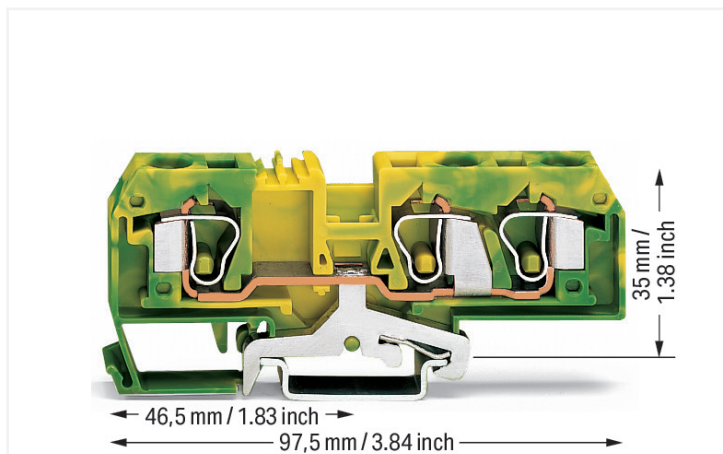


Data Sheet | Item Number: 284-687/999-950

3-conductor ground terminal block; 10 mm²; suitable for Ex e II applications; center marking; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP®; 10,00 mm²; green-yellow

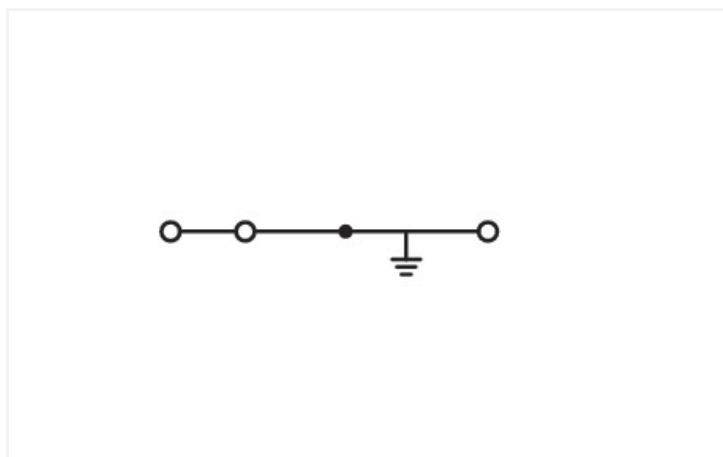
<https://www.wago.com/284-687/999-950>



Color: ■ green-yellow

Similar to illustration

Similar to illustration



Similar to illustration

Ground terminal block, 284 Series, operating tool

This ground terminal block (item number 284-687/999-950) is designed for quick and simple connections. Conductors can only be connected to this ground terminal block if their strip length is between 12 and 13 mm. Our ground terminal blocks allow you to connect electrical conductors directly to the mounting rail thanks to an integrated contact 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. This ground terminal block is suitable for conductor cross sections ranging from 0.2 mm² to 10 mm².

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

Electrical data

| Ratings per | IEC/EN 60947-7-2 | | |
|---------------------------------|------------------|-----|----|
| | III | III | II |
| 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 | 3 |
| 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 | 0.2 ... 10 mm ² / 24 ... 8 AWG |
| Fine-stranded conductor | 0.2 ... 10 mm ² / 24 ... 8 AWG |
| Strip length | 12 ... 13 mm / 0.47 ... 0.51 inches |
| Wiring direction | Front-entry wiring |

Physical data

| | |
|-----------------------------------|------------------------|
| Width | 10 mm / 0.394 inches |
| Height | 97.5 mm / 3.839 inches |
| Depth from upper-edge of DIN-rail | 35 mm / 1.378 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 | 0.367 MJ |
| Weight | 40 g |

Environmental requirements

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

Commercial data

| | |
|-----------------------|---------------|
| PU (SPU) | 25 pcs |
| Packaging type | Box |
| Country of origin | DE |
| GTIN | 4045454091569 |
| 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) | 3a0a9733-8989-4dfa-8016-2ccdf7f15f37 |
| SCIP notification number (Belgium) | 29bd4db8-a579-48d8-a8b5-ec970039568f |
| SCIP notification number (Bulgaria) | 7d961af2-d794-4684-bba2-93ee34fb2552 |
| SCIP notification number (Czech Republic) | b39db0a6-ed2b-4e93-9384-4891e07cbc82 |
| SCIP notification number (Denmark) | d51c9e16-4340-4f5b-a5a8-a7542d2fd15a |
| SCIP notification number (Finland) | db083cb0-e9d3-4c73-918e-12c0dc27e7a7 |
| SCIP notification number (France) | aec41ae8-d951-4218-94a1-c002a4934b10 |
| SCIP notification number (Germany) | f3c57d78-3fc6-4e5c-a111-3070fc63e502 |
| SCIP notification number (Hungary) | 9ebc4554-b977-4ac1-9583-d76e0e6c7cfc |
| SCIP notification number (Italy) | 1cf93778-ae45-43d9-90f4-c1f4ddb838db |
| SCIP notification number (Netherlands) | f42d41db-8123-4683-abca-4efa066ce517 |
| SCIP notification number (Poland) | 1b770f9e-8e43-4c4b-b5c5-8696deaff720 |
| SCIP notification number (Romania) | dd1a3a2e-314d-4b0c-9751-0152331637a5 |
| SCIP notification number (Sweden) | 5b306bd9-00b0-4568-a6db-68d2cd22adf9 |

Approvals / Certificates

General approvals



| Approval | Standard | Certificate Name |
|---------------------------------------|----------|------------------|
| CCA DEKRA Certification B.V. | EN 60947 | NTR NL-7379 |
| KEMA/KEUR DEKRA Certification B.V. | EN 60947 | 2178517.01 |
| UL Underwriters Laboratories Inc. | UL 1059 | 20190731-E45172 |

Declarations of conformity and manufacturer's declarations

| Approval | Standard | Certificate Name |
|--|----------|------------------|
| ATEX-Attestation of Conformity WAGO GmbH & Co. KG | - | - |
| EU-Declaration of Conformity WAGO GmbH & Co. KG | - | - |
| 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 |
| 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) | EN 60079 | PTB 98 ATEX 3133 U (II 2 G Ex eb IIC bzw. I M 2 Ex eb I Mb) |
| CCC CNEX | GB/T 3836.3 | 2020312313000176 (Ex eb IIC Gb, Ex eb I Mb) |
| IECEx Physikalisch Technische Bundesanstalt (PTB) | IEC 60079 | IECEx PTB 14.0046U (Ex eb IIC Gb and Ex eb I Mb) |

Downloads

Environmental Product Compliance

| Compliance Search |
|---|
| Environmental Product Compliance 284-687/999-950 |

Documentation

| Bid Text | | | |
|-----------------|------------|-----------------|--|
| 284-687/999-950 | 19.02.2019 | xml 3.10 KB | |
| 284-687/999-950 | 28.02.2017 | doc 24.00 KB | |

CAD/CAE-Data

| CAD data |
|---------------------------------|
| 2D/3D Models 284-687/999-950 |

| CAE data |
|--------------------------------------|
| EPLAN Data Portal 284-687/999-950 |
| WSCAD Universe 284-687/999-950 |
| ZUKEN Portal 284-687/999-950 |

1 Compatible Products

1.1 Required Accessories

1.1.1 End plate

1.1.1.1 End plate



Item No.: 284-341

End and intermediate plate; 2.5 mm thick; light gray

Item No.: 284-342

Separator plate; 2 mm thick; oversized; light gray

1.2 Optional Accessories

1.2.1 Cover

1.2.1.1 Cover



Item No.: 284-400

Finger guard; touchproof cover protects unused conductor entries; yellow

1.2.2 DIN-rail

1.2.2.1 Mounting accessories



Item No.: 210-196

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



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



Item No.: 210-115

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 18 mm; silver-colored



Item No.: 210-112

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 25 mm; silver-colored



Item No.: 210-504

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



Item No.: 210-505

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

1.2.3 Ferrule

1.2.3.1 Ferrule



Item No.: 216-262

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.: 216-263

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.: 216-264

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.: 216-266

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

1.2.3.1 Ferrule



Item No.: 216-267

Ferrule; Sleeve for 4 mm² / AWG 12; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray

Item No.: 216-208

Ferrule; Sleeve for 6 mm² / AWG 10; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; yellow

Item No.: 216-108

Ferrule; Sleeve for 6 mm² / AWG 10; uninsulated; electro-tin plated; silver-colored

1.2.4 Installation

1.2.4.1 Cover



Item No.: 709-154

Cover; Type 2; suitable for cover carrier, type 2; 1 m long; transparent

1.2.4.2 Cover carrier



Item No.: 709-168

Cover carrier; Type 2; incl. fixing/retaining screws and knurled nut; suitable for 283 to 285 Series rail-mounted terminal blocks; suitable for 279 to 281 Series double- and triple-deck terminal blocks; suitable for 780 to 785, 775, 776 and 777 Series TOPJOB® rail-mounted terminal blocks; suitable for 280 Series sensor and actuator terminal blocks; suitable for 282 Series disconnect/test terminal blocks for transformer circuits; gray

1.2.4.3 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

1.2.5 Jumper

1.2.5.1 Jumper



Item No.: 284-402

Jumper; insulated; gray

Item No.: 284-409

Jumper; insulated; gray

Item No.: 284-422

Jumper; insulated; yellow-green

1.2.6 Marking

1.2.6.1 Group marker carrier



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.: 284-415

Protective warning marker; for 5 terminal blocks; with high-voltage symbol, black; yellow

1.2.8 Tool

1.2.8.1 Operating tool



Item No.: 210-721

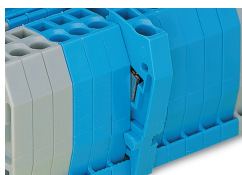
Operating tool; Blade: 5.5 x 0.8 mm; with a partially insulated shaft; multicoloured

Installation Notes

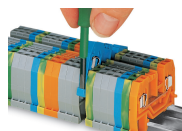
Installation



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

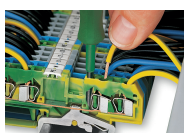


Quick assembly keys prevent reverse mounting.



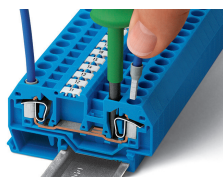
Removing a terminal block from the assembly.

Conductor termination



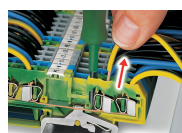
CAGE CLAMP® connection

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

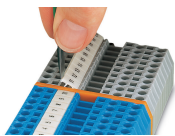
Removing a solid conductor.

Commoning



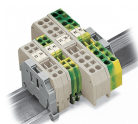
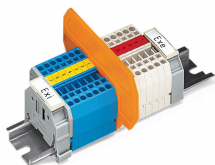
Commoning ground conductor terminal blocks with through terminal blocks is possible in one direction only (via rear side of terminal block) using adjacent jumpers. WAGO recommends using yellow-green adjacent jumpers in addition to the required marking of these blocks.

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.