

Color: ■ green-yellow

Ground terminal block, 285 Series, green-yellow

Our ground terminal block (item number 285-137) makes connections quick and easy. Strip lengths must be 25 mm when connecting conductors to this ground terminal block. This product features conductor terminals and utilizes POWER CAGE CLAMP. The POWER CAGE CLAMP is a powerful, maintenance-free, and universal way to connect large conductor cross-sections. It's also suitable for all conductor types. The clamping point can be locked open and you do not need to use a torque wrench or prepare the conductor in any way, e.g., by crimping the ferrule. This ground terminal block is suitable for conductor cross sections ranging from 6 mm<sup>2</sup> to 35 mm<sup>2</sup>. It has one level. You can connect a single potential using the two clamping points. The green-yellow housing is made of polyamide (PA66) for insulation. These high-current terminal blocks are mounted using DIN-rails 35 x 15..

Connection data			
Clamping units	2	<b>Connection 1</b>	
Total number of potentials	1	Connection technology	POWER CAGE CLAMP
Number of levels	1	Actuation type	Operating tool
Number of jumper slots	2	Connectable conductor materials	Copper
		Nominal cross-section	35 mm <sup>2</sup>
		Solid conductor	6 ... 35 mm <sup>2</sup> / 8 ... 2 AWG
		Stranded conductor	6 ... 35 mm <sup>2</sup> / 8 ... 2 AWG
		Fine-stranded conductor	6 ... 35 mm <sup>2</sup> / 8 ... 2 AWG
		Fine-stranded conductor; with insulated ferrule	6 ... 35 mm <sup>2</sup> / 8 ... 2 AWG
		Fine-stranded conductor; with uninsulated ferrule	6 ... 35 mm <sup>2</sup> / 8 ... 2 AWG
		Strip length	25 mm / 0.98 inches
		Wiring direction	Side-entry wiring
Physical data			
Width	16 mm / 0.63 inches		
Height	86 mm / 3.386 inches		
Depth from upper-edge of DIN-rail	63 mm / 2.48 inches		



Mechanical data	
Mounting type	DIN-rail 35 x 15
Mounting (note)	only suitable for DIN 35 x 15 rail
Marking level	Side marking

Material data	
Note (material data)	<a href="#">Information on material specifications can be found here</a>
Color	green-yellow
Material group	I
Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.154 MJ
Weight	108.3 g

Environmental requirements	
Processing temperature	-35 ... +85 °C
Continuous operating temperature	-60 ... +105 °C
Environmental Testing (Environmental Conditions)	
Test specification Railway applications – Rolling stock – Electronic equipment	DIN EN 50155 (VDE 0115-200):2022-06
Test procedure Railway applications – Rolling stock equipment – Shock and vibration tests	DIN EN 61373 (VDE 0115-0106):2011-04
Spectrum/Installation location	Service life test, Category 1, Class A/B
Function test with noise-like vibration	Test passed according to Section 8 of the standard
Frequency	f <sub>1</sub> = 5 Hz to f <sub>2</sub> = 150 Hz f <sub>1</sub> = 5 Hz to f <sub>2</sub> = 150 Hz
Acceleration	0.101g (highest test level used for all axes) 0.572g (highest test level used for all axes) 5g (highest test level used for all axes)
Test duration per axis	10 min. 5 h
Test directions	X, Y and Z axes X, Y and Z axes X, Y and Z axes
Monitoring for contact faults/interruptions	Passed
Voltage drop measurement before and after each axis	Passed
Simulated service life test through increased levels of noise-like vibration	Test passed according to Section 9 of the standard
Extended test scope: Monitoring for contact faults/interruptions	Passed Passed
Extended test scope: Voltage drop measurement before and after each axis	Passed Passed
Shock test	Test passed according to Section 10 of the standard
Shock form	Half sine
Shock duration	30 ms
Number of shocks per axis	3 pos. und 3 neg.
Vibration and shock stress for rolling stock equipment	Passed



Commercial data		
Product Group	1 (Rail Mounted Terminal Blocks)	
PU (SPU)	15 pcs	
Packaging type	Box	
Country of origin	PL	
GTIN	4045454507404	
Customs tariff number	85369010000	

Product classification		
UNSPSC	39121410	

Environmental Product Compliance		
RoHS Compliance Status	Compliant,No Exemption	

Approvals / Certificates

General approvals			Declarations of conformity and manufacturer's declarations		
Approval	Standard	Certificate Name	Approval	Standard	Certificate Name
CCA DEKRA Certification B.V.	EN 60947	NTR NL-7707	EU-Declaration of Confor- mity WAGO GmbH & Co. KG	-	-
CSA DEKRA Certification B.V.	C22.2 No. 158	154112	Railway WAGO GmbH & Co. KG	-	Z00004420.000
KEMA/KEUR DEKRA Certification B.V.	EN 60947	71-105562	UK-Declaration of Confor- mity WAGO GmbH & Co. KG	-	-
UL Underwriters Laboratories Inc.	UL 1059	E45172			

Approvals for marine applications

Approval	Standard	Certificate Name
ABS American Bureau of Ship- ping	EN 60947	20-HG1941090-PDA
DNV GL Det Norske Veritas, Ger- manischer Lloyd	-	TAE00001V2
LR Lloyds Register	EN 60947	91/20112 (E9)

Approvals for hazardous areas

Approval	Standard	Certificate Name
AEx Underwriters Laboratories Inc.	-	E185892 (AEx eb II C resp. Ex eb II C)



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Documentation

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Technical Section

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1 Compatible Products

1.1 Optional Accessories

1.1.1 Cover

1.1.1.1 Cover



[Item No.: 285-421](#)  
Finger guard; touchproof cover protects unused conductor entries; for 35 mm² high-current tbs; yellow

1.1.2 DIN-rail

1.1.2.1 Mounting accessories



[Item No.: 210-198](#)  
Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; copper-colored



[Item No.: 210-508](#)  
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; similar to EN 60715; silver-colored



[Item No.: 210-197](#)  
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715; silver-colored



[Item No.: 210-506](#)  
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715; silver-colored



[Item No.: 210-114](#)  
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored



[Item No.: 210-118](#)  
Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored



1.1.3 Ferrule

1.1.3.1 Ferrule



**Item No.: 216-413**  
Ferrule; Sleeve for 25 mm<sup>2</sup> / AWG 4; unin-  
sulated; electro-tin plated; electrolytic  
copper; gastight crimped; acc. to DIN  
46228, Part 1/08.92; silver-colored



**Item No.: 216-414**  
Ferrule; Sleeve for 35 mm<sup>2</sup> / AWG 2; unin-  
sulated; electro-tin plated; electrolytic  
copper; gastight crimped; acc. to DIN  
46228, Part 1/08.92; silver-colored

1.1.4 Installation

1.1.4.1 Mounting accessories



**Item No.: 249-117**  
Screwless end stop; 10 mm wide; for DIN-  
rail 35 x 15 and 35 x 7.5; gray



**Item No.: 249-197**  
Screwless end stop; 14 mm wide; for DIN-  
rail 35 x 15 and 35 x 7.5; gray

1.1.5 Jumper

1.1.5.1 Jumper



**Item No.: 285-435**  
Jumper; insulated; gray



**Item No.: 285-430**  
Step-down jumper; from 285 (35mm<sup>2</sup>) to  
2016/2010 series; insulated; gray

1.1.6 Marking

1.1.6.1 Group marker carrier



**Item No.: 249-105**  
Group marker carrier; gray

1.1.6.2 Marker



**Item No.: 793-5501/000-006**  
WMB marking card; as card; for terminal  
block width 5 - 17.5 mm; stretchable 5 -  
5.2 mm; plain; snap-on type; blue



**Item No.: 793-5501/000-014**  
WMB marking card; as card; for terminal  
block width 5 - 17.5 mm; stretchable 5 -  
5.2 mm; plain; snap-on type; brown



**Item No.: 793-5501/000-007**  
WMB marking card; as card; for terminal  
block width 5 - 17.5 mm; stretchable 5 -  
5.2 mm; plain; snap-on type; gray



**Item No.: 793-5501/000-023**  
WMB marking card; as card; for terminal  
block width 5 - 17.5 mm; stretchable 5 -  
5.2 mm; plain; snap-on type; green



**Item No.: 793-5501/000-017**  
WMB marking card; as card; for terminal  
block width 5 - 17.5 mm; stretchable 5 -  
5.2 mm; plain; snap-on type; light green



**Item No.: 793-5501/000-012**  
WMB marking card; as card; for terminal  
block width 5 - 17.5 mm; stretchable 5 -  
5.2 mm; plain; snap-on type; orange



**Item No.: 793-5501/000-005**  
WMB marking card; as card; for terminal  
block width 5 - 17.5 mm; stretchable 5 -  
5.2 mm; plain; snap-on type; red



**Item No.: 793-5501/000-024**  
WMB marking card; as card; for terminal  
block width 5 - 17.5 mm; stretchable 5 -  
5.2 mm; plain; snap-on type; violet



**Item No.: 793-5501**  
WMB marking card; as card; for terminal  
block width 5 - 17.5 mm; stretchable 5 -  
5.2 mm; plain; snap-on type; white



**Item No.: 793-5501/000-002**  
WMB marking card; as card; for terminal  
block width 5 - 17.5 mm; stretchable 5 -  
5.2 mm; plain; snap-on type; yellow



**Item No.: 793-501/000-006**  
WMB marking card; as card; not stretcha-  
ble; plain; snap-on type; blue



**Item No.: 793-5501/000-007**  
WMB marking card; as card; not stretcha-  
ble; plain; snap-on type; gray



1.1.6.2 Marker



**Item No.: 793-501/000-023**  
WMB marking card; as card; not stretchable; plain; snap-on type; green



**Item No.: 793-501/000-017**  
WMB marking card; as card; not stretchable; plain; snap-on type; light green



**Item No.: 793-501/000-012**  
WMB marking card; as card; not stretchable; plain; snap-on type; orange



**Item No.: 793-501/000-005**  
WMB marking card; as card; not stretchable; plain; snap-on type; red



**Item No.: 793-501/000-024**  
WMB marking card; as card; not stretchable; plain; snap-on type; violet



**Item No.: 793-501**  
WMB marking card; as card; not stretchable; plain; snap-on type; white



**Item No.: 793-501/000-002**  
WMB marking card; as card; not stretchable; plain; snap-on type; yellow



**Item No.: 2009-115/000-006**  
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; blue



**Item No.: 2009-115/000-007**  
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray



**Item No.: 2009-115/000-023**  
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green



**Item No.: 2009-115/000-017**  
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; light green



**Item No.: 2009-115/000-012**  
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange



**Item No.: 2009-115/000-005**  
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; red



**Item No.: 2009-115/000-024**  
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet



**Item No.: 2009-115**  
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white



**Item No.: 2009-115/000-002**  
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow

1.1.6.3 Marker carrier



**Item No.: 285-442**  
Adaptor; gray

1.1.6.4 Marking strip



**Item No.: 2009-110**  
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white

1.1.7 Power tap

1.1.7.1 Power tap



**Item No.: 285-427**  
Power tap; for 35 mm² high-current tbs; Module width 8 mm; 6,00 mm²; gray



**Item No.: 283-407**  
Power tap; with 500 mm cable; for 16 mm² (283/783 Series) and 35 mm²; gray

1.1.8 Protective warning marker

1.1.8.1 Cover



**Item No.: 285-420**  
Protective warning marker; with high-voltage symbol, black; yellow

1.1.9 Test and measurement

1.1.9.1 Testing accessories



**Item No.: 283-404**  
Test plug adapter; 11.6 mm wide; for 4 mm Ø test plugs; gray

1.1.10 Tool

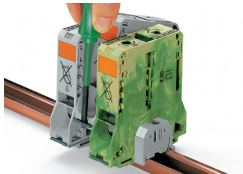
1.1.10.1 Operating tool



**Item No.: 210-721**  
Operating tool; Blade: 5.5 x 0.8 mm; with a partially insulated shaft; multicoloured

Installation Notes

Installation

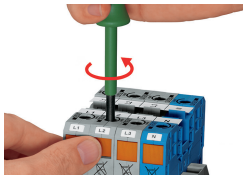


Removing a terminal block from the assembly (to the left or to the right).

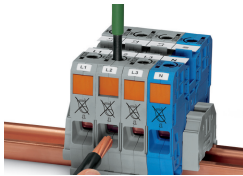


**Grounding foot:**  
Ground conductor terminal blocks (limited to max. 120 mm²/250 kcmil per EN 60947-7-2) must be snapped onto a 2.3 mm thick copper DIN-rail.

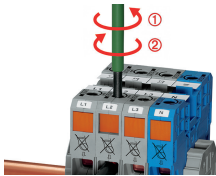
Conductor termination



**Conductor termination – step 1:**  
Rotate the operating tool (5.5 mm blade width) counter-clockwise. Next, push in the orange locking tab. The clamp is locked open for hands-free wiring.



**Conductor termination – step 2:**  
Insert a stripped conductor into the clamping unit until it hits the backstop. Hold in this position.

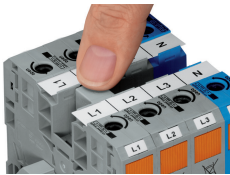


**Conductor termination – step 3:**  
A short counter-clockwise rotation closes the clamp, securing the conductor. When unlocked, allow the operating tool to rotate clockwise to securely terminate the conductor.

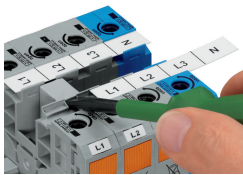


Side-entry wiring means that even larger conductors, which have limited flexibility, can be easily connected.

Commoning

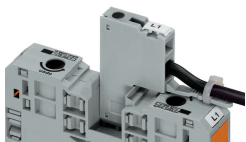


Commoning adjacent terminal blocks using a centrally positioned push-in jumper.

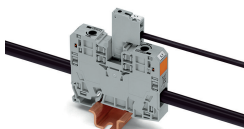


Slide the marking strip laterally to remove the jumper.

Power tap



The power tap is inserted into the jumper contact slot. It can be fitted with a strain relief plate.

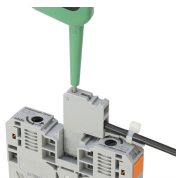


Power tap inserted in a jumper contact slot

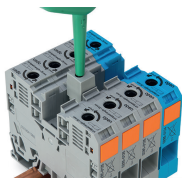


Always push voltage tap (Item No. 283-407) down into the terminal block until fully inserted!

Testing

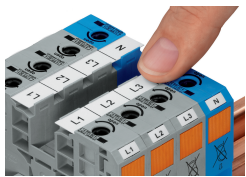


Testing  
Voltage measurements can be performed, e.g., using a 2-pole voltage tester (Item No. 206-707).

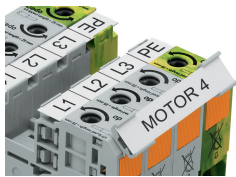


Testing with test plug adapter (Item No. 283-404).

Marking



WMB markers or self-adhesive, printable marking strips can be accommodated on 35, 50 and 95 mm<sup>2</sup> high-current terminal blocks.



Marker carrier (Item No. 285-442) for marking strips (Item No. 2009-110) or 2 WMB markers for 285-13x, 285-15x and 285-19x Terminal Blocks