0	07		01070
30 x 10 and section busbars	105 x 10 - 28		2800 A	3	84.0	07		01071

For the connection of flat busbars and laminated copper busbars

Clip-on screw connection, attachable, for DIN 46234 cable lugs

For busbar	Terminal space	For use up to max.	Pack size	Weight kg/100 u.	PG		Part No.
12, 15, 20, 25, 30 x 10 and section busbars	M8 x 8	490 A	20	16.5	07		01514
12, 15, 20, 25, 30 x 10 and section busbars	M10 x 10	630 A	6	36.2	07		01047

Laminated copper busbars, insulated, length 2 m

Dimensions (Number of laminates x width x thickness)	Rated current at 30 K	Rated current at 50 K	Cross-section mm ²	Pack size	Weight kg/100 u.	PG		Part No.
10 x 40 x 1	774 A	1053 A	400	1	746.0	06		01615
10 x 50 x 1	914 A	1244 A	500	1	932.0	06		01509
10 x 63 x 1	1088 A	1481 A	630	1	1180.0	06		01510
10 x 80 x 1	1305 A	1777 A	800	1	1490.0	06		01061
10 x 100 x 1	1550 A	2110 A	1000	1	1870.0	06		01273

You will find more laminated copper bars in the "accessories" chapter

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	Busbar length	Pack size	Weight kg/100 u.	PG		Part No.
double-T section busbar 500 mm ²	length 453 mm, tinned	453	1	200.6	06		01225
double-T section busbar 500 mm ²	length 650 mm, tinned	650	1	288.1	06		01226
double-T section busbar 720 mm ²	length 453 mm, tinned	453	1	293.3	06		01838
double-T section busbar 720 mm ²	length 653 mm, tinned	653	1	424.0	06		01831
triple-T section busbar 1140 mm ²	length 453 mm, tinned	453	1	464.0	06		01188
triple-T section busbar 1140 mm ²	length 653 mm, tinned	653	1	672.3	06		01189

For current carrying capacity of the busbars visit www.woehner.de



Centre feed units

TT, TTT and TCC section busbars



Busbar holder, 1-pole, lateral

Type	Pack size	Weight kg/100 u.	PG	Part No.
for section busbar TT, TTT and TCC	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 mm ²	2400	1	3416.0	06	01610

For current carrying capacity of the busbars visit www.woehner.de

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

For current carrying capacity of the busbars visit www.woehner.de

Brace terminal, 95 to 300 mm², for round conductors

For busbar	Connection mm ²	For use up to max.	Pack size	Weight kg/100 u.	PG	Part No.
20, 25, 30 x 5, 10 and section busbars	* 95 - 185	500 A	6	31.2	07	01318
20, 25, 30 x 5, 10 and section busbars	* 120 - 300	600 A	3	42.5	07	01760

* When using aluminium conductors, observe the maintenance instructions (see 8.2)

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

For busbar	Terminal space W x H	End feed	Centre feed	Pack size	Weight kg/100 u.	PG	Part No.
20, 25, 30 x 5, 10 and section busbars	30 x 20	630 A	750 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	1600 A	2000 A	3	50.0	07	01069
	68 x 10 - 28			3	63.0	07	01070
	105 x 10 - 28		2800 A	3	84.0	07	01071



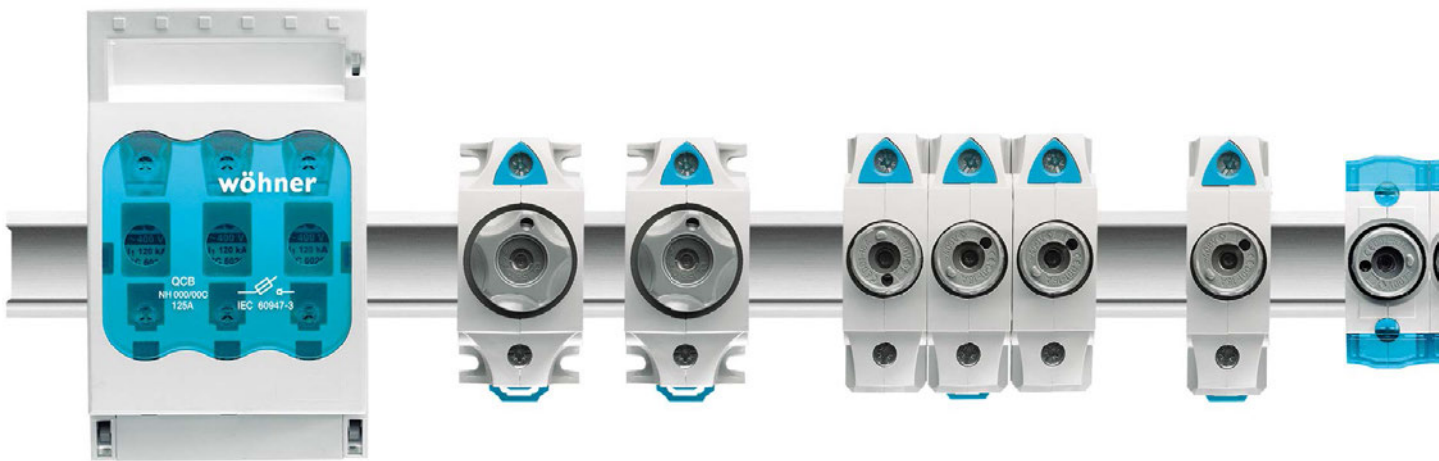
Panel

Panel-mounted components
and switching devices



MOUNTING PLATE OR MOUNTING RAIL COMPONENTS

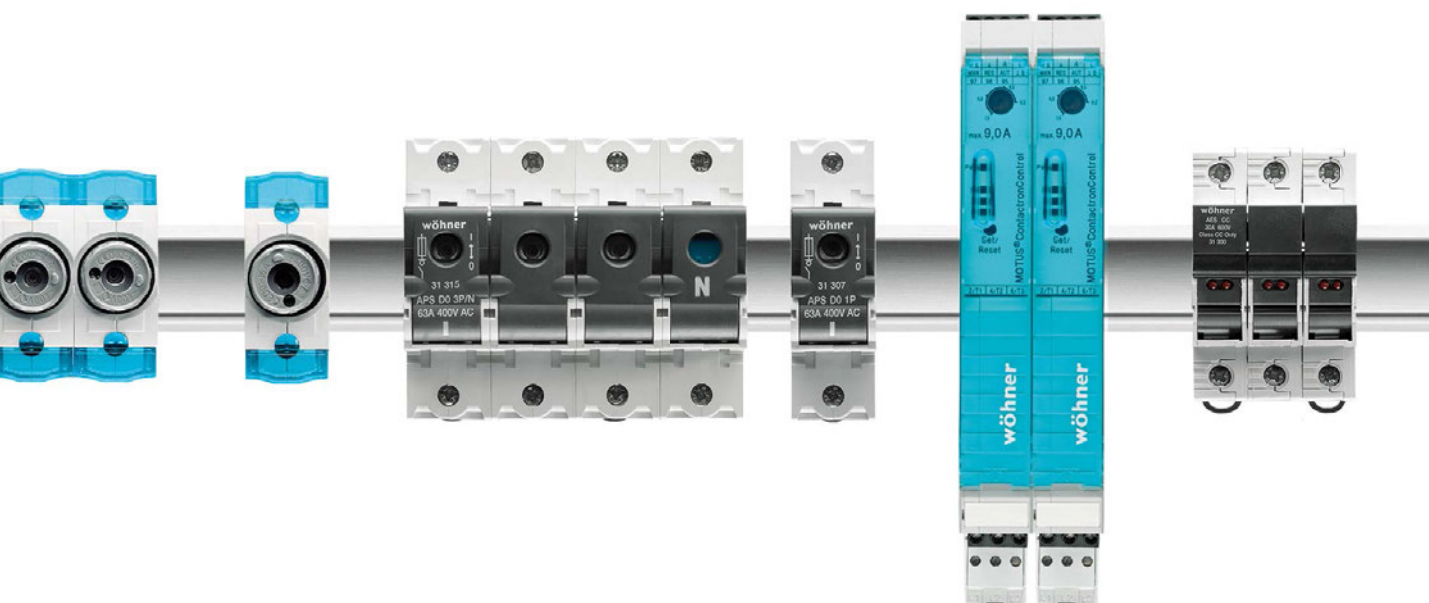
Panel



Components for conventional mounting

For conventional wiring, Wöhner offers a comprehensive range of components for mounting 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 through operator-independent switching. Selected products are ideal for special applications in the field of photovoltaics.





CUSTO® Panel

The CUSTO® fuse base D01 and D02 for installation in the 45 mm standard field section offers a high level of safety and favourable connection conditions.

- wide terminal range up to 35 mm²
- dual function terminal for 2 conductors, 35 mm² + 16 mm²
- connection of different conductors
- integrated cover and comprehensive touch-safe protection



TRITON® Panel

The TRITON® fuse bases D01, D02, DII and DIII in especially robust design with touch-safe protection according to DGUV V3 for industrial applications

- wide terminal range up to 35 mm²
- dual-function terminal incoming side
- connection of different conductors
- spring-loaded contact
- versions in DII and DIII
- versions with screw mounting



SECUR® Panel

The SECUR® fuse holder especially for photovoltaic applications allows for a comfortable fuse change by means of a removable fuse carrier. The contacts in the carrier remain protected against touch.

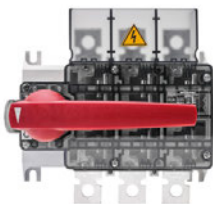
- for 10x85 / 14x85 fuses to 1500 V DC
- equipment width 22.5 mm
- UL approved



SECUR® Panel

D0 switch-disconnector with fuses offers a high degree of safety and comfort for the operator. The fuse replacement is only possible when switched off.

- dual-function terminal to 35 mm²
- captive fuse carrier with commercial gauge ring
- optional auxiliary switch



CAPUS® Panel

This product series includes three families.

- NH switch-disconnector with fuses 160 A - 630 A
- switch-disconnector 125 A - 3150 A
- changeover switch 125 A - 1000 A
- 3-pole + N versions available



MOTUS® Panel

With the MOTUS® hybrid motor starter drives up to 4 kW can be operated. By means of the integrated functions – direct and reversing starter, over load protection and emergency stop – significantly reduces the space requirement and wiring cost.

- 3 design versions: up to 0.6 A, up to 2.4 A and up to 9 A
- equipment width 22.5 mm
- up to 30 mil. switching cycles
- UL listed



AMBUS® Panel

The carrier for the cylindrical fuses is available in 1-, 2- and 3-pole as well as in versions with neutral conductor, with LED, with auxiliary switch as well as for semiconductor protection.

- 32 A (10x38), 50 A (14x51), 100 A (22x58)
- rated voltage to 690 V
- touch-safe protection after VDE 0106
- photovoltaic variants to 1000 V DC are also UL approved



AMBUS® Panel UL Version

Versions for Class CC to 30 A and Class J to 60 A fuses according to UL 248-8. All products are touch-safe protected and have convenient connection technology.

- short-circuit capacity up to 200 kA
- rated voltage to 600 V
- versions available with LED as fuse indicator
- UL listed



QUADRON® Panel

NH fuse switch-disconnector for sizes 000 to 4a protect and disconnect currents up to 1600 A.

- NH 000 to 2 can also be mounted on mounting rail
- NH 00 to 3-versions with fuse monitoring
- various accessories for connection and shrouding



QUADRON® Panel Speed

One highlight is the QUADRON® Panel NH switch-disconnector with fuses. Its snap-action switch mechanism allows safe, operator-independent switching.

- double interruption
- lockable in off-position
- FLAG indicator for switch position indicator
- versions with rotary drive or fuse monitoring

MOTUS®Panel - Hybrid-Motor starter

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	64.3	21		36100
0.18 - 2.4 A direct and reversing starter	22.5	175	138	1	64.3	21		36103
1.5 - 9 A direct and reversing starter	22.5	175	138	1	64.3	21		36106

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	50.9	21					36110
electronic unit 1.5 - 9 A direct and reversing starter	1	50.9	21					36111
adapter for MOTUS®Panel	1	12.8	21					36112
fuse 16 A for version 0.6 A and 2.4 A	3	2.8	21					31567
fuse 20 A for version 9 A	3	2.8	21					31568
fuse 30 A for version 9 A for motors with heavy-duty starting	3	2.8	21					31569



CUSTO®Panel - D0 integrated fuse bases

version with touch-safe protection, dual-function terminal on both sides



D0 fuse base, version for distribution boards

Type	Rated voltage	Poles	Connection mm ²	Pack size	Weight kg/100 u.	PG		Part No.
E 14 / 16 A / 1P	400 V	1-pole	1.5 - 35	9	7.6	03		31301
E 14 / 16 A / 3P		3-pole		3	23.0	03		31302
E 18 / 63 A / 1P		1-pole		9	7.6	03		31303
E 18 / 63 A / 3P		3-pole		3	23.0	03		31306

Comb-type busbar, pitch 27 mm, length 1 m

Type	Centre feed	End feed	Cross-section mm ²	Pack size	Weight kg/100 u.	PG		Part No.
comb-type busbar, 1-pole, bridge type, pitch 27 mm	130 A	80 A	16	25	19.0	06		31014
	220 A	130 A	35	10	50.0	06		31057
comb-type busbar, 3-pole, bridge type, pitch 27 mm	130 A	80 A	16	10	56.2	06		31012
	220 A	130 A	35	4	125.0	06		31056

Connection terminal, for comb-type busbars, bridge version

Article	Connection min. – max.	Type	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
connection terminal, side connection	6 - 50 mm ²	for 31014, 31024, 31309, 31311	125 A	25	2.5	07		31028
connection terminal, side connection		for 31012		25	2.9	07		31029
connection terminal, front connection				25	2.9	07		31085
connection terminal, front connection	25 - 95 mm ²	for 31057	225 A	3	9.0	07		01198
connection terminal, front connection		for 31056		3	9.3	07		01228

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 2-pole and 3-pole comb-type busbars 16 mm ²	50	0.1	06		31027
for 3-pole comb-type busbars 35 mm ²	10	0.2	06		31084

TRITON®Panel - D0 panel-mounting fuse bases

touch-safe protection in accordance with EN 50274 / DGUV V3 for industrial applications with dual-function terminal on incoming connection, box terminal on outgoing terminal



D0 fuse base, industrial version, pitch 27 mm

Type	Rated voltage	Poles	Connection mm ²	Pack size	Weight kg/100 u.	PG	Part No.
E 14 / 16 A / 1P	400 V	1-pole	1.5 - 35	9	12.8	02	31286
E 14 / 16 A / 3P	400 V	3-pole		3	38.4	02	31288
E 18 / 63 A / 1P	400 V	1-pole		9	13.9	02	31291
E 18 / 63 A / 3P	400 V	3-pole		3	41.4	02	31293

Comb-type busbar, pitch 27 mm, length 1 m

Type	Cross-section mm ²	Centre feed	End feed	Pack size	Weight kg/100 u.	PG	Part No.
comb type busbar, 1-pole, fork type, pitch 27 mm	16	130 A	80 A	25	24.6	06	31024
comb type busbar, 3-pole, fork type, pitch 27 mm	16			10	56.0	06	31026
comb-type busbar, 1-pole, bridge type, pitch 27 mm	16			25	19.0	06	31014
comb-type busbar, 3-pole, bridge type, pitch 27 mm	16			10	56.2	06	31012
	35	220 A	130 A	4	125.0	06	31056

End cover, for comb-type busbars

for 2-pole and 3-pole comb-type busbars 16 mm ²	50	0.1	06	31027
for 3-pole comb-type busbars 35 mm ²	10	0.2	06	31084

Connection terminal, for comb-type busbars, bridge version

Article	Type	Connection mm ²	Rated current	Pack size	Weight kg/100 u.	PG	Part No.
connection terminal, side connection	for 31014, 31024, 31309, 31311	6 - 50	125 A	25	2.5	07	31028
connection terminal, side connection	for 31012	6 - 50	125 A	25	2.9	07	31029
connection terminal, front connection	for 31012	6 - 50	125 A	25	2.9	07	31085
connection terminal, front connection	for 31056	25 - 95	225 A	3	9.3	07	01228

A connection terminal is required for each phase

Label holder

Type	Pack size	Weight kg/100 u.	PG	Part No.
for Triton, snap-on	100	0.1	02	31086

Label, for label holder

clip 20 x 9	100	0.1	03	31004
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SECUR®Panel - Switch-disconnectors with D0 fuses 63 A

touch-safe protection in accordance with EN 50274/DGUV V5, dual-function terminal on both sides



D0 switch disconnector with fuses

Type	Rated current	Connection mm ²	Pack size	Weight kg/100 u.	PG	Part No.
1-pole	63 A	1.5 - 35	3	14.0	03	31307
1-pole+N			2	26.2	03	31308
2-pole			2	27.8	03	31313
3-pole			1	42.0	03	31314
3-pole+N			1	54.0	03	31315

400 V AC / 130 V DC for 2-pole version

D0 Switch-disconnector with fuses, with LED

Type	Rated current	Connection mm ²	Pack size	Weight kg/100 u.	PG	Part No.
1-pole	63 A	1.5 - 35	3	14.2	03	31556
3-pole			1	42.6	03	31557

400 V AC / 130 V DC for 2-pole version

LED signals tripped fuse

Reducer

Type	Pack size	Weight kg/100 u.	PG	Part No.
reducer D02 for D01 fuses 2 - 16 A	20	0.1	01	31902

Pilot switch, for monitoring the switch position, 9 mm wide

Type	Pack size	Weight kg/100 u.	PG	Part No.
1 NO / 1 NC : 400 V AC / 2 A, 24 V DC / 6 A	1	5.4	03	31316

Comb-type busbar, length 1 m

Type	Cross-section mm ²	Centre feed	End feed	Pack size	Weight kg/100 u.	PG	Part No.
comb-type busbar, 1-pole, bridge type, pitch 27 mm	16	130 A	80 A	25	19.0	06	31014
	35	220 A	130 A	10	50.0	06	31057
comb-type busbar, 3-pole, bridge type, pitch 27 mm	16	130 A	80 A	10	56.2	06	31012
	35	220 A	130 A	4	125.0	06	31056

End cover, for comb-type busbars

Type	Pack size	Weight kg/100 u.	PG	Part No.
for 2-pole and 3-pole comb-type busbars 16 mm ²	50	0.1	06	31027
for 3-pole comb-type busbars 35 mm ²	10	0.2	06	31084

Connection terminal, for comb-type busbars, bridge version

Article	Type	Connection mm ²	Pack size	Weight kg/100 u.	PG	Part No.
connection terminal, side connection	for 31014, 31024, 31309, 31311	6 - 50	25	2.5	07	31028
	for 31012		25	2.9	07	31029
connection terminal, front connection	for 31012		25	2.9	07	31085
	for 31057		25 - 95	3	9.0	07
for 31056	3	9.3		07	01228	

A connection terminal is required for each phase

Fuse links not included

TRITON®Panel - D fuse bases

touch-safe protection in accordance with EN 50274 / DGUV V3 for industrial applications



D fuse base, industrial version, for screw-in gauge rings

Type	Rated voltage	Poles	Connection mm ²	Pack size	Weight kg/100 u.	PG		Part No.
E 27 / 25 A / 1P, for screw-in gauge rings	500 V	1	1.5 - 35	9	15.2	02		31173
E 27 / 25 A / 3P, for screw-in gauge rings	500 V	3	1.5 - 35	3	45.7	02		31174
E 33 / 63 A / 1P, for screw-in gauge rings	* 500 V	1	1.5 - 35	9	18.6	02		31175
E 33 / 63 A / 3P, for screw-in gauge rings	* 500 V	3	1.5 - 35	3	53.8	02		31176

* Conforms to VDE 0636-31, also 690 V AC / 600 V DC

Comb-type busbar, length 1 m

Type	Cross-section mm ²	Centre feed	End feed	Pack size	Weight kg/100 u.	PG		Part No.
1-pole comb-type busbar, insulated, for E27	16	130 A	80 A	25	21.5	06		31309
3-pole comb-type busbar, insulated, for E27				10	51.4	06		31310
1-pole comb type busbar, insulated, for E33				25	21.0	06		31311
3-pole comb-type busbar, insulated, for E33				10	50.5	06		31312

End cover, for comb-type busbars

Type	Pack size	Weight kg/100 u.	PG		Part No.
for 2-pole and 3-pole comb-type busbars 16 mm ²	50	0.1	06		31027

Connection terminal, for comb-type busbars

Article	Type	Connection mm ²	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
connection terminal, side connection	for 31014, 31024, 31309, 31311	6 - 50	125 A	25	2.5	07		31028
connection terminal, side connection	for 31012			25	2.9	07		31029
connection terminal, front connection				25	2.9	07		31085

A connection terminal is required for each phase

Label holder

Type	Pack size	Weight kg/100 u.	PG		Part No.
for Triton, snap-on	100	0.1	02		31086

Label, for label holder

Type	Pack size	Weight kg/100 u.	PG		Part No.
clip 20 x 9	100	0.1	03		31004

AMBUS®Panel - Fuse holders for IEC cylindrical fuses

type AES with box terminals, 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	32 A	1-pole	0.75 - 25 mm ² / 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 mm ² / 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	100 A	1-pole	4 - 50 mm ² / 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	32 A	1-pole	0.75 - 25 mm ² / AWG 18 - 4	18	12	5.7	17		31130
10x38		2-pole		36	6	11.3	17		31132
10x38		3-pole		54	4	17.0	17		31133
14x51	50 A	1-pole	1.5 - 35 mm ² / AWG 14 - 2	27	6	9.8	17		31135
14x51		3-pole		81	2	30.5	17		31138
22x58	100 A	1-pole	4 - 50 mm ² / AWG 10 - 1/0	36	6	15.9	17		31140
22x58		3-pole		108	2	48.7	17		31143

LED signals tripped fuse

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

10x38	32 A	1-pole	0.75 - 25 mm ² / AWG 18 - 4	18	12	5.7	17		31930
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LED signals tripped fuse

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

10x38	32 A	1-pole+N	0.75 - 25 mm ² / AWG 18 - 4	36	6	11.3	17		31111
10x38		3-pole+N		72	3	21.7	17		31114
14x51	50 A	1-pole+N	1.5 - 35 mm ² / AWG 14 - 2	54	3	21.8	17		31116
14x51		3-pole+N		108	1	42.7	17		31119
22x58	100 A	1-pole+N	4 - 50 mm ² / AWG 10 - 1/0	72	3	35.8	17		31121
22x58		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 mm ² / AWG 14 - 2	108	1	42.7	17		31168
22x58	100 A	3-pole+N	4 - 50 mm ² / AWG 10 - 1/0	144	1	67.5	17		31171

Fuse holder for cylindrical fuses, standard design, integrated neutral conductor (left)

10x38	32 A	1-pole+N	1.5 - 10 mm ²	18	12	9.0	17		31273
10x38		3-pole+N	1.5 - 10 mm ²	54	4	22.0	17		31274

N-module

10x38	32 A	N	0.75 - 25 mm ² / AWG 18 - 4	18	12	6.2	17		31258
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AMBUS®Panel - Fuse holders for IEC cylindrical fuses

type AES with box terminals, 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	32 A	1-pole	0.75 - 25 mm ² / 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 mm ² / 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	100 A	1-pole	4 - 50 mm ² / 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 mm ² / 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	100 A	1-pole	4 - 50 mm ² / 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 tripped

Fuse holder for cylindrical fuses, photovoltaic version, 1000 V

10x38 / 1P	30 A	1-pole	0.75 - 25 mm ² / 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 signalisiert ausgelöste Sicherung, Arbeitsbereich 400-1000 V

Fuse holder for cylindrical fuses, photovoltaic version, 1500 V

10x85 *	32 A	1-pole	0.75 - 25 mm ² / AWG 18 - 4	22.5	5	9.2	17		31555
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* Also suitable for 14 x 85 fuses



AMBUS®Panel - Accessories

for AES holder for cylindrical fuses



Connection set, for custom combinations of multipole units

Type	Pack size	Weight kg/100 u.	PG	Part No.
connection kit 10x38, 2-pole	1	2.5	17	31564
connection kit 10x38, 3-pole	1	3.6	17	31565
connection kit 14x51, 2-pole	1	3.6	17	31269

10 multipole devices can be produced with each set, depending on the version (2 or 3-pole)

Spacer 4.5 mm, set for 50 fuse holders

set for 50 fuse holders 31971 and 31973	1	1.2	17	31563
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Comb-type busbar, length 1 m

Type	Cross-section mm ²	Centre feed	End feed	Pack size	Weight kg/100 u.	PG	Part No.
comb-type busbar, 1-pole, bridge type, pitch 18 mm	16	130 A	80 A	25	21.8	06	31101
comb-type busbar, 3-pole, bridge type, pitch 18 mm				10	59.4	06	31102
comb-type busbar, 1-pole, bridge type, pitch 27 mm				25	19.0	06	31014
comb-type busbar, 3-pole, bridge type, pitch 27 mm				10	56.2	06	31012
comb-type busbar, 1-pole, bridge type, pitch 18 mm	25	200 A	100 A	10	47.5	06	31548
comb-type busbar, 2-pole, bridge type, pitch 18 mm				10	81.0	06	31561
comb-type busbar, 3-pole, bridge type, pitch 18 mm				10	113.3	06	31549
comb-type busbar, 1-pole, bridge type, pitch 27 mm	35	220 A	130 A	10	50.0	06	31057
comb-type busbar, 3-pole, bridge type, pitch 27 mm				4	125.0	06	31056

End cover, for comb-type busbars

Type	Pack size	Weight kg/100 u.	PG	Part No.
for 2-pole and 3-pole comb-type busbars 16 mm ²	50	0.1	06	31027
for 1-pole comb-type busbars 25 mm ²	20	0.1	06	31042
for 2-pole and 3-pole comb-type busbars 25 mm ²	20	0.2	06	31552
for 3-pole comb-type busbars 35 mm ²	10	0.2	06	31084

Connection terminal, for comb-type busbars

Article	Type	Connection mm ²	Rated current	Pack size	Weight kg/100 u.	PG	Part No.
connection terminal, side connection	for 31101 and 31102	6 - 25	80 A	50	1.2	07	31103
connection terminal, front connection	for 31101 and 31102			50	1.2	07	31157
	for 31548	6 - 35	115 A	10	3.0	07	31039
	for 31549, 31561			10	3.5	07	31550
connection terminal, side connection	for 31014, 31024, 31309, 31311	6 - 50	125 A	25	2.5	07	31028
	for 31012			25	2.9	07	31029
connection terminal, front connection	for 31012	25 - 95	225 A	25	2.9	07	31085
	for 31057			3	9.0	07	01198
	for 31056			3	9.3	07	01228

A connection terminal is required for each phase



AMBUS®Panel - Fuse holders for Class CC fuses

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 for cylindrical fuses, Class CC, standard version

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

Class CC fuse holder for cylindrical fuses, Class CC, standard version with LED 110 - 690 V AC / DC

Type	Poles	Connection	Width	Pack size	Weight kg/100 u.	PG	Part No.
30 A / 600 V	1-pole	0.75 - 25 mm ² / 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 tripped fuse

Class CC fuse holder for cylindrical fuses, Class CC, standard version with LED 12 - 72 V AC / DC

Type	Poles	Connection	Width	Pack size	Weight kg/100 u.	PG	Part No.
30 A / 12 - 72 V	1-pole	0.75 - 25 mm ² / AWG 18 - 4	18	12	6.2	17	31929

LED signals tripped fuse

Comb-type busbar, length 1 m

Type	Cross-section mm ²	Centre feed	End feed	Pack size	Weight kg/100 u.	PG	Part No.
comb-type busbar, 1-pole, bridge type, pitch 18 mm	25	200 A	100 A	10	47.5	06	31548
comb-type busbar, 2-pole, bridge type, pitch 18 mm				10	81.0	06	31561
comb-type busbar, 3-pole, bridge type, pitch 18 mm				10	113.3	06	31549

Connection terminal, for comb-type busbars

Type	Connection mm ²	Pack size	Weight kg/100 u.	PG	Part No.
for 31548	6 - 35	10	3.0	07	31039
for 31549, 31561	6 - 35	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 mm ²	20	0.1	06	31042
for 2-pole and 3-pole comb-type busbars 25 mm ²	20	0.2	06	31552



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

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



Class J fuse holder, AMBUS®Panel, clip-on mounting, standard version

Type	Poles	Connection	Width	Pack size	Weight kg/100 u.	PG		Part No.
30 A / 600 V (21x57)	1-pole	0.75 - 50 mm ² / 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 (27x60)	1-pole	2.5 - 50 mm ² / 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, clip-on mounting, standard version with LED 110 - 600 V AC / DC

30 A / 600 V (21x57)	1-pole	0.75 - 50 mm ² / AWG 18 - 1	36	6	15.8	16		31932
30 A / 600 V (21x57)	2-pole		72	3	32.2	16		31933
30 A / 600 V (21x57)	3-pole		108	2	48.6	16		31934
60 A / 600 V (27x60)	1-pole	2.5 - 50 mm ² / AWG 14 - 1	40	6	18.2	16		31923
60 A / 600 V (27x60)	2-pole		80	3	37.0	16		31924
60 A / 600 V (27x60)	3-pole		120	2	55.9	16		31925

LED signals tripped fuse

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

100 A / 600 V (29x117)	*	3-pole	4 - 50 mm ² / AWG 14 - 2/0	106	1	107.0	16		33408
200 A / 600 V (41x146)	*		35 - 150 mm ² / AWG 2 - MCM300	184	1	203.0	16		33409
400 A / 600 V (54x181)			25 - 300 mm ² / AWG 4 - MCM600	256	1	672.0	16		33308

* Do not use fuse links with sharp-edged blades



QUADRON® Panel NH - fuse bases

fuse holder for NH fuses and NH-PV 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	1500 V	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 30 x 10, for integrated mounting of CTs type LEM HTA	250 A	1500 V	NH 1XL	3	63.0	10		03288
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. 100W power dissipation Information on rated load factors with regard to current carrying capacity is available on request or at www.woehner.de

Accessories

Type	Pack size	Weight kg/100 u.	PG	Part No.
grip lug cover	* 30	1.5	10	79449

* 2 pieces required per fuse

NH fuse base, size 00, barrier version

Type	Rated current	Size	Number of poles	Connection mm ²	Pack size	Weight kg/100 u.	PG	Part No.
both sides screw M8, without barrier	160 A	NH 00	1	70	10	12.6	10	03350
both sides screw, with 2 barriers			3		4	45.7	10	03351
both sides terminal, without barrier			1		10	13.0	10	03354
both sides clamp, with 2 barriers			3		4	45.5	10	03355

NH fuse base, size 00 – 1 – 2 – 3, version with touch-safe protection

both sides screw M8	160 A	NH 00	1	70	12	15.2	10	03758
			3		4	48.4	10	03759
both sides clamp			1		12	15.5	10	03760
			3		4	49.4	10	03761
both sides screw M10	250 A	NH 1	1	150	3	48.6	10	03762
			3		1	158.3	10	03763
both sides clamp			3		1	161.6	10	03765
			both sides screw M10		400 A	NH 2	240	3
1	288.3	10		03767				
both sides screw M12	NH 3	1	3	110.8		10		03768
		3	1	340.0		10		03769



QUADRON® Panel - Accessories

for NH fuse holders



Grip lug cover, fits NH bases with touch-safe protection

Type	Size	Pack size	Weight kg/100 u.	PG		Part No.
for NH base and 33705	*	00	30	1.2	10	79448
for NH fuse base	**	1 - 3	30	1.5	10	79449

* 1 piece required per fuse

** 2 pieces required per fuse

Barrier and barrier support

Article	Type	Pack size	Weight kg/100 u.	PG		Part No.
barrier for fuse base NH 00	for 03350, 03351, 03354, 03355	100	2.2	10		03377
barrier support, for lateral barrier	for 03350, 03351, 03354, 03355	10	0.8	10		03359

Neutral conductor, screw-on mounting

Rated current	Type	Connection mm ²	Pack size	Weight kg/100 u.	PG		Part No.
160 A	clamp, both sides	70	10	14.1	10		03620
160 A	screw M8 at both sides		10	14.2	10		03519

Neutral conductor, disconnectable, screws-on or clip-on onto mounting rail TH 35 EN 60715

63 A		10	50	2.6	10		05188
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Neutral conductor, disconnectable, screw-on mounting

Rated current	Type	Length	Connection mm ²	Pack size	Weight kg/100 u.	PG		Part No.
160 A	clamp on both sides	70	120	10	19.2	10		03668
250 A	screw M8 at both sides	120		10	19.5	10		03657
400 A	screw M10 at both sides	240	200	3	58.9	10		03757
630 A	screw M12 at both sides			3	58.9	10		03213

Connecting terminal

160 A	both sides clamp	60	70	10	9.1	10		03193
160 A	both sides clamp	125	70	10	14.6	10		03173
250 A	both sides screw M10	100	120	10	16.8	10		03195
250 A	both sides screw M10	198	120	10	30.6	10		03196
630 A	both sides screw M12	100	240	10	25.6	10		03197
630 A	both sides screw M12	198	240	10	42.0	10		03198

Possible combinations: 3-pole NH bases with neutral conductor

(neutral conductor attachable to NH base)

03355 + 03620 (clamp on both sides)

03351 + 03519 (M8 screw on both sides)

Other combinations possible if the neutral conductors are fitted separately

QUADRON® Panel - NH fuse switch-disconnectors size 000 - 4a

type LTS and QCB for panel mounting



NH fuse switch-disconnector, size 000 - 3, 3-pole

Type	Rated current	Size	Pack size	Weight kg/100 u.	PG	Part No.
box terminal	125 A	NH 000	1	57.2	09	33217
clamp 70 mm ²	160 A	NH 00	1	78.0	09	33199
screw M8			1	77.7	09	33200
box terminal	250 A	NH 1	1	191.0	09	33393
screw M10			1	171.0	09	33201
screw M10	400 A	NH 2	1	362.0	09	33202
screw M12	630 A	NH 3	1	490.0	09	33203

NH fuse switch-disconnector, size 4a, 3-pole

2x screw M12	1600 A	NH 4a		1534.0	09	33204
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NH fuse switch-disconnector, size 00, 3-pole, with short touch-safe protection

clamp 70 mm ² , with short protection cover	160 A	NH 00	1	71.6	09	33221
screw M8, with short protection cover			1	71.9	09	33222

NH fuse switch-disconnector, size 00 - 3, 3-pole, with electronic fuse monitoring

clamp 70 mm ²	160 A	NH 00	1	93.0	09	33328
screw M8			1	92.0	09	33329
screw M10	250 A	NH 1	1	229.0	09	33330
screw M10	400 A	NH 2	1	380.0	09	33331
screw M12	630 A	NH 3	1	524.0	09	33332

Circuit diagram for fuse monitoring is available at www.woehner.de

NH fuse switch-disconnector, size 00 - 3, 3-pole, with electromechanical fuse monitoring

clamp 70 mm ²	160 A	NH 00	1	127.0	09	33207
screw M8			1	126.0	09	33208
screw M10	250 A	NH 1	1	255.0	09	33149
screw M10	400 A	NH 2	1	412.0	09	33150
screw M12	630 A	NH 3	1	556.0	09	33151

Circuit diagram for fuse monitoring is available at www.woehner.de



QUADRON® Panel - Accessories

NH fuse switch-disconnector, size 000 - 3



Comb-type busbar, closed version with end covers

Type	Cross-section mm ²	Usable with	Pack size	Weight kg/100 u.	PG		Part No.
comb-type busbar, 3-pole, for 2 NH fuse switch disconnectors	35	33217	4	23.0	09		33906
comb-type busbar, 3-pole, for 2 NH fuse switch disconnectors		33200	4	27.1	09		33376
comb-type busbar, 3-pole, for 3 NH fuse switch disconnectors			4	44.7	09		33377
comb-type busbar, 3-pole, for 4 NH fuse switch disconnectors			4	62.3	09		33392

Connection terminal, for comb-type busbars

Type	Connection mm ²	Pack size	Weight kg/100 u.	PG		Part No.
for 3-pole comb-type busbar 35 mm ² , suitable for NH-fuse switch disconnector size 000 with box terminal	6 - 35	3	4.0	09		33907
for 3-pole comb-type busbar 35 mm ² , suitable for NH-fuse switch disconnector size 00 with screw connection	25 - 95	3	12.1	09		33378



Connection accessories

Type	Connection	Size	Pack size	Weight kg/100 u.	PG		Part No.
box terminal for Cu cables	35 - 185 mm ² / 24 x 3 - 21	1	3	10.0	09		33909
clamp connector	1.5 - 70 mm ² / 12 x 1 - 10	00	3	1.5	09		03727
clamp connector for Cu cables	70 - 150 mm ² / 18 x 2 - 14	1	1	6.3	09		33163
clamp connector for Cu cables	120 - 240 mm ² / 21 x 1 - 14	2	1	10.6	09		33164
clamp connector for Cu cables	150 - 300 mm ² / 25 x 1 - 13	3	1	12.5	09		33165
M8 screw connector	70	00	3	1.4	09		30894
prism terminal, single, for Cu and Al cables	* 16 - 70 mm ²	00	3	3.0	09		33224
prism terminal, single, for Cu and Al cables	* 35 - 150 mm ²	1	1	11.6	09		33166
prism terminal, single, for Cu and Al cables	* 50 - 240 mm ²	2	1	19.9	09		33167
prism terminal, single, for Cu and Al cables	* 150 - 300 mm ²	3	1	24.7	09		33168
prism terminal, double, for Cu cables	2x 35 - 70 mm ²	1	1	16.6	09		33145
prism terminal, double, for Cu cables	2x 70 - 120 mm ²	2	1	27.8	09		33146
prism terminal, double, for Cu cables	2x 150 mm ²	3	1	36.8	09		33147
prism terminal, double, for Cu cables	2x 185 mm ²	3	1	36.8	09		33385
tunnel terminal for screw connection M8	1x 2.5 - 16 mm ² + 2x 2.5 - 25 mm ²	00	3	4.2	09		01182

* When using aluminium conductors, observe the maintenance instructions (see 8.2)

QUADRON® Panel - Accessories

NH fuse switch-disconnector, size 000 - 3



Cover, for cable lugs, attachable at the top and bottom

Type	Size	Pack size	Weight kg/100 u.	PG		Part No.
for 33200, 33208, 33329, 33394, 33398, 33420	00	1	2.8	09		79811
for 33221, 33222	00	2	4.8	09		33223
for QCB-NH1 and QCS 320 A	1	2	10.7	09		33142
for QCB-NH2	2	2	10.9	09		33143
for QCB-NH3	3	2	15.6	09		33144

Cover, for connection area, attachable at the top and bottom

for NH fuse switch-disconnector size 2	2	2	4.0	09		33418
for NH fuse switch-disconnector size 3, max. 600 A	3	2	5.4	09		33419

Barrier for handle

for closing of handle area from rear	1 - 3	10	2.2	09		33155
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Trim frame, cover with front plate assembly

Type	W x L	Size	Pack size	Weight kg/100 u.	PG		Part No.
trim frame, single	130 x 210 x 2	000	10	3.1	09		33219
trim frame, double	199 x 166 x 2	000	10	3.9	09		33220
trim frame, single	130 x 210 x 2	00	10	1.9	09		78893
trim frame, double	232 x 210 x 2	00	10	2.9	09		78105
trim frame, triple	340 x 210 x 2	00	10	3.8	09		78139
trim frame, single	* 143 x 210 x 2	00	10	3.3	09		33225
trim frame, double	* 250 x 210 x 2	00	10	5.6	09		33226
trim frame, single	215 x 330 x 2	1	1	11.7	09		33152
trim frame, single	248 x 330 x 2	2	1	9.4	09		33153
trim frame, single	290 x 330 x 2	3	1	13.2	09		33154

* For 33221, 33222

QUADRON® Panel - Accessories

NH fuse switch-disconnector, size 000 - 3



Pilot switch, for monitoring the disconnector lid position

Type	Size	Pack size	Weight kg/100 u.	PG		Part No.
changeover 250 V AC / 5 A, 30 V DC / 4 A	1	1	1.3	09		33917
changeover 250V AC/5A, 30V DC/4A	000 - 3	1	1.1	09		33156

33156 not suitable for size 1 fuse-switch disconnectors
Connection for flat plug DIN 46244-A, 2.8 x 0.5 mm

Disconnecter lid interlock

for sealing wire	000	10	0.1	09		33051
for sealing wire	00	10	0.2	09		03849
for sealing wire or 3 padlocks with shackle of 4 - 7 mm	1 - 3	10	0.5	09		33157

Rapid mounting set, for rails in accordance with EN 60715 (TH 35 x 7.5 mm)

for 1 mounting rail	000	1	0.6	09		33247
for 2 mounting rails, rails centre distance 125 mm or 150 mm	00	1	18.5	09		33193
for 2 mounting rails, rails centre distance 125 mm or 150 mm	1 - 2	1	51.0	09		33158

Arc chamber

retrofit package for higher utilisation category	1	3	10.7	09		33918
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QUADRON® Panel - Switch-disconnectors 160 A - 320 A and size 00 - 1

type QCS, with snap-action switch mechanism



Switch-disconnector, 3-pole switchable, with snap-action switch mechanism, with multifunction handle

Type	Rated current	Width	Pack size	Weight kg/100 u.	PG		Part No.
box terminal *	160 A	106	1	203.0	14		33542
screw M10 *	320 A	184	1	539.0	14		33552

* As main switch or emergency off switch only with the following maximum operating current:
160 A version: 125 A / 690 V AC; 320 A version: 280 A / 400 V AC, 250 A / 690 V AC

Switch-disconnector, 3-pole switchable, with snap-action switch mechanism, with door coupling rotary drive

box terminal, for door coupling twist handle *	160 A	106	1	203.0	14		33545
screw M10, for door coupling rotary handle *	320 A	184	1	516.0	14		33555

Additional extension shaft and door coupling rotary handle required
* As main switch or emergency off switch only with the following maximum operating current:
160 A version: 125 A / 690 V AC; 320 A version: 280 A / 400 V AC, 250 A / 690 V AC

NH switch-disconnector with fuses, 3-pole switchable, with snap-action switch mechanism, with multifunction handle

Type	Rated current	Size	Width	Pack size	Weight kg/100 u.	PG		Part No.
box terminal	125 A	NH 00	106	1	208.0	15		33502
box terminal, with electronic fuse monitoring	125 A	NH 00	106	1	208.0	15		33507
screw M10	250 A	NH 1	184	1	540.0	15		33512

Fuse monitoring on request

NH switch-disconnector with fuses, 3-pole switchable, with snap-action switch mechanism, with door coupling rotary drive

box terminal, for door coupling rotary handle	125 A	NH 00	106	1	201.6	15		33505
screw M10, for door coupling rotary handle	250 A	NH 1	184	1	528.0	15		33515

Additional extension shaft and door coupling rotary handle required

Accessories

Type	Usable for version	Connection mm ²	Pack size	Weight kg/100 u.	PG		Part No.
connection for auxiliary line, for box terminal	QCB-NH00, QCS-NH00, QCS 160 A	6.3 x 0.8	3	0.6	09		33915
connecting terminal 120 mm ²	QCS-NH00, QCS 160 A	120	3	12.1	14		33914
box terminal for Cu cables	QCB-NH1, QCS-NH1, QCS 320 A	35 - 185 mm ² / 24 x 3 - 21	3	10.0	09		33909
prism terminal, single, for Cu and Al cables *			1	11.6	09		33166
prism terminal, double, for Cu cables			1	16.6	09		33145
cover for cable lugs, top / bottom attachable			2	10.7	09		33142
pilot switch for monitoring the switch position			1	1.1	14		33908
door coupling rotary handle, black, without shaft **	QCS-NH00 / 1, QCS 160 A / 320 A		1	57.0	14		33910
door coupling rotary handle, red-yellow, without shaft **			1	57.0	14		33911
extension shaft, 290 mm long			1	13.0	14		33912
extension shaft, 490 mm long			1	22.0	14		33913

For current capacity of the terminals visit www.woehner.de

* When using aluminium conductors, observe the maintenance instructions (see 8.2)

** Switch can also be installed 90° left/right, always with the same handle position

Fuse links not included

CAPUS®Panel - NH switch-disconnectors with fuses size 00 - 3

type LTS-F



NH switch-disconnector with fuses, 3-pole, 690 V AC, with rotary handle

Type	Rated current	Size	Pack size	Weight kg/100 u.	PG		Part No.
screw M8, graphite grey handle	160 A	NH 00	1	230.0	15		33337
screw M10, graphite grey handle	250 A	NH 1	1	726.0	15		33338
screw M10, graphite grey handle	400 A	NH 2	1	760.0	15		33339
screw M12, graphite grey handle	630 A	NH 3	1	1310.0	15		33340
screw M8, red handle	160 A	NH 00	1	230.0	15		33359
screw M10, red handle	250 A	NH 1	1	724.0	15		33360
screw M10, red handle	400 A	NH 2	1	768.0	15		33361
screw M12, red handle	630 A	NH 3	1	1280.0	15		33362

Fuses and terminal compartment covers are not included in the scope of delivery

Terminal space cover, attachable at top and bottom

Type	Usable with	Pack size	Weight kg/100 u.	PG		Part No.
for covering all connections, dark grey	LTS-250, LTS-F 160	2	4.0	14		33350
	LTS-400/630, LTS-F 250/400	2	12.0	14		33351
	LTS-800, LTS-F 630	2	20.0	14		33352

Pilot switch, for monitoring the switch setting

1 n/c + 1 n/o, plug connectors 6.3 x 0.8	LTS, LTS-F	1	2.5	14		33347
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Door coupling drive, without rotary handle

door coupling rotary drive, graphit-grey blind cover	LTS-250/400/630 LTS-F 160/250/400	1	23.5	14		33342
	LTS-800 LTS-F 630	1	44.0	14		33343
door coupling rotary drive, graphite-grey blind cover, for closing with padlocks and door inter-locking	LTS-250/400/630, LTS-F160/250/400	1	38.0	14		33345
	LTS-800, LTS-F630	1	67.0	14		33346
door coupling rotary drive, red / yellow blind cover, for closing with padlocks and door inter-locking	LTS-250/400/630, LTS-F 160/250/400	1	38.0	14		33348
	LTS-800, LTS-F 630	1	56.0	14		33349
extension shaft, 300 mm long	LTS-250/400/630, LTS-F 160/250/400	1	30.0	14		33246
	LTS-800, LTS-F 630	1	57.3	14		33283
extension shaft, 550 mm long	LTS-250/400/630, LTS-F 160/250/400	1	29.0	14		33380
	LTS-800, LTS-F 630	1	38.0	14		33381

Connection accessories

Type	Usable with	Connection	Pack size	Weight kg/100 u.	PG		Part No.
clamp connector for Cu conductors	LTS-F 160	2.5 - 70 mm ² / 12 x 10	3	2.9	14		33363
clamp connector for Cu cables	QCB-NH1, QCS-NH1, LTS-F 250, LTS 400	70 - 150 mm ² / 18 x 2 - 14	1	6.3	09		33163
clamp connector for Cu cables	QCB-NH2, LTS-F 400, LTS 630	120 - 240 mm ² / 21 x 1 -14	1	10.6	09		33164
clamp connector for Cu cables	QCB-NH3, LTS-F 630, LTS 800	150 - 300 mm ² / 25 x 1 - 13	1	12.5	09		33165
wedge clamp terminal, single, for Cu and Al cond.	LTS-F 250, LTS 400	70 - 150 mm ²	3	11.6	14		33366
wedge clamp terminal, single, for Cu and Al cond.	LTS-F 400, LTS 630	120 - 240 mm ²	3	20.0	14		33367

When using aluminium conductors, observe the maintenance instructions (see 8.2)

Fuse links not included

CAPUS®Panel - Switch-disconnectors 250 A - 800 A

type LTS



Switch-disconnector, 3-pole, 500 V AC, with rotary handle

Type	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
screw M10, graphite grey handle	250 A	1	194.0	14		33333
	400 A	1	538.0	14		33334
	630 A	1	546.0	14		33335
screw M12, graphite grey handle	800 A	1	944.0	14		33336
screw M10, red handle	250 A	1	194.0	14		33355
	400 A	1	546.0	14		33356
	630 A	1	544.0	14		33357
screw M12, red handle	800 A	1	940.0	14		33358

Fuses and terminal compartment covers are not included in the scope of delivery

Terminal space cover, attachable at top / bottom

Type	Usable with	Pack size	Weight kg/100 u.	PG		Part No.
for covering all connections, dark grey	LTS-250, LTS-F 160	2	4.0	14		33350
	LTS-400/630, LTS-F 250/400	2	12.0	14		33351
	LTS-800, LTS-F 630	2	20.0	14		33352

Pilot switch, for monitoring the switch setting

1 n/c + 1 n/o, plug connectors 6.3 x 0.8	LTS, LTS-F	1	2.5	14		33347
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Door coupling drive, without rotary handle

door coupling rotary drive, graphit-grey blind cover	LTS-250/400/630 LTS-F 160/250/400	1	23.5	14		33342
	LTS-800 LTS-F 630	1	44.0	14		33343
door coupling rotary drive, graphite-grey blind cover, for closing with padlocks and door inter-locking	LTS-250/400/630, LTS-F160/250/400	1	38.0	14		33345
	LTS-800, LTS-F630	1	67.0	14		33346
door coupling rotary drive, red / yellow blind cover, for closing with padlocks and door inter-locking	LTS-250/400/630, LTS-F 160/250/400	1	38.0	14		33348
	LTS-800, LTS-F 630	1	56.0	14		33349
extension shaft, 300 mm long	LTS-250/400/630, LTS-F 160/250/400	1	30.0	14		33246
	LTS-800, LTS-F 630	1	57.3	14		33283
extension shaft, 550 mm long	LTS-250/400/630, LTS-F 160/250/400	1	29.0	14		33380
	LTS-800, LTS-F 630	1	38.0	14		33381

Connection accessories

Type	Usable with	Connection mm ²	Pack size	Weight kg/100 u.	PG		Part No.
clamp connector for lam. Cu	LTS 250	14 x 9	3	3.5	14		33364
clamp connector for Cu cables	QCB-NH1, QCS-NH1, LTS-F 250, LTS 400	18 x 10	1	6.3	09		33163
clamp connector for Cu cables	QCB-NH2, LTS-F 400, LTS 630	21 x 13	1	10.6	09		33164
clamp connector for Cu cables	QCB-NH3, LTS-F 630, LTS 800	25 x 13	1	12.5	09		33165
wedge clamp terminal, single, for Cu and Al cond. *	LTS 250	70 – 120	3	6.7	14		33365
wedge clamp terminal, single, for Cu and Al cond. *	LTS-F 250, LTS 400	70 – 150	3	11.6	14		33366
wedge clamp terminal, single, for Cu and Al cond. *	LTS-F 400, LTS 630	120 – 240	3	20.0	14		33367

* When using aluminium conductors, observe the maintenance instructions (see 8.2)

CAPUS®Panel - Switch-disconnectors 125 A - 3150 A

type LTS-T



Switch-disconnector, 3-pole, without rotary handle

Type	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
box terminal 95 mm ²	125 A	1	80.0	14		33424
screw M8	125 A	1	80.0	14		33425
box terminal 95 mm ²	160 A	1	80.0	14		33426
screw M8	160 A	1	80.0	14		33427
screw M10	200 A	1	80.0	14		33428
screw M10	250 A	1	90.0	14		33429
screw M10	315 A	1	170.0	14		33430
screw M10	400 A	1	170.0	14		33431
screw M10	630 A	1	420.0	14		33432
screw M10	800 A	1	420.0	14		33433
screw M14	* 1250 A	1	700.0	14		33434
screw M14	* 1600 A	1	1850.0	14		33435
screw M14	* 1800 A	1	1850.0	14		33436
screw M12	* 2000 A	1	5500.0	14		33437
screw M12	* 2500 A	1	5500.0	14		33438
screw M12	* 3150 A	1	5600.0	14		33439

Rated current at 400 V AC

* Delivery time on request

Switch-disconnector, 3-pole + N, without rotary handle

Type	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
box terminal 95 mm ²	125 A	1	90.0	14		33440
screw M8	125 A	1	90.0	14		33441
box terminal 95 mm ²	160 A	1	90.0	14		33442
screw M8	160 A	1	90.0	14		33443
screw M10	200 A	1	90.0	14		33444
screw M10	250 A	1	100.0	14		33445
screw M10	315 A	1	190.0	14		33446
screw M10	400 A	1	190.0	14		33447
screw M10	630 A	1	450.0	14		33448
screw M10	800 A	1	450.0	14		33449
screw M14	* 1250 A	1	760.0	14		33450
screw M14	* 1600 A	1	2100.0	14		33451
screw M12	* 2000 A	1	7500.0	14		33452
screw M12	* 2500 A	1	7500.0	14		33453
screw M12	* 3150 A	1	7600.0	14		33454

* Delivery time on request

CAPUS®Panel - Handles and accessories

for switch-disconnector type LTS-T



Rotary handle

Type	Usable with	Pack size	Weight	PG		Part No.
rotary handle for door coupling drive, graphite grey, with shaft	LTS-T 125,160,200,250	1	25.0	14		33921
door coupling rotary handle, graphite grey, with shaft	LTS-T 315,400	1	35.0	14		33922
	LTS-T 630,800	1	50.0	14		33923
	LTS-T 1250	1	80.0	14		33924
	LTS-T 1600,1800,2000,2500,3150	1	80.0	14		33925
door coupling rotary handle, yellow-red, with shaft	LTS-T 125,160,200,250	1	25.0	14		33970
	LTS-T 315,400	1	35.0	14		33971
	LTS-T 630,800	1	50.0	14		33972
	LTS-T 1250	1	80.0	14		33973
	LTS-T 1600,1800,2000,2500,3150	1	80.0	14		33974
direct rotary handle, graphite grey, with shaft	LTS-T 125,160,200,250	1	5.0	14		33926
	LTS-T 315,400	1	20.0	14		33927
	LTS-T 630,800	1	25.0	14		33928
	LTS-T 1250	1	30.0	14		33929
	LTS-T 1600,1800,2000,2500,3150	1	30.0	14		33930

Terminal cover

for covering all terminals at one side of the switch, transparent	LTS-T 315	1	10.0	14		33939
	LTS-T 630,800	1	15.0	14		33940
	LTS-T 1250	1	20.0	14		33941
	LTS-T 1600,1800	1	45.0	14		33942

Terminal space cover

for covering all terminals at one side of the switch, transparent	LTS-T 125,160,200,250	1	10.0	14		33943
	LTS-T 315,400	1	15.0	14		33944
	LTS-T 630,800	1	20.0	14		33945

Pilot switch, for monitoring of the switch position

1 n/c + 1 n/o, plug connectors 6.3 x 0.8	LTS-T, LTSU-T	1	5.0	14		33946
2 n/c + 2 n/o, plug connectors 6.3 x 0.8		1	10.0	14		33947

Rapid mounting set

rapid mounting set for 1 mounting rail TH 35	LTS-T 125,160	1	4.0	14		33177
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CAPUS®Panel - Changeover switches 125 A - 1000 A

type LTSU-T



Changeover switch, 3-pole, without rotary handle

Type	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
screw M8	* 125 A	1	180.0	14		33455
screw M8	* 160 A	1	180.0	14		33456
screw M10	* 200 A	1	190.0	14		33457
screw M10	250 A	1	550.0	14		33458
screw M10	315 A	1	550.0	14		33459
screw M10	400 A	1	550.0	14		33460
screw M12	630 A	1	1260.0	14		33461
screw M12	800 A	1	1260.0	14		33462
screw M14	1000 A	1	2430.0	14		33463

Rated current at 400 V AC

* Bridge cable required; 6 or 8 connections available

Changeover switch, 3-pole + N, without rotary handle

screw M8	* 125 A	1	210.0	14		33464
screw M8	* 160 A	1	210.0	14		33465
screw M10	* 200 A	1	220.0	14		33466
screw M10	250 A	1	590.0	14		33467
screw M10	315 A	1	590.0	14		33468
screw M10	400 A	1	590.0	14		33469
screw M12	630 A	1	1370.0	14		33470
screw M12	800 A	1	1370.0	14		33471
screw M14	1000 A	1	2680.0	14		33472

Rated current at 400 V AC

* Bridge cable required; 6 or 8 connections available

Rotary handle

door coupling rotary handle, graphite grey, with shaft	LTSU-T 125,160,200	1	25.0	14		33931
	LTSU-T 250,400	1	50.0	14		33932
	LTSU-T 630,800	1	70.0	14		33933
	LTSU-T 1000	1	80.0	14		33934
direct rotary handle, graphite grey, with shaft	LTSU-T 125,160,200	1	5.0	14		33935
	LTSU-T 250,400	1	5.0	14		33936
	LTSU-T 630,800	1	30.0	14		33937
	LTSU-T 1000	1	30.0	14		33938

Terminal cover

terminal cover, transparent, 3-pole, for incoming II	LTSU-T 200-400	1	10.0	14		33963
terminal cover, transparent, 3-pole, for incoming I		1	10.0	14		33964
terminal cover, transparent, 3-pole, for outgoing		1	10.0	14		33968
terminal cover, transparent, 4-pole, for incoming I and II	LTSU-T 250-400	1	10.0	14		33967
terminal cover, transparent, 4-pole, for outgoing		1	10.0	14		33969

Pilot switch

1 n/c + 1 n/o, plug connectors 6.3 x 0.8	LTSU-T, LTSU-T	1	5.0	14		33946
2 n/c + 2 n/o, plug connectors 6.3 x 0.8		1	10.0	14		33947

Accessories

for switch disconnecter LTS-T and changeover switch LTSU-T



Extension shaft

Type	Usable with	Pack size	Weight kg/100 u.	PG		Part No.
extension shaft, 250 mm long	LTS-T 125-250, LTSU-T 125-200	1	10.0	14		33954
extension shaft, 376 mm long	LTS-T 315/400, LTSU-T 250-400	1	31.0	14		33955
extension shaft, 345 mm long	LTS-T 630/800	1	52.0	14		33956
extension shaft, 336 mm long	LTS-T 1250, LTSU-T 630-1000	1	52.0	14		33957
extension shaft, 485 mm long	LTS-T 1600/1800	1	75.0	14		33958
extension shaft, 387 mm long	LTS-T 125-250, LTSU-T 125-200	1	17.0	14		33959
extension shaft, 536 mm long	LTS-T 315/400	1	43.0	14		33960
extension shaft, 525 mm long	LTS-T 630/800	1	85.0	14		33961
extension shaft, 635 mm long	LTS-T 1600/1800	1	100.0	14		33962

Accessories

WOEHNER 01613

CE



D0 fuses

in accordance with IEC / HD / DIN VDE 60269-3



Fuse link gG (gL)

Size	Rated voltage	Rated breaking capacity	Pack size	Weight kg/100 u.	PG		Part No.
D01 fuse link 2 A	400 V AC / 250 V DC	50 kA AC / 8 kA DC	10	0.6	22		01685
D01 fuse link 4 A			10	0.6	22		01686
D01 fuse link 6 A			10	0.6	22		01687
D01 fuse link 10 A			10	0.6	22		01688
D01 fuse link 16 A			10	0.7	22		01689
D02 fuse link 20 A			10	1.2	22		01690
D02 fuse link 25 A			10	1.3	22		01691
D02 fuse link 35 A			10	1.3	22		01692
D02 fuse link 50 A			10	1.5	22		01693
D02 fuse link 63 A			10	1.5	22		01694

Ferrule gauge ring for E 14

D01 gauge ring 2 A	50	0.1	22		01715
D01 gauge ring 4 A	50	0.1	22		01716
D01 gauge ring 6 A	50	0.1	22		01717
D01 gauge ring 10 A	50	0.1	22		01718

Ferrule gauge ring for E 18

special D01 gauge ring 2 A	50	0.1	22		01724
special D01 gauge ring 4 A	50	0.1	22		01725
special D01 gauge ring 6 A	50	0.1	22		01726
special D01 gauge ring 10 A	50	0.1	22		01727
special D01 gauge ring 16 A	50	0.1	22		01728
D02 gauge ring 20 A	50	0.1	22		01719
D02 gauge ring 25 A	50	0.1	22		01720
D02 gauge ring 35 A	50	0.1	22		01721
D02 gauge ring 50 A	50	0.1	22		01722

D0 fuses

in accordance with IEC / HD / DIN VDE 60269-3



Screw cap, 400 V AC / 250 V DC

Size	Type	Pack size	Weight kg/100 u.	PG		Part No.
D01 screw cap, porcelain	E 14	20	1.9	22		01103
D01 screw cap, plastic		20	1.2	22		31005
D02 screw cap, porcelain	E 18	20	1.8	22		01104
D02 screw cap, plastic		20	1.3	22		31006
D02 screw cap, plastic, with reducer for D01		20	1.4	22		31104

Retaining cap

locking cap D01 version "industry"	E 14	36	1.1	22		31909
locking cap D01 version "utility"		36	1.1	22		31908
locking cap D02 version "industry"	E 18	36	1.1	22		31910
locking cap D02 version "utility"		36	1.1	22		31904

Special retaining spring

Size	Rated current	Pack size	Weight kg/100 u.	PG		Part No.
special-retaining spring for D01 - E 18	2 - 16 A	50	0.1	22		01729

Gauge ring tool

D01 - D03		1	2.8	22		01730
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Special key for retaining cap

"industry" version D and D0		1	3.6	22		31913
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D fuses

in accordance with IEC / HD / DIN VDE 60269-3



Fuse link gG (gL)

Size	Rated voltage	Rated breaking capacity	Type	Pack size	Weight kg/100 u.	PG		Part No.
D-fuse link 2 A	500 V AC / 500 V DC	50 kA AC / 50 kA DC	E 27	5	2.7	22		01670
D-fuse link 4 A				5	2.8	22		01671
D-fuse link 6 A				5	2.8	22		01672
D-fuse link 10 A				5	2.8	22		01673
D-fuse link 16 A				5	2.9	22		01674
D-fuse link 20 A				5	3.1	22		01675
D-fuse link 25 A				5	3.2	22		01676
D-fuse link 35 A				E 33	5	4.8	22	
D-fuse link 50 A			5		5.0	22		01678
D-fuse link 63 A			5		5.2	22		01679

Screw-in gauge ring

screw-in gauge ring 2 A	E 27 / E 33	25	1.3	22		01741
screw-in gauge ring 4 A		25	1.2	22		01701
screw-in gauge ring 6 A		25	1.2	22		01702
screw-in gauge ring 10 A		25	1.2	22		01703
screw-in gauge ring 16 A		25	1.2	22		01704
screw-in gauge ring 20 A		25	1.2	22		01705
screw-in gauge ring 25 A		25	1.2	22		01706
screw-in gauge ring 35 A		E 33	25	2.0	22	
screw-in gauge ring 50 A	25		2.0	22		01708
screw-in gauge ring 63 A	25		2.0	22		01709

Gauge ring

gauge ring 2 A	E 27	50	0.4	22		01541
gauge ring 4 A		50	0.4	22		01542
gauge ring 6 A		50	0.4	22		01543
gauge ring 10 A		50	0.4	22		01544
gauge ring 16 A		50	0.4	22		01545
gauge ring 20 A		50	0.4	22		01546
gauge ring 25 A		50	0.4	22		01547
gauge ring 35 A		E 33	50	0.4	22	
gauge ring 50 A	50		0.4	22		01549
gauge ring 63 A	50		0.4	22		01550

D fuses

in accordance with IEC / HD / DIN VDE 60269-3



Screw cap

Size	Type	Rated voltage	Pack size	Weight kg/100 u.	PG		Part No.
D-screw cap, porcelain	E 27	500 V	20	4.8	22		01098
D-screw cap, plastic			20	2.8	22		31098
D-screw cap, porcelain	E 33		20	7.9	22		01100
D-screw cap, plastic			20	4.8	22		31100

Retaining cap

locking cap DII version "industry"	E 27	500 V	20	1.7	22		31911
locking cap DII version "utility"			20	1.7	22		31905
locking cap DIII version "industry"	E 33		10	2.6	22		31912
locking cap DIII version "utility"			10	2.6	22		31906

Gauge screw key

Type	Pack size	Weight kg/100 u.	PG		Part No.
E 27 / E 33	1	4.7	22		01998

Gauge screw key

E 27 / E 33	1	3.7	22		01059
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Special key for retaining cap

"industry" version D and D0	1	3.6	22		31913
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NH fuses

in accordance with IEC / HD / DIN VDE 60269-2



Fuse link gG (gL)

Size	Rated current	Rated voltage, AC	Rated voltage, DC	Pack size	Weight kg/100 u.	PG	Part No.	
NH 000	125 A	400 V	250 V	3	12.2	22	03243	
NH 000	6 A	500 V		3	12.2	22	03523	
NH 000	10 A			3	12.2	22	03524	
NH 000	16 A			3	12.2	22	03525	
NH 000	20 A			3	12.2	22	03526	
NH 000	25 A			3	12.2	22	03527	
NH 000	35 A			3	12.2	22	03528	
NH 000	50 A			3	12.2	22	03529	
NH 000	63 A			3	12.2	22	03530	
NH 000	80 A			3	12.2	22	03531	
NH 000	100 A			3	12.2	22	03532	
NH 00	125 A			440 V	3	18.3	22	03533
NH 00	160 A				3	18.3	22	03534
NH 00	6 A	690 V	250 V	3	12.7	22	03908	
NH 00	10 A			3	12.7	22	03909	
NH 00	16 A			3	12.7	22	03910	
NH 00	20 A			3	12.7	22	03911	
NH 00	25 A			3	12.7	22	03912	
NH 00	32 A			3	12.7	22	03913	
NH 00	35 A			3	12.7	22	03914	
NH 00	40 A			3	12.7	22	03915	
NH 00	50 A			3	12.7	22	03916	
NH 00	63 A			3	12.7	22	03917	
NH 00	80 A			3	19.0	22	03918	
NH 00	100 A			3	20.5	22	03919	

NH fuses in accordance with size 000 can be used in NH fuse bases, fuse-switch disconnectors and NH fuse-switch units of size 00

Knife link

Size	Rated current	Pack size	Weight kg/100 u.	PG	Part No.
NH 00	160 A	3	7.0	22	03161
NH 1	250 A	3	14.9	22	03162
NH 2	400 A	3	20.7	22	03163
NH 3	630 A	3	28.0	22	03164
NH 4a	1600 A	3	85.0	22	03185

NH universal slip-on handle

Size	Type	Pack size	Weight kg/100 u.	PG	Part No.
000 - 3	without sleeve	1	28.4	10	03502

NH fuses

in accordance with IEC / HD / DIN VDE 60269-2



Fuse link gG

Size	Rated voltage, AC	Rated voltage, DC	Rated current	Pack size	Weight kg/100 u.	PG		Part No.			
NH 1	500 V	440 V	20 A	3	26.3	22		03550			
			35 A	3	26.3	22		03552			
			50 A	3	26.3	22		03553			
			80 A	3	26.3	22		03555			
			100 A	3	26.3	22		03556			
			125 A	3	26.3	22		03557			
			160 A	3	26.3	22		03558			
			200 A	3	26.3	22		03559			
			224 A	3	26.3	22		03560			
	250 A	3	26.3	22		03561					
	690 V	250 V	160 A	3	35.0	22		03929			
			200 A	3	35.0	22		03930			
			250 A	3	35.0	22		03924			
	NH 2	500 V	440 V	100 A	3	47.8	22		03566		
160 A				3	47.8	22		03568			
200 A				3	47.8	22		03569			
224 A				3	47.8	22		03570			
250 A				3	47.8	22		03571			
300 A				3	47.8	22		03572			
315 A				3	47.8	22		03573			
250 V			355 A	3	47.8	22		03574			
			400 A	3	47.8	22		03575			
			690 V	250 A	3	62.6	22		03942		
				315 A	3	62.6	22		03943		
				NH 3	500 V	440 V	315 A	3	65.4	22	
			400 A				3	65.4	22		03579
500 A		3	65.4				22		03581		
630 A	3	65.4	22					03582			
690 V	400 A	3	96.0		22			03946			
	500 A	3	105.0		22			03947			
	NH 4a	500 V	440 V		800 A		1	260.0	22		03181
1000 A				1	260.0	22		03182			
1250 A				1	266.0	22		03183			

Cylindrical fuses gG

in accordance with IEC / HD 60269-2



Fuse link gG (gL)

Size	Rated current	Rated voltage	Rated breaking capacity	Power dissipation	Pack size	Weight kg/100 u.	PG		Part No.
10x38	1 A	500 V	120 kA	0.5 W	10	0.6	22		31008
	2 A			0.7 W	10	0.6	22		31182
	4 A			0.8 W	10	0.6	22		31183
	6 A			0.9 W	10	0.6	22		31184
	8 A			0.9 W	10	0.6	22		31009
	10 A			1.3 W	10	0.6	22		31185
	12 A			1.3 W	10	0.6	22		31010
	16 A			1.9 W	10	0.6	22		31186
	20 A			2.3 W	10	0.6	22		31187
	25 A			2.8 W	10	0.6	22		31188
	32 A			3.0 W	10	0.6	22		31189
14x51	2 A	690 V	80 kA	0.8 W	10	1.9	22		31011
	6 A			1.0 W	10	1.9	22		31017
	10 A			1.8 W	10	1.9	22		31190
	16 A	500 V	80 kA	2.5 W	10	1.9	22		31191
	20 A			3.0 W	10	1.9	22		31192
	25 A			3.5 W	10	1.9	22		31193
	32 A			3.8 W	10	1.9	22		31194
	40 A			4.4 W	10	1.9	22		31195
	50 A			4.7 W	10	1.9	22		31196
22x58	32 A	690 V	80 kA	4.3 W	10	5.0	22		31198
	40 A			5.1 W	10	5.0	22		31199
	50 A			5.5 W	10	5.0	22		31200
	63 A			6.7 W	10	5.0	22		31201
	80 A	500 V	120 kA	8.0 W	10	5.0	22		31202
	100 A			9.0 W	10	5.0	22		31203
	125 A			12.5 W	10	5.0	22		31204

Fuse link gG (gL), with striker

14x51	6 A	500 V	80 kA	1.1 W	10	2.0	22		31366
14x51	10 A			1.3 W	10	2.0	22		31368
14x51	16 A			2.0 W	10	2.0	22		31370
14x51	20 A			2.5 W	10	2.0	22		31371
14x51	25 A			3.3 W	10	2.0	22		31372
14x51	32 A			3.5 W	10	2.0	22		31373
14x51	40 A			4.8 W	10	2.0	22		31374
22x58	50 A	690 V	80 kA	5.2 W	10	5.2	22		31385
22x58	63 A	500 V		6.9 W	10	5.2	22		31386
22x58	80 A			7.8 W	10	5.2	22		31387

Cylindrical fuses gR and gPV

gR in accordance with IEC / EN 60269-4 and gPV in accordance with IEC / EN 60269-6



Fuse link gR

Size	Rated current	Rated voltage	Rated breaking capacity	Power dissipation	Pack size	Weight kg/100 u.	PG		Part No.		
10x38	1 A	690 V	200 kA	0.9 W	10	0.6	22		31205		
	2 A			1.0 W	10	0.6	22		31206		
	4 A			1.1 W	10	0.6	22		31207		
	6 A			1.6 W	10	0.6	22		31208		
	10 A			2.1 W	10	0.6	22		31209		
	12 A			3.1 W	10	0.6	22		31210		
	16 A			4.4 W	10	0.6	22		31211		
	20 A			5.8 W	10	0.6	22		31212		
	25 A			6.8 W	10	0.6	22		31213		
	30 A			8.2 W	10	0.6	22		31214		
14x51	10 A	690 V	200 kA	2.6 W	10	1.9	22		31215		
	16 A			4.7 W	10	1.9	22		31216		
	20 A			6.0 W	10	1.9	22		31217		
	32 A			9.5 W	10	1.9	22		31219		
	40 A			10.0 W	10	1.9	22		31220		
	50 A			12.0 W	10	1.9	22		31221		
22x58						15.0 W	10	5.0	22		31226
						16.0 W	10	5.0	22		31227
						18.0 W	10	5.0	22		31228
						19.0 W	10	5.0	22		31229

Fuse link gPV, for photovoltaic applications

10x38	8 A	1000 V	30 kA	1.6 W	10	0.6	22		31543
	10 A			2.0 W	10	0.6	22		31544
	12 A			2.4 W	10	0.6	22		31545
	16 A			2.1 W	10	0.6	22		31546
	20 A			2.5 W	10	0.6	22		31547
14x85	16 A	1100 V	30 kA	3.8 W	20	2.7	22		31560
	20 A			4.7 W	20	2.7	22		31559
	25 A			5.9 W	20	2.7	22		31558



Cylindrical fuses Class CC

in accordance with UL 248-4



Fuse link, 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			10	0.8	22		31244
	1.5 A			10	0.8	22		31395
	2 A			10	0.8	22		31245
	2.5 A			10	0.8	22		31396
	3 A			10	0.8	22		31397
	4 A			10	0.8	22		31246
	5 A			10	0.8	22		31398
	6 A			10	0.8	22		31247
	8 A			10	0.8	22		31399
	10 A			10	0.8	22		31248
	12 A			10	0.8	22		31400
	15 A			10	0.8	22		31249
	20 A			10	0.8	22		31250
	25 A			10	0.8	22		31251
30 A	10	0.8	22		31252			

Fuse link, Class CC, fast acting

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



Cylindrical fuses Class J

in accordance with UL 248-8



Fuse link, Class J, time delay

Size	Rated current	Rated voltage	Rated breaking capacity	Pack size	Weight kg/100 u.	PG	Part No.
Class J, 21x57	1 A	600 V	200 kA	10	5.0	22	31333
	2 A			10	5.0	22	31338
	3 A			10	5.0	22	31342
	4 A			10	5.0	22	31345
	6 A			10	5.0	22	31349
	8 A			10	5.0	22	31351
	10 A			10	5.0	22	31353
	12 A			10	5.0	22	31354
	15 A			10	5.0	22	31355
	20 A			10	5.0	22	31357
	25 A			10	5.0	22	31358
	30 A			10	5.0	22	31359
Class J, 27x60	35 A	600 V	200 kA	10	8.5	22	31360
	40 A			10	8.5	22	31361
	45 A			10	8.5	22	31362
	50 A			10	8.5	22	31363
	60 A			10	8.5	22	31364
Class J, 29x118	70 A	600 V	200 kA	1	14.5	22	03228
	80 A			1	14.5	22	03229
	90 A			1	14.5	22	03230
	100 A			1	14.5	22	03231
Class J, 41x146	125 A	600 V	200 kA	1	35.5	22	03233
	150 A			1	35.5	22	03234
	175 A			1	35.5	22	03235
	200 A			1	35.5	22	03236
Class J, 54x181	250 A	600 V	200 kA	1	67.0	22	03238
	300 A			1	67.0	22	03239
	350 A			1	67.0	22	03240
	400 A			1	67.0	22	03241



Cylindrical fuses Class J

in accordance with UL 248-8



Fuse link, Class J, fast acting

Size	Rated current	Rated voltage	Rated breaking capacity	Pack size	Weight kg/100 u.	PG		Part No.
Class J, 21x57	10 A	600 V	200 kA	10	5.0	22		31323
	15 A			10	5.0	22		31324
	20 A			10	5.0	22		31325
	25 A			10	5.0	22		31326
	30 A			10	5.0	22		31327
Class J, 27x60	35 A	600 V	200 kA	10	8.5	22		31511
	40 A			10	8.5	22		31512
	50 A			10	8.5	22		31514
	60 A			10	8.5	22		31515
Class J, 29x118	70 A	600 V	200 kA	1	14.5	22		03214
	80 A			1	14.5	22		03215
	100 A			1	14.5	22		03217
Class J, 41x146	125 A	600 V	200 kA	1	35.0	22		03219
	150 A			1	35.5	22		03220
	175 A			1	38.2	22		03221
	200 A			1	35.5	22		03222
Class J, 54x181	250 A	600 V	200 kA	1	67.0	22		03224
	300 A			1	67.0	22		03225
	350 A			1	67.0	22		03226
	400 A			1	67.0	22		03227



Insulators



Insulator, with female thread

Total height	Female thread, both sides	Width across flats	Rated voltage	Pack size	Weight kg/100 u.	PG		Part No.
20	M6	17	600 V	100	1.2	06		05779
25	M5	22	1000 V	20	3.5	06		05793
30	M6	30	1500 V	20	5.4	06		05780
30	M8	30	1500 V	20	5.3	06		05792
35	M6	32	1500 V	20	7.0	06		05781
35	M8	32	1500 V	20	7.2	06		05782
40	M8	40	2000 V	20	10.2	06		05783
40	M10	40	2000 V	20	10.8	06		05784
40	M12	40	2000 V	20	11.8	06		05791
45	M8	46	2000 V	20	14.8	06		05786
45	M10	46	2000 V	20	15.3	06		05787
50	M8	36	2000 V	20	10.9	06		05790
50	M10	36	2000 V	20	12.2	06		05788
60	M10	40	3000 V	20	16.2	06		05789

Insulator, with threaded bolt and female thread

30	M6	30	1500 V	20	5.3	06		05800
35	M6	32	1500 V	20	6.0	06		05801
35	M8	32	1500 V	20	8.2	06		05802

Laminated copper busbars



Laminated copper busbar, plain, insulated (105°C), length 2 m

Dimensions (number of laminates x width x thickness)	Cross-section mm ²	Rated current 30 K	Rated current 50 K	Pack size	Weight kg/100 u.	PG		Part No.
3 x 9 x 0.8	21.6	119 A	162 A	1	40.4	06		01054
6 x 9 x 0.8	43.2	176 A	240 A	1	80.6	06		01194
4 x 15.5 x 0.8	49.6	205 A	279 A	1	92.8	06		01196
6 x 15.5 x 0.8	74.4	257 A	350 A	1	139.2	06		01035
10 x 15.5 x 0.8	124	345 A	470 A	1	232.0	06		01583
3 x 20 x 1	60	240 A	326 A	1	112.4	06		01027
6 x 20 x 1	120	351 A	477 A	1	225.0	06		01028
10 x 20 x 1	200	470 A	640 A	1	375.0	06		01029
4 x 24 x 1	96	322 A	438 A	1	180.0	06		01253
5 x 24 x 1	120	363 A	494 A	1	225.0	06		01611
6 x 24 x 1	144	402 A	547 A	1	270.0	06		01255
8 x 24 x 1	192	471 A	641 A	1	360.0	06		01323
10 x 24 x 1	240	534 A	727 A	1	450.0	06		01184
5 x 32 x 1	160	453 A	617 A	1	299.0	06		01612
10 x 32 x 1	320	657 A	894 A	1	598.0	06		01613
5 x 40 x 1	200	541 A	736 A	1	373.0	06		01614
6 x 40 x 1	240	594 A	809 A	1	447.6	06		01256
10 x 40 x 1	400	774 A	1053 A	1	746.0	06		01615
5 x 50 x 1	250	646 A	880 A	1	466.0	06		01060
8 x 50 x 1	400	818 A	1114 A	1	746.0	06		01343
10 x 50 x 1	500	914 A	1244 A	1	932.0	06		01509
5 x 63 x 1	315	779 A	1061 A	1	590.0	06		01324
10 x 63 x 1	630	1088 A	1481 A	1	1180.0	06		01510
10 x 80 x 1	800	1305 A	1777 A	1	1490.0	06		01061
10 x 100 x 1	1000	1550 A	2110 A	1	1870.0	06		01273

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



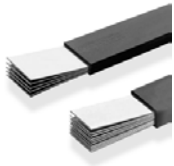
Holder for laminated busbars

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

For mounting on standard C-rail



Laminated copper busbars



Laminated copper busbar, tin-plated, insulated (105°C), length 2 m

Dimensions (number of laminates x width x thickness)	Cross-section mm ²	Rated current 30 K	Rated current 50 K	Pack size	Weight kg/100 u.	PG		Part No.
6 x 9 x 0.8	43.2	176 A	240 A	1	80.6	06		01084
4 x 15.5 x 0.8	49.6	205 A	279 A	1	92.8	06		01089
6 x 15.5 x 0.8	74.4	257 A	350 A	1	139.2	06		01090
10 x 15.5 x 0.8	124	345 A	470 A	1	232.0	06		01091
6 x 20 x 1	120	351 A	477 A	1	225.0	06		01063
10 x 20 x 1	200	470 A	640 A	1	375.0	06		01064
5 x 24 x 1	120	363 A	494 A	1	225.0	06		01075
10 x 24 x 1	240	534 A	727 A	1	450.0	06		01076
5 x 32 x 1	160	453 A	617 A	1	299.0	06		01095
10 x 32 x 1	320	657 A	894 A	1	598.0	06		01096
5 x 40 x 1	200	541 A	736 A	1	373.0	06		01097
10 x 40 x 1	400	774 A	1053 A	1	746.0	06		01099
5 x 50 x 1	250	646 A	880 A	1	466.0	06		01112
10 x 50 x 1	500	914 A	1244 A	1	932.0	06		01113
10 x 63 x 1	630	1088 A	1481 A	1	1180.0	06		01123

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 6 x 15.5 x 0.8 to 10 x 63 x 1	3	11.3	06		01298
for multiple fastening for lam. Cu of 5 x 40 x 1 to 10 x 63 x 1	4	16.6	06		01299

For mounting on standard C-rail



Connection bars for PE or N



PE and N busbar, current capacity 63 A, with self-locking screws

Connection mm ²	Number of contact positions	Dimensions L x W x D	Pack size	Weight kg/100 u.	PG		Part No.
10	8 terminal points	52 x 9 x 6.5	100	2.2	06		01126
	12 terminal points	78 x 9 x 6.5	100	3.2	06		01127
	16 terminal points	104 x 9 x 6.5	100	4.3	06		01128
	24 terminal points	156 x 9 x 6.5	50	6.7	06		01129
	151 terminal points	1000 x 9 x 6.5	1	43.0	06		01130

Connection terminal

35	suitable for PE and N busbars 01126 - 01130		100	1.4	07		01114
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PE and N busbar, with terminal clamp, current capacity 63 A, with self-locking screws

Connection	Type	Dimensions L x W x H	Pack size	Weight kg/100 u.	PG		Part No.
without terminal clamp	6 terminal points 10mm ² , screw-on, 61.5 mm long	62 x 9 x 6.5	100	2.5	06		01926
1 terminal clamp 25 mm ²	12 terminal points 10mm ² , screw-on, 124.0 mm long	124 x 9 x 6.5	50	5.5	06		01927
2 terminal clamps 25 mm ²	18 terminal points 10mm ² , screw-on, 186.5 mm long	187 x 9 x 6.5	60	9.6	06		01928
3 terminal clamps 25 mm ²	24 terminal points 10mm ² , screw-on, 249.0 mm long	249 x 9 x 6.5	50	11.5	06		01929
4 terminal clamps 25 mm ²	30 terminal points 10mm ² , screw-on, 311.5 mm long	312 x 9 x 6.5	50	16.7	06		01930
5 terminal clamps 25 mm ²	36 terminal points 10mm ² , screw-on, 374.0 mm long	374 x 9 x 6.5	100	17.6	06		01931
15 terminal clamps 25 mm ²	96 terminal points 10mm ² , screw-on, 1000 mm long	1000 x 9 x 6.5	1	48.0	06		01932

For 10 mm² incoming connection the connection clamp must be reversed

Connection clamp

25 mm ²	for PE/N bars 01926 - 01932		100	0.3	06		08824
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Clip-on mounting, for rail 35 mm to EN 60715

for mounting rail 35 x 7.5	for PE/N bars 01126 - 01129 and 01926 - 01932		100	0.2	06		08825
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Terminal support, for PE and N busbars

screw-on			50	1.4	06		01120
snap-on to mounting rail TH 35			50	1.6	06		01121
screw-on			50	0.1	06		01119

Connection and connecting terminals



Insulated PE and N terminal

Rated current	Connection mm ²	Type	Pack size	Weight kg/100 u.	PG		Part No.
63 A	7x 10 mm ²	PE-terminal, green/yellow	50	2.7	06		01144
63 A		neutral terminal, blue	50	2.7	06		01143
63 A		PE-terminal, green/yellow	50	2.9	06		01258
63 A		neutral terminal, blue	50	2.9	06		01257

* for mounting on flat busbars 12 x 2mm

** for clip-on mounting

Connecting terminal

160 A	70	both sides clamp	10	9.1	10		03193
		both sides clamp	10	14.6	10		03173
250 A	120	both sides screw M10	10	16.8	10		03195
		both sides screw M10	10	30.6	10		03196
630 A	240	both sides screw M12	10	25.6	10		03197
		both sides screw M12	10	42.0	10		03198

Label, self-adhesive, Ø 15 mm

PE green-yellow	200	0.1	06		78442
N blue	200	0.1	06		78443
PE/N green-yellow / blue	200	0.1	06		78447

Appendix

General notes

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. Planning, construction requirements and the required test certifications are prescribed in the parts of the IEC or EN 61439 standard "Low-voltage switchgear and control-gear assemblies". To avoid hazards to people and materials which can arise when working with electricity, these systems and components should only be used by suitably trained personnel, and relevant regulations must be observed.

In particular, installation, maintenance, modifications and additions must only be carried out by qualified personnel in accordance with the general construction and safety regulations applicable to high-current electrical systems. Modern technological developments and the way in which

the components of the system interact 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 product 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.

Detailed technical information is available on the internet at: www.woehner.com

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 61439-1/2/3.

Plant-specific reduction factors must be considered, depending on the exact conditions of use.

The rated loading factors listed below represent guide values and refer to a maximum +35°C temperature of the air directly surrounding the products.

Number of main circuits	Rated diversity factor	
	to IEC / EN 61439-2	to IEC / EN 61439-3
2 and 3	0.9	0.8
4 and 5	0.8	0.7
6 to 9 inclusive	0.7	0.6
10 and more	0.6	0.5

IEC 61439
Part 2: Power switchgear and controlgear assemblies
Part 3: Installation distributor for operation by lay people

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. See www.woehner.com for further information.

We recommend vertically mounting the device on a horizontal busbar system. The fixing handle must be placed on top for switchgears mounted vertically. For this mounting position, the rated diversity factors contained in Table 1 or Table 101 apply to components with permitted dissipation in the worst-case scenario and with ambient conditions in conformity with 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 such as:

- Power output per fuse and the device in operation,
- Simultaneous full and partial load cycles,
- Alignment in the system, devices affecting each other,
- Busbar cross-section, conductor cross-section,
- Ambient temperature, current conditions, require the observation of 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 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.

Conductor connections

Specifications regarding conductor terminals are only valid for copper conductors. The maintenance-free resistance to ageing for selected connections has been verified by testing.

If the standards-compliant connection of aluminium conductors has been confirmed for connection terminals, this is stated expressly. Before connecting aluminium conductors, any oxide deposits must be removed from the conductor surfaces and further oxidation prevented. After removal of the oxide deposit, chips and abrasives cannot be permitted to damage the contacts. Multiwire conductors should be shortened and exposed to the bare metallic conductor section. The contact points are to be sealed (e.g. using acid-free contact grease) so that they are airtight to protect them against further oxidation.

The terminal points need to be checked, taking operating conditions into account. For normal ambient conditions and loads, we recommend inspections at 6-month intervals. In case of unfavourable operating conditions or frequent temperature fluctuations at the terminal points, a shorter interval may be necessary. It is possible to place temperature measuring strips and a record of the maximum values in the immediate vicinity of the terminal points, which may be useful for an objective assessment during regular tests.

All contact positions are suitable for connecting one conductor, unless expressly otherwise indicated. Double-function terminals are characterised by 2 contact positions.

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

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

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

Conductor types are designated as follows:

	Abbreviation	Standard name
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 flexible	
copper busbar	lam. Cu
wire-end ferrules	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 or -2. Conductor connection set-up is to be such that no load tension and – with respect to the application – no alternating bending load developed.

Notes for the dimensioning of 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 this application (= 1) do not match.

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 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 on page 8 / 1 apply, in accordance with IEC 61439-2:2011 and IEC 61439-3:2011.

At any rate, care must be taken to ensure that the rated diversity factor is always based on the fuse that is used, not the rated current of the switch disconnecter or fuse holder. Furthermore, the use of fuse links with silver-plated contacts is recommended. The size of the copper conductors is determined on the basis of the applicable product standard, e.g. IEC/EN 60947-3 for SECUR® 60Classic, PowerLiner.

For the above example, this means 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 disconnecter, 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.

The rated diversity factors must always be selected in conformity with the application of the switch fuse unit, in accordance with IEC 61439-2 or IEC 61439-3. See table on page 8 / 1. Non-compliance with these reduction factors leads to unacceptably high temperatures in switchgear assemblies. This may in turn result in damaged or incorrectly triggered switchgear devices. Both fuse links and cable insulation age when exposed to high temperatures. In all cases, failures in photovoltaic systems can be expected.

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. 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 facilitates cabinet and thermal management selection.

Note on operating NH 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 60269-2.

When switching devices observe the following instructions:

- Operation (release, switching on, switching off and fuse replacement) only permitted for authorized electricians or trained electrical personnel 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 cover is mounted or guided exactly into the open position.
- If the cover is only partially open, the fuse links may still be energized. Only open and close the cover using the handle.

Using busbars

To ensure that single and multi-pole busbar components are securely mounted and contacts are firmly connected, the busbars in question must comply with the required tolerances shown here.

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

Using comb-type busbars

A range of Wöhner fuse holders and switches are suitable for use with comb-type busbars. We recommend that you used the comb-type busbars listed on the corresponding pages in the current Wöhner catalogue (IEC / EN 61439-1 / 2, level of soiling: 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.

Processing and using plastic profiles

The mechanical, thermal and electric properties of the profiles, which are listed in the Wöhner catalogue, are optimised for covering busbars or busbar systems and bottom troughs. 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 lengths are given in millimetres, unless otherwise stated.
Mounting rails of adapters and clip-on fixings generally comply with 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 to the individual packing units.
Even some of the products are marked accordingly. In doing so, Wöhner confirms that the products comply with the valid regulations.

Wöhner holds the corresponding conformity declarations.

Additional requirements for compliance with UL



Components that have also been tested for feeder circuits up to 600 V AC in compliance with UL 508 A are labelled in the approval overview.

ROHS, WEEE and REACH

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.

According to current knowledge, there are no substances in our products or their packaging with a concentration above 0.1 percent by mass, in accordance with the candidate list (as of 16.06.2014), article 59 (1, 10) of Regulation (EC) no. 1907/2006 ("REACH").

We are in constant contact with our suppliers as regards substances subject to registration and information relevant to REACH is forwarded without delay to our customers.

You will find further information in the download area under Service at www.woehner.com

Overview of the applicability of Wöhner products in terms of operating voltage

(only the conditions according to IEC standards are taken into consideration)

All specifications apply for overvoltage category III in accordance with IEC 60439-1 or IEC 61439-1

The applicability for other overvoltage categories can be derived from the rated surge withstand capacity U_{imp} .

The following clearances must be maintained:

Rated surge withstand capacity 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 level of soiling 3 in accordance with IEC 60439-1 or IEC 61439-1 (Wöhner uses insulating parts made from materials in material class IIIa).

The following creepage distances must be maintained:

Rated insulation 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 values shown in the table below apply for the Wöhner items themselves.

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) under www.woehner.com/insulation_coordination

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Chapter page	Pack size
01008	0,525	0,000	0,000	3.8, 5.1	3
01025	0,000	0,000	0,000	3.4	2
01026	0,000	0,000	0,000	3.4	10
01027	1,124	0,000	0,000	7.12	1
01028	2,250	0,000	0,000	7.12	1
01029	3,750	0,000	0,000	7.12	1
01035	1,392	0,000	0,000	7.12	1
01047	0,251	0,000	0,000	3.7, 5.2	6
01054	0,404	0,000	0,000	7.12	1
01059	0,000	0,000	0,000	7.4	1
01060	4,660	0,000	0,000	7.12	1
01061	14,900	0,000	0,000	3.8, 5.2, 7.12	1
01063	2,250	0,000	0,000	7.13	1
01064	3,750	0,000	0,000	7.13	1
01068	0,000	0,000	0,000	2.2, 3.6	25
01069	0,196	0,000	0,000	3.6, 3.7, 3.8, 5.2, 5.3	3
01070	0,235	0,000	0,000	3.6, 3.8, 5.2, 5.3	3
01071	0,355	0,000	0,000	3.6, 3.8, 5.2, 5.3	3
01075	2,250	0,000	0,000	7.13	1
01076	4,500	0,000	0,000	7.13	1
01084	0,806	0,000	0,000	7.13	1
01089	0,928	0,000	0,000	7.13	1
01090	1,392	0,000	0,000	7.13	1
01091	2,320	0,000	0,000	7.13	1
01092	0,185	0,652	0,000	3.8	3
01093	0,000	0,000	0,000	2.2, 3.6	20
01094	0,000	0,853	0,000	3.8, 5.1	3
01095	2,990	0,000	0,000	7.13	1
01096	5,980	0,000	0,000	7.13	1
01097	3,730	0,000	0,000	7.13	1
01098	0,000	0,000	0,000	7.4	20
01099	7,460	0,000	0,000	7.13	1
01100	0,000	0,000	0,000	7.4	20
01102	0,226	0,350	0,000	3.9	2
01103	0,000	0,000	0,000	7.2	20
01104	0,000	0,000	0,000	7.2	20
01112	4,660	0,000	0,000	7.13	1
01113	9,320	0,000	0,000	7.13	1
01114	0,000	0,006	0,000	7.15	100
01116	0,000	0,004	0,000	3.2	4
01119	0,000	0,000	0,000	7.15	50
01120	0,000	0,000	0,000	7.15	50
01121	0,000	0,000	0,000	7.15	50
01123	11,800	0,000	0,000	7.13	1
01126	0,000	0,012	0,000	7.15	100
01127	0,000	0,016	0,000	7.15	100
01128	0,000	0,024	0,000	7.15	100
01129	0,000	0,037	0,000	7.15	50
01130	0,000	0,249	0,000	7.15	1
01131	0,000	0,000	0,000	3.1	5
01132	0,000	0,004	0,000	3.2	4
01135	0,019	0,011	0,000	2.2, 3.6	6
01136	0,000	0,000	0,000	3.4	1
01137	0,000	0,000	0,000	3.4	1
01138	0,000	0,000	0,000	3.19, 3.30	30
01139	0,000	0,000	0,000	3.30	10
01140	6,500	0,000	0,000	3.3	1

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Chapter page	Pack size
01141	0,521	0,000	0,000	3.9	3
01143	0,000	0,013	0,000	7.16	50
01144	0,000	0,013	0,000	7.16	50
01145	0,536	0,403	0,000	3.9	3
01147	0,000	0,891	0,000	3.5	1
01162	0,000	0,463	0,000	3.5	1
01165	0,036	0,021	0,000	2.2	1
01166	0,000	0,181	0,000	2.2, 3.9	12
01170	0,000	0,000	0,000	3.19, 3.30	100
01182	0,000	0,040	0,000	3.22, 3.24, 6.14	3
01184	4,500	0,000	0,000	7.12	1
01185	0,198	0,000	0,000	3.8, 5.1	3
01186	0,717	0,000	0,000	3.8, 5.1	3
01187	24,624	0,000	0,000	3.3	1
01188	4,640	0,000	0,000	5.2	1
01189	6,723	0,000	0,000	5.2	1
01190	23,340	0,000	0,000	3.3	1
01193	0,000	0,509	0,000	2.2, 3.9	3
01194	0,806	0,000	0,000	7.12	1
01196	0,928	0,000	0,000	7.12	1
01198	0,032	0,000	0,000	6.2, 6.4, 6.8	3
01199	0,000	0,386	0,000	3.5	1
01201	0,000	0,049	0,000	3.7	3
01202	0,000	0,069	0,000	3.7	3
01203	0,000	0,000	0,000	2.2, 3.6, 5.1	25
01204	9,700	0,000	0,000	3.3	1
01206	0,000	0,000	0,000	3.7	10
01223	15,960	0,000	0,000	3.3	1
01224	15,920	0,000	0,000	3.3	1
01225	2,006	0,000	0,000	5.2	1
01226	2,881	0,000	0,000	5.2	1
01227	36,936	0,000	0,000	3.3	1
01228	0,042	0,000	0,000	6.2, 6.3, 6.4, 6.8	3
01229	23,320	0,000	0,000	3.3	1
01231	0,000	0,018	0,000	3.2	3
01232	0,000	0,018	0,000	3.2	2
01234	0,000	0,000	0,000	3.2	4
01236	0,000	0,000	0,000	3.4	1
01237	0,000	0,000	0,000	3.4	1
01238	0,000	0,000	0,000	3.4	1
01240	0,031	0,018	0,000	3.5	1
01243	0,046	0,030	0,000	3.5	1
01244	0,000	0,000	0,000	2.1, 3.4	10
01245	0,000	0,000	0,000	2.1, 3.4	10
01249	15,560	0,000	0,000	3.3	1
01250	10,600	0,000	0,000	3.3	1
01252	0,000	0,000	0,000	3.4	5
01253	1,800	0,000	0,000	7.12	1
01255	2,700	0,000	0,000	7.12	1
01256	4,476	0,000	0,000	7.12	1
01257	0,000	0,013	0,000	7.16	50
01258	0,000	0,013	0,000	7.16	50
01272	0,000	0,000	0,000	2.1, 2.5	10
01273	18,700	0,000	0,000	3.8, 5.2, 7.12	1
01274	1,030	0,000	0,000	3.9	3
01275	1,612	0,000	0,000	3.9	3
01284	0,000	0,000	0,000	2.2, 3.6	100
01285	0,000	0,000	0,000	2.2, 3.6	50

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Chapter page	Pack size
01287	0,000	0,000	0,000	2.2, 3.6	25
01289	0,000	0,000	0,000	2.2, 3.6	100
01290	0,000	0,000	0,000	2.2, 3.6	50
01292	0,000	0,000	0,000	2.2, 3.6	25
01295	6,059	0,000	0,000	3.9	1
01298	0,000	0,000	0,000	7.12, 7.13	3
01299	0,000	0,000	0,000	7.12, 7.13	4
01300	0,000	0,000	0,000	3.5	3
01301	0,000	0,000	0,000	3.5	3
01314	0,000	0,000	0,000	2.1, 2.5	2
01317	0,000	0,000	0,000	2.1, 2.5	10
01318	0,000	0,128	0,000	3.6, 5.1, 5.3	6
01319	0,000	0,115	0,000	3.6, 5.3	6
01320	0,000	0,000	0,000	3.4	8
01323	3,600	0,000	0,000	7.12	1
01324	5,900	0,000	0,000	7.12	1
01325	0,000	0,000	0,000	3.1	10
01343	7,460	0,000	0,000	7.12	1
01355	0,000	0,000	0,000	3.30	1
01356	0,000	0,000	0,000	3.1	10
01357	0,000	0,000	0,000	3.1	10
01358	0,000	0,000	0,000	3.1	10
01359	0,000	0,000	0,000	3.1	10
01360	0,000	0,000	0,000	3.9	1
01361	0,000	0,000	0,000	3.9	1
01362	0,000	0,000	0,000	3.9	1
01363	0,000	0,000	0,000	3.1	1
01364	0,015	0,009	0,000	2.5	1
01367	0,015	0,009	0,000	2.5	1
01369	0,000	0,000	0,000	5.3	6
01370	0,045	0,027	0,000	2.5	1
01371	0,000	0,000	0,000	2.5	2
01373	0,000	0,000	0,000	3.2	4
01374	0,000	0,000	0,000	2.1	10
01376	0,000	0,000	0,000	2.5	10
01379	0,000	0,000	0,000	5.3	12
01380	0,000	0,000	0,000	5.3	12
01401	0,031	0,018	0,000	2.2	1
01413	0,000	0,000	0,000	3.6	10
01416	0,000	0,000	0,000	4.1	1
01417	0,000	0,000	0,000	3.4	2
01420	0,000	0,000	0,000	4.1	1
01421	0,000	0,000	0,000	4.1	1
01422	0,000	0,000	0,000	3.2	2
01424	0,000	0,000	0,000	3.18	10
01425	0,000	0,000	0,000	3.2	4
01426	0,045	0,030	0,000	2.5	1
01427	0,031	0,020	0,000	2.5	1
01430	0,000	0,000	0,000	4.1	4
01431	0,000	0,000	0,000	4.1	1
01432	0,000	0,000	0,000	4.1	2
01433	0,000	0,000	0,000	4.1	8
01434	0,000	0,000	0,000	4.1	4
01435	0,000	0,000	0,000	4.1	3
01436	0,000	0,000	0,000	4.1	1
01437	0,000	0,000	0,000	4.2	1
01438	2,393	0,000	3,128	4.2	1
01439	6,786	0,027	4,410	4.2	1
01440	0,000	0,000	0,000	4.1	2
01441	0,893	0,136	0,000	4.2	1

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Chapter page	Pack size
01442	0,689	0,000	0,000	4.2	1
01443	0,883	0,000	0,000	4.2	1
01444	0,000	0,000	0,000	4.1	2
01480	0,407	0,000	0,000	4.1	3
01481	0,602	0,000	0,000	4.1	3
01482	0,000	0,000	0,000	4.1	1
01484	0,019	0,000	0,000	3.1, 3.5	10
01485	0,000	0,000	0,000	3.1	10
01495	0,000	0,000	0,000	3.1	10
01498	0,000	0,025	0,000	3.18	10
01500	0,000	0,000	0,000	3.1	10
01508	0,000	0,000	0,000	3.1	10
01509	9,320	0,000	0,000	3.8, 5.2, 7.12	1
01510	11,800	0,000	0,000	3.8, 5.2, 7.12	1
01512	0,027	0,000	0,000	3.7	25
01513	0,397	0,000	0,000	3.8, 5.1	3
01514	0,091	0,000	0,000	3.7, 5.2	20
01515	0,000	0,000	0,000	3.1	2
01518	0,000	0,000	0,000	3.1	2
01537	0,000	0,668	0,000	3.5	1
01538	0,000	0,347	0,000	3.5	1
01539	0,000	0,000	0,000	3.6	1
01540	0,000	0,000	0,000	3.6	1
01541	0,000	0,000	0,000	7.3	50
01542	0,000	0,000	0,000	7.3	50
01543	0,000	0,000	0,000	7.3	50
01544	0,000	0,000	0,000	7.3	50
01545	0,000	0,000	0,000	7.3	50
01546	0,000	0,000	0,000	7.3	50
01547	0,000	0,000	0,000	7.3	50
01548	0,000	0,000	0,000	7.3	50
01549	0,000	0,000	0,000	7.3	50
01550	0,000	0,000	0,000	7.3	50
01554	0,000	0,000	0,000	3.4	1
01555	0,000	0,000	0,000	3.4	2
01562	0,033	0,000	0,000	2.2	6
01563	0,033	0,000	0,000	3.5	8
01573	0,000	0,000	0,000	3.1, 3.30	10
01583	2,320	0,000	0,000	7.12	1
01586	0,000	0,000	0,000	3.7	10
01587	0,000	0,000	0,000	3.7	10
01590	0,000	0,000	0,000	3.6	1
01592	0,023	0,000	0,090	1.1	1
01596	0,000	0,000	0,000	3.6	1
01597	0,000	0,000	0,000	3.6	1
01599	0,000	0,000	0,000	3.4	1
01601	0,000	0,000	0,000	3.1	1
01602	0,000	0,000	0,000	3.1	1
01603	0,000	0,000	0,000	3.30	10
01608	15,540	0,000	0,000	3.3	1
01609	10,620	0,000	0,000	3.3	1
01610	34,160	0,000	0,000	3.3, 5.3	1
01611	2,250	0,000	0,000	7.12	1
01612	2,990	0,000	0,000	7.12	1
01613	5,980	0,000	0,000	7.12	1
01614	3,730	0,000	0,000	7.12	1
01615	7,460	0,000	0,000	3.8, 5.2, 7.12	1
01616	0,000	0,000	0,000	3.7	6

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Chapter. page	Pack size
01618	1,284	0,000	0,000	2.1, 2.5, 3.3	1
01619	1,606	0,000	0,000	3.3	1
01620	2,144	0,000	0,000	3.3	1
01621	2,678	0,000	0,000	3.3	1
01622	3,214	0,000	0,000	3.3	1
01623	2,570	0,000	0,000	2.1, 3.3	1
01624	4,286	0,000	0,000	3.3	1
01625	6,432	0,000	0,000	3.3, 4.1	1
01626	8,568	0,000	0,000	4.1	1
01628	12,940	0,000	0,000	4.1	1
01647	0,000	0,025	0,000	3.18	10
01670	0,000	0,000	0,000	7.3	5
01671	0,000	0,000	0,000	7.3	5
01672	0,000	0,000	0,000	7.3	5
01673	0,000	0,000	0,000	7.3	5
01674	0,000	0,000	0,000	7.3	5
01675	0,000	0,000	0,000	7.3	5
01676	0,000	0,000	0,000	7.3	5
01677	0,000	0,000	0,000	7.3	5
01678	0,000	0,000	0,000	7.3	5
01679	0,000	0,000	0,000	7.3	5
01685	0,000	0,000	0,000	7.1	10
01686	0,000	0,000	0,000	7.1	10
01687	0,000	0,000	0,000	7.1	10
01688	0,000	0,000	0,000	7.1	10
01689	0,000	0,000	0,000	7.1	10
01690	0,000	0,000	0,000	7.1	10
01691	0,000	0,000	0,000	7.1	10
01692	0,000	0,000	0,000	7.1	10
01693	0,000	0,000	0,000	7.1	10
01694	0,000	0,000	0,000	7.1	10
01701	0,000	0,000	0,000	7.3	25
01702	0,000	0,000	0,000	7.3	25
01703	0,000	0,000	0,000	7.3	25
01704	0,000	0,000	0,000	7.3	25
01705	0,000	0,000	0,000	7.3	25
01706	0,000	0,000	0,000	7.3	25
01707	0,000	0,000	0,000	7.3	25
01708	0,000	0,000	0,000	7.3	25
01709	0,000	0,000	0,000	7.3	25
01715	0,000	0,000	0,000	7.1	50
01716	0,000	0,000	0,000	7.1	50
01717	0,000	0,000	0,000	7.1	50
01718	0,000	0,000	0,000	7.1	50
01719	0,000	0,000	0,000	7.1	50
01720	0,000	0,000	0,000	7.1	50
01721	0,000	0,000	0,000	7.1	50
01722	0,000	0,000	0,000	7.1	50
01724	0,000	0,000	0,000	7.1	50
01725	0,000	0,000	0,000	7.1	50
01726	0,000	0,000	0,000	7.1	50
01727	0,000	0,000	0,000	7.1	50
01728	0,000	0,000	0,000	7.1	50
01729	0,000	0,000	0,000	7.2	50
01730	0,000	0,000	0,000	7.2	1
01741	0,000	0,000	0,000	7.3	25
01747	0,027	0,000	0,000	3.7	25
01748	0,091	0,000	0,000	3.7	20
01749	0,251	0,000	0,000	3.7	6
01753	0,000	0,347	0,000	3.5	1

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Chapter. page	Pack size
01754	0,000	0,668	0,000	3.5	1
01756	0,000	0,000	0,000	3.6	1
01757	0,000	0,000	0,000	3.6	1
01759	0,000	0,115	0,000	3.6, 5.3	3
01760	0,000	0,222	0,000	3.6, 5.1, 5.3	3
01765	17,280	0,000	0,000	4.1	1
01766	21,740	0,000	0,000	4.1	1
01767	25,728	0,000	0,000	4.1	1
01823	0,213	0,000	0,000	3.9	6
01827	0,290	0,217	0,000	3.9	6
01829	0,824	0,635	0,000	3.9	3
01831	4,240	0,000	0,000	5.2	1
01838	2,933	0,000	0,000	5.2	1
01886	0,795	0,000	0,000	3.9	3
01888	0,128	0,000	0,000	3.30	3
01890	0,130	0,044	0,000	3.30	3
01906	0,230	0,000	0,000	3.8, 5.1	3
01907	0,262	0,000	0,000	3.8, 5.1	3
01911	0,262	0,000	0,000	3.8, 5.1	3
01926	0,000	0,018	0,000	7.15	100
01927	0,000	0,036	0,000	7.15	50
01928	0,000	0,054	0,000	7.15	60
01929	0,000	0,072	0,000	7.15	50
01930	0,000	0,090	0,000	7.15	50
01931	0,000	0,108	0,000	7.15	100
01932	0,000	0,276	0,000	7.15	1
01934	0,301	0,000	0,000	3.8, 5.1	3
01935	0,358	0,000	0,000	3.8, 5.1	3
01936	0,230	0,000	0,000	3.8, 5.1	3
01980	0,000	0,000	0,000	3.18	10
01981	0,000	0,000	0,000	3.18	10
01990	0,213	0,000	0,000	3.9	6
01996	0,000	0,000	0,000	3.7	10
01997	0,000	0,000	0,000	3.7	10
01998	0,000	0,000	0,000	7.4	1
03161	0,054	0,000	0,090	7.5	3
03162	0,127	0,000	0,239	7.5	3
03163	0,198	0,000	0,290	7.5	3
03164	0,241	0,000	0,377	7.5	3
03173	0,056	0,000	0,000	6.12, 7.16	10
03181	0,800	0,000	0,000	7.6	1
03182	0,800	0,000	0,000	7.6	1
03183	0,800	0,000	0,000	7.6	1
03185	0,800	0,000	0,000	7.5	3
03193	0,025	0,000	0,000	6.12, 7.16	10
03195	0,066	0,000	0,000	6.12, 7.16	10
03196	0,142	0,000	0,000	6.12, 7.16	10
03197	0,108	0,000	0,000	6.12, 7.16	10
03198	0,236	0,000	0,000	6.12, 7.16	10
03199	0,209	0,000	0,630	3.22	1
03213	0,270	0,000	0,818	6.12	3
03214	0,000	0,000	0,000	7.11	1
03215	0,000	0,000	0,000	7.11	1
03217	0,000	0,000	0,000	7.11	1
03219	0,000	0,000	0,000	7.11	1
03220	0,000	0,000	0,000	7.11	1
03221	0,000	0,000	0,000	7.11	1
03222	0,000	0,000	0,000	7.11	1
03224	0,000	0,000	0,000	7.11	1
03225	0,000	0,000	0,000	7.11	1

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Chapter. page	Pack size
03226	0,000	0,000	0,000	7.11	1
03227	0,000	0,000	0,000	7.11	1
03228	0,000	0,000	0,000	7.10	1
03229	0,000	0,000	0,000	7.10	1
03230	0,000	0,000	0,000	7.10	1
03231	0,000	0,000	0,000	7.10	1
03233	0,000	0,000	0,000	7.10	1
03234	0,000	0,000	0,000	7.10	1
03235	0,000	0,000	0,000	7.10	1
03236	0,000	0,000	0,000	7.10	1
03238	0,000	0,000	0,000	7.10	1
03239	0,000	0,000	0,000	7.10	1
03240	0,000	0,000	0,000	7.10	1
03241	0,000	0,000	0,000	7.10	1
03243	0,000	0,000	0,000	7.5	3
03287	0,000	0,000	0,000	2.4	4
03288	0,201	0,000	0,770	6.11	3
03289	0,139	0,000	0,585	6.11	3
03290	0,097	0,000	0,400	6.11	3
03293	0,447	0,000	1,094	6.11	3
03294	0,412	0,000	1,094	6.11	3
03299	0,201	0,000	0,612	3.22	1
03300	0,602	0,252	1,350	3.22	1
03301	0,463	0,000	0,800	3.22	1
03316	0,189	0,032	0,516	2.4	1
03350	0,033	0,000	0,202	6.11	10
03351	0,099	0,000	0,606	6.11	4
03354	0,033	0,000	0,188	6.11	10
03355	0,101	0,000	0,564	6.11	4
03359	0,000	0,000	0,000	6.12	10
03377	0,000	0,000	0,000	6.12	100
03502	0,000	0,000	0,000	7.5	1
03519	0,000	0,025	0,000	6.12	10
03523	0,000	0,000	0,000	7.5	3
03524	0,000	0,000	0,000	7.5	3
03525	0,000	0,000	0,000	7.5	3
03526	0,000	0,000	0,000	7.5	3
03527	0,000	0,000	0,000	7.5	3
03528	0,000	0,000	0,000	7.5	3
03529	0,000	0,000	0,000	7.5	3
03530	0,000	0,000	0,000	7.5	3
03531	0,000	0,000	0,000	7.5	3
03532	0,000	0,000	0,000	7.5	3
03533	0,000	0,000	0,000	7.5	3
03534	0,000	0,000	0,000	7.5	3
03550	0,000	0,000	0,000	7.6	3
03552	0,000	0,000	0,000	7.6	3
03553	0,000	0,000	0,000	7.6	3
03555	0,000	0,000	0,000	7.6	3
03556	0,000	0,000	0,000	7.6	3
03557	0,000	0,000	0,000	7.6	3
03558	0,000	0,000	0,000	7.6	3
03559	0,000	0,000	0,000	7.6	3
03560	0,000	0,000	0,000	7.6	3
03561	0,000	0,000	0,000	7.6	3
03566	0,000	0,000	0,000	7.6	3
03568	0,000	0,000	0,000	7.6	3
03569	0,000	0,000	0,000	7.6	3
03570	0,000	0,000	0,000	7.6	3
03571	0,000	0,000	0,000	7.6	3

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Chapter. page	Pack size
03572	0,000	0,000	0,000	7.6	3
03573	0,000	0,000	0,000	7.6	3
03574	0,000	0,000	0,000	7.6	3
03575	0,000	0,000	0,000	7.6	3
03577	0,000	0,000	0,000	7.6	3
03579	0,000	0,000	0,000	7.6	3
03581	0,000	0,000	0,000	7.6	3
03582	0,000	0,000	0,000	7.6	3
03620	0,000	0,025	0,000	6.12	10
03654	0,189	0,000	1,003	3.22	4
03656	0,190	0,000	1,030	3.22	4
03657	0,000	0,110	0,000	6.12	10
03668	0,000	0,108	0,000	6.12	10
03693	1,235	0,000	2,874	3.22	1
03727	0,000	0,000	0,000	3.29, 6.14	3
03757	0,269	0,000	0,642	6.12	3
03758	0,033	0,000	0,202	6.11	12
03759	0,099	0,000	0,606	6.11	4
03760	0,033	0,000	0,188	6.11	12
03761	0,101	0,000	0,564	6.11	4
03762	0,089	0,000	0,320	6.11	3
03763	0,267	0,000	0,960	6.11	1
03765	0,275	0,000	1,476	6.11	1
03766	0,366	0,000	1,134	6.11	3
03767	1,097	0,000	3,402	6.11	1
03768	0,412	0,000	1,094	6.11	3
03769	1,236	0,000	3,282	6.11	1
03849	0,000	0,000	0,000	3.24, 6.16	10
03908	0,000	0,000	0,000	7.5	3
03909	0,000	0,000	0,000	7.5	3
03910	0,000	0,000	0,000	7.5	3
03911	0,000	0,000	0,000	7.5	3
03912	0,000	0,000	0,000	7.5	3
03913	0,000	0,000	0,000	7.5	3
03914	0,000	0,000	0,000	7.5	3
03915	0,000	0,000	0,000	7.5	3
03916	0,000	0,000	0,000	7.5	3
03917	0,000	0,000	0,000	7.5	3
03918	0,000	0,000	0,000	7.5	3
03919	0,000	0,000	0,000	7.5	3
03924	0,000	0,000	0,000	7.6	3
03929	0,000	0,000	0,000	7.6	3
03930	0,000	0,000	0,000	7.6	3
03942	0,000	0,000	0,000	7.6	3
03943	0,000	0,000	0,000	7.6	3
03946	0,000	0,000	0,000	7.6	3
03947	0,000	0,000	0,000	7.6	3
05188	0,000	0,018	0,000	6.12	50
05779	0,000	0,000	0,000	7.14	100
05780	0,000	0,000	0,000	7.14	20
05781	0,000	0,000	0,000	7.14	20
05782	0,000	0,000	0,000	7.14	20
05783	0,000	0,000	0,000	7.14	20
05784	0,000	0,000	0,000	7.14	20
05786	0,000	0,000	0,000	7.14	20
05787	0,000	0,000	0,000	7.14	20
05788	0,000	0,000	0,000	7.14	20
05789	0,000	0,000	0,000	7.14	20
05790	0,000	0,000	0,000	7.14	20
05791	0,000	0,000	0,000	7.14	20

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Chapter. page	Pack size
05792	0,000	0,000	0,000	7.14	20
05793	0,000	0,000	0,000	7.14	20
05800	0,000	0,000	0,000	7.14	20
05801	0,000	0,000	0,000	7.14	20
05802	0,000	0,000	0,000	7.14	20
08824	0,000	0,002	0,000	7.15	100
08825	0,000	0,000	0,000	7.15	100
11225	0,302	0,000	0,000	1.1	1
11405	0,551	0,000	0,000	1.1	1
30322	3,277	2,101	0,000	3.9	1
30473	4,228	2,101	0,000	3.9	1
30894	0,000	0,000	0,000	3.29, 6.14	3
31004	0,000	0,000	0,000	6.3, 6.5	100
31005	0,000	0,000	0,000	7.2	20
31006	0,000	0,000	0,000	7.2	20
31008	0,000	0,000	0,000	7.7	10
31009	0,000	0,000	0,000	7.7	10
31010	0,000	0,000	0,000	7.7	10
31011	0,000	0,000	0,000	7.7	10
31012	0,765	0,000	0,000	6.2, 6.3, 6.4, 6.8	10
31014	0,235	0,000	0,000	6.2, 6.3, 6.4, 6.8	25
31017	0,000	0,000	0,000	7.7	10
31024	0,268	0,000	0,000	6.3	25
31026	0,670	0,000	0,000	6.3	10
31027	0,000	0,000	0,000	6.2, 6.3, 6.4, 6.5, 6.8	50
31028	0,000	0,000	0,000	6.2, 6.3, 6.4, 6.5, 6.8	25
31029	0,000	0,000	0,000	6.2, 6.3, 6.4, 6.5, 6.8	25
31039	0,015	0,000	0,000	6.8, 6.9	10
31042	0,000	0,000	0,000	6.8, 6.9	20
31056	1,485	0,000	0,000	6.2, 6.3, 6.4, 6.8	4
31057	0,505	0,000	0,000	6.2, 6.4, 6.8	10
31070	0,000	0,000	0,000	3.17	10
31071	0,000	0,000	0,000	3.17	10
31072	0,000	0,000	0,000	3.17	5
31073	0,000	0,000	0,000	3.17	5
31084	0,000	0,000	0,000	6.2, 6.3, 6.4, 6.8	10
31085	0,000	0,000	0,000	6.2, 6.3, 6.4, 6.5, 6.8	25
31086	0,000	0,000	0,000	6.3, 6.5	100
31098	0,000	0,000	0,000	7.4	20
31100	0,000	0,000	0,000	7.4	20
31101	0,220	0,000	0,000	6.8	25
31102	0,812	0,000	0,000	6.8	10
31103	0,000	0,000	0,000	6.8	50
31104	0,000	0,000	0,000	7.2	20
31110	0,006	0,000	0,006	6.6	12
31111	0,020	0,000	0,012	6.6	6
31112	0,011	0,000	0,012	6.6	6
31113	0,016	0,000	0,018	6.6	4
31114	0,030	0,000	0,024	6.6	3
31115	0,012	0,000	0,015	6.6	6
31116	0,040	0,000	0,030	6.6	3
31117	0,025	0,000	0,030	6.6	3
31118	0,038	0,000	0,045	6.6	2
31119	0,066	0,000	0,060	6.6	1

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Chapter. page	Pack size
31120	0,024	0,000	0,028	6.6	6
31121	0,079	0,000	0,056	6.6	3
31122	0,048	0,000	0,056	6.6	3
31123	0,072	0,000	0,084	6.6	2
31124	0,127	0,000	0,112	6.6	1
31130	0,006	0,000	0,006	6.6	12
31132	0,011	0,000	0,012	6.6	6
31133	0,016	0,000	0,018	6.6	4
31135	0,011	0,000	0,000	6.6	6
31138	0,037	0,000	0,000	6.6	2
31140	0,024	0,000	0,028	6.6	6
31143	0,072	0,000	0,084	6.6	2
31157	0,020	0,000	0,000	6.8	50
31158	0,222	0,000	2,685	3.18	1
31168	0,066	0,000	0,060	6.6	1
31171	0,127	0,000	0,112	6.6	1
31173	0,014	0,013	0,065	6.5	9
31174	0,042	0,041	0,195	6.5	3
31175	0,014	0,022	0,065	6.5	9
31176	0,042	0,067	0,195	6.5	3
31182	0,000	0,000	0,000	7.7	10
31183	0,000	0,000	0,000	7.7	10
31184	0,000	0,000	0,000	7.7	10
31185	0,000	0,000	0,000	7.7	10
31186	0,000	0,000	0,000	7.7	10
31187	0,000	0,000	0,000	7.7	10
31188	0,000	0,000	0,000	7.7	10
31189	0,000	0,000	0,000	1.2, 2.3, 3.16, 7.7	10
31190	0,000	0,000	0,000	7.7	10
31191	0,000	0,000	0,000	7.7	10
31192	0,000	0,000	0,000	7.7	10
31193	0,000	0,000	0,000	7.7	10
31194	0,000	0,000	0,000	7.7	10
31195	0,000	0,000	0,000	7.7	10
31196	0,000	0,000	0,000	7.7	10
31198	0,000	0,000	0,000	7.7	10
31199	0,000	0,000	0,000	7.7	10
31200	0,000	0,000	0,000	7.7	10
31201	0,000	0,000	0,000	7.7	10
31202	0,000	0,000	0,000	7.7	10
31203	0,000	0,000	0,000	7.7	10
31204	0,000	0,000	0,000	7.7	10
31205	0,000	0,000	0,000	7.8	10
31206	0,000	0,000	0,000	7.8	10
31207	0,000	0,000	0,000	7.8	10
31208	0,000	0,000	0,000	7.8	10
31209	0,000	0,000	0,000	7.8	10
31210	0,000	0,000	0,000	7.8	10
31211	0,000	0,000	0,000	7.8	10
31212	0,000	0,000	0,000	7.8	10
31213	0,000	0,000	0,000	7.8	10
31214	0,000	0,000	0,000	7.8	10
31215	0,000	0,000	0,000	7.8	10
31216	0,000	0,000	0,000	7.8	10
31217	0,000	0,000	0,000	7.8	10
31219	0,000	0,000	0,000	7.8	10
31220	0,000	0,000	0,000	7.8	10
31221	0,000	0,000	0,000	7.8	10
31226	0,000	0,000	0,000	7.8	10
31227	0,000	0,000	0,000	7.8	10

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Chapter. page	Pack size
31228	0,000	0,000	0,000	7.8	10
31229	0,000	0,000	0,000	7.8	10
31232	0,222	0,000	2,685	3.18, 3.20	1
31235	0,000	0,000	0,000	7.9	10
31236	0,000	0,000	0,000	7.9	10
31237	0,000	0,000	0,000	7.9	10
31238	0,000	0,000	0,000	7.9	10
31239	0,000	0,000	0,000	7.9	10
31240	0,000	0,000	0,000	7.9	10
31241	0,000	0,000	0,000	7.9	10
31242	0,000	0,000	0,000	7.9	10
31243	0,000	0,000	0,000	7.9	10
31244	0,000	0,000	0,000	7.9	10
31245	0,000	0,000	0,000	7.9	10
31246	0,000	0,000	0,000	7.9	10
31247	0,000	0,000	0,000	7.9	10
31248	0,000	0,000	0,000	7.9	10
31249	0,000	0,000	0,000	7.9	10
31250	0,000	0,000	0,000	7.9	10
31251	0,000	0,000	0,000	7.9	10
31252	0,000	0,000	0,000	1.2, 2.3, 3.16, 7.9	10
31258	0,015	0,000	0,006	6.6	12
31269	0,000	0,000	0,000	6.8	1
31273	0,009	0,000	0,012	6.6	12
31274	0,023	0,000	0,024	6.6	4
31275	0,006	0,000	0,006	6.7	12
31276	0,011	0,000	0,012	6.7	6
31277	0,016	0,000	0,018	6.7	4
31278	0,012	0,000	0,015	6.7	6
31279	0,025	0,000	0,030	6.7	3
31280	0,038	0,000	0,045	6.7	2
31281	0,024	0,000	0,028	6.7	6
31282	0,048	0,000	0,056	6.7	3
31283	0,072	0,000	0,084	6.7	2
31284	0,024	0,000	0,028	6.10	6
31285	0,048	0,000	0,056	6.10	3
31286	0,000	0,022	0,000	6.3	9
31287	0,072	0,000	0,084	6.10	2
31288	0,000	0,066	0,000	6.3	3
31291	0,000	0,031	0,000	6.3	9
31293	0,000	0,094	0,000	6.3	3
31295	0,006	0,000	0,006	6.9	12
31296	0,011	0,000	0,012	6.9	6
31297	0,016	0,000	0,018	6.9	4
31298	0,006	0,000	0,006	6.9	12
31299	0,011	0,000	0,012	6.9	6
31300	0,016	0,000	0,018	6.9	4
31301	0,000	0,021	0,000	6.2	9
31302	0,000	0,064	0,000	6.2	3
31303	0,000	0,021	0,000	6.2	9
31306	0,000	0,063	0,000	6.2	3
31307	0,030	0,000	0,296	6.4	3
31308	0,051	0,000	0,440	6.4	2
31309	0,263	0,000	0,000	6.5	25
31310	0,671	0,000	0,000	6.5	10
31311	0,256	0,000	0,000	6.5	25
31312	0,641	0,000	0,000	6.5	10
31313	0,062	0,000	0,592	6.4	2
31314	0,090	0,000	0,888	6.4	1
31315	0,111	0,000	1,032	6.4	1

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Chapter. page	Pack size
31316	0,000	0,000	0,000	6.4	1
31323	0,000	0,000	0,000	7.11	10
31324	0,000	0,000	0,000	7.11	10
31325	0,000	0,000	0,000	7.11	10
31326	0,000	0,000	0,000	7.11	10
31327	0,000	0,000	0,000	7.11	10
31333	0,000	0,000	0,000	7.10	10
31338	0,000	0,000	0,000	7.10	10
31342	0,000	0,000	0,000	7.10	10
31345	0,000	0,000	0,000	7.10	10
31349	0,000	0,000	0,000	7.10	10
31351	0,000	0,000	0,000	7.10	10
31353	0,000	0,000	0,000	7.10	10
31354	0,000	0,000	0,000	7.10	10
31355	0,000	0,000	0,000	7.10	10
31357	0,000	0,000	0,000	7.10	10
31358	0,000	0,000	0,000	7.10	10
31359	0,000	0,000	0,000	7.10	10
31360	0,000	0,000	0,000	7.10	10
31361	0,000	0,000	0,000	7.10	10
31362	0,000	0,000	0,000	7.10	10
31363	0,000	0,000	0,000	7.10	10
31364	0,000	0,000	0,000	7.10	10
31366	0,000	0,000	0,000	7.7	10
31368	0,000	0,000	0,000	7.7	10
31370	0,000	0,000	0,000	7.7	10
31371	0,000	0,000	0,000	7.7	10
31372	0,000	0,000	0,000	7.7	10
31373	0,000	0,000	0,000	7.7	10
31374	0,000	0,000	0,000	7.7	10
31385	0,000	0,000	0,000	7.7	10
31386	0,000	0,000	0,000	7.7	10
31387	0,000	0,000	0,000	7.7	10
31390	0,000	0,000	0,000	2.6	1
31394	0,000	0,000	0,000	7.9	10
31395	0,000	0,000	0,000	7.9	10
31396	0,000	0,000	0,000	7.9	10
31397	0,000	0,000	0,000	7.9	10
31398	0,000	0,000	0,000	7.9	10
31399	0,000	0,000	0,000	7.9	10
31400	0,000	0,000	0,000	7.9	10
31401	0,000	0,000	0,000	7.9	10
31404	0,000	0,000	0,000	7.9	10
31405	0,000	0,000	0,000	7.9	10
31406	0,000	0,000	0,000	7.9	10
31407	0,000	0,000	0,000	7.9	10
31441	0,019	0,037	0,000	3.17	10
31442	0,019	0,060	0,000	3.17	10
31511	0,000	0,000	0,000	7.11	10
31512	0,000	0,000	0,000	7.11	10
31514	0,000	0,000	0,000	7.11	10
31515	0,000	0,000	0,000	7.11	10
31525	0,222	0,000	2,685	3.18	1
31543	0,000	0,000	0,000	7.8	10
31544	0,000	0,000	0,000	7.8	10
31545	0,000	0,000	0,000	7.8	10
31546	0,000	0,000	0,000	7.8	10
31547	0,000	0,000	0,000	7.8	10
31548	0,450	0,000	0,000	6.8, 6.9	10
31549	1,070	0,000	0,000	6.8, 6.9	10

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Chapter. page	Pack size	
31550	0,035	0,000	0,000	6.8, 6.9	10	
31552	0,000	0,000	0,000	6.8, 6.9	20	
31554	0,049	0,000	0,000	2.4	6	
31555	0,008	0,000	0,006	6.7	5	
31556	0,030	0,000	0,800	6.4	3	
31557	0,090	0,000	0,888	6.4	1	
31558	0,000	0,000	0,000	7.8	20	
31559	0,000	0,000	0,000	7.8	20	
31560	0,000	0,000	0,000	7.8	20	
31561	0,680	0,000	0,000	6.8, 6.9	10	
31563	0,000	0,000	0,000	6.8	1	
31564	0,000	0,000	0,000	6.8	1	
31565	0,000	0,000	0,000	6.8	1	
31567	0,000	0,000	0,000	1.2, 2.3, 3.16, 6.1	3	
31568	0,000	0,000	0,000	1.2, 2.3, 3.16, 6.1	3	
31569	0,000	0,000	0,000	1.2, 2.3, 3.16, 6.1	3	
31570	0,005	0,000	0,006	3.20	12	
31571	0,005	0,000	0,006	3.20	12	
31572	0,005	0,000	0,006	3.20	12	
31574	0,081	0,000	1,107	3.19	1	
31575	0,081	0,000	1,107	3.19	1	
31578	0,081	0,000	1,107	3.19	1	
31579	0,081	0,000	1,107	3.19	1	
31588	0,081	0,000	1,107	3.19	1	
31901	0,000	0,000	0,000	3.18	5	
31902	0,000	0,000	0,000	3.18, 3.19, 6.4	20	
31903	0,000	0,000	0,000	3.18	1	
31904	0,000	0,000	0,000	7.2	36	
31905	0,000	0,000	0,000	7.4	20	
31906	0,000	0,000	0,000	7.4	10	
31908	0,000	0,000	0,000	7.2	36	
31909	0,000	0,000	0,000	7.2	36	
31910	0,000	0,000	0,000	7.2	36	
31911	0,000	0,000	0,000	7.4	20	
31912	0,000	0,000	0,000	7.4	10	
31913	0,000	0,000	0,000	7.2, 7.4	1	
31914	0,000	0,000	0,000	3.19	5	
31915	0,000	0,000	0,000	3.19	5	
31918	0,028	0,037	0,000	3.17	10	
31919	0,028	0,060	0,000	3.17	10	
31920	0,040	0,032	0,268	6.10	6	
31921	0,079	0,064	0,536	6.10	3	
31922	0,118	0,096	0,804	6.10	2	
31923	0,040	0,032	0,268	6.10	6	
31924	0,079	0,064	0,536	6.10	3	
31925	0,118	0,096	0,804	6.10	2	
31929	0,006	0,000	0,006	6.9	12	
31930	0,006	0,000	0,006	6.6	12	
31932	0,024	0,032	0,028	6.10	6	
31933	0,048	0,065	0,056	6.10	3	
31934	0,072	0,098	0,084	6.10	2	
31935	0,000	0,025	0,000	3.18	8	
31936	0,000	0,025	0,000	3.18	6	
31940	0,012	0,000	0,015	6.7	6	
31941	0,038	0,000	0,045	6.7	2	
31942	0,024	0,000	0,028	6.7	6	
31943	0,072	0,000	0,084	6.7	2	

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Chapter. page	Pack size	
31946	0,028	0,037	0,000	3.17	8	
31947	0,028	0,060	0,000	3.17	6	
31950	0,019	0,037	0,000	3.17	8	
31951	0,019	0,060	0,000	3.17	6	
31954	0,032	0,000	0,348	3.20	4	
31955	0,032	0,000	0,348	3.20	4	
31957	0,048	0,000	0,056	6.7	3	
31958	0,032	0,000	0,348	3.21	4	
31959	0,032	0,000	0,348	3.21	4	
31961	0,022	0,000	0,232	3.20	6	
31963	0,052	0,000	0,464	3.20	4	
31964	0,052	0,000	0,464	3.20	4	
31968	0,139	0,098	0,000	3.21	1	
31970	0,340	0,096	0,000	3.21	1	
31971	0,006	0,000	0,006	6.7	12	
31972	0,025	0,000	0,030	6.7	3	
31973	0,006	0,000	0,006	6.7	12	
31974	0,011	0,000	0,012	6.7	6	
31976	0,000	0,000	0,000	3.19	1	
32004	0,952	0,052	0,000	3.15	1	
32017	0,455	0,000	0,000	3.14	1	
32018	0,397	0,000	0,000	3.14	1	
32020	0,397	0,000	0,000	3.14	1	
32023	0,309	0,009	0,000	3.14	1	
32028	0,397	0,000	0,375	3.14	1	
32029	0,182	0,000	0,000	3.13	1	
32031	1,559	0,007	0,000	3.15	1	
32033	2,276	0,005	0,000	3.15	1	
32064	1,641	0,020	5,642	3.15	1	
32067	0,614	0,000	0,000	3.14	1	
32137	0,307	0,018	0,000	3.14	1	
32138	1,088	0,003	0,000	3.15	1	
32140	0,322	0,018	0,000	3.14	1	
32146	0,029	0,000	0,000	3.12	4	
32156	0,312	0,007	0,000	3.14	1	
32157	1,095	0,007	0,000	3.15	1	
32168	0,348	0,040	0,000	3.14	1	
32214	0,156	0,027	0,000	3.14	1	
32215	0,156	0,027	0,000	3.14	1	
32216	0,348	0,040	0,000	3.14	1	
32400	0,047	0,000	0,000	3.10	4	
32401	0,047	0,000	0,000	3.10	4	
32402	0,047	0,000	0,000	3.10	4	
32404	0,091	0,000	0,000	3.10	4	
32408	0,091	0,000	0,000	3.10	4	
32412	0,109	0,000	0,000	3.10	4	
32416	0,109	0,000	0,000	3.10	4	
32420	0,004	0,000	0,000	3.10	4	
32421	0,011	0,000	0,000	3.10	4	
32425	0,004	0,000	0,000	3.10	4	
32426	0,011	0,000	0,000	3.10	4	
32427	0,048	0,000	0,000	3.13	4	
32428	0,048	0,000	0,000	3.13	4	
32429	0,036	0,000	0,000	3.13	4	
32430	0,042	0,000	0,000	3.11	4	
32431	0,042	0,000	0,000	3.11	4	
32432	0,046	0,000	0,000	3.11	2	
32433	0,042	0,000	0,000	3.11	4	
32434	0,048	0,000	0,000	3.13	4	
32436	0,021	0,000	0,000	3.11	4	

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Chapter. page	Pack size
32438	0,048	0,000	0,000	3.13	4
32439	0,021	0,000	0,000	3.11	4
32440	0,040	0,000	0,000	3.13	2
32441	0,084	0,000	0,000	3.11	4
32442	0,084	0,000	0,000	3.11	4
32443	0,084	0,000	0,000	3.11	4
32444	0,084	0,000	0,000	3.11	4
32445	0,042	0,000	0,000	3.13	4
32446	0,084	0,000	0,000	3.11	4
32448	0,046	0,000	0,000	3.13	2
32449	0,084	0,000	0,000	3.11	4
32450	0,042	0,000	0,000	3.13	4
32451	0,048	0,000	0,000	3.13	4
32452	0,046	0,000	0,000	3.13	2
32453	0,052	0,000	0,000	3.13	2
32454	0,105	0,000	0,000	3.11	4
32455	0,105	0,000	0,000	3.11	4
32456	0,105	0,000	0,000	3.11	4
32457	0,105	0,000	0,000	3.11	4
32459	0,105	0,000	0,000	3.11	4
32460	0,105	0,000	0,000	3.13	4
32461	0,105	0,000	0,000	3.11	4
32463	0,105	0,000	0,000	3.13	2
32464	0,058	0,000	0,000	3.12	4
32465	0,058	0,000	0,000	3.12	4
32466	0,057	0,000	0,000	3.11	4
32467	0,057	0,000	0,000	3.11	4
32469	0,057	0,000	0,000	3.11	4
32472	0,057	0,000	0,000	3.11	4
32477	0,004	0,000	0,000	3.12	4
32478	0,011	0,000	0,000	3.12	4
32484	0,004	0,000	0,000	3.12	4
32485	0,011	0,000	0,000	3.12	4
32486	0,022	0,000	0,000	3.12	4
32487	0,022	0,000	0,000	3.12	4
32498	0,049	0,000	0,000	3.13	4
32511	0,000	0,000	0,000	3.10, 3.12	10
32513	0,000	0,000	0,000	3.10, 3.12	10
32533	0,048	0,000	0,000	3.13	4
32534	0,084	0,000	0,000	3.13	4
32535	0,105	0,000	0,000	3.13	4
32570	0,266	0,002	0,772	3.14	1
32575	0,397	0,000	0,375	3.14	1
32577	0,397	0,000	0,375	3.14	1
32578	0,611	0,000	0,000	3.14	1
32579	2,103	0,009	0,000	3.15	1
32580	0,617	0,000	0,000	3.14	1
32581	2,157	0,003	0,000	3.15	1
32584	0,600	0,000	0,000	3.14	1
32585	2,765	0,007	0,000	3.15	1
32586	0,617	0,000	0,000	3.14	1
32588	0,051	0,000	0,000	3.13	4
32590	0,040	0,000	0,000	2.3	4
32591	0,087	0,000	0,000	2.3	4
32592	0,449	0,000	0,000	3.14	1
32593	1,458	0,003	0,000	3.15	1
32594	0,097	0,000	0,000	3.23	2
32595	0,233	0,000	0,000	3.23	2
32601	0,440	0,000	0,000	3.14	1
32628	0,033	0,000	0,000	2.6	12

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Chapter. page	Pack size
32629	0,030	0,000	0,000	2.6	12
32630	0,031	0,000	0,000	2.6	12
32631	0,000	0,000	0,000	2.6	6
32632	0,008	0,005	0,000	2.6	12
32633	0,000	0,000	0,000	2.6	12
32634	0,007	0,005	0,000	2.6	12
32635	0,005	0,000	0,000	3.12	4
32636	0,005	0,000	0,000	3.12	4
32637	0,055	0,000	0,000	3.13	4
32638	0,064	0,000	0,000	3.13	4
32639	0,049	0,000	0,000	3.13	4
32640	0,217	0,004	0,000	2.5	1
32641	1,473	0,003	0,000	3.15	1
32642	0,426	0,010	0,000	3.14	1
32643	1,679	0,010	0,000	3.15	1
32650	0,055	0,000	0,000	3.13	4
32651	0,462	0,000	0,000	3.14	1
32655	0,049	0,000	0,000	3.11	4
32659	0,064	0,000	0,000	3.13	4
32660	0,218	0,000	0,000	3.14	1
32661	0,218	0,000	0,000	2.3	1
32662	0,181	0,000	0,000	3.13	1
32663	0,181	0,000	0,000	3.13	1
32664	0,192	0,000	0,000	3.13	1
32666	0,014	0,000	0,090	1.3	1
32668	0,014	0,000	0,090	1.3	1
32669	0,014	0,000	0,090	1.3	1
32676	0,021	0,000	0,090	1.3	1
32682	0,036	0,000	0,090	1.3	1
32684	0,036	0,000	0,090	1.3	1
32686	0,036	0,000	0,090	1.3	1
32692	0,052	0,000	0,090	1.3	1
32700	0,000	0,000	0,000	4.8	1
32701	0,000	0,000	0,000	4.8	1
32702	0,000	0,000	0,000	4.8	1
32703	0,000	0,000	0,000	4.8	1
32704	0,000	0,000	0,000	4.8	1
32706	0,000	0,000	0,000	4.8	1
32718	24,310	0,000	0,000	4.6	1
32719	22,875	0,000	0,000	4.6	1
32720	24,383	0,000	0,000	4.8	1
32721	23,892	0,000	0,000	4.8	1
32722	24,313	0,000	0,000	4.6	1
32723	22,875	0,000	0,000	4.6	1
32724	24,382	0,000	0,000	4.8	1
32725	22,944	0,000	0,000	4.8	1
32726	22,912	0,000	0,000	4.5	1
32729	14,858	0,000	0,000	4.5	1
32730	14,282	0,000	0,000	4.5	1
32731	24,805	0,000	0,000	4.5	1
32732	23,366	0,000	0,000	4.5	1
32733	15,557	0,000	0,000	4.5	1
32734	24,351	0,000	0,000	4.5	1
32737	22,912	0,000	0,000	4.5	1
32738	24,768	0,000	0,000	4.6	1
32739	23,042	0,000	0,000	4.6	1
32741	4,611	0,008	0,000	4.3	1
32742	4,503	0,008	0,000	4.3	1
32743	4,482	0,008	0,000	4.3	1
32745	5,351	0,008	0,000	4.3	1

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Chapter. page	Pack size
32746	5,219	0,008	0,000	4.3	1
32747	14,858	0,000	0,000	4.5	1
32748	24,837	0,000	0,000	4.8	1
32749	23,111	0,000	0,000	4.8	1
32752	23,387	0,000	0,000	4.4	1
32753	21,661	0,000	0,000	4.4	1
32754	14,272	0,000	0,000	4.4	1
32755	14,848	0,000	0,000	4.4	1
32756	22,933	0,000	0,000	4.4	1
32757	21,494	0,000	0,000	4.4	1
32758	14,149	0,000	0,000	4.4	1
32761	23,387	0,000	0,000	4.4	1
32762	21,948	0,000	0,000	4.4	1
32763	14,848	0,000	0,000	4.4	1
32764	24,805	0,000	0,000	4.5	1
32765	21,494	0,000	0,000	4.4	1
32766	14,149	0,000	0,000	4.4	1
32767	13,573	0,000	0,000	4.4	1
32769	13,573	0,000	0,000	4.4	1
32770	13,642	0,000	0,000	4.7	1
32771	23,079	0,000	0,000	4.5	1
32772	21,730	0,000	0,000	4.7	1
32773	14,917	0,000	0,000	4.7	1
32774	14,341	0,000	0,000	4.7	1
32775	23,002	0,000	0,000	4.7	1
32776	21,563	0,000	0,000	4.7	1
32777	13,642	0,000	0,000	4.7	1
32779	14,917	0,000	0,000	4.7	1
32780	23,456	0,000	0,000	4.7	1
32781	22,017	0,000	0,000	4.7	1
32783	15,557	0,000	0,000	4.5	1
32784	21,563	0,000	0,000	4.7	1
32785	14,218	0,000	0,000	4.7	1
32786	13,642	0,000	0,000	4.7	1
32787	24,768	0,000	0,000	4.6	1
32788	23,329	0,000	0,000	4.6	1
32789	24,837	0,000	0,000	4.8	1
32790	23,398	0,000	0,000	4.8	1
32795	14,981	0,000	0,000	4.5	1
32796	14,282	0,000	0,000	4.5	1
32797	24,351	0,000	0,000	4.5	1
32807	22,923	0,000	0,000	4.4	1
32808	21,563	0,000	0,000	4.7	1
32809	23,665	0,000	0,000	4.7	1
32907	0,008	0,000	0,000	3.12	24
32912	0,000	0,000	0,000	2.3	10
32914	0,052	0,000	0,000	3.12	24
32915	0,026	0,000	0,000	3.12	24
32921	0,004	0,000	0,000	3.12	24
32933	0,000	0,000	0,000	1.3	8
32934	0,000	0,000	0,000	1.3	4
32937	0,000	0,000	0,000	3.14	4
32947	0,000	0,000	0,000	1.3, 3.10, 3.12	10
32948	0,000	0,000	0,000	3.10, 3.12	10
32949	0,000	0,000	0,000	3.10, 3.12	10
32950	0,000	0,000	0,000	3.10, 3.12	10
32951	0,000	0,000	0,000	3.10, 3.12	10
32952	0,000	0,000	0,000	1.3	10
32954	0,000	0,000	0,000	3.10, 3.12	50
32956	0,000	0,000	0,000	3.10	10

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Chapter. page	Pack size
32963	0,000	0,000	0,000	3.12	10
32964	0,000	0,000	0,000	3.10	10
32969	0,000	0,000	0,000	3.10, 3.12	50
32973	0,000	0,000	0,000	3.11	4
32974	0,000	0,000	0,000	3.11	4
32975	1,167	0,025	0,000	3.15	1
32976	0,358	0,015	0,000	3.14	1
32977	0,358	0,021	0,000	3.14	1
32978	1,473	0,000	0,000	3.15	1
32979	0,000	0,000	0,000	1.3	10
32980	1,163	0,053	0,000	3.15	1
32981	0,182	0,000	0,000	3.13	1
32982	0,000	0,000	0,000	3.15	1
32983	0,000	0,000	0,000	4.8	1
32984	0,000	0,000	0,000	4.8	1
32985	0,000	0,000	0,000	4.8	1
32986	0,000	0,000	0,000	4.8	1
32987	0,000	0,000	0,000	4.8	1
32988	0,000	0,000	0,000	4.3	1
32989	0,000	0,000	0,000	4.3	1
32990	0,000	0,000	0,000	4.3	1
33051	0,000	0,000	0,000	3.24, 6.16	10
33075	0,210	0,000	0,630	3.19, 3.30	1
33079	0,385	0,000	0,624	3.19, 3.30	1
33113	0,000	0,000	0,000	4.10, 4.12, 4.14, 4.15	4
33142	0,000	0,000	0,000	3.25, 3.28, 6.15, 6.17	2
33143	0,000	0,000	0,000	3.25, 6.15	2
33144	0,000	0,000	0,000	3.25, 6.15	2
33145	0,000	0,124	0,000	3.24, 3.28, 6.14, 6.17	1
33146	0,000	0,202	0,000	3.24, 6.14	1
33147	0,000	0,288	0,000	3.24, 6.14	1
33148	0,000	0,000	0,000	3.24	1
33149	0,325	0,000	1,200	6.13	1
33150	0,684	0,000	2,064	6.13	1
33151	1,111	0,000	3,474	6.13	1
33152	0,000	0,000	0,000	6.15	1
33153	0,000	0,000	0,000	6.15	1
33154	0,000	0,000	0,000	6.15	1
33155	0,000	0,000	0,000	3.24, 6.15	10
33156	0,000	0,000	0,052	2.4, 3.24, 3.29, 4.10, 4.12, 6.16	1
33157	0,000	0,000	0,000	3.24, 6.16	10
33158	0,000	0,000	0,000	6.16	1
33160	0,583	0,000	1,200	3.23	1
33161	1,620	0,000	4,342	3.23	1
33162	2,766	0,000	6,723	3.23	1
33163	0,000	0,027	0,000	3.24, 3.28, 6.14, 6.18, 6.19	1
33164	0,000	0,049	0,000	3.24, 6.14, 6.18, 6.19	1
33165	0,000	0,069	0,000	3.24, 6.14, 6.18, 6.19	1
33166	0,000	0,080	0,000	3.24, 3.28, 6.14, 6.17	1
33167	0,000	0,137	0,000	3.24, 6.14	1
33168	0,000	0,177	0,000	3.24, 6.14	1
33177	0,000	0,000	0,000	6.21	1
33193	0,000	0,000	0,000	6.16	1

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Chapter. page	Pack size
33194	0,888	0,000	2,274	3.19, 3.30	1
33198	0,209	0,000	0,630	3.23	1
33199	0,110	0,000	0,624	6.13	1
33200	0,110	0,000	0,624	6.13	1
33201	0,306	0,000	1,368	6.13	1
33202	0,665	0,000	2,064	6.13	1
33203	1,090	0,000	3,474	6.13	1
33204	7,090	0,000	14,300	6.13	1
33206	0,216	0,000	0,630	3.23	1
33207	0,116	0,000	0,624	6.13	1
33208	0,116	0,000	0,624	6.13	1
33216	0,375	0,065	0,861	3.23	1
33217	0,086	0,065	0,486	6.13	1
33219	0,000	0,000	0,000	6.15	10
33220	0,000	0,000	0,000	6.15	10
33221	0,110	0,000	0,624	6.13	1
33222	0,110	0,000	0,624	6.13	1
33223	0,000	0,000	0,000	6.15	2
33224	0,000	0,014	0,000	3.22, 3.24, 3.29, 6.14	3
33225	0,000	0,000	0,000	6.15	10
33226	0,000	0,000	0,000	6.15	10
33234	0,488	0,000	2,241	3.29	1
33246	0,000	0,000	0,000	6.18, 6.19	1
33247	0,000	0,000	0,000	6.16	1
33283	0,000	0,000	0,000	6.18, 6.19	1
33285	0,488	0,002	2,241	3.29	1
33292	0,000	0,000	0,000	4.12	1
33293	0,000	0,000	0,000	4.12	1
33294	0,000	0,000	0,000	4.12	1
33295	0,000	0,000	0,000	4.12	1
33298	0,000	0,000	0,000	4.12	1
33299	0,000	0,000	0,000	4.12	1
33308	1,480	2,100	5,100	6.10	1
33311	3,134	1,050	8,349	3.21	1
33315	0,000	0,000	0,000	3.25	1
33316	0,000	0,000	0,000	3.25	1
33317	0,000	0,000	0,000	3.25	2
33324	0,209	0,005	0,630	3.23	1
33325	0,577	0,000	1,200	3.23	1
33326	1,614	0,000	4,342	3.23	1
33327	2,758	0,000	6,723	3.23	1
33328	0,110	0,003	0,624	6.13	1
33329	0,110	0,003	0,624	6.13	1
33330	0,319	0,000	1,200	6.13	1
33331	0,678	0,000	2,064	6.13	1
33332	1,103	0,000	3,474	6.13	1
33333	0,248	0,000	0,000	6.19	1
33334	0,980	0,000	0,000	6.19	1
33335	1,041	0,000	0,000	6.19	1
33336	2,043	0,000	0,000	6.19	1
33337	0,413	0,000	0,000	6.18	1
33338	1,803	0,000	0,000	6.18	1
33339	2,135	0,000	0,000	6.18	1
33340	3,897	0,000	0,000	6.18	1
33342	0,000	0,000	0,000	6.18, 6.19	1
33343	0,000	0,000	0,000	6.18, 6.19	1
33345	0,000	0,000	0,000	6.18, 6.19	1
33346	0,000	0,000	0,000	6.18, 6.19	1
33347	0,000	0,000	0,000	6.18, 6.19	1
33348	0,000	0,000	0,000	6.18, 6.19	1

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Chapter. page	Pack size
33349	0,000	0,000	0,000	6.18, 6.19	1
33350	0,000	0,000	0,000	6.18, 6.19	2
33351	0,000	0,000	0,000	6.18, 6.19	2
33352	0,000	0,000	0,000	6.18, 6.19	2
33355	0,248	0,000	0,000	6.19	1
33356	0,980	0,000	0,000	6.19	1
33357	1,041	0,000	0,000	6.19	1
33358	2,043	0,000	0,000	6.19	1
33359	0,413	0,000	0,000	6.18	1
33360	1,803	0,000	0,000	6.18	1
33361	2,135	0,000	0,000	6.18	1
33362	3,897	0,000	0,000	6.18	1
33363	0,000	0,000	0,000	6.18	3
33364	0,000	0,000	0,000	6.19	3
33365	0,000	0,000	0,000	6.19	3
33366	0,000	0,080	0,000	6.18, 6.19	3
33367	0,000	0,131	0,000	6.18, 6.19	3
33376	0,404	0,000	0,000	6.14	4
33377	0,661	0,000	0,000	6.14	4
33378	0,090	0,052	0,000	6.14	3
33380	0,000	0,000	0,000	6.18, 6.19	1
33381	0,000	0,000	0,000	6.18, 6.19	1
33385	0,000	0,288	0,000	3.24, 6.14	1
33392	0,998	0,000	0,000	6.14	4
33393	0,380	0,505	1,812	6.13	1
33394	0,201	0,003	0,612	3.23	1
33398	0,201	0,000	0,690	3.23	1
33402	0,351	0,000	0,990	3.21	1
33403	0,769	0,225	1,800	3.21	1
33408	0,255	0,000	1,010	6.10	1
33409	0,504	0,451	1,680	6.10	1
33416	0,189	0,030	0,516	2.4, 2.5	1
33418	0,000	0,000	0,000	3.25, 6.15	2
33419	0,000	0,000	0,000	3.25, 6.15	2
33420	0,208	0,005	0,612	3.23	1
33421	0,463	0,000	0,990	3.21	1
33422	0,480	0,000	0,990	3.21	1
33424	0,124	0,000	0,000	6.20	1
33425	0,145	0,000	0,000	6.20	1
33426	0,124	0,000	0,000	6.20	1
33427	0,145	0,000	0,000	6.20	1
33428	0,214	0,000	0,000	6.20	1
33429	0,214	0,000	0,000	6.20	1
33430	0,473	0,000	0,000	6.20	1
33431	0,473	0,000	0,000	6.20	1
33432	0,913	0,000	0,000	6.20	1
33433	0,913	0,000	0,000	6.20	1
33434	2,606	0,000	0,000	6.20	1
33435	6,648	0,000	0,000	6.20	1
33436	6,648	0,000	0,000	6.20	1
33437	18,968	0,000	0,000	6.20	1
33438	20,468	0,000	0,000	6.20	1
33439	20,468	0,000	0,000	6.20	1
33440	0,166	0,000	0,000	6.20	1
33441	0,193	0,000	0,000	6.20	1
33442	0,166	0,000	0,000	6.20	1
33443	0,193	0,000	0,000	6.20	1
33444	0,273	0,000	0,000	6.20	1
33445	0,273	0,000	0,000	6.20	1
33446	0,564	0,000	0,000	6.20	1

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Chapter. page	Pack size	
33447	0,564	0,000	0,000	6.20	1	
33448	1,217	0,000	0,000	6.20	1	
33449	1,217	0,000	0,000	6.20	1	
33450	3,186	0,000	0,000	6.20	1	
33451	8,444	0,000	0,000	6.20	1	
33452	26,968	0,000	0,000	6.20	1	
33453	28,468	0,000	0,000	6.20	1	
33454	28,468	0,000	0,000	6.20	1	
33455	0,280	0,000	0,000	6.22	1	
33456	0,280	0,000	0,000	6.22	1	
33457	0,437	0,000	0,000	6.22	1	
33458	0,888	0,000	0,000	6.22	1	
33459	0,888	0,000	0,000	6.22	1	
33460	0,888	0,000	0,000	6.22	1	
33461	2,984	0,000	0,000	6.22	1	
33462	2,984	0,000	0,000	6.22	1	
33463	9,245	0,000	0,000	6.22	1	
33464	0,392	0,000	0,000	6.22	1	
33465	0,392	0,000	0,000	6.22	1	
33466	0,557	0,000	0,000	6.22	1	
33467	1,209	0,000	0,000	6.22	1	
33468	1,209	0,000	0,000	6.22	1	
33469	1,209	0,000	0,000	6.22	1	
33470	3,984	0,000	0,000	6.22	1	
33471	3,984	0,000	0,000	6.22	1	
33472	11,740	0,000	0,000	6.22	1	
33500	0,385	0,110	2,352	3.26	1	
33501	0,415	0,110	3,582	3.26	1	
33502	0,334	0,110	3,618	6.17	1	
33503	0,385	0,123	2,352	3.26	1	
33504	0,415	0,123	2,904	3.26	1	
33505	0,334	0,123	3,618	6.17	1	
33506	0,368	0,111	2,094	3.26	1	
33507	0,344	0,111	8,940	6.17	1	
33510	0,913	0,286	7,167	3.27	1	
33511	1,059	0,286	10,071	3.27	1	
33512	0,854	0,286	9,090	6.17	1	
33513	0,913	0,334	7,167	3.27	1	
33514	1,059	0,334	10,071	3.27	1	
33515	0,854	0,334	9,090	6.17	1	
33516	0,926	0,286	14,301	3.27	1	
33540	0,444	0,110	3,798	3.26	1	
33541	0,474	0,110	5,028	3.26	1	
33542	0,393	0,110	5,064	6.17	1	
33543	0,444	0,123	3,798	3.26	1	
33544	0,474	0,123	5,028	3.26	1	
33545	0,393	0,123	5,064	6.17	1	
33550	0,896	0,286	6,177	3.27	1	
33551	1,041	0,286	7,641	3.27	1	
33552	0,837	0,286	8,100	6.17	1	
33553	0,896	0,334	6,177	3.27	1	
33554	1,042	0,334	7,641	3.27	1	
33555	0,837	0,334	8,100	6.17	1	
33600	0,602	0,252	1,506	3.23	1	
33601	0,565	0,000	1,200	3.23	1	
33602	1,601	0,000	4,342	3.23	1	
33603	2,745	0,000	8,868	3.23	1	
33610	0,996	0,000	4,780	4.13	1	
33611	0,883	0,000	4,780	4.13	1	
33612	0,996	0,000	4,780	4.13	1	

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Chapter. page	Pack size	
33613	0,883	0,000	4,780	4.13	1	
33614	1,072	0,000	4,780	4.13	1	
33615	0,959	0,000	4,780	4.13	1	
33616	1,072	0,000	4,780	4.13	1	
33617	0,959	0,000	4,780	4.13	1	
33620	1,061	0,000	4,780	4.13	1	
33621	0,948	0,000	4,780	4.13	1	
33622	1,043	0,000	4,780	4.13	1	
33623	0,930	0,000	4,780	4.13	1	
33624	1,137	0,000	4,780	4.13	1	
33625	1,024	0,000	4,780	4.13	1	
33626	1,119	0,000	4,780	4.13	1	
33627	1,006	0,000	4,780	4.13	1	
33630	2,696	0,000	15,180	4.15	1	
33631	2,868	0,000	15,710	4.15	1	
33632	3,685	0,000	18,290	4.15	1	
33633	4,003	0,000	18,920	4.15	1	
33634	4,718	0,000	19,920	4.15	1	
33635	5,285	0,000	20,950	4.15	1	
33636	2,758	0,000	15,180	4.15	1	
33637	2,915	0,000	15,710	4.15	1	
33638	3,747	0,000	18,290	4.15	1	
33639	4,050	0,000	18,920	4.15	1	
33640	4,780	0,000	19,920	4.15	1	
33641	5,332	0,000	20,950	4.15	1	
33642	0,000	0,000	0,052	4.14, 4.15	1	
33645	0,000	0,000	0,000	4.14	1	
33646	0,000	0,000	0,000	4.15	1	
33647	0,000	0,000	0,000	4.15	1	
33648	0,381	0,205	0,810	4.15	1	
33649	0,381	0,205	0,810	4.15	1	
33650	0,000	0,000	0,000	4.15	1	
33651	0,151	0,000	0,000	4.15	1	
33652	0,000	0,000	0,000	4.15	3	
33653	0,000	0,000	0,000	4.14	1	
33700	0,602	0,000	1,780	4.9	1	
33701	1,733	0,000	4,785	4.11	1	
33702	1,733	0,000	4,785	4.11	1	
33703	2,555	0,000	4,892	4.11	1	
33704	0,530	0,000	1,570	4.9	1	
33705	0,530	0,000	1,570	4.9	1	
33706	1,733	0,000	4,785	4.11	1	
33707	1,733	0,000	4,785	4.11	1	
33708	2,555	0,000	4,892	4.11	1	
33715	0,602	0,000	1,780	4.9	1	
33716	1,733	0,000	4,785	4.11	1	
33717	1,733	0,000	4,785	4.11	1	
33718	2,555	0,000	4,892	4.11	1	
33719	0,530	0,000	1,570	4.9	1	
33720	0,626	0,000	4,420	4.9	1	
33721	1,781	0,000	4,785	4.11	1	
33722	1,781	0,000	4,785	4.11	1	
33723	2,598	0,000	4,892	4.11	1	
33724	0,554	0,000	4,210	4.9	1	
33725	0,000	0,000	0,000	4.10	1	
33726	0,000	0,000	0,000	4.10	1	
33727	0,000	0,000	0,000	4.10	1	
33728	0,405	0,000	0,000	4.10, 4.14	1	
33731	6,837	0,000	12,774	4.11	1	
33732	0,000	0,000	0,000	4.10, 4.14	1	

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Chapter. page	Pack size
33733	0,000	0,000	0,000	4.12, 4.15	1
33734	0,000	0,030	0,000	4.10, 4.14	3
33735	0,000	0,068	0,000	4.12	3
33736	0,000	0,068	0,000	4.12	3
33737	0,038	0,000	0,000	4.9	3
33738	0,051	0,000	0,000	4.11, 4.2	3
33739	0,003	0,000	0,000	4.9	3
33740	0,000	0,000	0,000	4.11, 4.2	3
33741	0,000	0,000	0,000	4.10, 4.14	1
33742	0,000	0,000	0,000	4.10, 4.14	1
33744	0,000	0,000	0,000	4.10, 4.14	1
33745	0,000	0,000	0,000	4.12	1
33746	0,000	0,000	0,000	4.12	1
33747	0,000	0,000	0,000	4.12	1
33748	0,000	0,000	0,000	4.12	1
33749	0,000	0,000	0,000	4.10	1
33750	0,000	0,000	0,000	4.10, 4.14	1
33751	0,000	0,000	0,000	4.10, 4.14	1
33752	0,000	0,000	0,000	4.10, 4.14	1
33753	0,000	0,000	0,000	4.10, 4.14	1
33754	0,000	0,000	0,000	4.10, 4.14	1
33755	0,000	0,000	0,000	4.10, 4.14	3
33758	0,000	0,000	0,000	4.10, 4.12, 4.14, 4.15	2
33759	0,000	0,000	0,000	4.12	6
33761	0,000	0,000	0,000	4.12	10
33762	1,340	0,001	1,520	4.12, 4.16, 4.2	1
33765	0,038	0,000	0,000	4.9	3
33766	0,000	0,000	0,000	4.10	1
33767	0,000	0,000	0,000	4.10	1
33768	0,000	0,000	0,000	4.12	1
33769	0,000	0,000	0,000	4.12	1
33770	0,606	0,000	1,772	4.9	1
33771	0,630	0,000	4,412	4.9	1
33772	0,606	0,000	1,772	4.9	1
33773	0,534	0,000	1,490	4.9	1
33774	0,558	0,000	4,130	4.9	1
33775	0,534	0,000	1,490	4.9	1
33780	0,000	0,000	0,000	4.16	1
33781	0,000	0,000	0,000	4.16	1
33782	0,000	0,000	0,000	4.16	1
33783	0,000	0,000	0,000	4.16	1
33784	0,000	0,000	0,000	4.16	1
33785	0,000	0,000	0,000	4.16	1
33786	0,000	0,000	0,000	4.16	1
33787	0,000	0,000	0,000	4.16	1
33788	0,000	0,000	0,000	4.16	1
33789	0,000	0,000	0,000	4.16	1
33790	0,000	0,000	0,000	4.16	1
33791	0,000	0,000	0,000	4.16	1
33906	0,434	0,000	0,000	6.14	4
33907	0,050	0,000	0,000	6.14	3
33908	0,000	0,000	0,056	3.28, 6.17	1
33909	0,012	0,084	0,074	3.24, 3.28, 6.14, 6.17	3
33910	0,000	0,000	0,000	3.28, 6.17	1
33911	0,000	0,000	0,000	3.28, 6.17	1
33912	0,000	0,000	0,000	3.28, 6.17	1
33913	0,000	0,000	0,000	3.28, 6.17	1
33914	0,090	0,044	0,000	3.28, 6.17	3

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Chapter. page	Pack size
33915	0,000	0,002	0,000	3.22, 3.24, 3.28, 6.17	3
33916	0,000	0,000	0,000	3.22	3
33917	0,000	0,000	0,056	3.24, 6.16	1
33918	0,000	0,000	0,000	3.24, 6.16	3
33921	0,000	0,000	0,000	6.21	1
33922	0,000	0,000	0,000	6.21	1
33923	0,000	0,000	0,000	6.21	1
33924	0,000	0,000	0,000	6.21	1
33925	0,000	0,000	0,000	6.21	1
33926	0,000	0,000	0,000	6.21	1
33927	0,000	0,000	0,000	6.21	1
33928	0,000	0,000	0,000	6.21	1
33929	0,000	0,000	0,000	6.21	1
33930	0,000	0,000	0,000	6.21	1
33931	0,000	0,000	0,000	6.22	1
33932	0,000	0,000	0,000	6.22	1
33933	0,000	0,000	0,000	6.22	1
33934	0,000	0,000	0,000	6.22	1
33935	0,000	0,000	0,000	6.22	1
33936	0,000	0,000	0,000	6.22	1
33937	0,000	0,000	0,000	6.22	1
33938	0,000	0,000	0,000	6.22	1
33939	0,000	0,000	0,000	6.21	1
33940	0,000	0,000	0,000	6.21	1
33941	0,000	0,000	0,000	6.21	1
33942	0,000	0,000	0,000	6.21	1
33943	0,000	0,000	0,000	6.21	1
33944	0,000	0,000	0,000	6.21	1
33945	0,000	0,000	0,000	6.21	1
33946	0,000	0,000	0,000	6.21, 6.22	1
33947	0,000	0,000	0,000	6.21, 6.22	1
33954	0,000	0,000	0,000	6.23	1
33955	0,000	0,000	0,000	6.23	1
33956	0,000	0,000	0,000	6.23	1
33957	0,000	0,000	0,000	6.23	1
33958	0,000	0,000	0,000	6.23	1
33959	0,000	0,000	0,000	6.23	1
33960	0,000	0,000	0,000	6.23	1
33961	0,000	0,000	0,000	6.23	1
33962	0,000	0,000	0,000	6.23	1
33963	0,000	0,000	0,000	6.22	1
33964	0,000	0,000	0,000	6.22	1
33967	0,000	0,000	0,000	6.22	1
33968	0,000	0,000	0,000	6.22	1
33969	0,000	0,000	0,000	6.22	1
33970	0,000	0,000	0,000	6.21	1
33971	0,000	0,000	0,000	6.21	1
33972	0,000	0,000	0,000	6.21	1
33973	0,000	0,000	0,000	6.21	1
33974	0,000	0,000	0,000	6.21	1
35001	0,000	0,000	0,000	5.2	1
35004	12,570	0,000	0,000	5.1	1
35005	8,730	0,000	0,000	5.1	1
35006	8,644	0,000	0,000	5.1	1
35007	5,966	0,000	0,000	5.1	1
35008	0,000	0,000	0,000	5.2	2
35009	0,000	0,000	0,000	5.2	1
35015	13,921	0,000	0,000	5.1	1
35016	20,170	0,000	0,000	5.1	1
35017	0,000	0,000	0,000	5.2	4

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Chapter. page	Pack size
36001	0,027	0,000	0,000	2.3	1
36003	0,028	0,000	0,000	3.10	1
36009	0,020	0,000	0,000	1.3	1
36100	0,023	0,004	0,000	6.1	1
36101	0,019	0,000	0,000	2.3	1
36102	0,019	0,000	0,000	3.16	1
36103	0,023	0,004	0,000	6.1	1
36104	0,019	0,000	0,000	2.3	1
36105	0,019	0,000	0,000	3.16	1
36106	0,022	0,005	0,000	6.1	1
36107	0,019	0,000	0,000	2.3	1
36108	0,019	0,000	0,000	3.16	1
36109	0,013	0,000	0,000	1.2, 2.3, 3.16, 6.1	1
36110	0,013	0,000	0,000	1.2, 2.3, 3.16, 6.1	1
36111	0,013	0,000	0,000	1.2, 2.3, 3.16, 6.1	1
36112	0,011	0,004	0,000	6.1	1
36113	0,007	0,000	0,000	2.3	1
36114	0,007	0,000	0,000	3.16	1
36152	0,025	0,000	0,000	2.3	1
36153	0,025	0,000	0,000	3.16	1
36154	0,013	0,000	0,000	1.2, 2.3, 3.16	1
36155	0,012	0,000	0,000	2.3	1
36156	0,012	0,000	0,000	3.16	1
36157	0,025	0,000	0,000	2.3	1
36158	0,025	0,000	0,000	3.16	1
36159	0,013	0,000	0,000	1.2, 2.3, 3.16	1
36200	0,000	0,000	0,000	1.1	1
36902	0,049	0,000	0,000	6.1	1
36903	0,062	0,000	0,000	6.1	1
36904	0,076	0,000	0,000	6.1	1
36916	0,000	0,000	0,000	1.2, 2.3, 3.16	1
36917	0,000	0,000	0,000	1.2, 2.3, 3.16	1
36918	0,000	0,000	0,000	1.2, 2.3, 3.16	1
78105	0,000	0,000	0,000	6.15	10
78139	0,000	0,000	0,000	6.15	10
78442	0,000	0,000	0,000	7.16	200
78443	0,000	0,000	0,000	7.16	200
78447	0,000	0,000	0,000	7.16	200
78463	0,000	0,000	0,000	2.1, 3.4	10
78893	0,000	0,000	0,000	6.15	10
79448	0,000	0,000	0,000	3.22, 4.10, 6.12	30
79449	0,000	0,000	0,000	3.22, 6.11, 6.12	30
79663	0,000	0,000	0,000	3.17, 3.18	10
79738	0,000	0,000	0,000	3.30	10
79811	0,000	0,000	0,000	3.22, 3.25, 6.15	1
79859	0,000	0,000	0,000	3.30	10

Terms of Delivery and Payment of Wöhner GmbH & Co. KG

I. General

1. Diverging and / or supplementary conditions of the Customer not expressly acknowledged by us in writing are not binding upon us, even if they are not expressly opposed by us.

2. Orders shall not be deemed as accepted but upon confirmation by us or delivery having been made.

II. Delivery

1. We aim high at complying as punctual as possible with the delivery dates confirmed by us. Should such compliance with the delivery time be impossible due to circumstances beyond our control, such as natural disasters, war, or measures of industrial action with us or our subcontractors, a reasonable extension of the delivery time sets in. Should such impediments continue to exist for more than 2 months, each contracting party is entitled to withdrawal.

2. Partial delivery is possible. With manufacture to Customer's specifications, delivery deviations of 10 % more / less are permissible. Wöhner reserves the right of modifications, especially of the given values, measures and weights, as well as of constructional modifications. Drawings are not binding.

3. In case of delay in delivery on our side and an additional period of time of reasonable length having been granted to us by the Customer, and with such period having been elapsed, the Customer may either withdraw from the Contract or inasmuch as he shows satisfactorily that he has suffered a loss by this – demand for each terminated week of such delay a compensation of 0,5 % but all in all not more than 5 % of the purchase price of such delayed delivery. Any further claims of the Customer in all cases of delayed delivery are excluded, even in case of expiration of an additional period of time that may have been granted to us. To claims for compensation apply also par. IX.1 pages 2 and 3 and IX.4.

4. Returns accepted by our firm upon prior agreement confirmed in writing are reimbursed with 90 % of the invoice value. Returns are not possible but within the first 14 days following delivery and in closed original packing. With returns, packing is not reimbursed. With returns of a total value of less than 250,- Euros a handling fee of 25,- Euros net is charged.

III. Prices, Dispatch, Liability for Damage to Goods in Transit

1. Accounting is done at the list prices, allowances, and terms valid on the day of delivery. Precious metal surcharges are charged separately according to the quotation of the day before the day the order is received. Our prices are based on a price of 200.- € per 100 kg of copper, 185.- € per 100 kg of brass and 180.- € per kg of silver.

2. All list and offer prices are net, without the statutory VAT, without packing and ex works. Orders under 100.- € are charged without any allowance. From 500.- € net on, Wöhner delivers "free domicile, packing extra" and from 1000.- € net on "free domicile, standard packing included". Insurance charges equaling 1 % of the net total price are also charged. Basis of these terms is a complete order and the taking of the goods in packing units. Special wishes of the Customer (e. g. delivery under an address other than that of the Customer, express delivery, special packing, commissioning of a particular forwarder) are taken into account as far as possible. The additional costs resulting therefrom are borne by the Customer.

3. Tool costs paid pro rata by the Customer create no entitlement to the tools, unless otherwise agreed by the parties. They remain the property of the firm of Wöhner. This applies also to the rights in exclusive developments.

4. With dispatch ex works and also in case of partial delivery, risk passes in any event to the Customer, even when in individual cases freight paid delivery was agreed. With the product being ready for dispatch and its dispatch or taking delivery of being delayed for reasons beyond our control, risk passes to the Customer at the moment of receipt of the advice of readiness for dispatch.

IV. Payments

1. On invoiced amounts received within 14 days upon the invoice date the Customer may deduct 2 % discount. Except for that our invoices are payable 30 days upon the invoice date without deduction, unless otherwise individually agreed.

2. According to the statutory regulations, the Customer is in default especially 30 days upon payment being due and receipt of an invoice or an equivalent list of accounts receivable. Payments shall be considered as being made on the day the amount is at our disposal. From the due date on, statutory default interest of 8 % above the basic interest rate is charged.

3. Dishonoured cheques or bills of exchange, suspension of payments, and petition in insolvency proceedings against the assets of the Customer make all our claims – also in case of respite – immediately become due.

4. The Customer may only set off such claims that are established uncontested or have become final and absolute.

V. Reservation of Title

1. We reserve full title in the products until payment in full of all accounts receivable under a current business relation.

2. The Customer is obliged to the careful handling of the products. The Customer is obliged to inform us immediately of any attachment of the products by third parties, e. g. in case of seizure, as well as of possible damages to or the destruction of the products. Any change in the possession of the products and the change of his own residence must immediately be communicated to us by the Customer.

3. With the Customer being in breach of contract, especially in case of delay in payment, we are entitled to withdraw from the Contract and to demand the return of the products.

4. The Customer is entitled to resell the products in the ordinary course of business. He already now assigns to us all claims to the size of our invoice amount that accrue to him against a third party through such reselling. We accept this assignment. Upon assignment the Customer is entitled to collect the sum due. We reserve the right to collect the sum due ourselves the moment the Customer does not properly comply with his financial obligations and is in default.

5. The processing and working up of the products by the Customer is always done in our name and on our behalf. Where the products are being worked up with objects not in our possession, we acquire co-ownership in the new article at the ratio of the value of the products delivered by us to the other worked up objects. The same applies when the products are mixed with other objects not in our possession.

VI. Duty to Examine and Notice of Defect

Has the Customer failed to give notice of defect according to § 377 sub-par. 1 HGB / German Commercial Code, which has to be sent in writing to our firm within 10 days upon receipt of the products, any recourse of the Customer is excluded, unless such defect is of a kind not recognisable at the time of the examination.

VII. Warranty

1. We warrant the faultlessness corresponding to the respective state of the art. Modifications in construction or design that do not impair neither the functionality nor the value of the product do not represent an imperfection.

2. For the condition of the product only the product description shall basically pass for being agreed on.

3. With the product being defective, of which notification in writing has to be made immediately by the Customer, we shall within a reasonable period of time remove such defect at no cost by our after-sales service or

deliver a faultless article (= subsequent performance). We choose in each case under the aspect of reasonableness the adequate kind of subsequent performance. Should subsequent improvement or substitute delivery fail, the Customer may withdraw from the Contract or reduce the purchase price. In case of a substitute delivery or withdrawal we reserve ourselves the assertion of an adequate allowance for use. To claims for damages applies par. IX, any further claims of the customer are excluded. If improper changes, additions/removals or repair work is done by the customer or third parties, then there are no claims for defects for this and resulting consequences.

4. All statutory and contractual claims of the Customer based on a defective product become statute-barred for new products after two years upon handing over. Removal of defects or new delivery is no new beginning of the limitation period. This does not apply insofar as the law prescribes periods longer than two years, especially in the event of intent, malicious concealment of the defect as well as in the event of non-compliance with a guarantee of quality. The customer's claim to reimbursement of expenses pursuant to § 445 a BGB (German Civil Code) (recourse of the seller) also expires after two years from the legal start of the limitation period, provided that the last contract in the supply chain is not a sale of consumer goods.

5. Claims for recourse by the customer against the supplier pursuant to § 445a BGB (recourse of the seller) only exist so the extent that the purchaser has not made any agreements with its purchaser beyond the statutory claim for defects.

VIII. Industrial Property Rights / Copyrights

Orders according to drawings, drafts or other indications given to us are executed at Customer's risk regarding patent, industrial design, and trademark rights. Should the execution of such orders interfere with any third party's industrial property rights, the Customer accepts responsibility for any damage incurred to us by such interference.

IX. Other Liabilities

1. Any claims for damages by the Customer for whatsoever cause in law are excluded. This does not apply where obligatory liability is given, e. g. under the German product liability law, or in cases of intent, gross negligence, for personal injury or the breach of essential contractual obligations. Yet, indemnity for breach of essential contractual obligations is limited to a foreseeable contractually inherent damage, as far as it is not a case of intent or gross negligence or liability for personal injury is given.

2. Any other claims against us do not exist, especially no claims for damages and no rights of recourse for non-compliance with the instructions for use or the mounting instructions, or for misuse of the products. Claims for damages and rights of recourse do also not exist for damages arising out of in-expert installation, mounting or repair of our products, or for damages arising during transport after the passing of risk to the Customer. Any intruding action on the product, especially the changing of parts and /or modification of the original Wöhner product excludes liability.

3. Claims for damages for defects become statute-barred one year upon handing over of the product, except for the reproach of gross fault or fraudulent intent, or in case of injuries to health.

4. A reversal of the burden of proof to the prejudice of the Customer is not incidental to the above terms.

X. Place of Performance and Venue

1. Place of performance for all obligations under this contractual relationship is the registered office of Wöhner.

2. Place of venue is – with the Customer being merchant entered in the commercial register – at our choice Coburg or the seat of our respective locally responsible distribution company.

3. For these contractual relations the German Law is applicable to the exclusion of the United Nations Convention on Contracts for the International Sale of Goods (CISG).

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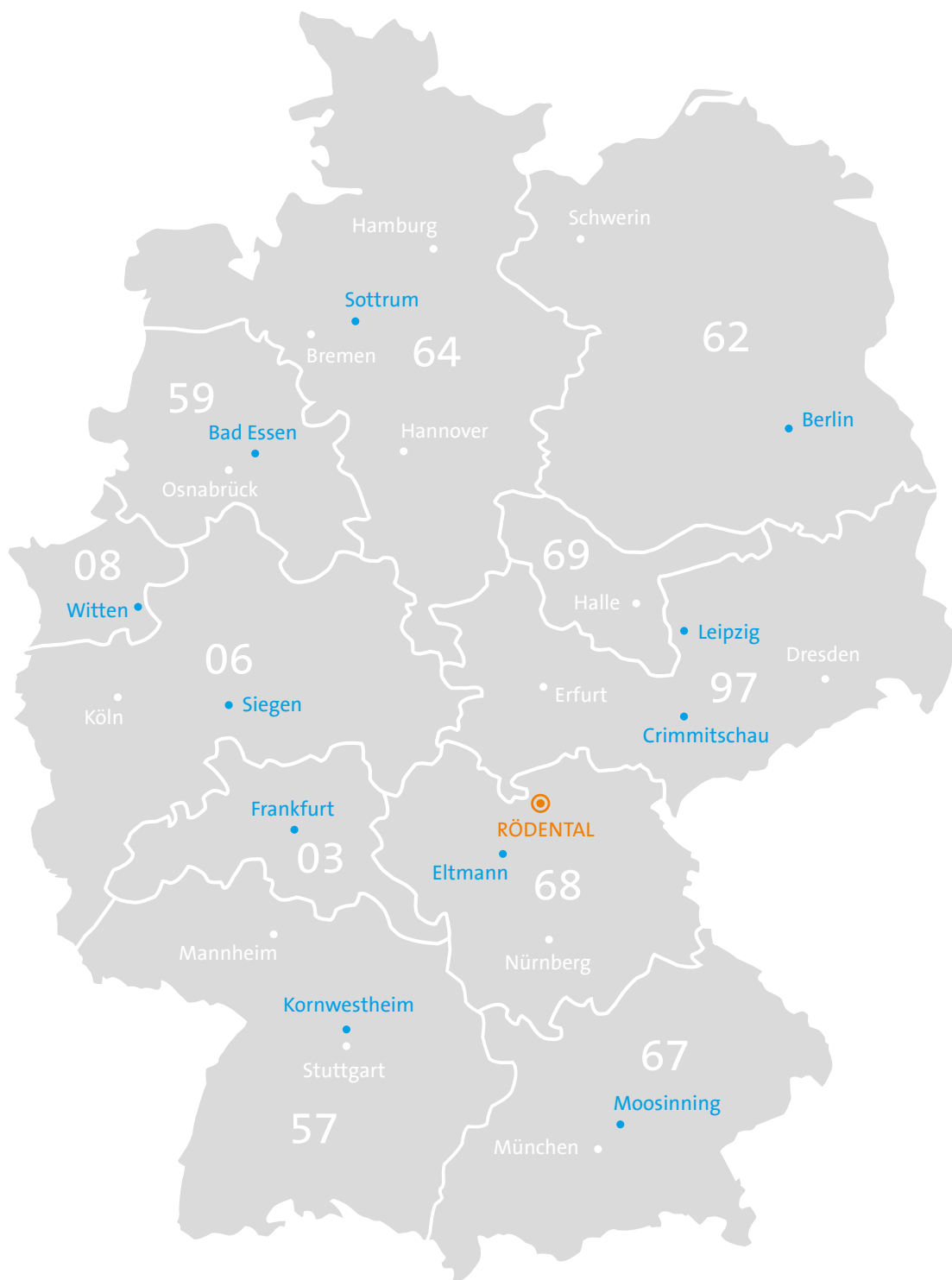
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