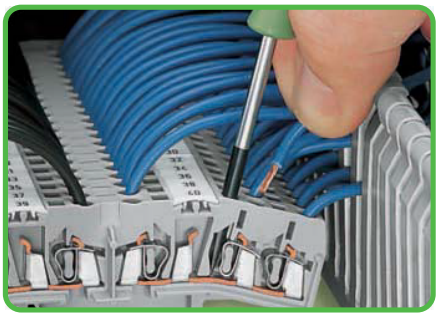
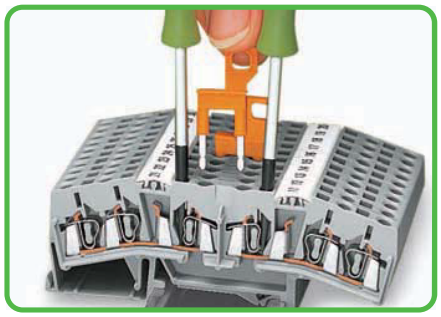
# Rail-Mounted Terminal Blocks for Matrix Patching, 280 Series – Description and Handling –

CAGE CLAMP®



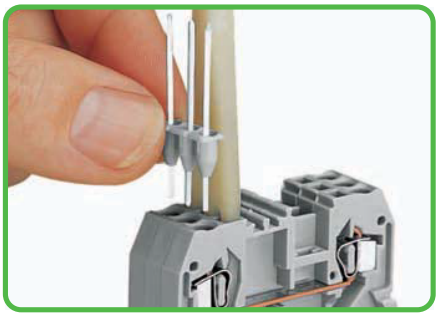
Terminal blocks for matrix patching.
Conductor termination/removal on the terminal block's side-entry.

Terminal blocks for matrix patching.
Conductor termination/removal in center of the terminal block.

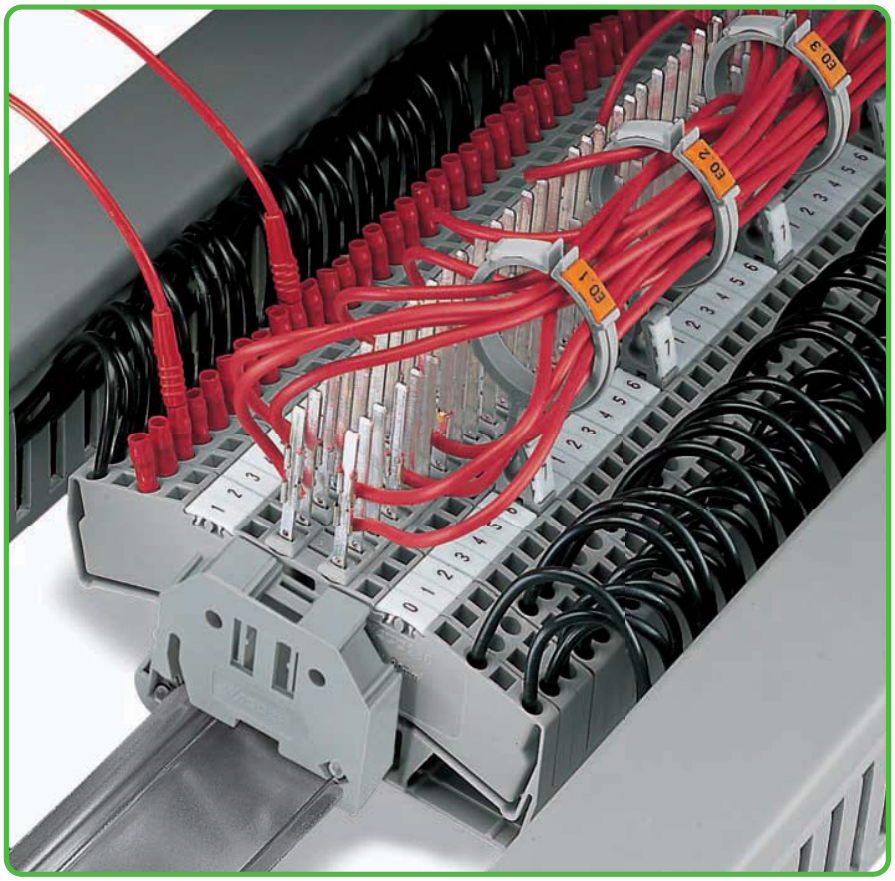


Used as disconnect terminal block.
Inserting disconnect jumpers.

## Pin modules



Inserting a pin module shown with 280 Series terminal blocks.



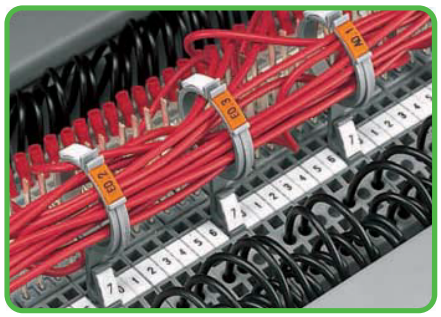
## Comb-style jumper bars

Used as potential multiplication.
Inserting a 10-way, comb-style jumper bar (only possible in the center).

## Wire harness support

Clipping wire harness support onto the marker slot.

Inserting a cable into the wire harness support.



2 x group marking on top
1 x terminal block marking at the bottom

**CAGE CLAMP® clamps the following copper conductors:***

| solid | stranded | fine-stranded, also with tinned single strands | fine-stranded, tip-bonded | fine-stranded, with ferrule ❶ (gastight crimped) | fine-stranded, with pin terminal (gastight crimped) |
|---|---|---|---|---|---|

* For aluminum conductors, see notes in Section 14.

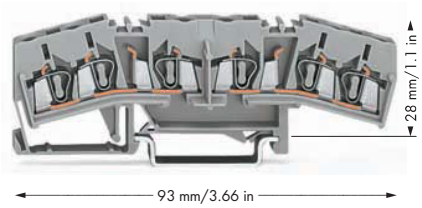
❶ When using ferrules, the max. conductor cross section accommodated is one size smaller than max. rating of terminal block.

# Rail-Mounted Terminal Blocks for Matrix Patching 2.5 mm² 280 Series

| | |
|---|---|
| 0.08 - 2.5 mm² | AWG 28 - 12 * |
| 800 V/8 kV/3 ❶ | 600 V, 10 A |
| $I_N$ 18 A | |

Terminal block width 5 mm / 0.197 in
8 - 9 mm / 0.33 in ❷

In measurement and control technology, matrix patchboards are essential to process automation systems. Particularly beneficial to these applications is the use of the WAGO wire harness support, which simplifies wiring. WAGO 280 Series 3-conductor, front-entry, double-potential terminal blocks (with or without the addition of Wire-Wrap® or TERMI-POINT® pins) are also ideal for this type of application. They can be used for linking incoming field wires from items such as measuring devices or servos etc., with central process controllers, e.g., control consoles, panelboards or PLCs via matrix connections.
The WAGO wire harness support elements are pushed into the terminal blocks (approx. every 8th unit) to form an additional "cable-duct" above the wiring level of the terminal blocks. Two marker slots are provided in each, the top ones may be used for group marking, and the lower slot for marking the terminal block.




* AWG 12: THHN, THWN

❶ 800 V = rated voltage
8 kV = rated surge voltage
3 = pollution degree
(also see Section 14)
500 V/6 kV/3 between both current bars
(if used as disconnect terminal block or potential multiplier)

❷ Strip length, see packaging or instructions.

❸ See application notes for:
Isolierungsstopp Seite 199
Brückungskamm Seite 200
Betätigungswerkzeug Seite 200

| | Item No. | Pack. Unit |
|---|---|---|
| **3-conductor double-potential terminal block** | | |
| **or** | | |
| **Rail-mounted terminal block for matrix patching,** | | |
| Notice: This 3-conductor double-potential terminal block cannot be commoned via adjacent jumpers. | | |
| gray | **280-675** | 50 |

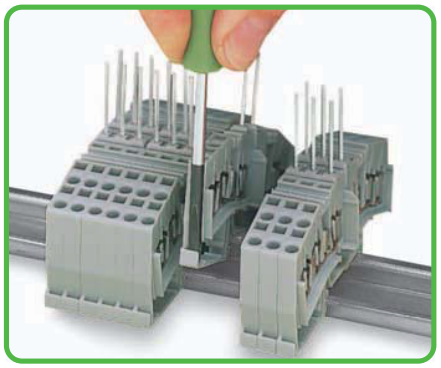
## Accessories

Appropriate marking system:
WMB (see Section 13)

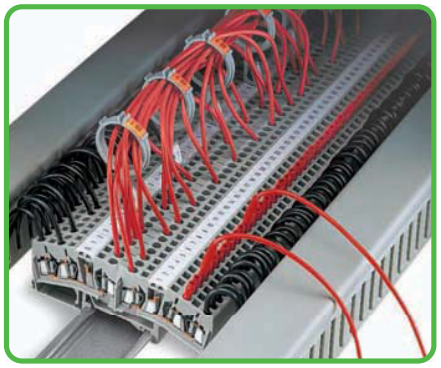
| | | |
|---|---|---|
| **End and intermediate plate,** 5 mm thick | | |
| orange | **280-333** | 25 |
| gray | **280-325** | 25 |
| **Insulation stop,** ❸ 5 pcs/strip, 0.08 - 0.2 mm² "s" (0.14 mm² "f-st") | | |
| white | **280-470** | 200 (8x25) |
| **Insulation stop,** ❸ 5 pcs/strip, 0.25 - 0.5 mm² | | |
| light gray | **280-471** | 200 (8x25) |
| **Insulation stop,** ❸ 5 pcs/strip, 0.75 - 1 mm² | | |
| dark gray | **280-472** | 200 (8x25) |
| **Alternate comb-style jumper bar,** insulated, $I_N$ = $I_N$ terminal block | | |
| 2-way | **280-492** | 200 (8x25) |
| **Comb-style jumper bar,** insulated, ❸ $I_N$ = $I_N$ terminal block | | |
| 2-way | **280-482** | 200 (8x25) |
| 3-way | **280-483** | 200 (8x25) |
| **Comb-style jumper bar,** insulated, $I_N$ = $I_N$ terminal block | | |
| 10-way | **280-490** | 50 (2x25) |
| **Disconnect jumper with pull-tab,** orange, $I_N$ = $I_N$ of terminal block | | |
| 2-way | **280-494** | 200 (8x25) |
| **Operating tool,** of insulating material | | |
| 2-way | **280-432** | 1 |
| 3-way | **280-433** | 1 |
| **Operating tool,** of insulating material | | |
| 10-way | **280-440** | 1 |

## Accessories

| | | |
|---|---|---|
| **Protective warning marker,** with high-voltage symbol, black, for 5 terminal blocks | | |
| yellow | **280-415** | 100 (4x25) |
| **Pin module,** 2-pole, for assembly on all front-entry 280 Series rail-mounted terminal blocks, for Wire-Wrap®, 1 x 1 mm | | |
| | **280-477** | 100 |
| **Pin module,** 2-pole, for TERMI-POINT®, 0.8 x 1.6 mm | | |
| | **280-475** | 100 |
| **Pin module,** 2-pole, for TERMI-POINT®, 0.8 x 2.4 mm | | |
| | **280-473** | 100 |
| **Pin module,** 3-pole, for Wire-Wrap®, 1 x 1 mm | | |
| | **280-478** | 100 |
| **Pin module,** 3-pole, for TERMI-POINT®, 0.8 x 1.6 mm | | |
| | **280-476** | 100 |
| **Pin module,** 3-pole, for TERMI-POINT®, 0.8 x 2.4 mm | | |
| | **280-474** | 100 |
| **Wire harness support** | | |
| gray | **249-109** | 50 |



Removal: Separate terminal strip, slide terminal block to disconnect and then remove from the carrier rail.



For 5 mm/0.197 in wide double-potential front-entry terminal blocks, two 3-conductor through terminal blocks are offered in one insulating housing on one level. On each side of the terminal block are marker slots for WAGO markers. Via of the available accessories, these terminal blocks can also be used as 4-conductor disconnect terminal blocks or multipliers of potential. During mounting/dismounting using DIN carrier rail, please note that due to the protruding webs, the terminal blocks can only be inserted or removed from the assembly after having displaced the adjacent terminal blocks (also see picture above).

For list of approvals and user guide, see pages 634 to 637.