

Color: ■ gray

Through terminal block, 285 Series, t-wrench und 8 mm

This through terminal block (item number 285-150) is designed for easy and secure connections. Strip lengths must be 30 mm when connecting conductors to this through terminal block. Featuring conductor terminals along with POWER CAGE CLAMP, this product delivers reliable performance. The POWER CAGE CLAMP is perfect for connecting large conductor cross-sections. This universal connector is both reliable and maintenance-free. What's more, you can use it to connect all types of conductors and the clamping point can be locked open, making it easier to use. You do not need to use a torque wrench or prepare the conductor. For example, crimping ferrules is not necessary. This through terminal block is suitable for conductor cross sections ranging from 10 mm² to 50 mm². It features one level and two clamping points for connecting a single potential. The gray housing is made of polyamide (PA66) for insulation. These high-current terminal blocks are mounted using DIN-rails 35 x 15..

Electrical data				
Ratings per		IEC/EN 60947-7-1		
Overvoltage category		III	III	II
Pollution degree		3	2	2
Nominal voltage		1000 V	-	-
Rated surge voltage		8 kV	-	-
Rated current		150 A	-	-
Approvals per		UL 1059		
Use group		B	C	D
Rated voltage		600 V	600 V	-
Rated current		150 A	150 A	-
Approvals per		CSA 22.2 No 158		
Use group		B	C	D
Rated voltage		600 V	600 V	-
Rated current		150 A	-	-
Power Loss				
Power loss, per pole (potential)		4.725 W		
Rated current I <sub>N</sub> for specified power loss		150 A		
Resistance value for specified, current-dependent power loss		0.0001 Ω		

Connection data		Connection 1	
Clamping units	2	Connection technology	POWER CAGE CLAMP
Total number of potentials	1	Actuation type	T-wrench; 8 mm
Number of levels	1	Connectable conductor materials	Copper
Number of jumper slots	2	Nominal cross-section	50 mm²
		Solid conductor	10 ... 50 mm² / 8 ... 1/0 AWG
		Stranded conductor	10 ... 50 mm² / 8 ... 1/0 AWG
		Fine-stranded conductor	10 ... 70 mm² / 8 ... 2/0 AWG
		Fine-stranded conductor; with insulated ferrule	10 ... 50 mm² / 8 ... 1/0 AWG



Connection 1	
Fine-stranded conductor; with uninsulated ferrule	10 ... 50 mm² / 8 ... 1/0 AWG
Strip length	30 mm / 1.18 inches
Wiring direction	Side-entry wiring

Physical data		
Width		20 mm / 0.787 inches
Height		94 mm / 3.701 inches
Depth from upper-edge of DIN-rail		87 mm / 3.425 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	gray
Material group	I
Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	2.168 MJ
Weight	158.8 g

Environmental requirements																												
Processing temperature	-35 ... +85 °C	<table><tr><th colspan="2">Environmental Testing (Environmental Conditions)</th></tr><tr><td>Test specification Railway applications – Rolling stock – Electronic equipment</td><td>DIN EN 50155 (VDE 0115-200):2022-06</td></tr><tr><td>Test procedure Railway applications – Rolling stock equipment – Shock and vibration tests</td><td>DIN EN 61373 (VDE 0115-0106):2011-04</td></tr><tr><td>Spectrum/Installation location</td><td>Service life test, Category 1, Class A/B</td></tr><tr><td>Function test with noise-like vibration</td><td>Test passed according to Section 8 of the standard</td></tr><tr><td>Frequency</td><td>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</td></tr><tr><td>Acceleration</td><td>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)</td></tr><tr><td>Test duration per axis</td><td>10 min. 5 h</td></tr><tr><td>Test directions</td><td>X, Y and Z axes X, Y and Z axes X, Y and Z axes</td></tr><tr><td>Monitoring for contact faults/interruptions</td><td>Passed</td></tr><tr><td>Voltage drop measurement before and after each axis</td><td>Passed</td></tr><tr><td>Simulated service life test through increased levels of noise-like vibration</td><td>Test passed according to Section 9 of the standard</td></tr><tr><td>Extended test scope: Monitoring for contact faults/interruptions</td><td>Passed Passed</td></tr></table>	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
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Extended test scope: Monitoring for contact faults/interruptions	Passed Passed																											
Continuous operating temperature	-60 ... +105 °C																											



Environmental Testing (Environmental Conditions)	
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)
eCl@ss 10.0	27-14-11-20
eCl@ss 9.0	27-14-11-20
ETIM 9.0	EC000897
ETIM 8.0	EC000897
PU (SPU)	5 pcs
Packaging type	Box
Country of origin	PL
GTIN	4045454507411
Customs tariff number	85369010000

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 Conformity 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 Conformity 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



Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 285-150

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Documentation

Additional Information

Technical Section

pdf

2246.92 KB

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Bid Text

285-150

19.02.2019

xml

3.25 KB

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285-150

04.01.2018

doc

23.50 KB

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CAD/CAE-Data

CAD data

2D/3D Models 285-150

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CAE data

EPLAN Data Portal 285-150

Download icon

WSCAD Universe 285-150

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ZUKEN Portal 285-150

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1 Compatible Products

1.1 Optional Accessories

1.1.1 Cover

1.1.1.1 Cover



**Item No.: 285-441**  
Finger guard; touchproof cover protects unused conductor entries and jumper slots; for 50 mm² high-current tbs; yellow

1.1.2 Current and voltage tap

1.1.2.1 Current and voltage tap



**Item No.: 855-501/150-000**  
Current and voltage tap up to 50 mm²; Primary rated current: 150 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 0.5; fused



1.1.3 DIN-rail

1.1.3.1 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

1.1.4 Ferrule

1.1.4.1 Ferrule



**Item No.: 216-424**  
Ferrule; Sleeve for 35 mm² / AWG 2; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92; silver-colored



**Item No.: 216-425**  
Ferrule; Sleeve for 50 mm² / AWG 1; uninsulated; electro-tin plated; electrolytic copper; acc. to DIN 46228, Part 1/08.92

1.1.5 Installation

1.1.5.1 Mounting accessories



**Item No.: 285-448**  
Fixing element; for 50 mm² high-current terminal blocks; orange



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

1.1.6 Jumper

1.1.6.1 Jumper



**Item No.: 285-450**  
Jumper; insulated; gray

1.1.7 Marking

1.1.7.1 Group marker carrier



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



1.1.7.2 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 stretchable; plain; snap-on type; blue



Item No.: 793-501/000-007  
WMB marking card; as card; not stretchable; plain; snap-on type; gray



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

1.1.7.3 Marker carrier



Item No.: 285-442  
Adaptor; gray

1.1.8 Power tap

1.1.8.1 Power tap



Item No.: 285-447  
Power tap; for 50 mm² high-current tbs; Module width 16 mm; gray

1.1.9 Protective warning marker

1.1.9.1 Cover



**Item No.: 285-440**  
Protective warning marker; with high-voltage symbol, black; yellow



**Item No.: 285-449**  
Protective warning marker; yellow

1.1.10 Tool

1.1.10.1 Operating tool



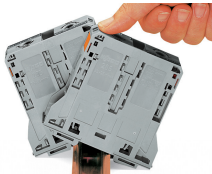
**Item No.: 285-172**  
Allen wrench; with a partially insulated shaft; green



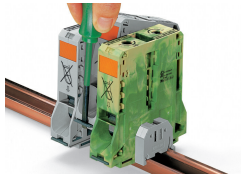
**Item No.: 285-173**  
Allen wrench; with a partially insulated shaft; with anti-rotation protection; green

Installation Notes

Installation



Snapping a terminal block onto DIN-rail (to the left or to the right).



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

Conductor termination

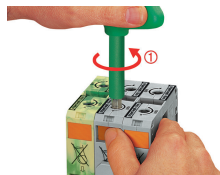


For the optimal clamping force:

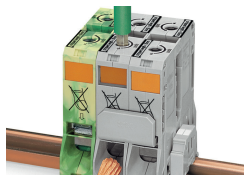
- Bend conductor
- Cut conductor to length (conductor end must be straight)
- Strip conductor



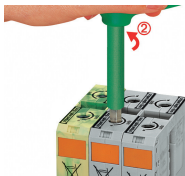
Always observe the on-unit printed strip length guide!



**Conductor termination – step 1:**  
Rotate the T-wrench counter-clockwise to the stop . Next, push in the orange locking tab. The clamp is locked open for hands-free wiring.

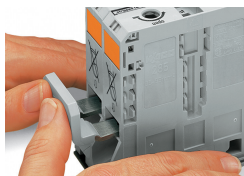


**Conductor termination – step 2:**  
Insert a stripped conductor into the clamping unit until it hits the backstop. Hold in this position.

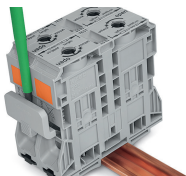


**Conductor termination – step 3:**  
A short counter-clockwise rotation releases the tab. When unlocked, the T-wrench rotates clockwise, securely clamping the conductor.

## Commoning



Commoning with an adjacent jumper: insert the jumper above the conductor entry hole – prior to conductor termination. The nominal cross-section remains unchanged.



Removing jumper via operating tool.

## Cover

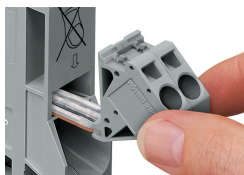


Protective warning marker may indicate: Notice: Power is still on even after switching off the main switch!

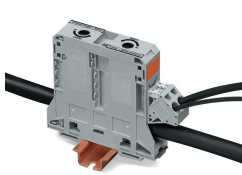


Yellow, detachable finger guards provide touch-proof safety by shielding jumper contact slots and/or unused conductor entries.

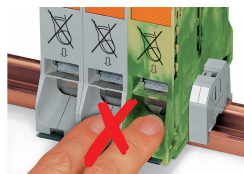
## Power tap



Easily and consistently tap directly into the power supply. Insert the unwired tap before opening the clamping unit.



## Security

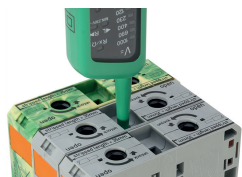


Risk of Injury!  
Do not insert fingers in the conductor entry!

## Testing



Testing via touch-proof 4 mm Ø test plugs (not available from WAGO, but offered by industry suppliers such as, Multi-Contact Deutschland GmbH).

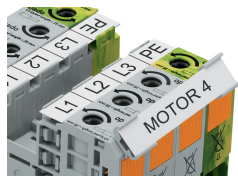


Testing  
Voltage measurements can be performed, e.g., using a 2-pole voltage tester (Item No. 206-707).

## 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