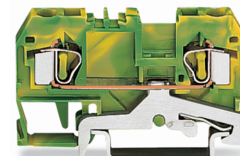
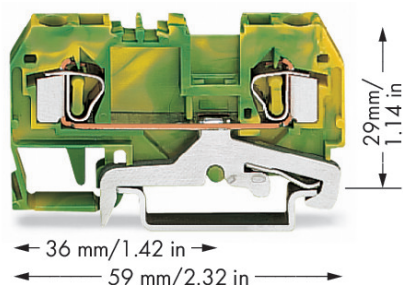


Data Sheet | Item Number: 281-907/999-950

2-conductor ground terminal block; 4 mm²; suitable for Ex e II applications; center marking; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP®; 4,00 mm²; green-yellow

<https://www.wago.com/281-907/999-950>



Color: ■ green-yellow

Similar to illustration

Similar to illustration



Similar to illustration

Ground terminal block, 281 Series, CAGE CLAMP®

Easily, quickly and safely connect conductors with this ground terminal block (item number 281-907/999-950). Strip lengths must be between 9 and 10 mm when connecting conductors to this ground terminal block. Our ground terminal blocks create a direct connection between the mounting rail and the electrical conductors thanks to an integrated mounting foot. This connection ensures both electrical and mechanical stability between the conductors and the mounting adapter. This product features conductor terminals and utilizes CAGE CLAMP®. Our reliable and maintenance-free CAGE CLAMP® connection makes it easy to connect all conductor types without having to prepare the conductor. For example, you don't need to crimp ferrules. Depending on the type of conductor, this ground terminal block is ideal for conductor cross sections ranging from 0.08 mm² to 4 mm².

An operating tool is used to operate this through rail-mount terminal block.



Electrical data			
Ratings per	IEC/EN 60947-7-2		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Nominal voltage	-	-	-
Rated impulse withstand voltage	-	-	-
Rated current	-	-	-

Ex information	
Reference to hazardous areas	See application instructions in section "Knowledge and Downloads – Documentation – Additional Information: Technical Section; Technical Explications"

General information	
Wiring direction	Front-entry wiring

Connection Data	
Clamping units	2
Total number of potentials	1
Number of levels	1

Connection 1	
Connection technology	CAGE CLAMP®
Actuation type	Operating tool
Connectable conductor materials	Copper
Solid conductor	0.08 ... 4 mm² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 4 mm² / 28 ... 12 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inches
Wiring direction	Front-entry wiring

Physical data	
Width	6 mm / 0.236 inches
Height	59 mm / 2.323 inches
Depth from upper-edge of DIN-rail	29 mm / 1.142 inches

Mechanical data	
Design	horizontal type
Mounting type	DIN-35 rail
Marking level	Center marking

Material data	
Note (material data)	Information on material specifications can be found here
Color	green-yellow
Material group	I
Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.107 MJ
Weight	12.6 g

Environmental requirements	
Processing temperature	-35 ... +85 °C
Continuous operating temperature	-60 ... +105 °C

Commercial data	
PU (SPU)	50 pcs
Packaging type	Box
Country of origin	DE
GTIN	4044918513579
Customs tariff number	85369010000

Product Classification	
UNSPSC	39121410
eCl@ss 10.0	27-14-11-41
eCl@ss 9.0	27-14-11-41
ETIM 9.0	EC000901
ETIM 10.0	EC000901
ECCN	NO US CLASSIFICATION

Environmental Product Compliance	
CAS-No.	7439-92-1
REACH Candidate List Substance	Lead
RoHS Compliance Status	Compliant, No Exemption
SCIP notification number (Austria)	b806290b-1fd6-4ea6-b9ce-b09cf6054012
SCIP notification number (Belgium)	95cd09e5-38c4-4238-9caa-dc480c7b60e8
SCIP notification number (Bulgaria)	bfc16921-bd06-47d7-b0f2-4cda9fd05f88
SCIP notification number (Czech Republic)	6d80f572-00cc-4355-bc00-e3db2dd072f7
SCIP notification number (Denmark)	31d7b45a-c7ff-4d29-ba0b-741775a91efb
SCIP notification number (Finland)	ab533da0-9dc0-4238-9bb0-0ea14cfa5caf
SCIP notification number (France)	00aa1924-1192-43cf-8139-0cce045b2d27
SCIP notification number (Germany)	4641ef53-a625-4e9d-b336-c6d77a349694
SCIP notification number (Hungary)	cf0b69a4-fa2c-43da-a23e-00691258791f
SCIP notification number (Italy)	9f8fc37b-7756-4676-b9c0-0ff19c1ab3cd
SCIP notification number (Netherlands)	b6a0f59e-bcc6-4f62-b693-941d7f8d2e43
SCIP notification number (Poland)	2b60a530-c737-4f72-ac20-0cc7d177c9dd
SCIP notification number (Romania)	46df1f03-5ab3-48dc-b250-ee1d14ebbd10
SCIP notification number (Sweden)	6eb3952f-b555-44c9-ba2f-76dc7e192bdc

Approvals / Certificates		
General approvals		Declarations of conformity and manufacturer's declarations
		
Approval	Standard	Certificate Name
CCA DEKRA Certification B.V.	EN 60947	NTR NL-7727
KEMA/KEUR DEKRA Certification B.V.	EN 60947	71-107288
UL Underwriters Laboratories Inc.	UL 1059	20190731-E45172
		Approval
		ATEX-Attestation of Confor- mity WAGO GmbH & Co. KG
		EU-Declaration of Conformi- ty WAGO GmbH & Co. KG



Approvals for marine applications



Approval	Standard	Certificate Name
ABS American Bureau of Ship- ping	-	24-0152298-PDA
BV Bureau Veritas S.A.	EN 60947	07436/G0 BV
DNV GL Det Norske Veritas, Ger- manischer Lloyd	-	TAE00001V2
PRS Polski Rejestr Statków	-	TE/1094/880590/23

Approvals for hazardous areas



Approval	Standard	Certificate Name
AEx UL International Germany GmbH c/o Physikalisch Technische Bundesanstalt	UL 60079	E185892 (AEx e II resp. Ex e II)
ATEX Physikalisch Technische Bundesanstalt (PTB)	-	PTB 00 ATEX 3110 U (II 2 G Ex eb IIC Gb bzw. I M 2 Ex eb I Mb)
CCC CNEX	GB/T 3836.3	2020312313000232 (Ex eb IIC Gb, Ex eb I Mb)
IECEx Physikalisch Technische Bundesanstalt	IEC 60079-0	IECEx PTB 03.0004U (Ex eb IIC Gb or Ex eb I Mb)

Downloads

Environmental Product Compliance

Compliance Search
Environmental Product Compliance 281-907/999-950

Documentation

Bid Text			
281-907/999-950	19.02.2019	xml 3.10 KB	↓
281-907/999-950	28.02.2017	doc 24.00 KB	↓

CAD/CAE-Data

CAD data
2D/3D Models 281-907/999-950

CAE data
EPLAN Data Portal 281-907/999-950
WSCAD Universe 281-907/999-950
ZUKEN Portal 281-907/999-950

1 Compatible Products

1.1 Required Accessories

1.1.1 End plate

1.1.1.1 End plate



Item No.: 281-349

End and intermediate plate; 2.5 mm thick; light gray



Item No.: 209-191

Separator for Ex e/Ex i applications; 3 mm thick; 120 mm wide; orange



Item No.: 209-192

Separator for Ex e/Ex i applications; 3 mm thick; 125.5 mm wide; orange



Item No.: 209-190

Separator for Ex e/Ex i applications; 3 mm thick; 90 mm wide; orange



Item No.: 281-350

Separator plate; 2 mm thick; oversized; light gray

1.2 Optional Accessories

1.2.1 DIN-rail

1.2.1.1 Mounting accessories



Item No.: 210-196

Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm thick; 2 m long; unslopped; similar to EN 60715; silver-colored



Item No.: 210-198

Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslopped; according to EN 60715; copper-colored



Item No.: 210-508

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slopped; 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; slopped; similar to EN 60715; silver-colored



Item No.: 210-506

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslopped; 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; unslopped; similar to EN 60715; silver-colored



Item No.: 210-118

Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslopped; according to EN 60715; silver-colored



Item No.: 210-115

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slopped; according to EN 60715; silver-colored



Item No.: 210-112

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slopped; according to EN 60715; silver-colored



Item No.: 210-504

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slopped; galvanized; according to EN 60715; silver-colored



Item No.: 210-113

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslopped; according to EN 60715; silver-colored



Item No.: 210-505

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslopped; galvanized; according to EN 60715; silver-colored

1.2.2 Ferrule

1.2.2.1 Ferrule



Item No.: 216-241

Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white



Item No.: 216-242

Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray



Item No.: 216-243

Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red



Item No.: 216-244

Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black



Item No.: 216-246

Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue



Item No.: 216-106

Ferrule; Sleeve for 2.5 mm² / AWG 14; uninsulated; electro-tin plated; silver-colored



1.2.3 Installation

1.2.3.1 Cover



Item No.: 709-153
Cover, Type 1; suitable for cover carrier, type 1; 1 m long; transparent

1.2.3.2 Cover carrier



Item No.: 709-167
Cover carrier; Type 1; incl. fixing/retaining screws and knurled nut; suitable for 279 to 282 and 880 Series rail-mounted terminal blocks; suitable for 264 Series miniature rail-mounted terminal blocks; suitable for 270 Series sensor and actuator terminal blocks; gray

1.2.3.3 Mounting accessories



Item No.: 209-106
Mounting carrier; for isolated mounting on DIN 35 rails; gray



Item No.: 249-116
Screwless end stop; 6 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray

1.2.4 Insulation stop

1.2.4.1 Insulation stop



Item No.: 281-470
Insulation stop; 0.08 - 0.2 mm² "s" (0.14 mm² "f-st"); 5 pieces/strip; white



Item No.: 281-471
Insulation stop; 0.25 - 0.5 mm²; 5 pieces/strip; light gray



Item No.: 281-472
Insulation stop; 0.75 - 1.5 mm²; 5 pieces/strip; dark gray

1.2.5 Jumper

1.2.5.1 Jumper



Item No.: 281-490
Jumper; 10-way; insulated; gray



Item No.: 281-482
Jumper; 2-way; insulated; gray



Item No.: 281-492
Jumper; 2-way; insulated; gray



Item No.: 281-483
Jumper; 3-way; insulated; gray



Item No.: 281-485
Jumper; 5-way; insulated; gray



Item No.: 281-402
Jumper; insulated; gray



Item No.: 281-409
Jumper; insulated; gray



Item No.: 281-422
Jumper; insulated; yellow-green



Item No.: 781-452
Staggered jumper; from 1 to 2; insulated; gray



Item No.: 781-453
Staggered jumper; from 1 to 3; insulated; gray



Item No.: 781-454
Staggered jumper; from 1 to 4; insulated; gray



Item No.: 781-455
Staggered jumper; from 1 to 5; insulated; gray



Item No.: 781-456
Staggered jumper; from 1 to 6; insulated; gray



Item No.: 709-110
Wire commoning chain; 2.5 mm²; insulated; black



Item No.: 709-111
Wire commoning chain; 2.5 mm²; insulated; black



Item No.: 709-112
Wire commoning chain; 2.5 mm²; insulated; black

1.2.6 Marking

1.2.6.1 Group marker carrier

**Item No.: 209-140**

Group marker carrier; gray

**Item No.: 209-141**

Group marker carrier; gray

**Item No.: 209-142**

Group marker carrier; gray

**Item No.: 249-105**

Group marker carrier; gray

1.2.6.2 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.: 793-5501/000-007**

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.: 2009-115/000-024**

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

1.2.7 Protective warning marker

1.2.7.1 Cover



Item No.: 281-415
Protective warning marker; for 5 terminal blocks; with high-voltage symbol, black; yellow

1.2.8 Push-in type wire jumper

1.2.8.1 Jumper



Item No.: 249-126
Push-in type wire jumper; 0.75 mm²; insulated; 110 mm long; black



Item No.: 249-123
Push-in type wire jumper; 0.75 mm²; insulated; 180 mm long; black



Item No.: 249-127
Push-in type wire jumper; 0.75 mm²; insulated; 250 mm long; black



Item No.: 249-125
Push-in type wire jumper; insulated; 60 mm long; black

1.2.9 Tool

1.2.9.1 Operating tool



Item No.: 210-658
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; angled; short; multicoloured



Item No.: 210-720
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured



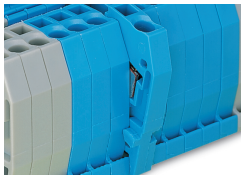
Item No.: 210-657
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured

Installation Notes

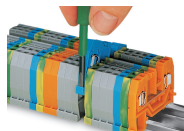
Installation



Snapping a ground conductor block onto the DIN-rail automatically makes a direct electrical connection to the rail.



Quick assembly keys prevent reverse mounting.



Removing a terminal block from the assembly.

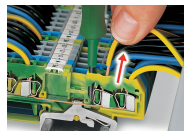
Conductor termination



CAGE CLAMP® connection
Inserting a conductor.



CAGE CLAMP® connection
Inserting a conductor.
With ferruled conductors, it is necessary to use a terminal block one size larger than the conductor's nominal cross-section.

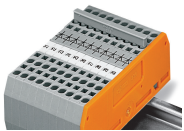
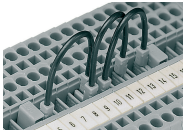
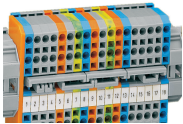
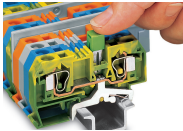


CAGE CLAMP® connection
Removing a solid conductor.



Inserting insulation stops.

Commoning



Commoning ground conductor terminal blocks with through terminal blocks is possible in one direction only (via rear side of terminal block) using adjacent jumpers. WAGO recommends using yellow-green adjacent jumpers in addition to the required marking of these blocks.

Staggered jumpers are suitable for sophisticated circuit requirements. Push jumpers down until fully inserted!

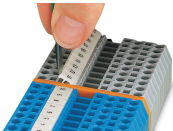
Push-In Type Wire Jumpers
When installing machines or control systems, it is often necessary to make an additional connection between two terminal blocks that are not next to each other on the rail. In such cases, WAGO's touch-proof, push-in type wire jumpers are the ideal solution.

These jumpers are compatible with the following rail-mount terminal blocks:
- 279 Series (1.5 mm²/16 AWG),
- 280/775/780 Series (2.5 mm²/14 AWG)
- 281/769/776/777/781 and 880 Series (4 mm²/12 AWG)
They are available in three conductor lengths (60, 110 and 250 mm), allowing up to 60 terminal blocks to be commoned depending on their width (see table on the right).

The 280/775/780 and 281/776/777/781 Series Terminal Blocks accept two wire jumpers, allowing the use of commoning chains. Furthermore, the 280/769/775/780/880 and 281/776/777/781 Series allow both wire jumper and adjacent jumper to be simultaneously plugged into a same terminal block.

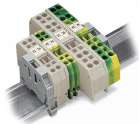
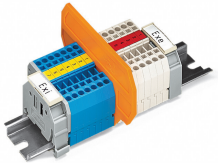
Commoning using comb-style jumper bars: Push comb-style jumper bars down until fully inserted.

Marking



Labeling via WMB Multi Marking System.

Ex application



Separator plate for Ex e/Ex i applications
According to EN 50020, a minimum distance of 50 mm must be kept between live parts of Ex e and Ex i circuits. The use of Ex e/Ex i separators is a space-saving solution when Ex e and Ex i terminal blocks are mounted on a common DIN-rail.
For 279 ... 282 Series:
209-190 for 2-conductor terminal blocks
209-191 for 2-, 3-, 4-conductor terminal blocks

End and intermediate plate
In order to meet creepage and clearance requirements for Ex e applications, it is necessary to insert an end or intermediate plate between a through and a ground conductor terminal block.

Subject to changes. Please also observe the further product documentation!

Current addresses can be found at: www.wago.com