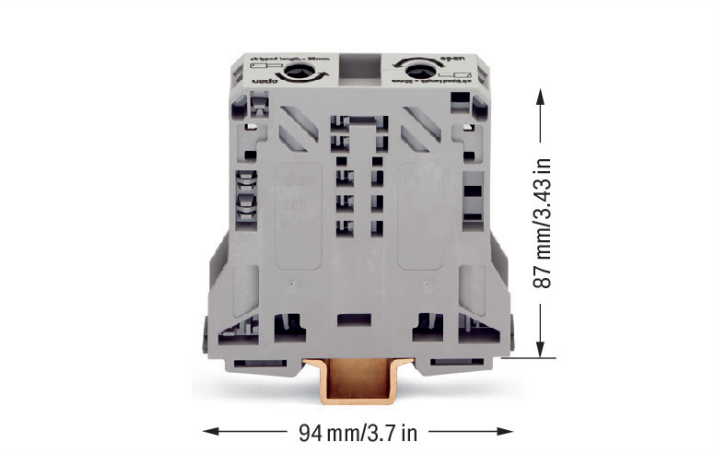
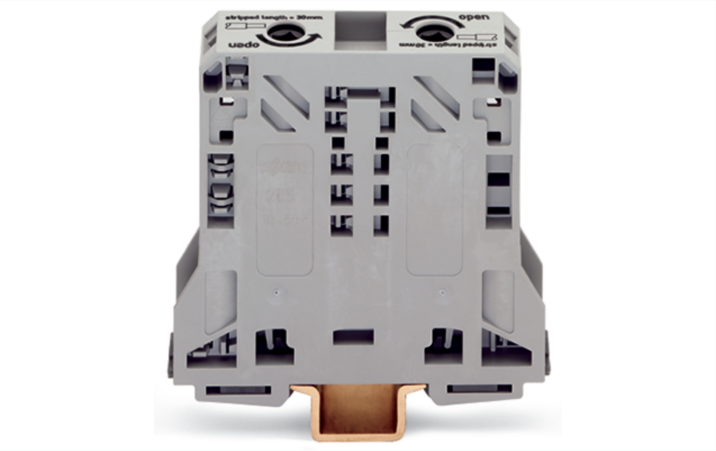
# Data Sheet | Item Number: 285-150

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

High-current terminal block, 285 Series, gray

Our through terminal block (item number 285-150) simplifies electrical installations. Strip lengths must be 32 mm when connecting conductors to this through terminal block. This product features conductor terminals and utilizes POWER CAGE CLAMP. 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.

## Electrical data

| Ratings per | IEC/EN 60947-7-1 | | |
|---|---|---|---|
| Overvoltage category | III | III | II |
| Pollution degree | 3 | 2 | 2 |
| Nominal voltage | 1000 V | - | - |
| Rated impulse withstand 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 |

| General information | |
|---|---|
| Wiring direction | Side-entry wiring |



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## 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 |
| Fine-stranded conductor; with uninsulated ferrule | 10 … 50 mm² / 8 … 1/0 AWG |
| Strip length | 32 mm / 1.26 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 | 1.918 MJ |
| Weight | 158.7 g |

## Environmental requirements

| | |
|---|---|
| Processing temperature | -35 … +85 °C |
| Continuous operating temperature | -60 … +105 °C |

### Environmental Testing

| | |
|---|---|
| Test specification:<br>Railway applications –<br>Rolling stock –<br>Electronic equipment | DIN EN 50155 (VDE 0115-200):2022-06 |
| Test procedure:<br>Railway applications –<br>Rolling stock equipment –<br>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 |


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## Environmental Testing

| | |
|---|---|
| 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 |
| 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 10.0 | EC000897 |
| ECCN | NO US CLASSIFICATION |

## Environmental Product Compliance

| | |
|---|---|
| RoHS Compliance Status | Compliant,No Exemption |


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## Approvals / Certificates

### General approvals

| Approval | Standard | Certificate Name |
|---|---|---|
| CCA<br>DEKRA Certification B.V. | EN 60947 | NTR NL-7707 |
| CSA<br>CSA Group | C22.2 | 1151144 |
| KEMA/KEUR<br>DEKRA Certification B.V. | EN 60947 | 71-105562 |
| UL<br>Underwriters Laboratories Inc. | UL 1059 | 20190731-E45172 |

### Declarations of conformity and manufacturer's declarations

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

### Approvals for marine applications

| Approval | Standard | Certificate Name |
|---|---|---|
| ABS<br>American Bureau of Shipping | EN 60947 | 24-0152298-PDA |
| DNV GL<br>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<br>3.25 KB | |
| 285-150 | 04.01.2018 | doc<br>23.50 KB | |


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## CAD/CAE-Data

| CAD data | CAE data |
|---|---|
| 2D/3D Models 285-150 | 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


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## 1.1.4 Ferrule

### 1.1.4.1 Ferrule

Item No.: 216-3427
Ferrule; Sleeve for 25 mm² / AWG 4; uninsulated; electro-tin plated; electrolytic copper; acc. to DIN 46228, Part 1/08.92

Item No.: 216-3112
Ferrule; Sleeve for 35 mm² / AWG 2; uninsulated; electro-tin plated; electrolytic copper; acc. to DIN 46228, Part 1/08.92

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.: 216-3113
Ferrule; Sleeve for 50 mm² / AWG 1; uninsulated; electro-tin plated; electrolytic copper; acc. to DIN 46228, Part 1/08.92

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


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### 1.1.7.2 Marker



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


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### 1.1.10 Tool

#### 1.1.10.1 Operating tool

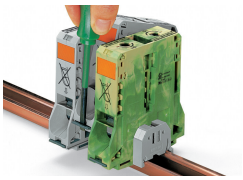
Item No.: 285-172
Allen wrench; with a partially insulated shaft; green

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).



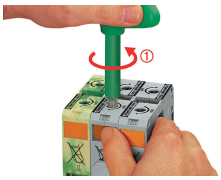
Removing a terminal block from the assembly (to the left or to the right).

### Conductor termination

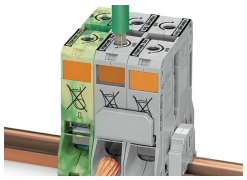
For the optimal clamping force:

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

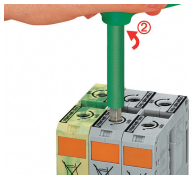
Always observe the on-unit printed strip length guide!




**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.

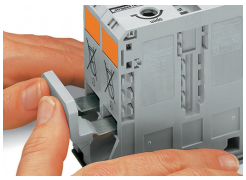


**Conductor termination – step 2:**
Insert a stripped conductor into the clamping unit until it hits the backstop. Hold in this position.

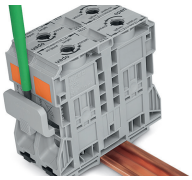



**Conductor termination – step 3:**
A short counter-clockwise rotation releases the tab. When unlocked, the T-wrench rotates clockwise, securely clamping the conductor.

### 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.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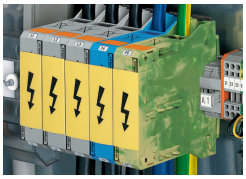
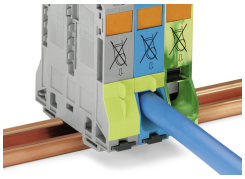
## Cover

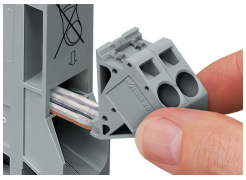


Protective warning marker may indicate: Notice: Power is still on even after switching off the main switch!

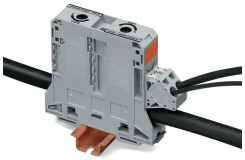


Yellow, detachable finger guards provide touch-proof safety by shielding jumper contact slots and/or unused conductor entries.

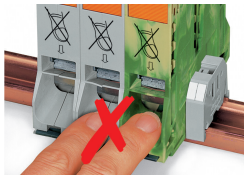
## Power tap



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

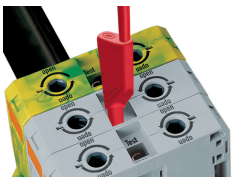


## Security

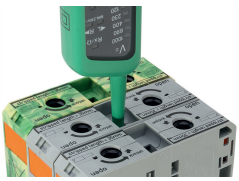


Risk of Injury!
Do not insert fingers in the conductor entry!

## Testing

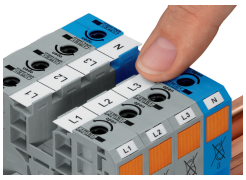


Testing via touch-proof 4 mm Ø test plugs (not available from WAGO, but offered by industry suppliers such as, Multi-Contact Deutschland GmbH).

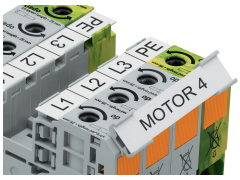


Testing
Voltage measurements can be performed, e. g., using a 2-pole voltage tester (Item No. 206-707).

## 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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