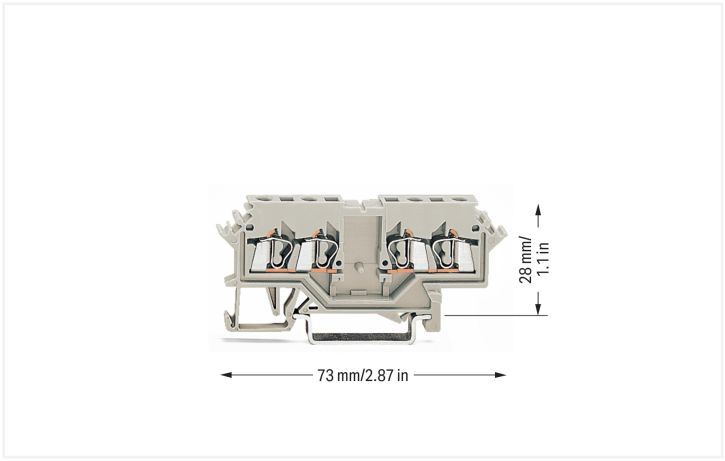
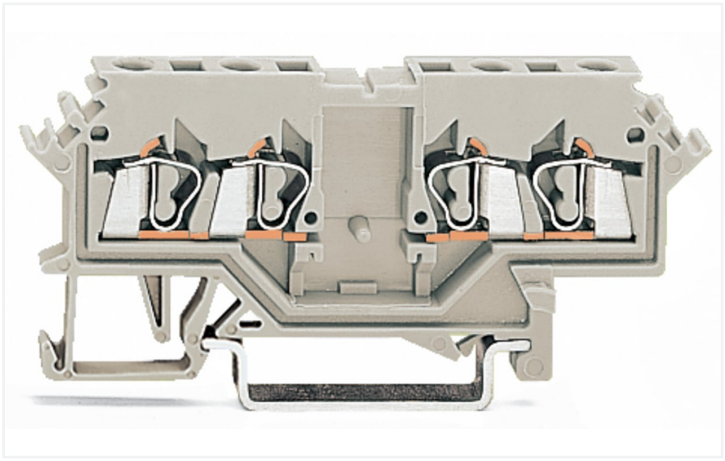
# Data Sheet | Item Number: 280-989

Double potential terminal block; 2.5 mm²; suitable for Ex e II applications; lateral marker slots; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP®; 2,50 mm²; light gray

https://www.wago.com/280-989



Color: light gray

Double potential terminal block, 280 Series, operating tool

Our double potential terminal block (item number 280-989) ensures effortless electrical installations. Ensure that the strip lengths are between 8 and 9 mm when connecting conductors to this double potential terminal block. WAGO's double potential terminal blocks are a space-saving solution that boasts two current bars with different potentials on one level. ou can separately through-wire a single potential on each side of the terminal block. The compact design saves space without sacrificing functionality. Featuring conductor terminals along with CAGE CLAMP®, this product outperforms the competition. Our reliable and maintenance-free CAGE CLAMP® connection makes it easy to connect all types of conductors without having to prepare the conductor. For example, you don't need to crimp ferrules. This double potential terminal block is suitable for conductor cross sections ranging from 0.08 mm² to 2.5 mm².

This through rail-mount terminal block is operated with an operating tool.

## Notes

| | |
|---|---|
| Safety Information | Notice: This double potential terminal block cannot be commoned via adjacent jumpers. |

## Electrical data

### Ratings per IEC/EN 60947-7-1

| | | | |
|---|---|---|---|
| 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 “Downloads – Documentation – Additional Information: Technical Section; Technical Explications” |
| Rated voltage EN (Ex e II) | 550 V |
| Rated current (Ex e II) | 22 A |

### Power Loss

| | |
|---|---|
| Power loss, per pole (potential) | 0.6437 W |
| Rated current $I_N$ for power loss specification | 22 A |
| Resistance value for specified, current-dependent power loss | 0.00133 Ω |

### General information

| | |
|---|---|
| Wiring direction | Front-entry wiring |

## Connection Data

| | |
|---|---|
| Clamping units | 4 |
| Total number of potentials | 2 |
| Number of levels | 1 |

### Connection 1

| | |
|---|---|
| Connection technology | CAGE CLAMP® |
| Actuation type | Operating tool |
| Connectable conductor materials | Copper |
| Solid conductor | 0.08 … 2.5 mm² / 28 … 12 AWG |
| Fine-stranded conductor | 0.08 … 2.5 mm² / 28 … 12 AWG |
| Note (conductor cross-section) | 12 AWG: THHN, THWN |
| Strip length | 8 … 9 mm / 0.31 … 0.35 inches |
| Wiring direction | Front-entry wiring |

## Physical data

| | |
|---|---|
| Width | 5 mm / 0.197 inches |
| Height | 73 mm / 2.874 inches |
| Depth from upper-edge of DIN-rail | 28 mm / 1.102 inches |

## Mechanical data

| | |
|---|---|
| Design | horizontal type |
| Mounting type | DIN-35 rail |
| Marking level | Side marking |

## Material data

| | |
|---|---|
| Note (material data) | Information on material specifications can be found here |
| Color | light gray |
| Material group | I |
| Insulation material (main housing) | Polyamide (PA66) |
| Flammability class per UL94 | V0 |
| Fire load | 0.127 MJ |
| Weight | 8.2 g |

## Environmental requirements

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

## Commercial data

| | |
|---|---|
| Product Group | 1 (Rail Mounted Terminal Blocks) |
| PU (SPU) | 100 pcs |
| Packaging type | Box |
| Country of origin | DE |
| GTIN | 4044918395700 |
| Customs tariff number | 85369010000 |


Continued on next page

## 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 |

## Approvals / Certificates

### General approvals

| Approval | Standard | Certificate Name |
|---|---|---|
| CSA<br>DEKRA Certification B.V. | C22.2 | 1536071 |
| KEMA/KEUR<br>DEKRA Certification B.V. | EN 60947 | 71-154769 |
| UL<br>Underwriters Laboratories Inc. | UL 1059 | 20190731-E45172 |

### Declarations of conformity and manufacturer's declarations

| Approval | Standard | Certificate Name |
|---|---|---|
| ATEX-Attestation of Conformity<br>WAGO GmbH & Co. KG | - | - |
| EU-Declaration of Conformity<br>WAGO GmbH & Co. KG | - | - |
| 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 |
| BV<br>Bureau Veritas S.A. | EN 60947 | 07436/G0 BV |
| DNV GL<br>Det Norske Veritas, Germanischer Lloyd | - | TAE00001V2 |

### Approvals for hazardous areas

| Approval | Standard | Certificate Name |
|---|---|---|
| AEx<br>UL International Germany GmbH c/o Physikalisch Technische Bundesanstalt | UL 60079 | E185892 (AEx e II resp. Ex e II) |
| ATEX<br>Physikalisch Technische Bundesanstalt | IEC 60079-0 | PTB 99 ATEX 3109 U (Ex eb IIC, IM 2 Ex eb IMb) |
| CCC<br>CNEX | GB/T 3836.3 | 2020312313000232 (Ex eb IIC Gb, Ex eb I Mb) |
| IECEx<br>Physikalisch Technische Bundesanstalt | IEC 60079-0 | IECEx PTB 03.0004U (Ex eb IIC Gb or Ex eb I Mb) |


Continued on next page

## Downloads

### Environmental Product Compliance

**Compliance Search**

Environmental Product Compliance 280-989

### CAD/CAE-Data

**CAD data**

2D/3D Models 280-989

**CAE data**

EPLAN Data Portal 280-989

WSCAD Universe 280-989

ZUKEN Portal 280-989

## 1 Compatible Products

### 1.1 Required Accessories

#### 1.1.1 End plate

##### 1.1.1.1 End plate



Item No.: 280-364
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.: 280-365
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; 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


Continued on next page

## 1.2.2 Ferrule

### 1.2.2.1 Ferrule



Item No.: 216-301
Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow



Item No.: 216-302
Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise



Item No.: 216-201
Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; electrolytic copper; acc. to DIN 46228, Part 4/09.90; white



Item No.: 216-101
Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated; silver-colored



Item No.: 216-202
Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray



Item No.: 216-102
Ferrule; Sleeve for 0.75 mm² / 18 AWG; uninsulated; electro-tin plated; silver-colored



Item No.: 216-203
Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red



Item No.: 216-103
Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated



Item No.: 216-204
Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black



Item No.: 216-104
Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated; silver-colored

## 1.2.3 Installation

### 1.2.3.1 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.: 280-470
Insulation stop; 0.08 - 0.2 mm² "s" (0.14 mm² "f-st"); 5 pieces/strip; white



Item No.: 280-471
Insulation stop; 0.25 - 0.5 mm²; 5 pieces/strip; light gray



Item No.: 280-472
Insulation stop; 0.75 - 1 mm²; 5 pieces/strip; black

## 1.2.5 Jumper

### 1.2.5.1 Jumper



Item No.: 280-490
Jumper; 10-way; insulated; gray



Item No.: 280-482
Jumper; 2-way; insulated; gray



Item No.: 280-492
Jumper; 2-way; insulated; gray



Item No.: 280-483
Jumper; 3-way; insulated; gray



Item No.: 280-484
Jumper; 4-way; insulated; gray



Item No.: 280-485
Jumper; 5-way; insulated; gray


Continued on next page

## 1.2.6 Marking

### 1.2.6.1 Double marker carrier



Item No.: 209-128
Adaptor; gray

### 1.2.6.2 Group marker carrier



Item No.: 249-105
Group marker carrier; gray

### 1.2.6.3 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


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## 1.2.7 Protective warning marker

### 1.2.7.1 Cover



Item No.: 280-415
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.: 210-658
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; angled; short; multicoloured



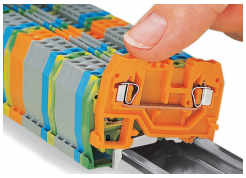
Item No.: 210-720
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured



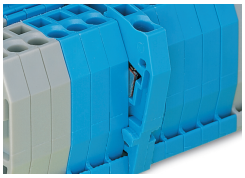
Item No.: 210-657
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured

## Installation Notes

### Installation



Snapping a terminal block onto the DIN-rail.

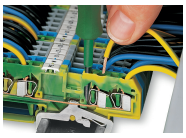


Quick assembly keys prevent reverse mounting.



Removing a terminal block from the assembly.

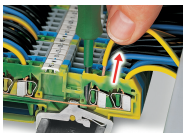
### Conductor termination



**CAGE CLAMP® connection**
Inserting a conductor.



Inserting insulation stops.



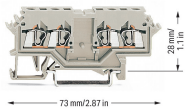
**CAGE CLAMP® connection**
Removing a solid conductor.

### Commoning



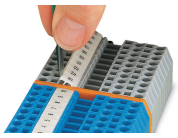
Commoning using comb-style jumper bars: Push comb-style jumper bars down until fully inserted.


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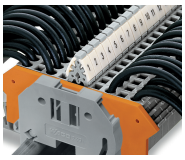



WAGO's front-entry double potential terminal blocks save space.
Two independent feedthrough circuits are placed in one insulated housing on one level in just 5 mm. This achieves a width of just 2.5 mm per potential versus standard through terminal blocks.
Input and output of a circuit are placed on the same side of the terminal block. Both circuits can be individually marked according to input and output.

## Marking



Labeling via WMB Multi Marking System.



Terminal block marking with double marker carriers (209-128) Terminal blocks with side marking