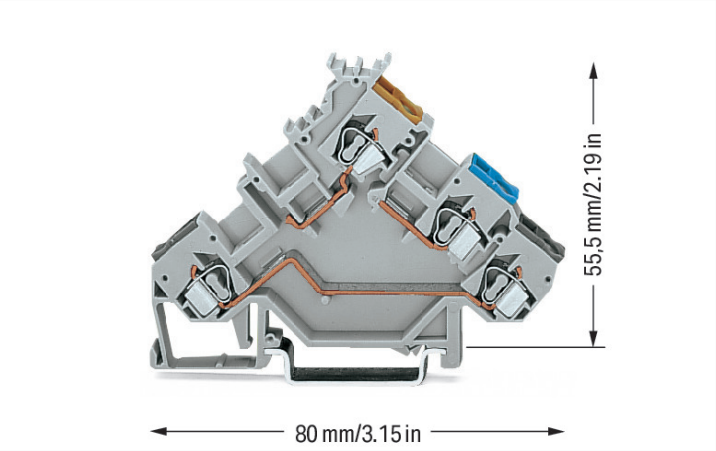
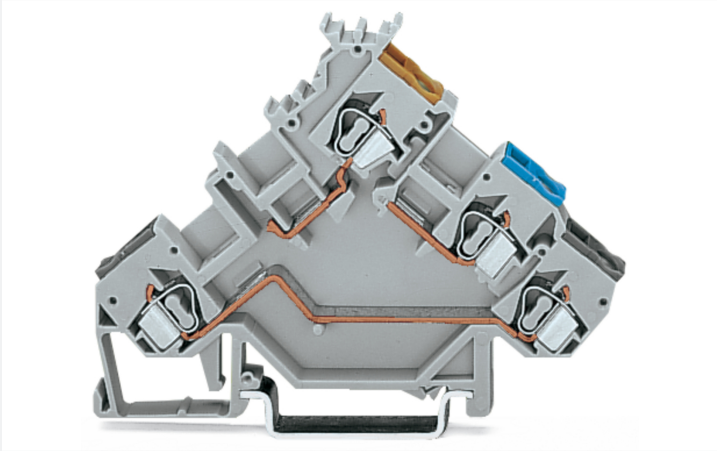
# Data Sheet | Item Number: 280-560

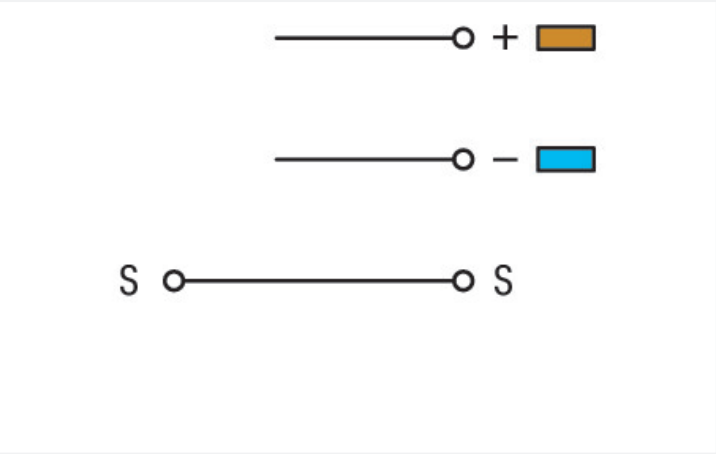
3-conductor sensor terminal block; with colored conductor entries; 2.5 mm²; CAGE CLAMP®; 2,50 mm²; gray

https://www.wago.com/280-560



Color: gray




Sensor terminal block, 280 Series, gray

Convenient electrical installations are guaranteed with this sensor terminal block (item number 280-560). Conductors can only be connected to this sensor terminal block if their strip length is between 8 and 9 mm . This product incorporates conductor terminals and utilizes CAGE CLAMP®. Our highly-rated 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 sensor terminal block is suitable for conductor cross sections ranging from 0.08 mm² to 2.5 mm².

## Electrical data

### Ratings per IEC/EN

| | |
|---|---|
| Nominal voltage (III/3) | 400 V |
| Rated impulse withstand voltage (III / 3) | 6 kV |
| Rated current | 20 A |
| Legend (ratings) | (III / 3) ≙ Overvoltage category III / Pollution degree 3 |

### Power Loss

| | |
|---|---|
| Power loss, per pole (potential) | 0.532 W |
| Rated current $I_N$ for power loss specification | 20 A |
| Resistance value for specified, current-dependent power loss | 0.00133 Ω |



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## General information

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

## Connection Data

| | |
|---|---|
| Clamping units | 4 |
| Total number of potentials | 3 |
| Number of levels | 3 |

### Connection 1

| | |
|---|---|
| Connection technology | CAGE CLAMP® |
| Actuation type | Operating tool |
| Connectable conductor materials | Copper<br>Aluminum |
| Connectable conductor materials (note) | **Terminating Aluminum Conductors**<br>WAGO Spring-Clamp Terminal Blocks are suitable for solid aluminum conductors up to 4 mm²/12 AWG if WAGO Aluminum Contact Paste 249-130 is used for termination.<br><br>Aluminum Contact Paste Advantages:<br>▪ Automatically destroys the oxide film during clamping.<br>▪ Prevents fresh oxidation at the clamping point.<br>▪ Prevents electrolytic corrosion between aluminum and copper conductors (in the same terminal block).<br>▪ Provides long-term protection against corrosion.<br><br>Using terminal blocks with CAGE CLAMP® Spring Pressure Connection Technology, **aluminum conductors must first be cleaned with a blade** and then immediately inserted into the clamping units filled with aluminum contact paste.<br><br>It is also possible to apply WAGO Aluminum Contact Paste **additionally** on the whole surface of the aluminum conductor before termination.<br><br>Please note that the nominal currents must be adapted to the reduced conductivity of the aluminum conductors::<br>2.5 mm² = 16 A<br>4 mm² = 22 A |
| 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 | 80 mm / 3.15 inches |
| Depth from upper-edge of DIN-rail | 55.5 mm / 2.185 inches |


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## Mechanical data

| | |
|---|---|
| Design | angled |
| Mounting type | DIN-35 rail |
| Marking level | Center 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 | 0.162 MJ |
| Weight | 10.6 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) | 50 pcs |
| Packaging type | Box |
| Country of origin | DE |
| GTIN | 4044918637176 |
| Customs tariff number | 85369010000 |

## Product Classification

| | |
|---|---|
| UNSPSC | 39121410 |
| eCl@ss 10.0 | 27-14-11-28 |
| eCl@ss 9.0 | 27-14-11-28 |
| ETIM 9.0 | EC000900 |
| ETIM 10.0 | EC000900 |
| ECCN | NO US CLASSIFICATION |

## Environmental Product Compliance

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

## Approvals / Certificates

### General approvals

| Approval | Standard | Certificate Name |
|---|---|---|
| CCA<br>DEKRA Certification B.V. | EN 60947 | 2160584.53 |
| CSA<br>DEKRA Certification B.V. | C22.2 | 1536071 |
| UR<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 | - | - |
| UK-Declaration of Conformity<br>WAGO GmbH & Co. KG | - | - |


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## 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 280-560

## Documentation

**Bid Text**

| | | | |
|---|---|---|---|
| 280-560 | 19.02.2019 | xml<br>3.19 KB | |
| 280-560 | 14.03.2017 | doc<br>24.50 KB | |

## CAD/CAE-Data

**CAD data**

2D/3D Models 280-560

**CAE data**

EPLAN Data Portal 280-560

WSCAD Universe 280-560

ZUKEN Portal 280-560

# 1 Compatible Products

## 1.1 Required Accessories

### 1.1.1 End plate

#### 1.1.1.1 End plate

Item No.: 280-319
End and intermediate plate; 1 mm thick; for triple-deck terminal blocks; gray

Item No.: 280-321
End and intermediate plate; 1 mm thick; for triple-deck terminal blocks; orange


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## 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

### 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 Cover

Item No.: 709-154
Cover; Type 2; suitable for cover carrier, type 2; 1 m long; transparent


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### 1.2.3.2 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

### 1.2.3.3 Mounting accessories

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

Item No.: 280-402
Jumper; insulated; gray

Item No.: 780-452
Staggered jumper; from 1 to 2; insulated; gray

Item No.: 780-453
Staggered jumper; from 1 to 3; insulated; gray

Item No.: 780-454
Staggered jumper; from 1 to 4; insulated; gray

Item No.: 780-455
Staggered jumper; from 1 to 5; insulated; gray

Item No.: 780-456
Staggered jumper; from 1 to 6; insulated; gray

Item No.: 780-457
Staggered jumper; from 1 to 7; insulated; gray

Item No.: 780-458
Staggered jumper; from 1 to 8; insulated; gray

Item No.: 210-103
Wire commoning chain; 0.5 mm²; insulated; black

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

Item No.: 210-123
Wire commoning chain; insulated; blue


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## 1.2.6 Marking

### 1.2.6.1 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.: 280-415
Protective warning marker; for 5 terminal blocks; with high-voltage symbol, black; yellow


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## 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 Test and measurement

### 1.2.9.1 Testing accessories

Item No.: 209-170
Test plug adapter; 8.3 mm wide; for 4 mm Ø test plugs; suitable for 1.5 mm² - 10 mm² tbs; gray

## 1.2.10 Tool

### 1.2.10.1 Operating tool

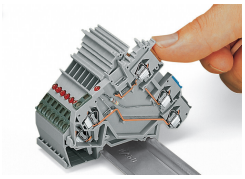
Item No.: 210-658
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; angled; short; multicoloured

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

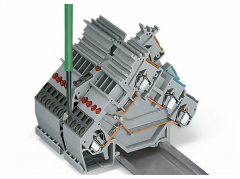
Item No.: 210-657
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured

# Installation Notes

## Installation

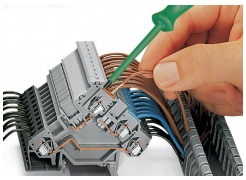


Snapping a terminal block onto the DIN-rail. Terminal blocks with a grounding foot automatically establish a direct contact to the rail.

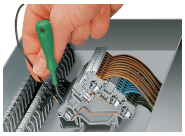


Removing the terminal block from DIN-rail. Notice: Remove jumper contacts first!

## Conductor termination



**CAGE CLAMP® connection**
Inserting a conductor via straight operating tool (210-720).



**CAGE CLAMP® connection**
Inserting a conductor via angled operating tool (210-658).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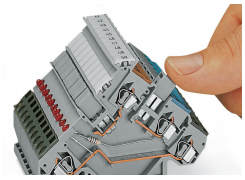
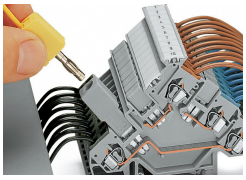
## Commoning

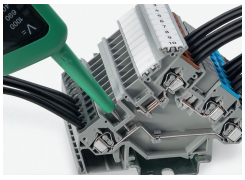


Commoning using an adjacent jumper (280-402).
Push jumper down until fully inserted.

## Testing



Testing via banana plug and test plug adapter (209-170).

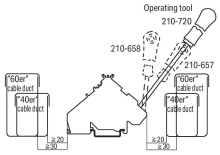


Testing via voltage tester directly on the current bar.

## Application

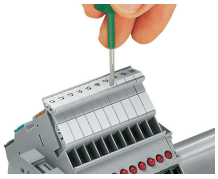
Sensor terminal block paired with a 3-conductor sensor

## Installation




Min. mounting distance – terminal blocks to cable duct

## Marking



Labeling via WMB Multi Marking System.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