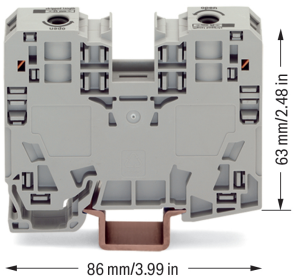
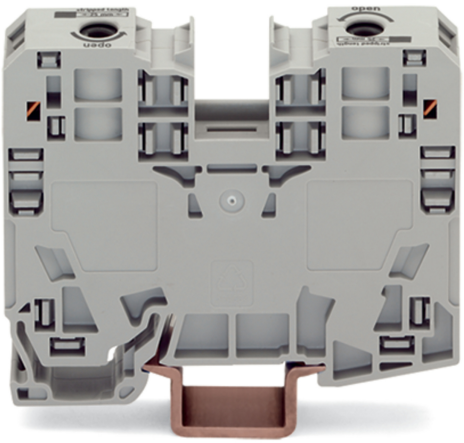
Data Sheet | Item Number: 285-135

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

https://www.wago.com/285-135





Color: gray

High-current terminal block, 285 Series, power cage clamp

Our through terminal block (item number 285-135) simplifies electrical installations. Strip lengths must be 25 mm when connecting conductors to this through 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. Depending on the type of conductor, this through terminal block is designed for conductor cross sections ranging from 6 mm² to 35 mm².

- The right solution for every wiring task
- Actuation via operating tool
- Ready to install, immediately usable

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	125 A	-	-

Approvals per	UL 1059		
Use group	B	C	D
Rated voltage	600 V	600 V	-
Rated current	115 A	115 A	-

Approvals per	CSA 22.2 No 158		
Use group	B	C	D
Rated voltage	600 V	600 V	-
Rated current	115 A	-	-

Power Loss	
Power loss, per pole (potential)	4.0625 W
Rated current I_N for power loss specification	125 A
Resistance value for specified, current-dependent power loss	0.00026 Ω

Continued on next page

General information

Wiring direction	Side-entry wiring

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	Operating tool
Connectable conductor materials	Copper
Nominal cross-section	35 mm²
Solid conductor	6 … 35 mm² / 8 … 2 AWG
Stranded conductor	6 … 35 mm² / 8 … 2 AWG
Fine-stranded conductor	6 … 35 mm² / 8 … 2 AWG
Fine-stranded conductor; with insulated ferrule	6 … 35 mm² / 8 … 2 AWG
Fine-stranded conductor; with uninsulated ferrule	6 … 35 mm² / 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-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	1.099 MJ
Weight	79.4 g

Environmental requirements

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

Environmental Testing

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

Continued on next page

Environmental Testing

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
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)	15 pcs
Packaging type	Box
Country of origin	PL
GTIN	4066966248548
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

Continued on next page

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 CSA Group	C22.2	1151144
KEMA/KEUR DEKRA Certification B.V.	EN 60947	71-105562
UL Underwriters Laboratories Inc.	UL 1059	20190731-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	-	-

Approvals for marine applications

Approval	Standard	Certificate Name
ABS American Bureau of Shipping	EN 60947	24-0152298-PDA
DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAE00001V2
LR Lloyds Register	EN 60947	LR23325966TA
PRS Polski Rejestr Statków	-	TE/1094/880590/23

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 285-135

Continued on next page

Documentation

Bid Text

285-135	19.02.2019	xml 3.23 KB
285-135	04.01.2018	doc 23.50 KB

CAD/CAE-Data

CAD data

2D/3D Models 285-135

CAE data

EPLAN Data Portal 285-135

WSCAD Universe 285-135

ZUKEN Portal 285-135

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

Continued on next page

1.1.3 Ferrule

1.1.3.1 Ferrule



Item No.: 216-413
Ferrule; Sleeve for 25 mm² / AWG 4; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92; silver-colored



Item No.: 216-3464
Ferrule; Sleeve for 35 mm² / AWG 2; insulated; electro-tin plated; electrolytic copper; red



Item No.: 216-3414
Ferrule; Sleeve for 35 mm² / AWG 2; uninsulated; electro-tin plated; electrolytic copper; acc. to DIN 46228, Part 1/08.92; silver-colored



Item No.: 216-414
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

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 (35mm²) 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 stretchable; plain; snap-on type; blue



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

Continued on next page

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; 50 m on roll; 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

Continued on next page

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



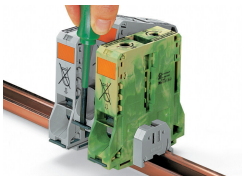
Item No.: 210-721
Operating tool; Blade: 5.5 x 0.8 mm; with a partially insulated shaft; multicoloured

Installation Notes

Installation

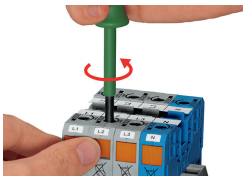


Snapping a terminal block onto DIN-rail (to the left or to the right).

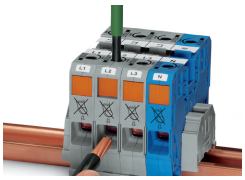


Removing a terminal block from the assembly (to the left or to the right).

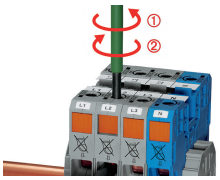
Conductor termination



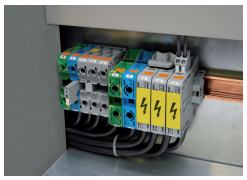
Conductor termination – step 1:
Rotate the operating tool (5.5 mm blade width) counter-clockwise. Next, push in the orange locking tab. The clamp is locked open for hands-free wiring.



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



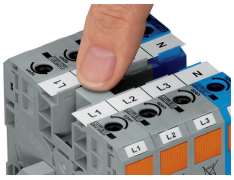
Conductor termination – step 3:
A short counter-clockwise rotation closes the clamp, securing the conductor . When unlocked, allow the operating tool to rotate clockwise to securely terminate the conductor.



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

Continued on next page

Commoning

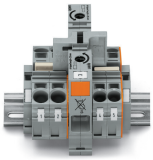


Commoning adjacent terminal blocks using a centrally positioned push-in jumper.



Slide the marking strip laterally to remove the jumper.

Commoning



Commoning 35 mm² (2 AWG) POWER CAGE CLAMP Terminal Blocks with 10/16 mm² (8/6 AWG) 2010 and 2016 Series TOPJOP® S Terminal Blocks using step-down jumpers (not valid for Item No. 2016-76xx and Item No. 2016-77xx).

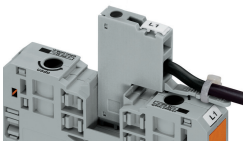


Step-down jumpers common terminal blocks of different sizes, without losing a conductor clamping point. This can be beneficial on long conductor runs where voltage drop can be a problem. A large conductor can be easily connected to smaller conductors at the distribution point.

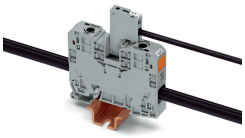
Step-down jumpers are simply pushed down for full insertion, similar to adjacent jumpers. Commoning may be made in either direction using the special thin end plate to cover the open side. Additional through terminal blocks having a smaller cross-section may be commoned using adjacent jumpers.

The following should be noted:
The total current of the outgoing circuits does not exceed the nominal current of the step-down jumper.

Power tap



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

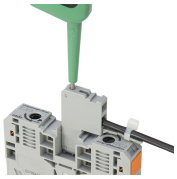


Power tap inserted in a jumper contact slot

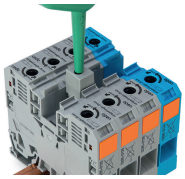


Always push voltage tap (Item No. 283-407) down into the terminal block until fully inserted!

Testing



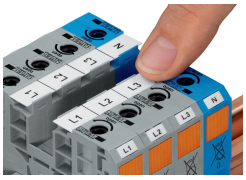
Testing
Voltage measurements can be performed, e. g., using a 2-pole voltage tester (Item No. 206-707).



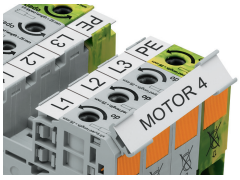
Testing with test plug adapter (Item No. 283-404).

Continued on next page

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