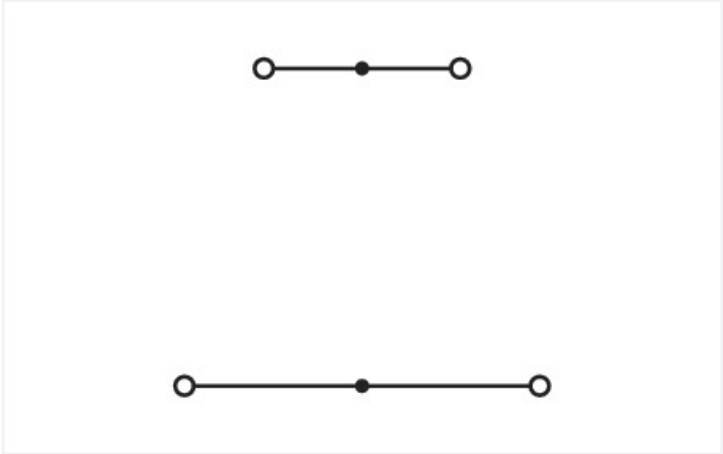
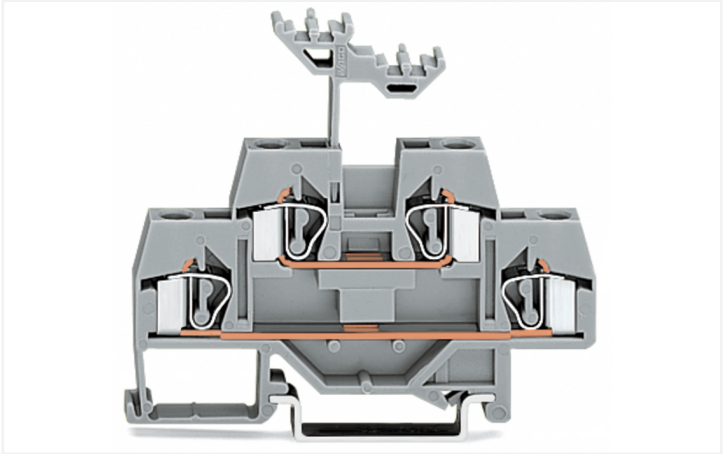


Color: ■ gray



Similar to illustration

Double-deck terminal block, 281 Series, operating tool

This double-deck terminal block (item number 281-619) simplifies electrical installations. The double-deck terminal block also serves as a through terminal block. Strip lengths must be between 9 mm and 10 mm when connecting conductors to this double-deck terminal block. This product features 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 double-deck terminal block is suitable for conductor cross sections ranging from 0.08 mm² to 4 mm². It has two levels. Two potentials can connect using the four clamping points. The gray housing is made of polyamide (PA66) for insulation. These through rail-mount terminal blocks are mounted using DIN-35 rails..

| Electrical data | | | | |
|--|-------|------------------|-----|----|
| Ratings per | | IEC/EN 60947-7-1 | | |
| Overvoltage category | | III | III | II |
| Pollution degree | | 3 | 2 | 2 |
| Nominal voltage | 500 V | - | - | - |
| Rated surge voltage | 6 kV | - | - | - |
| Rated current | 26 A | - | - | - |
| Power Loss | | | | |
| Power loss, per pole (potential) | | 1.352 W | | |
| Rated current I _N for power loss specification | | 26 A | | |
| Resistance value for specified, current-dependent power loss | | 0.001 Ω | | |



| Connection data | | |
|--|--|--|
| Clamping units | 4 | |
| Total number of potentials | 2 | |
| Number of levels | 2 | |
| Connection 1 | | |
| Connection technology | CAGE CLAMP® | |
| Actuation type | Operating tool | |
| Connectable conductor materials | Copper Aluminum | |
| Connectable conductor materials (note) | <p>Terminating Aluminum Conductors WAGO Spring-Clamp Terminal Blocks are suitable for solid aluminum conductors up to 4 mm²/12 AWG if WAGO "Alu-Plus" Contact Paste 249-130 is used for termination.</p> <p>"Alu-Plus" Contact Paste Advantages:</p> <ul style="list-style-type: none">• Automatically destroys the oxide film during clamping.• Prevents fresh oxidation at the clamping point.• Prevents electrolytic corrosion between aluminum and copper conductors (in the same terminal block).• Provides long-term protection against corrosion. <p>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 "Alu-Plus" contact paste.</p> <p>It is also possible to apply WAGO "Alu-Plus" additionally on the whole surface of the aluminum conductor before termination.</p> <p>Please note that the nominal currents must be adapted to the reduced conductivity of the aluminum conductors:: 2.5 mm² = 16 A 4 mm² = 22 A</p> | |
| 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 | 73.5 mm / 2.894 inches | |
| Depth from upper-edge of DIN-rail | 58.5 mm / 2.303 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 | gray | |
| Material group | I | |
| Insulation material (main housing) | Polyamide (PA66) | |
| Flammability class per UL94 | V0 | |
| Fire load | 0.223 MJ | |
| Weight | 13.9 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 | CN | |
| GTIN | 4050821215110 | |
| 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 8.0 | EC000897 | |
| ECCN | NO US CLASSIFICATION | |

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

| Approvals / Certificates | | | | | | | | |
|--|-----------|--|----------|----------|------------------|--|---|---|
| General approvals | | Declarations of conformity and manufacturer's declarations | | | | | | |
| | | | | | | | | |
| Approval | Standard | Certificate Name | | | | | | |
| CCA DEKRA Certification B.V. | IEC 60947 | NTR NL-7454/A1 | | | | | | |
| CSA CSA Group | C22.2 | 1505034 | | | | | | |
| KEMA/KEUR DEKRA Certification B.V. | EN 60947 | 71-107288 | | | | | | |
| UL Underwriters Laboratories Inc. | UL 1059 | E45172 | | | | | | |
| | | <table><tr><th>Approval</th><th>Standard</th><th>Certificate Name</th></tr><tr><td>EU-Declaration of Confor- mity WAGO GmbH & Co. KG</td><td>-</td><td>-</td></tr></table> | Approval | Standard | Certificate Name | EU-Declaration of Confor- mity WAGO GmbH & Co. KG | - | - |
| Approval | Standard | Certificate Name | | | | | | |
| EU-Declaration of Confor- mity WAGO GmbH & Co. KG | - | - | | | | | | |



Approvals for marine applications



| Approval | Standard | Certificate Name |
|---|----------|------------------|
| ABS American Bureau of Ship- ping | - | 20-HG1941090-PDA |
| BV Bureau Veritas S.A. | EN 60947 | 07436/F0 BV |
| DNV GL Det Norske Veritas, Ger- manischer Lloyd | - | TAE00001V2 |

Downloads

Environmental Product Compliance

| Compliance Search |
|---|
| Environmental Product Compliance 281-619 |



Documentation

| Bid Text | | | |
|----------|------------|-----------------|--|
| 281-619 | 19.02.2019 | xml 3.26 KB | |
| 281-619 | 02.03.2017 | doc 24.50 KB | |

CAD/CAE-Data

| CAD data |
|----------------------|
| 2D/3D Models 281-619 |



| CAE data |
|------------------------------|
| EPLAN Data Portal 281-619 |
| WSCAD Universe 281-619 |
| ZUKEN Portal 281-619 |





1 Compatible Products

1.1 Required Accessories

1.1.1 End plate

1.1.1.1 End plate



Item No.: 281-340
End and intermediate plate; 2.5 mm thick; gray



Item No.: 281-341
End and intermediate plate; 2.5 mm thick; orange

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.: 216-241
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; un-insulated; 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

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 TOP-JOB® 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.: 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.: 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



1.2.5.1 Jumper



Item No.: 281-421
Vertical jumper; 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



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



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

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; violet



Item No.: 2009-115/000-024
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange



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 Push-in type wire jumper

1.2.7.1 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

1.2.8 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



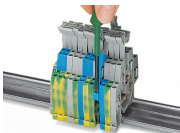
Item No.: 210-657
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured

Installation Notes

Installation



Snapping a terminal block onto the DIN-rail.

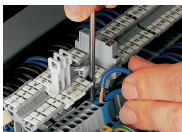


Removing a terminal block from the assembly.



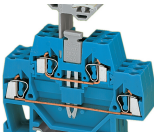
Double-deck terminal blocks accommodate two circuits of different potentials on two decks; different circuits can be differentiated by color coding either deck (280 Series). The lower deck is wider than the upper for easier wiring.

Conductor termination



The flexible marker carrier, which is placed above the wiring level, can be pushed aside during wiring or commoning. The carrier has two staggered levels for WMB markers that perfectly align with the terminal block decks.

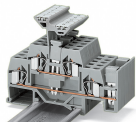
Commoning



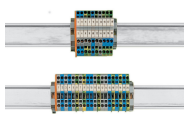
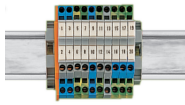
Commoning using an adjacent jumper.
Push jumpers down until fully inserted!

Commoning with a vertical jumper
(281-421).
Push vertical jumper down until fully inserted!

Commoning



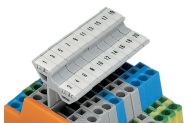
A vertical jumper commons the upper and lower decks, creating a 4-conductor commoned through terminal block in one housing. Two adjacent terminals may be commoned together on the same deck using a push-in adjacent jumper.



With a terminal block width of just 5 mm, an effective width of just 2.5 mm for terminal blocks of same or different potentials can be realized for conductors ranging 0.08 mm² ... 2.5 mm² (28 ... 14 AWG).

Use 50% less rail space with double-deck terminal blocks.

Marking



Labeling via WMB Multi Marking System.