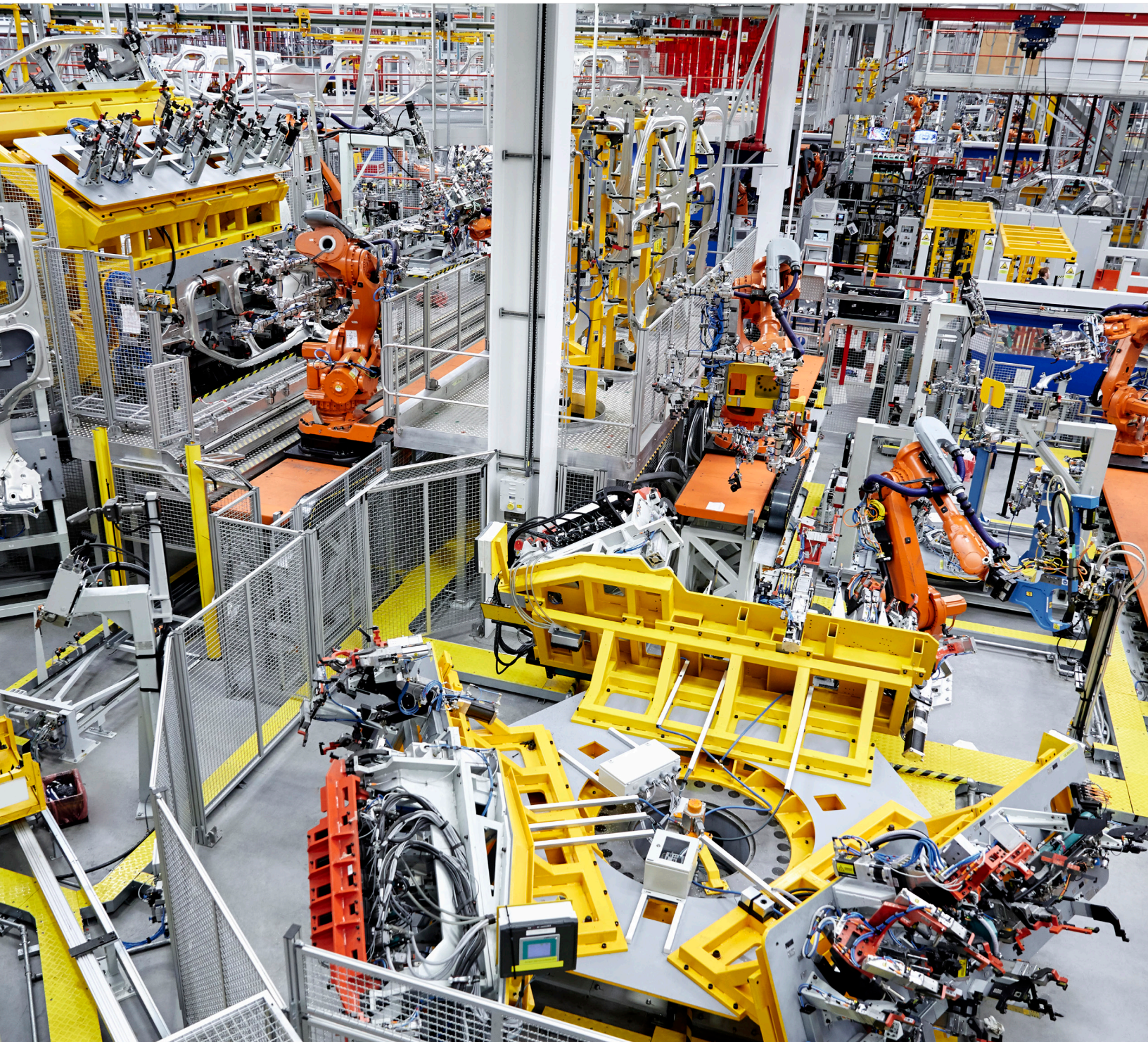
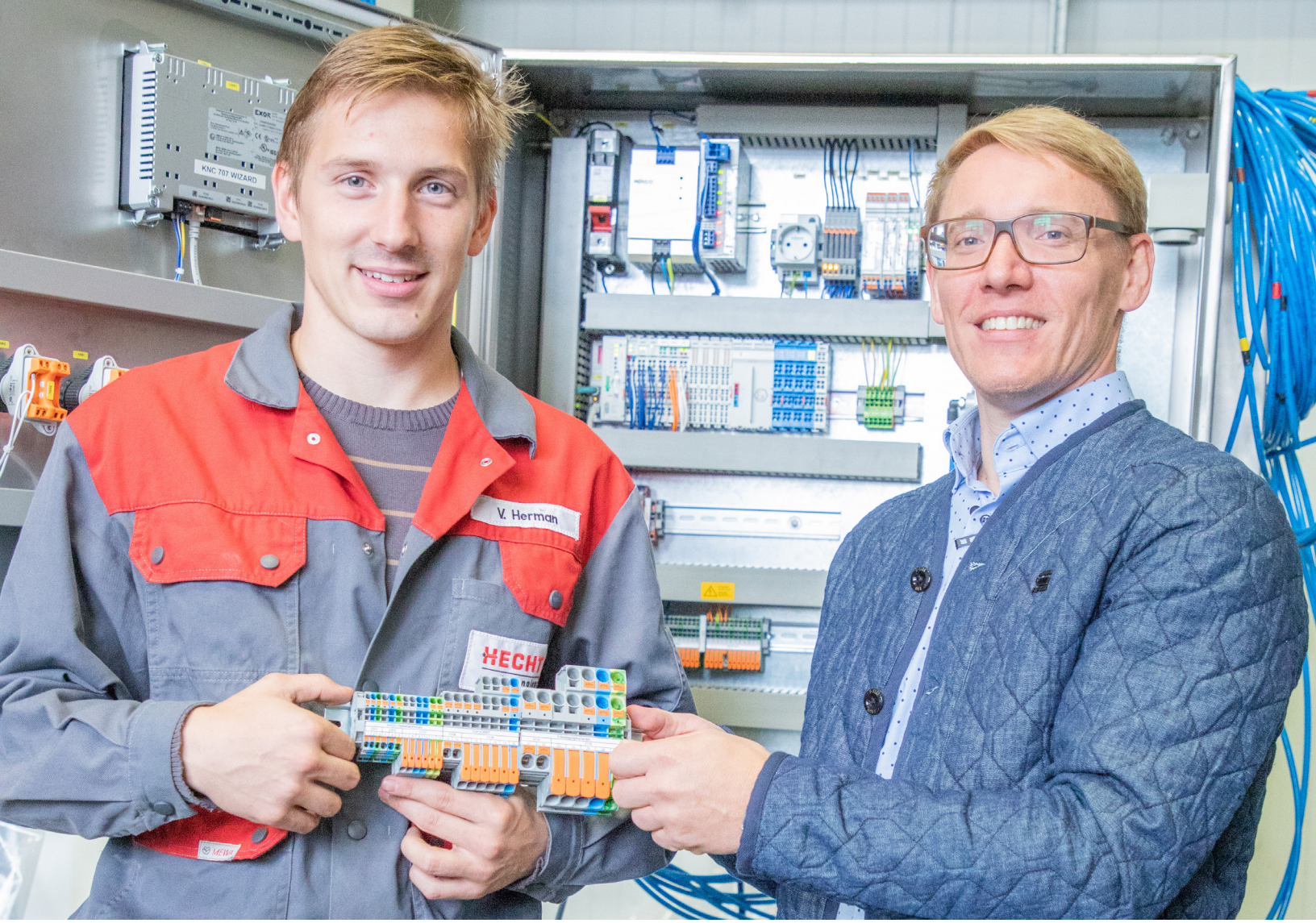
Power Distribution Solutions

With Power Cage-Clamp, Bus-Bar, & TOPJOB® S Terminal Blocks





CONTENTS

WAGO 285 SERIES

✓SAFE ✓SECURE ✓SCALABILITY

High Current Terminal Blocks:

- Use of POWER CAGE CLAMP® spring pressure connection technology
- For conductor sizes up to 350 kcmil

Power Distribution with Power Taps:

- Based on spring pressure connection technology
- For potential distributions and load connections with conductor sizes up to 8 AWG

UL & CSA Certification:

- Approved per UL 1059 / CSA 22.2
- Evaluated for increased Short-Circuit-Current Ratings for use with overcurrent protection devices – Up To 100 kA
- Ex application approved variants for 8 AWG up to 350 kcmil

Power Distribution

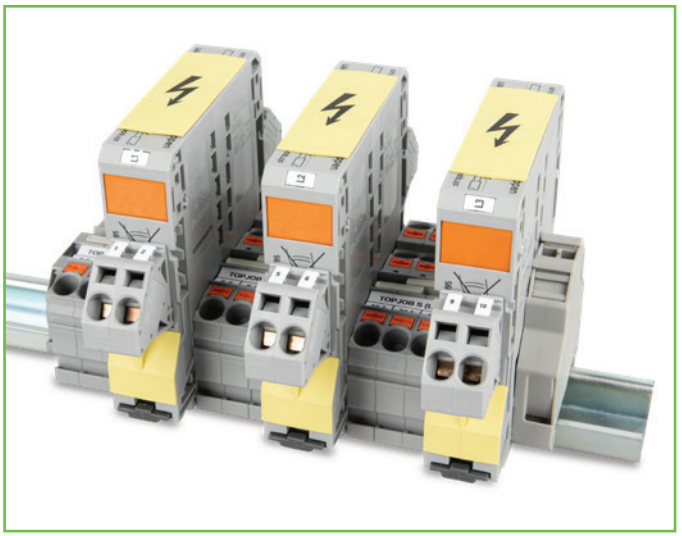
Example Setups

Through Terminal Blocks (L)

- Power supply to lines L1, L2 and L3 on POWER CAGE CLAMP® Series Rail-Mount Terminal Blocks
- Power distribution with power taps and TOPJOB® S Rail-Mount Terminal Blocks

Features with Accessories:

- Potential distribution with TOPJOB® S Series insulted jumpers
- IP20 touch-proof protection thanks to protective warning markers and finger guards

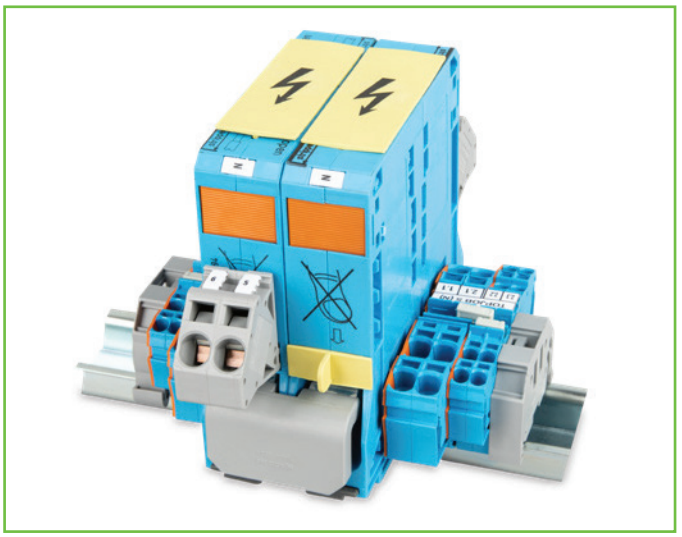


Through Terminal Blocks (N)

- Power supply to the neutral conductor with the POWER CAGE CLAMP® Series terminal blocks
- Distribution of the N potential through power taps and TOPJOB® S Series Rail-Mount Terminal Blocks

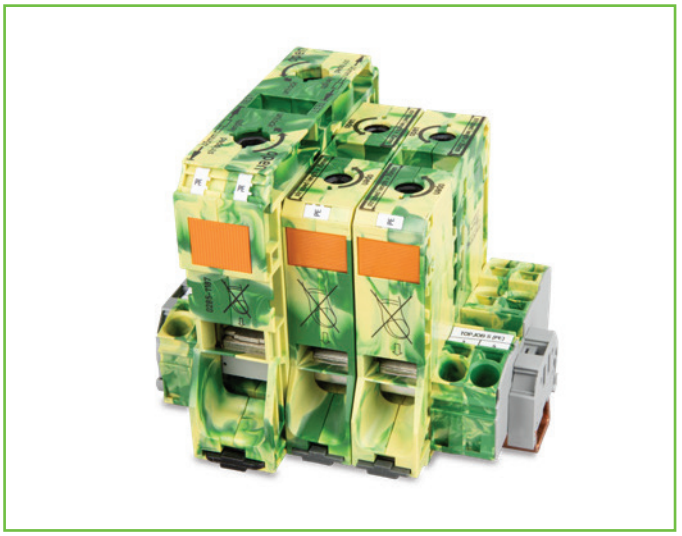
Features with Accessories:

- If the shaft above the conductor entry is already used for potential taps on both sides, the jumper can be rotated 180˚ and inserted into the conductor entry
- IP20 touch-proof protection thanks to protective warning markers and finger guards
- Potential distribution with TOPJOB® S Series insulted jumpers



Ground Terminal Blocks (PE)

- Direct contact between the terminal block and DIN-rail through conductive metal mounting adapters
- No additional power taps or jumpers required for PE distribution to smaller conductor cross-sections
- Copper rail required for conductor cross-sections greater than 35 mm^2

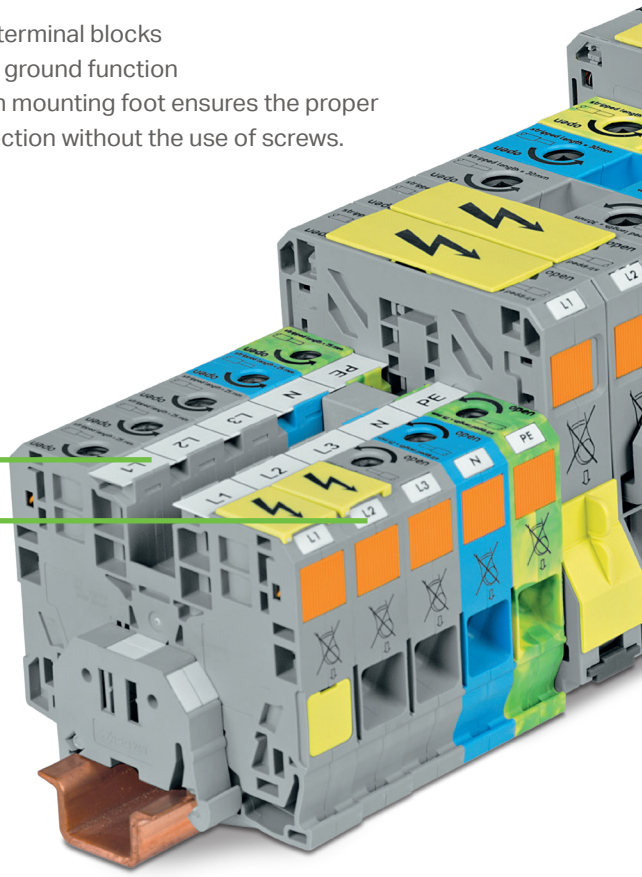


OUR POWER TEAM

Terminate Conductors up to 350 kcmil (185 mm²) with just one turn

Grounding

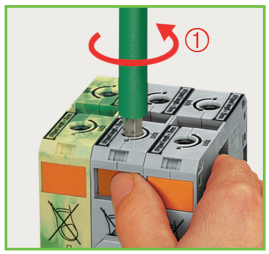
- Green/yellow terminal blocks easily identify ground function
- Metal snap-on mounting foot ensures the proper ground connection without the use of screws.



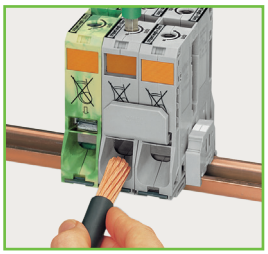
Marking

- Continuous marking strip installed with a quick swipe of the thumb
- Marking tags installed individually above the orange locking tab
- Marking carrier supplements the use of tag and strip marking

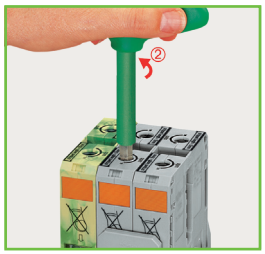
Conductor Termination



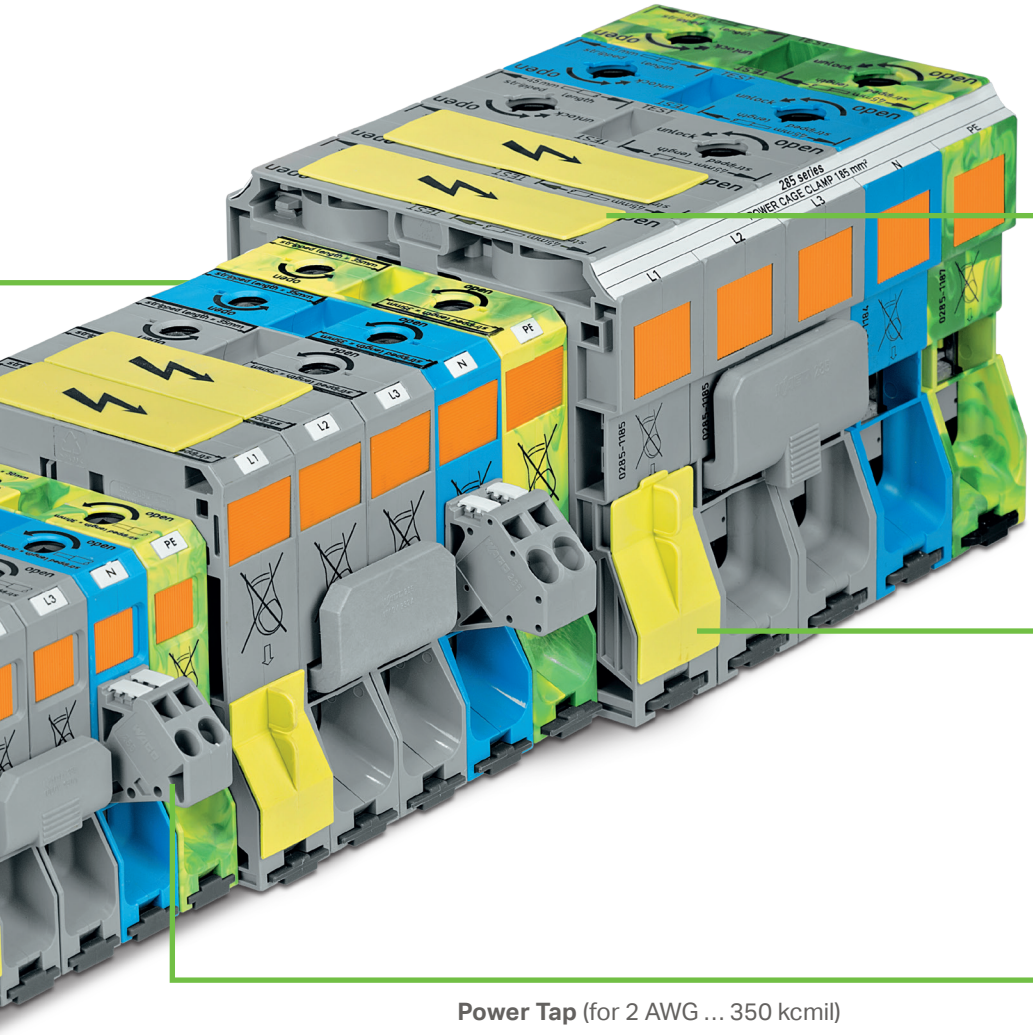
Rotate the operating tool counterclockwise to the stop! Next, push in the orange locking tab for hands-free wiring.



Insert a stripped conductor until it hits the backstop. Hold in this position.



A short counterclock-wise rotation releases the tab. The operating tool then rotates clock-wise, securely clamping the conductor.



Safety

Protective Warning Covers

- Provides visual indication for high-voltage applications and prevents access to conductor clamping mechanism as well as built-in test point

Safety

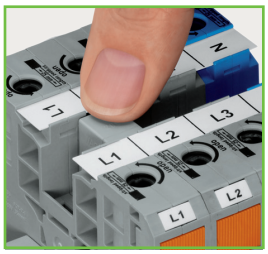
Finger Guards

- Yellow, detachable shock protectors for unused jumper slots or conductor entries

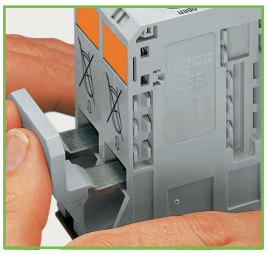
Power Tap (for 2 AWG … 350 kcmil)

- Easy to install, space saving power tap, with marking tag holder, allows for convenient power distribution to additional loads

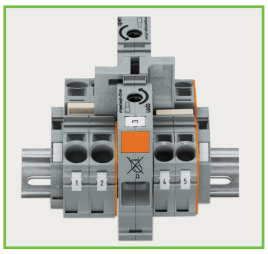
Commoning



For 2 AWG
Convenient push-in adjacent jumper allows for easy potential commoning. Independent jumper slots allow continuous commoning beyond two terminal blocks.

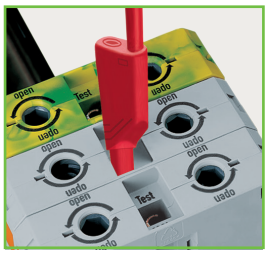


For 2/0, 4/0 and 350 kcmil
Comb style jumper provides convenient potential commoning. Dual jumper slot allows for max rated conductor – no conductor size derating required.



Via Step-Down Jumpers with TOPJOB® S
Push-in, step-down jumper offers easy power distribution from 2 AWG (POWER CAGE CLAMP®) to 20-4 AWG (2010 - 2016 Series TOPJOB®S terminal blocks).

Testing



Easy troubleshooting
via 4 mm Ø touch-proof test plug. Use a test plug adapter (283-404) for 2 AWG terminal blocks.

285 SERIES – DISTRIBUTION and ENHANCED SAFETY SOLUTIONS

POWER CAGE CLAMP® – Pluggable Power Taps

Item Number	Cross-Section (AWG/kcmil)		Rated Current (A)	Max. Voltage (V)	Product Image (Example)
	Line	Load			
285-1175	24-8 AWG		57 per termination	600	
285-407	24-8 AWG		57 per termination	600	
285-447	24-10 AWG		30 per termination	600	
285-427	24-10 AWG		30 per termination	600	

POWER CAGE CLAMP® – Jumper and Safety

Description	Item Number 350 kcmil	Item Number 4/0 AWG	Item Number 1/0 AWG	Item Number 2 AWG	Product Image (Example)
Jumper 2-way	285-1171 310 A	285-495 200 A	285-450 150 A	285-435 85 A	
Finger guard	185-1178	285-169	285-441	285-421	
Protective warning marker with test opening	285-1176	285-175	285-449	-	
Protective warning marker	285-1177	285-170	285-440	285-420	
Mounting adapter for greater stability and easier positioning	285-1179	285-168	285-448	-	
Operating tool	285-172	285-172	285-172	210-721	

POWER CAGE CLAMP® - Elevated SCCR Ratings

RAIL-MOUNT 2-WIRE THROUGH and GROUND CONDUCTOR TERMINAL BLOCKS

Technical data refers to UL 1059

Item Number	Conductor Size (AWG/kcmil)		Rated Current (A)	Required Class/Maximum Permissible Current for the Overcurrent production (A)						SCCR, RMS; Sym, ka	Max. Voltage (V)	Product Image (Example)
	Line	Load		J	T	RK1	RK5	G	CC			
285-1181 285-1184 285-1185 285-1187	1/0-350		310	400	400	200	100	60	30	100	600	
285-191 285-194 285-195 285-995 285-197	4-4/0		200	350	350	200	100	60	30	100	600	
285-150 285-950 285-151 285-154 285-157	1/0-2/0		150	400	400	200	100	60	30	100	600	
	6-2/0		150	200	200	100	30	60	30	100	600	
	8-1/0		150							100	600	
285-131 285-134 285-135 285-137	6-2		115	200	200	100	30	60	30	100	600	
	10-2		115							100	600	

SURFACE MOUNT FLANGE 2-WIRE THROUGH TERMINAL BLOCKS

Technical data refers to UL 1059

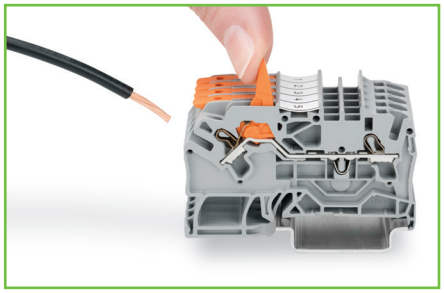
Item Number	Conductor Size (AWG/kcmil)		Rated Current (A)	Required Class/Maximum Permissible Current for the Overcurrent production (A)						SCCR, RMS; Sym, ka	Max. Voltage (V)	Product Image (Example)
	Line	Load		J	T	RK1	RK5	G	CC			
285-1161 285-1163 285-1164 285-1167	1/0-350		310	400	400	200	100	60	30	100	600	
285-181 285-184 285-187	4-4/0		200	350	350	200	100	60	30	100	600	
285-141 285-144 285-147	1/0-2/0		150	400	400	200	100	60	30	100	600	
	6-2/0		150	200	200	100	30	60	30	100	600	
	8-1/0		150							100	600	

TOPJOB® S Rail-Mount Terminal Blocks

3 Ways to Wire

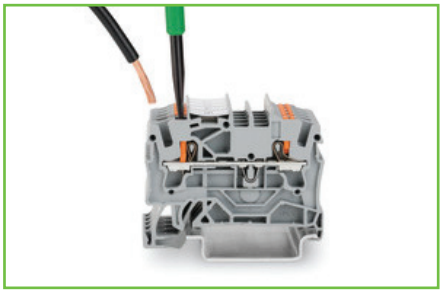
Features / Advantages	Actuation Type		
	Operating Slot	Push-Button	Lever
Intuitive operation		x	x
Both hands-free	x		x
Push-in CAGE CALMP® termination	x	x	x
Type of tool	Operating tool	Any	No tool required
Contact quality	x	x	x
For every application	x	x	x
Safety reserves (Current carrying capacity)	x	x	x
One range of jumpers for all	x	x	x
One marking system for all	x	x	x

2100 Series



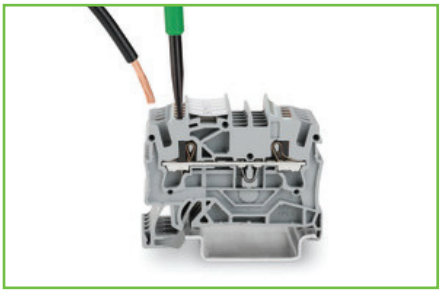
Lever up until it "clicks", insert the conductor and lever down for all conductor types

2200 Series

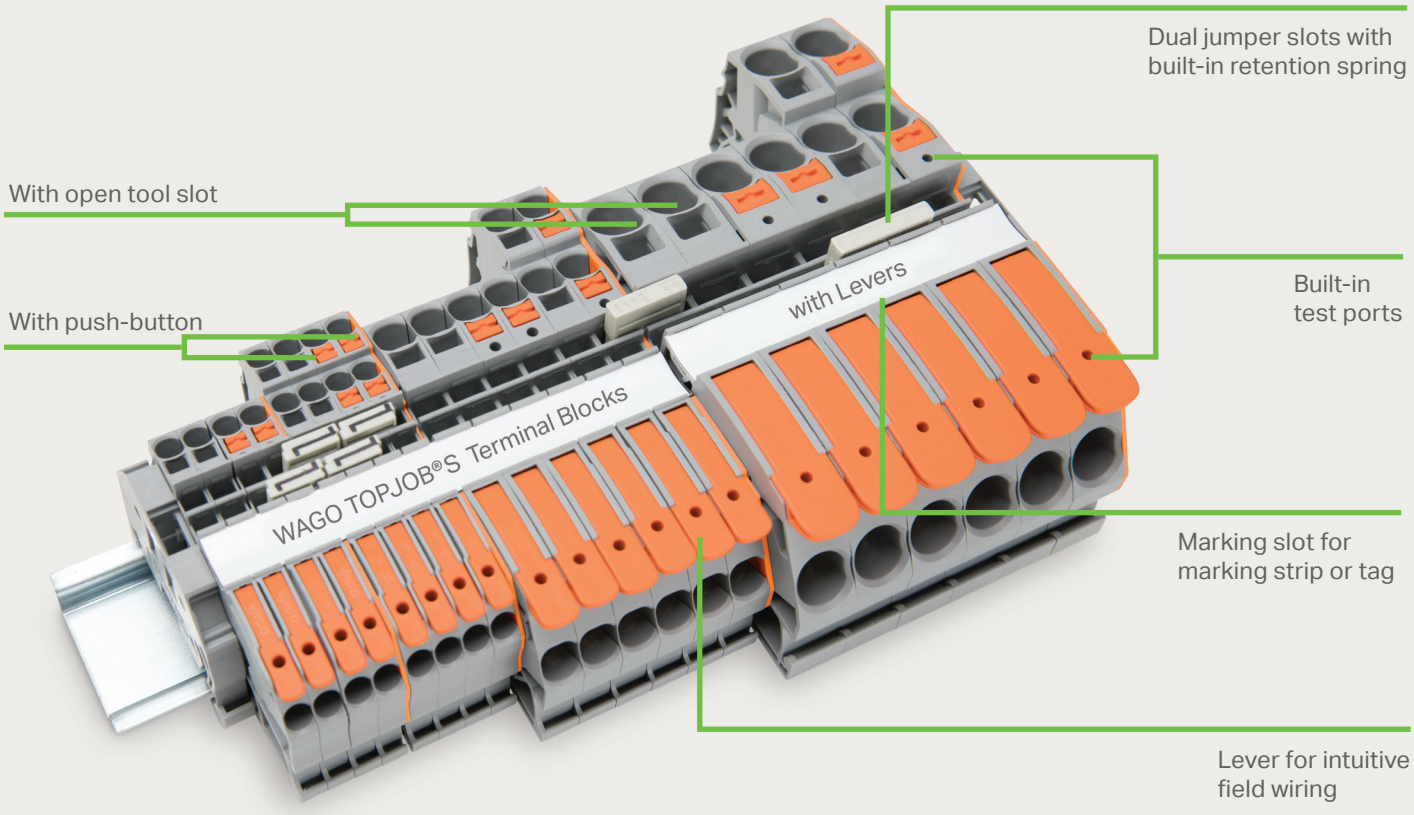


Terminate fine-stranded conductors via operating tool

2000 Series



Terminate fine-stranded conductors via operating tool



TOPJOB® S Terminal Blocks

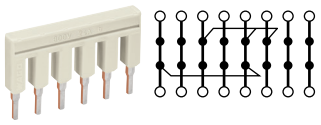
Accessories

Having the right accessories available is an important consideration when selecting the right terminal block for your application. With the broadest range of accessories in the industry, the TOPJOB® S family of accessories not only increases safety and functionality, but they also reduce assembly time, troubleshooting and costs.

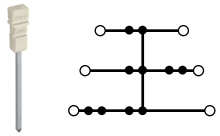
Advantages:

- Exclusive jumper retention spring securely holds the jumpers in place
- Industry's most comprehensive jumper offering simplifies complex wiring tasks
- Multi-line, continuous strip marking is fast, economical and clearly identified
- One family — accessories fit all TOPJOB® S terminal blocks in the same series

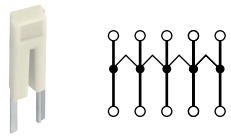
Push-In Type Jumper Bar



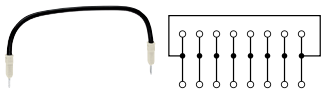
Vertical Jumper



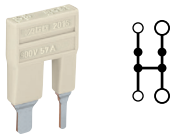
Continuous Jumpers



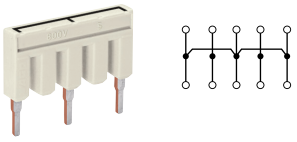
Push-In Type Wire Jumper



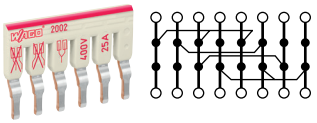
Step-Down Jumper



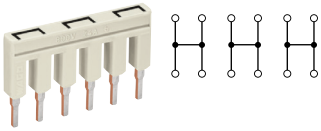
Star Point Jumper

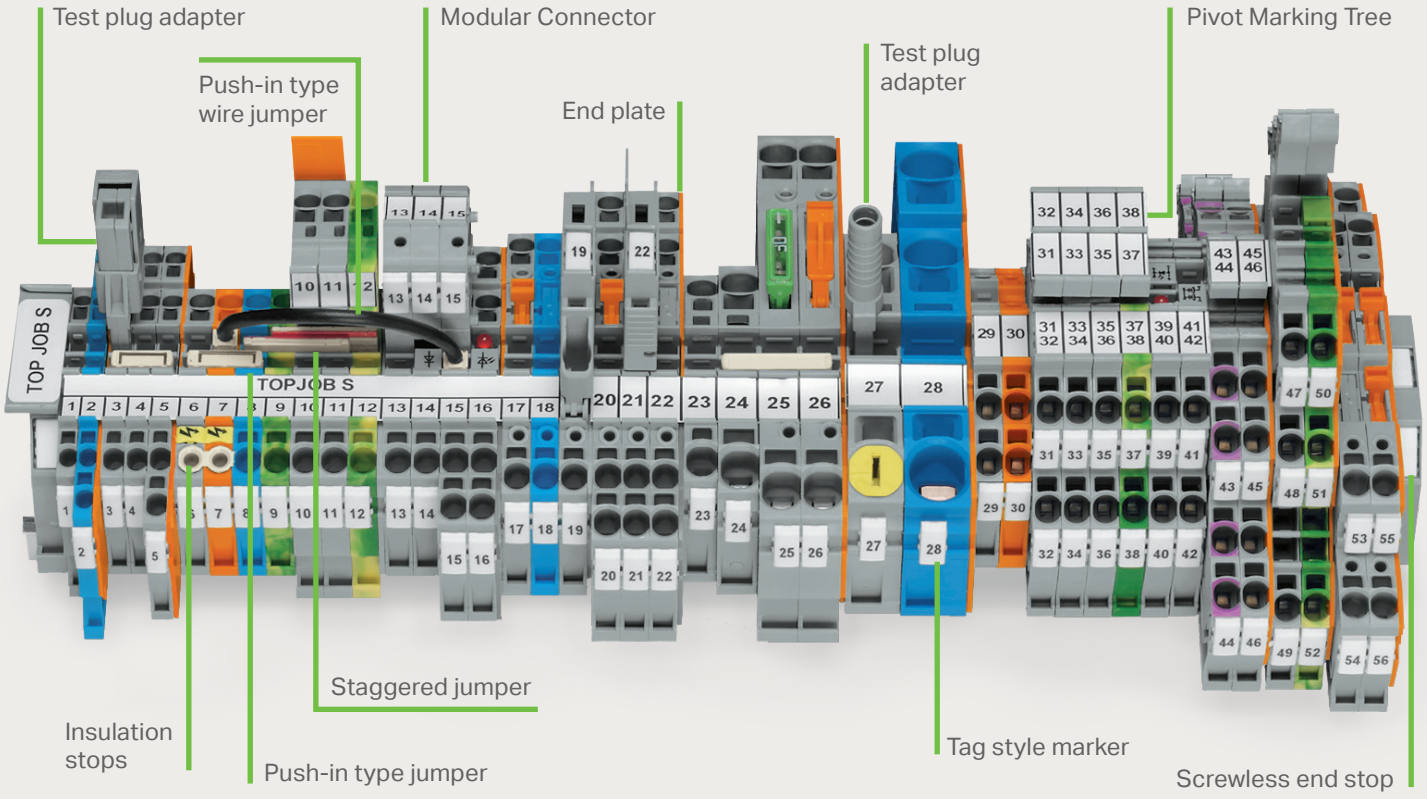


Staggered Jumpers



Delta Jumper





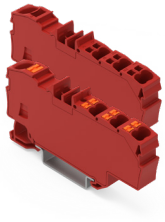
TOPJOB® S Power Distribution Terminal Blocks

2006 & 2206 Series TOPJOB® S Distribution Block

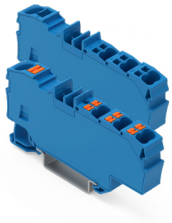
Distribution solutions are a critical component in electrical installation and control panel design. WAGO's new Push-Button and Open Tool Slot TOPJOB® S Distribution Terminal Blocks are extremely compact and designed to provide efficient potential distribution from a single terminal block. This terminal block is just 9 mm (3/8 in.) wide, allows power feed-in up to a nominal cross-section of 8 AWG (10 AWG with ferrule) and has a total of six 14 AWG outputs – the ideal addition for integrating power supplies and fuse protection. Each connection point comes with molded-in conductor entry marking, meeting the distribution terminal block requirements of many CAE systems.

Joining WAGO's TOPJOB® S line offers Application Engineers design compatibility with all other TOPJOB® S Series products and accessories. The thin profile of this 2006 Series option conveniently mounts on DIN-35 rail, helping reduce the size of any rail footprint. It also provides panel space savings and opening design configuration options minimizing exposure to incoming power sources. The latest addition to WAGO's existing terminal block offerings can be ordered in four color options for intuitive field identification and design flexibility.

2006-8031
2206-8031

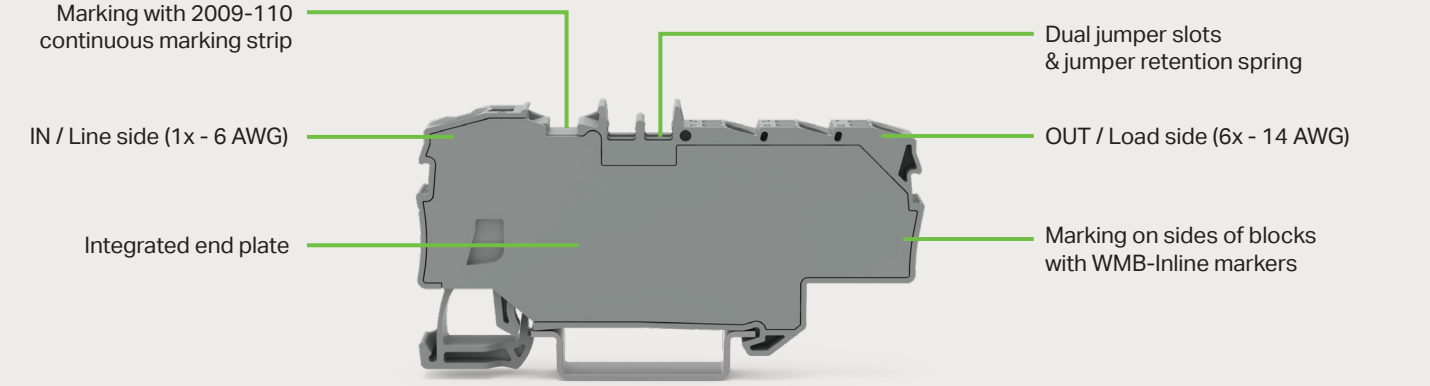


2006-8033
2206-8033



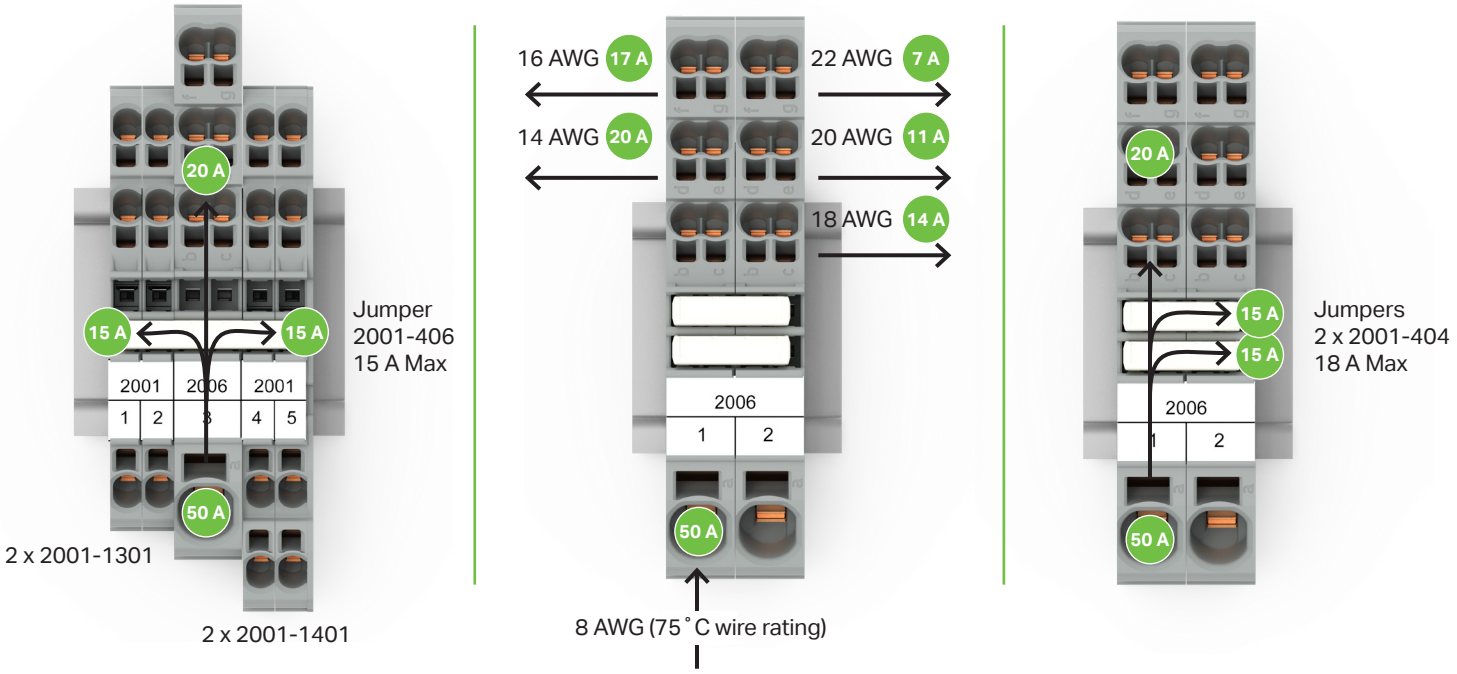
2006-8034
2206-8034

2006-8035
2206-8035

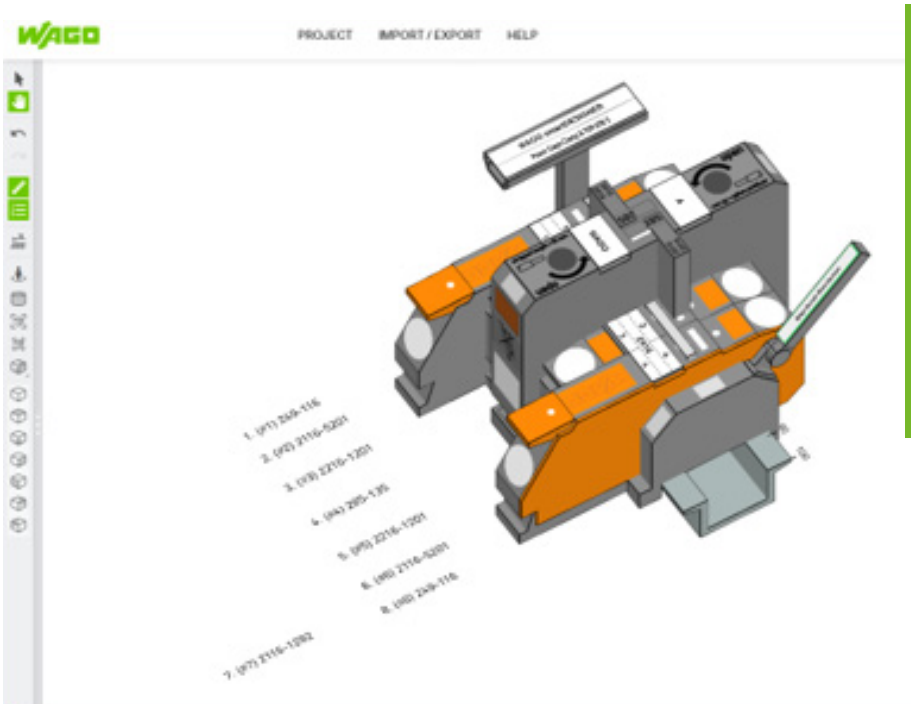


Commoning options for the 2006/2206 Series Distribution Terminal Blocks and 2001 Series Terminal Blocks using 2001 Series Jumpers. Note: The total current of the outgoing circuits must not exceed the nominal current of the push-in type jumper bar.

2006-803x & 2206-803x Examples

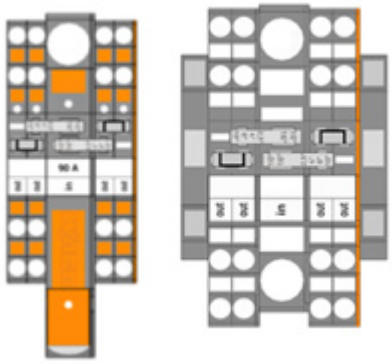


285 Series and TOPJOBS - Configure and Scale Your Applications with Smart Designer



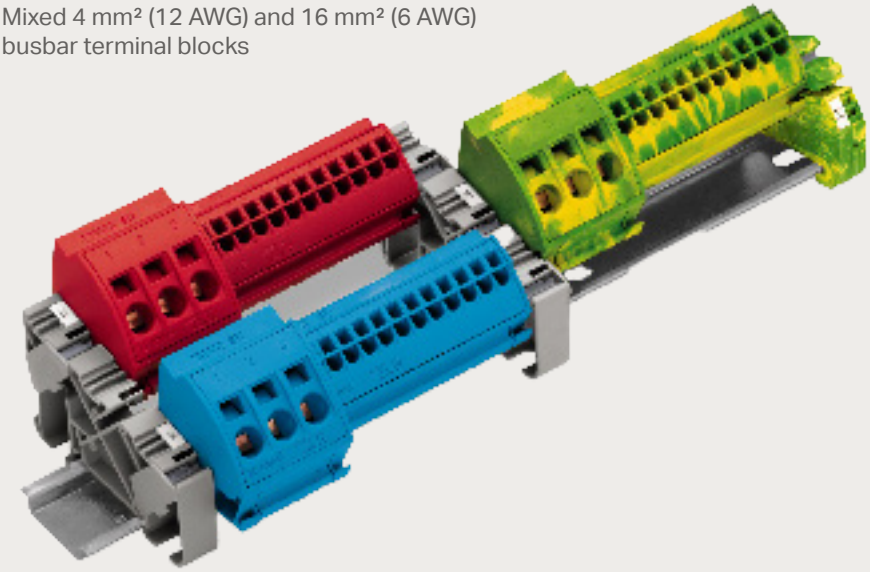
Smart Designer

- No installation required
- Free online configuration and ordering software for all electrical interconnect and automation components
- Available worldwide – 24 hours a day
- Item data is always updated
- Auto-audit feature checks product compatibility via programed database
- Design in full 3-D

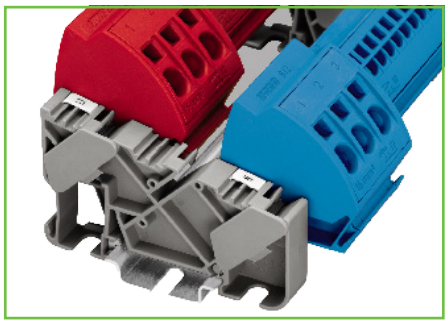


812 Series Busbar Distribution Terminal Blocks

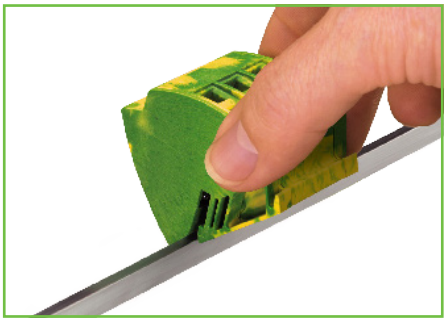
Mixed 4 mm² (12 AWG) and 16 mm² (6 AWG) busbar terminal blocks



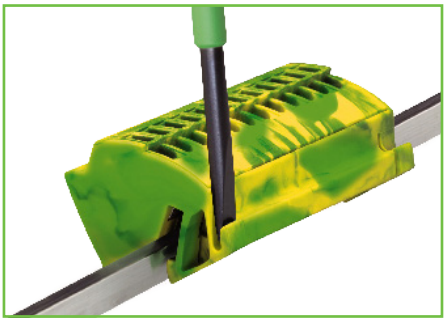
Using the 812 Series Busbar Terminal Blocks in switchgear cabinets and distribution boards permits simple and safe potential distribution on standard (10 x 3) mm busbars. Tool-free and self-locking busbar terminal blocks can be snapped onto the busbar. Providing engineers a quick and easy assembly, The busbar terminal blocks are available in two different versions for conductors ranging from 1.5 to 16 mm² (16–6 AWG). Current carrying capacity: With a maximum total current of 96 A, the clamping units of the busbar terminal block can be loaded with the rated current of the conductor cross sections approved. This only applies when (10 x 3) mm busbars are used.



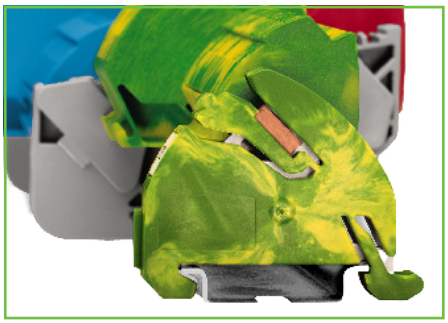
Busbar carrier (812-140):
Offers three receptacles for (10 x 3) mm busbars with locking device for easy mounting of the busbars. The carrier can be snapped onto the DIN-35 rail or screwed on a panel.



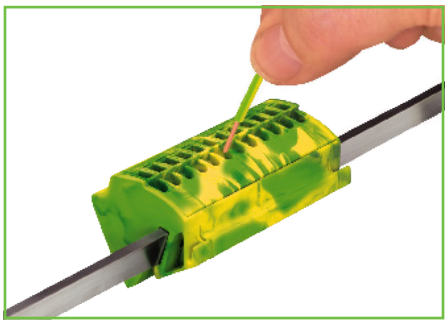
Snapping a ground busbar terminal block onto the N-bus-bar.



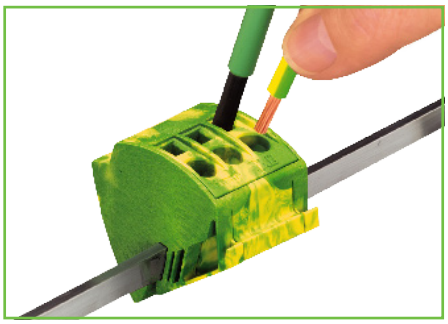
Unlock right and left positions to remove the ground busbar terminal block. Then pull up the block from the busbar.



Ground busbar carrier (812-141):
Offers a receptacle with locking device for (10 x 3) mm busbar. Contact between the busbar and rail is made automatically by simply snapping the carrier onto the DIN-35 rail. One end of the busbar is mounted onto the ground busbar carrier, the other end is inserted into the middle position of the insulated busbar carrier.



Conductor termination (4 mm²/12 AWG): With Push-in CAGE CLAMP®, solid conductors can be terminated by simply pushing them into the 12 x 4 mm² busbar terminal block, significantly reducing wiring time.



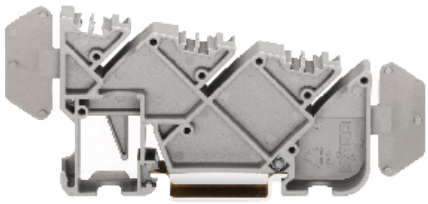
Conductor termination (16 mm²/6 AWG): Open the clamping unit with an operating tool when terminating solid, stranded and fine-stranded conductors.

Busbar Terminal Blocks

20-12 AWG and 14-6 AWG

Technical Data	
0.5…4 mm²	20…12 AWG
1000 V/6 kV/3	600 V, 20 A
I_N 96 A	600 V, 95 A
Terminal block width: 75 mm / 2.953 inch	
11 mm / 0.34 inch	

Technical Data	
1.5…16 mm²	14…6 AWG
1000 V/6 kV/3	600 V, 20 A
I_N 96 A	600 V, 95 A
Terminal block width: 38 mm / 1.496 inch	
12 mm / 0.47 inch	



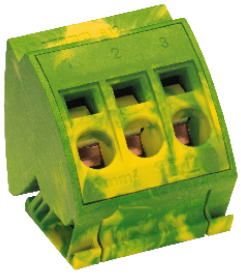
Busbar terminal block 4 mm²; with Push-in CAGE CLAMP® connection		
Color	Item No.	Pack. Unit
Blue	812-104	10
Light gray	812-101	10
Dark gray	812-102	10
Red	812-103	10

Busbar terminal block16 mm²; with CAGE CLAMP® connection		
Color	Item No.	Pack. Unit
Blue	812-114	12
Light gray	812-111	12
Dark gray	812-112	12
Red	812-113	12

Insulated busbar carrier; 12 mm wide		
Color	Item No.	Pack. Unit
Gray	812-140	25

Accessories; item-specific			
Busbar, tin-plated; 1000 mm long; Copper (10x3) mm			
	I_N 140 A	210-133	1

Accessories; item-specific			
Busbar, tin-plated; 1000 mm long; Copper (10x3) mm			
	I_N 140 A	210-133	1



Busbar terminal block 4 mm²; with Push-in CAGE CLAMP® connection		
Color	Item No.	Pack. Unit
Green-yellow	812-100	10

Busbar terminal block16 mm²; with CAGE CLAMP® connection		
Color	Item No.	Pack. Unit
Green-yellow	812-110	12

Ground busbar carrier; with DIN-35 rail contact; 11 mm		
Color	Item No.	Pack. Unit
Green-yellow	812-141	25

Accessories; item-specific			
Busbar, tin-plated; 1000 mm long; Copper (10x3) mm			
	I_N 140 A	210-133	1

Accessories; item-specific			
Busbar, tin-plated; 1000 mm long; Copper (10x3) mm			
	I_N 140 A	210-133	1

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