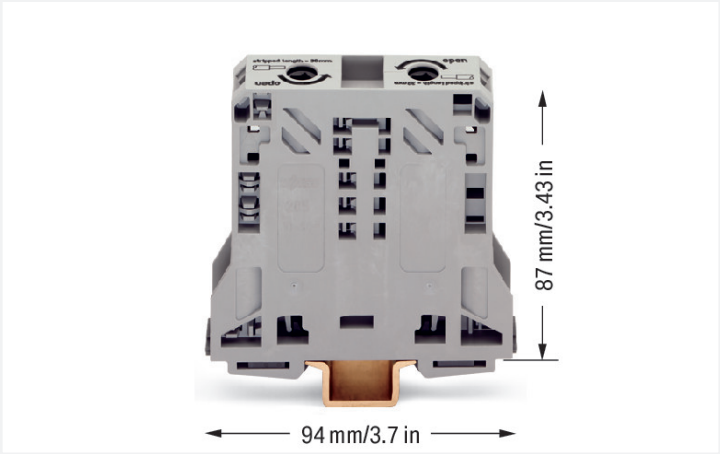
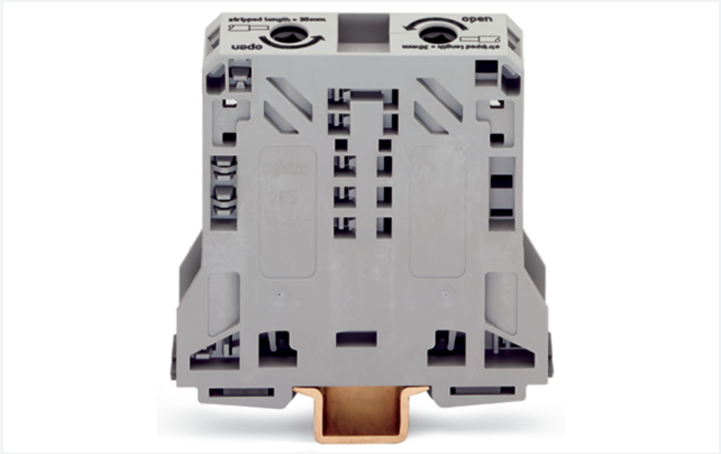
Data Sheet | Item Number: 285-150

2-conductor through terminal block; 50 mm²; lateral marker slots; only for DIN 35 x 15 rail; POWER CAGE CLAMP; 50,00 mm²; gray

https://www.wago.com/285-150





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_N for power loss specification	150 A
Resistance value for specified, current-dependent power loss	0.0001 Ω

Connection data

Clamping units	2
Total number of potentials	1
Number of levels	1
Number of jumper slots	2

Connection 1	
Connection technology	POWER CAGE CLAMP
Actuation type	T-wrench; 8 mm
Connectable conductor materials	Copper
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-35 x 15 rail
Mounting (note)	only suitable for DIN 35 x 15 rail
Marking level	Side marking

Material data

Note (material data)	Information on material specifications can be found here
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
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 – Vibration and shock tests	DIN EN 61373 (VDE 0115-0106):2011-04
Spectrum/Mounting location	Service life test, Category 1, Class A/B
Functional test with noise-like oscillations	Test passed according to Section 8 of the standard
Frequency	f_1 = 5 Hz to f_2 = 150 Hz
Acceleration	0.101g (highest test level used for all axes)
Test duration per axis	10 min.
Test directions	X, Y and Z axes
Monitoring of contact faults and interruptions	Passed
Voltage drop measurement before and after each axis	Passed
Simulated service life test through increased levels of noise-like oscillations	Test passed according to Section 9 of the standard
Frequency	f_1 = 5 Hz to f_2 = 150 Hz
Acceleration	0.572g (highest test level used for all axes)
Test duration per axis	5 h
Test directions	X, Y and Z axes
Extended testing: Monitoring of contact faults and interruptions	Passed

Continued on next page

Environmental Testing (Environmental Conditions)

Extended testing: Voltage drop measurement before and after each axis	Passed
Shock test	Test passed according to Section 10 of the standard
Shock pulse form	Half sine
Acceleration	5g (highest test level used for all axes)
Shock duration	30 ms
Number of shocks (per axis)	3 pos. und 3 neg.
Test directions	X, Y and Z axes
Extended testing: Monitoring of contact faults and interruptions	Passed
Extended testing: Voltage drop measurement before and after each axis	Passed
Vibration and shock stress for rolling stock equipment	Passed

Commercial data

Product Group	1 (Rail Mounted Terminal Blocks)
PU (SPU)	5 pcs
Packaging type	Box
Country of origin	PL
GTIN	4045454507411
Customs tariff number	85369010000

Product classification

UNSPSC	39121410
eCl@ss 10.0	27-14-11-20
eCl@ss 9.0	27-14-11-20
ETIM 9.0	EC000897
ETIM 8.0	EC000897
ECCN	NO US CLASSIFICATION

Environmental Product Compliance

RoHS Compliance Status	Compliant,No Exemption

Approvals / Certificates

General approvals

Approval	Standard	Certificate Name
CCA DEKRA Certification B.V.	EN 60947	NTR NL-7707
CSA DEKRA Certification B.V.	C22.2 No. 158	154112
KEMA/KEUR DEKRA Certification B.V.	EN 60947	71-105562
UL Underwriters Laboratories Inc.	UL 1059	E45172

Declarations of conformity and manufacturer's declarations

Approval	Standard	Certificate Name
EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-
Railway WAGO GmbH & Co. KG	-	Z00004420.000
UK-Declaration of Conformity WAGO GmbH & Co. KG	-	-

 Continued on next page

Approvals for marine applications

Approval	Standard	Certificate Name
ABS American Bureau of Shipping	EN 60947	20-HG1941090-PDA
DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAE00001V2

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 285-150

Documentation

Bid Text

285-150	19.02.2019	xml 3.25 KB
285-150	04.01.2018	doc 23.50 KB

CAD/CAE-Data

CAD data

2D/3D Models 285-150

CAE data

EPLAN Data Portal 285-150

WSCAD Universe 285-150

ZUKEN Portal 285-150

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

Continued on next page

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

Continued on next page

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

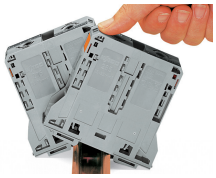
1.1.10.1 Operating tool

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

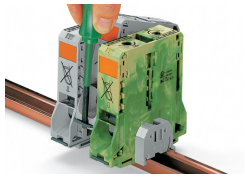
Item No.: 285-173
Allen wrench; with a partially insulated shaft; with anti-rotation protection; green

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).

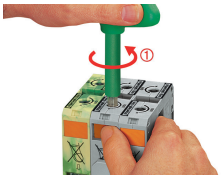
Continued on next page

Conductor termination

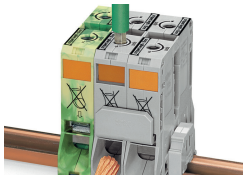
For the optimal clamping force:

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

Always observe the on-unit printed strip length guide!



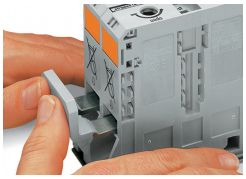
Conductor termination – step 1:
Rotate the T-wrench counter-clockwise to the stop . Next, push in the orange locking tab. The clamp is locked open for hands-free wiring.



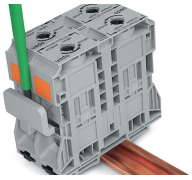
Conductor termination – step 2:
Insert a stripped conductor into the clamping unit until it hits the backstop. Hold in this position.

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

Commoning

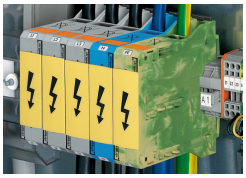


Commoning with an adjacent jumper: insert the jumper above the conductor entry hole – prior to conductor termination. The nominal cross-section remains unchanged.

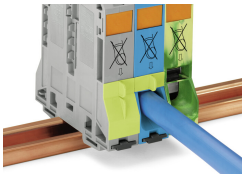


Removing jumper via operating tool.

Cover

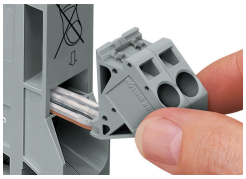


Protective warning marker may indicate: Notice: Power is still on even after switching off the main switch!

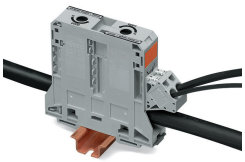


Yellow, detachable finger guards provide touch-proof safety by shielding jumper contact slots and/or unused conductor entries.

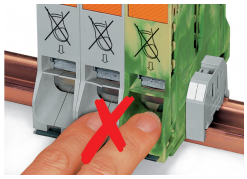
Power tap



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

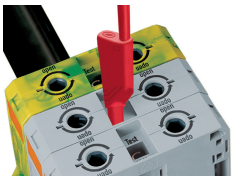


Security

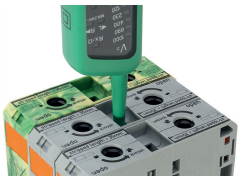


Risk of Injury!
Do not insert fingers in the conductor entry!

Testing

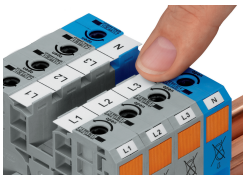


Testing via touch-proof 4 mm Ø test plugs (not available from WAGO, but offered by industry suppliers such as, Multi-Contact Deutschland GmbH).

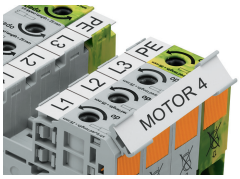


Testing
Voltage measurements can be performed, e.g., using a 2-pole voltage tester (Item No. 206-707).

Marking



WMB markers or self-adhesive, printable marking strips can be accommodated on 35, 50 and 95 mm² 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