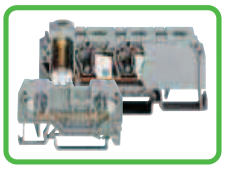
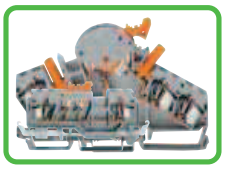
3

| | | |
|---|---|---|
| Through, Ground Conductor and Ex Terminal Blocks | | |
| 0.08 mm² to 35 mm² (AWG 28 - 2) | 279 - 285 and 880 Series | 162 – 176 |
| Distribution Terminal Blocks | | |
| 10 mm² / 35 mm² (AWG 8 / AWG 2) | 284 Series | 177 |



| | | |
|---|---|---|
| Multilevel Rail-Mounted Terminal Blocks | | |
| Double-Deck Terminal Blocks | | |
| 1.5/2.5/4 mm² (AWG 16/12) | 279/280/281 Series | 180 – 188 |
| Triple-Deck Terminal Blocks 2.5 mm²/AWG 12 | 280 Series | 190 |
| Quadruple-Deck Terminal Blocks 4 mm²/AWG 12 | 281 Series | 192 |



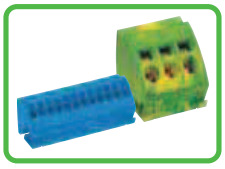
| | | |
|---|---|---|
| Disconnect Terminal Blocks for Test and Measurement | | |
| – with knife disconnect | 280 Series | 204 – 205 |
| – with disconnect tab | 280/281 Series | 206 – 209 |
| – for transformer circuits | 282 Series | 214 – 219 |
| Ground Conductor Disconnect Terminal Blocks | 282 Series | 220 |



| | | |
|---|---|---|
| Fuse Terminal Blocks | | |
| – with pivoting fuse holder | 281 Series | 226 – 229 |
| – for mini-automotive blade-style fuses | 282 Series | 222 |
| Fuse Plugs for Carrier Terminal Blocks | 280/281 Series | 230 – 233 |
| Technical Information on Fuse Terminal Blocks and Fuse Plugs | | 234 – 235 |



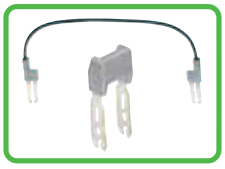
| | | |
|---|---|---|
| Sensor and Actuator Terminal Blocks | 280 Series | 238 – 253 |
| Diode and LED Terminal Blocks | 279/280/281 Series | 254 – 259 |
| Double-Deck Diode and LED Terminal Blocks | 280/281 Series | 260 – 263 |
| Pluggable Modules - Diodes, LED and Neon Indicators | 280 Series | 264 – 267 |



| | |
|---|---|
| Accessories for Rail-Mounted Terminal Blocks | |
| – Busbar Terminal Blocks | 427 |



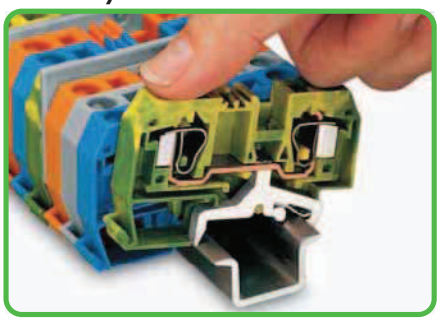
| | |
|---|---|
| – Banana Plugs | 198 |
| – Insulation Stops | 199 |
| – Comb-Style Jumper Bars | 200 |



| | |
|---|---|
| – Push-In Type Wire Jumpers | 201 |
| – Staggered Jumpers | 201 |
| – Test Plug Modules | 194 – 197 |
| – Step-Down Jumpers for Through Terminal Blocks | 178 – 179 |

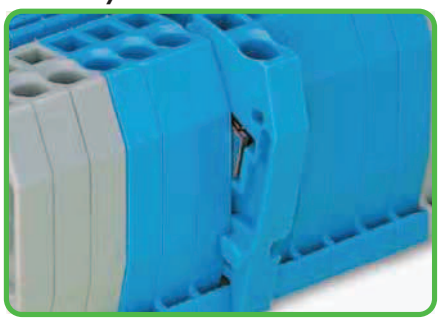
# Rail-Mounted Terminal Blocks
# 279 to 285 Series and 880 Series

## Assembly



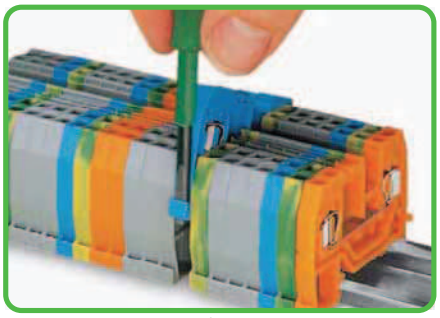
By snapping a ground conductor terminal block onto the carrier rail, a direct electrical connection is automatically made to the rail.

## Assembly



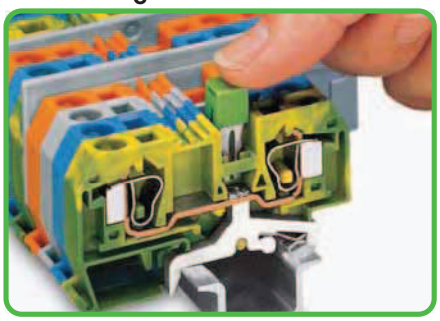
Quick assembly keys prevent reverse mounting.

## Removal



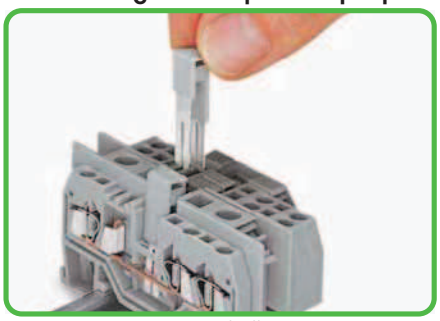
Removing a terminal block from the assembly.

## Commoning



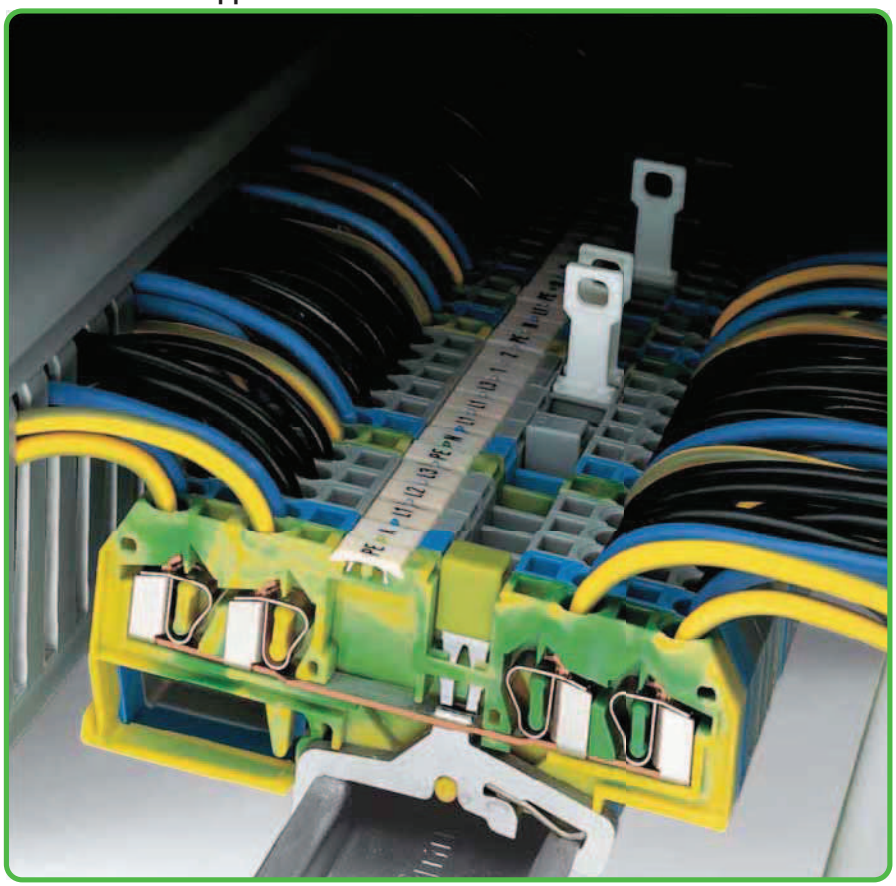
Commoning ground conductor terminal blocks with through terminal blocks is possible in one direction only (via rear side of terminal block) using adjacent jumpers. In addition to the required marking of these blocks, use yellow-green adjacent jumpers.

## Commoning with step-down jumpers

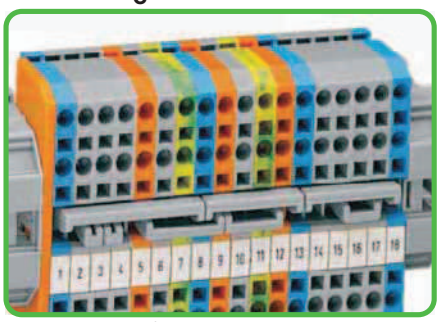


Commoning terminal blocks of different sizes – step down.
For application notes, see page 178.

## According to EN 60947-7-2 (VDE 0611, part 3), steel carrier rails shall not be used for PEN applications

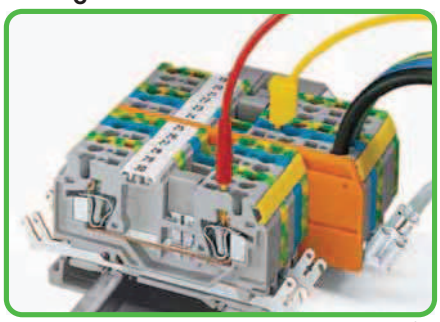


## Commoning



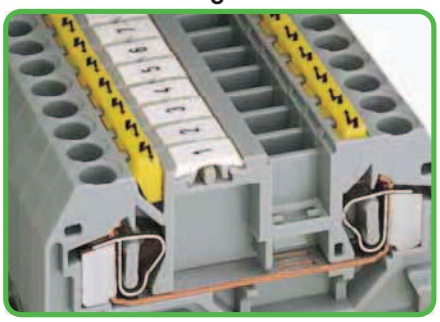
Staggered jumpers for sophisticated circuit requirements. Push jumpers down firmly until fully inserted.
For additional notes, see page 201.

## Testing - 880 Series



880 Series terminal blocks have an additional test slot for 2 mm Ø or 2.3 mm Ø test plugs.

## Protective warning marker



Protective warning markers inserted into the operating slots.



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

solid



stranded

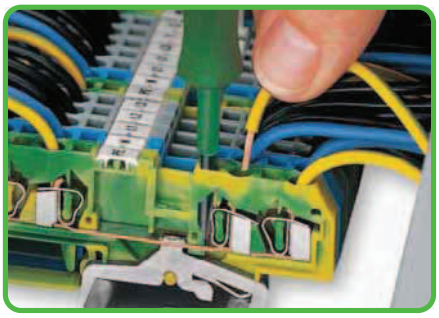


fine-stranded, also with tinned single strands

* For aluminum conductors, see notes in Section 14.

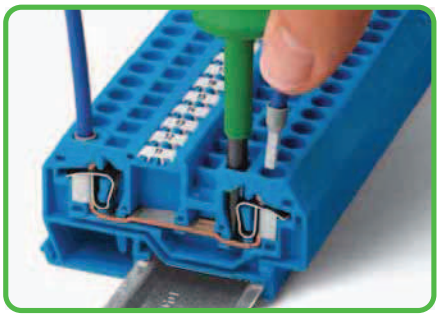
# – Description and Handling –

## CAGE CLAMP® connection



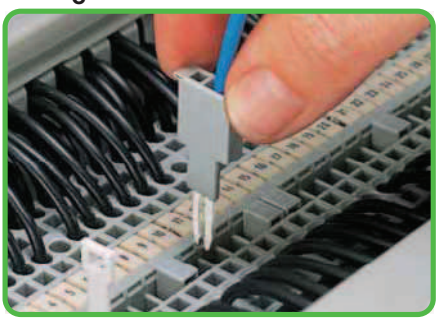
Conductor termination

## CAGE CLAMP® connection

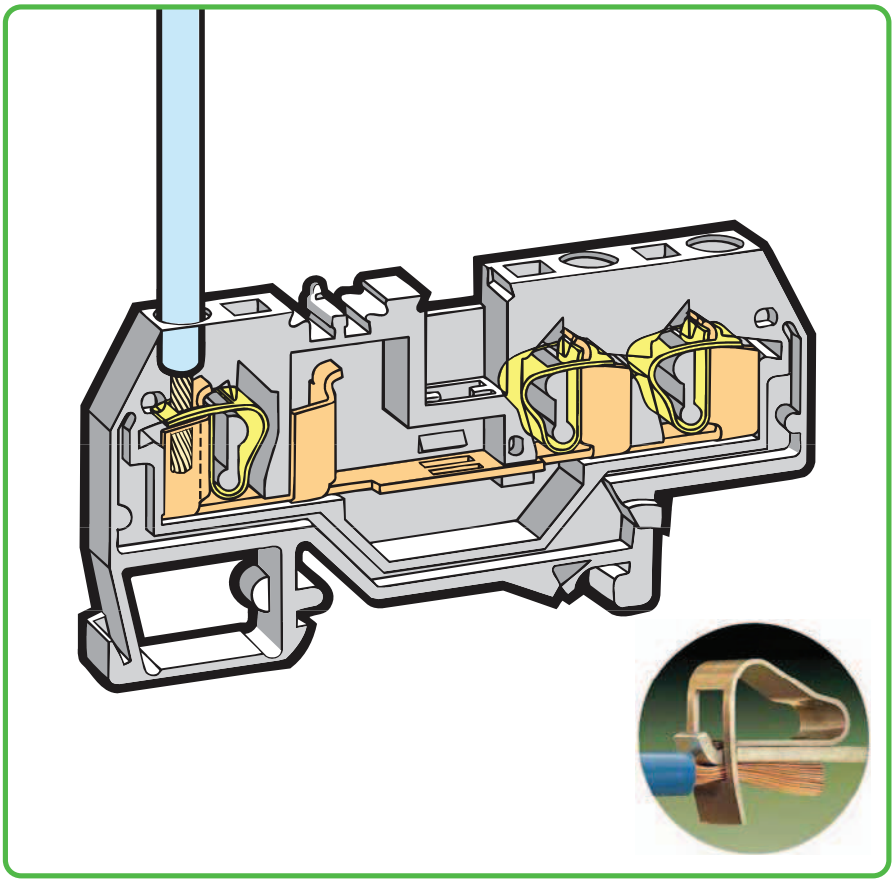


Conductor termination
❶ When using ferruled conductors, it is necessary to use a terminal block one size larger than the nominal cross section of the wire.

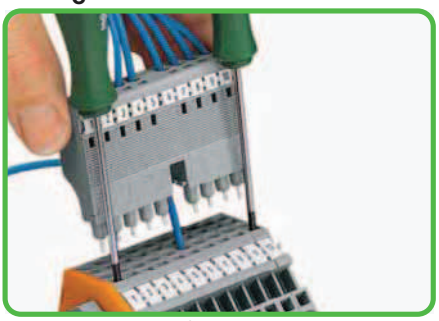
## Testing



Testing with test plug.
Test plug fitted with CAGE CLAMP®.



## Testing



L-type test plug modules fitted with CAGE CLAMP®.
For application notes, see page 194.

## Testing



B-type test plug modules fitted with CAGE CLAMP®.
For application notes, see page 195.

## Marking



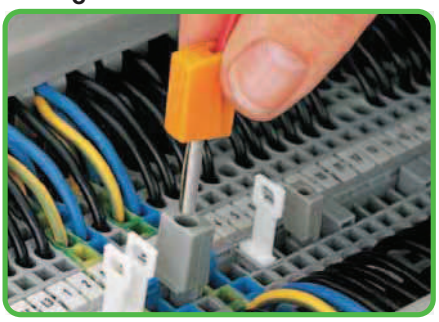
Marking with WMB Multi marking system.
For additional systems, see Section 13.

## Insulation stop



Insertion of insulation stop.
For application notes, see page 199.

## Testing



Testing with test plug.
Using 209-170 test plug adapter.



fine-stranded,
tip-bonded



fine-stranded,
with ferrule ❶
(gastight crimped)

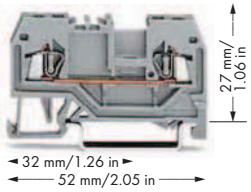


fine-stranded,
with pin terminal
(gastight crimped)

# Through/Ground Conductor/Shield and Ex Terminal Blocks 1.5 mm² 279 Series

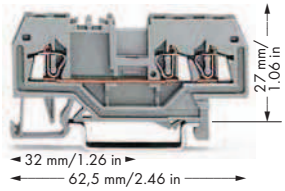
| 0.08 - 1.5 mm² | AWG 28 - 16 |
|---|---|
| 800 V/8 kV/3 ❶ | 600 V, 10 A |
| $I_N$ 18 A | 600 V, 10 A |

Terminal block width 4 mm / 0.157 in
8 - 9 mm / 0.33 in ❷



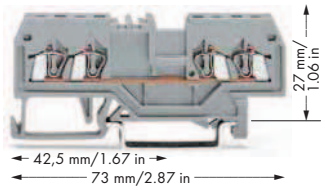

| 0.08 - 1.5 mm² | AWG 28 - 16 |
|---|---|
| 800 V/8 kV/3 ❶ | 600 V, 10 A |
| $I_N$ 18 A | 600 V, 10 A |

Terminal block width 4 mm / 0.157 in
8 - 9 mm / 0.33 in ❷




| 0.08 - 1.5 mm² | AWG 28 - 16 |
|---|---|
| 800 V/8 kV/3 ❶ | 600 V, 10 A |
| $I_N$ 18 A | 600 V, 10 A |

Terminal block width 4 mm / 0.157 in
8 - 9 mm / 0.33 in ❷




| | Item No. | Pack. Unit |
|---|---|---|
| **2-conductor through terminal block** | | |
| gray | **279-901** | 100 |
| blue | **279-904** ❸ | 100 |
| orange | **279-902** | 100 |
| red | **279-903** | 100 |
| black | **279-905** | 100 |
| yellow | **279-906** | 100 |
| light gray Ex | **279-992** ❹ | 100 |
| **2-conductor ground terminal block** | | |
| green-yellow | **279-907** | 100 |
| green-yellow Ex | **279-907/999-950** ❹ | 100 |
| **Other terminal blocks with the same profile:** | | |
| Diode | **279-915/281-410** Page 254 | |

| | Item No. | Pack. Unit |
|---|---|---|
| **3-conductor through terminal block** | | |
| gray | **279-681** | 100 |
| blue | **279-684** ❸ | 100 |
| orange | **279-682** | 100 |
| red | **279-683** | 100 |
| black | **279-685** | 100 |
| yellow | **279-686** | 100 |
| light gray Ex | **279-993** ❹ | 100 |
| **3-conductor ground terminal block** | | |
| green-yellow | **279-687** | 100 |
| green-yellow Ex | **279-687/999-950** ❹ | 100 |
| **Other terminal blocks with the same profile:** | | |
| Diode | **279-673/281-410** Page 254 | |
| LED | **279-674/281-434** Page 254 | |

| | Item No. | Pack. Unit |
|---|---|---|
| **4-conductor through terminal block** | | |
| gray | **279-831** | 100 |
| blue | **279-834** ❸ | 100 |
| orange | **279-832** | 100 |
| red | **279-833** | 100 |
| black | **279-835** | 100 |
| yellow | **279-836** | 100 |
| light gray Ex | **279-994** ❹ | 100 |
| **4-conductor ground terminal block** | | |
| green-yellow | **279-837** | 100 |
| green-yellow Ex | **279-837/999-950** ❹ | 100 |
| **4-conductor shield terminal block** | | |
| white | **279-838** | 100 |
| **Other terminal blocks with the same profile:** | | |
| Diode | **279-815/281-410** Page 254 | |
| LED | **279-809/281-434** Page 254 | |
| Double-potential | **279-826** Page 163 | |

## Item-Specific Accessories

**End and intermediate plate,** 2 mm thick



| | | |
|---|---|---|
| orange | **279-328** | 100 (4x25) |
| gray | **279-325** | 100 (4x25) |
| light gray | **279-330** | 100 (4x25) |

**Separator,** oversized, 2 mm thick



| | | |
|---|---|---|
| orange | **279-329** | 100 (4x25) |
| gray | **279-326** | 100 (4x25) |
| light gray | **279-331** | 100 (4x25) |

**Ex e/Ex i separator,** orange,



| | | |
|---|---|---|
| 3 mm thick | | |
| 90 mm | **209-190** | 50 (2x25) |
| 120 mm | **209-191** | 50 (2x25) |

## Item-Specific Accessories

**End and intermediate plate,** 2 mm thick



| | | |
|---|---|---|
| orange | **279-339** | 100 (4x25) |
| gray | **279-308** | 100 (4x25) |
| light gray | **279-341** | 100 (4x25) |

**Separator,** oversized, 2 mm thick



| | | |
|---|---|---|
| orange | **279-340** | 100 (4x25) |
| gray | **279-309** | 100 (4x25) |
| light gray | **279-342** | 100 (4x25) |

**Ex e/Ex i separator,** orange,



| | | |
|---|---|---|
| 3 mm thick | | |
| 120 mm | **209-191** | 50 (2x25) |

## Item-Specific Accessories

**End and intermediate plate,** 2 mm thick



| | | |
|---|---|---|
| orange | **279-346** | 100 (4x25) |
| gray | **279-344** | 100 (4x25) |
| light gray | **279-348** | 100 (4x25) |

**Separator,** oversized, 2 mm thick



| | | |
|---|---|---|
| orange | **279-347** | 100 (4x25) |
| gray | **279-345** | 100 (4x25) |
| light gray | **279-349** | 100 (4x25) |

**Ex e/Ex i separator,** orange,



| | | |
|---|---|---|
| 3 mm thick | | |
| 120 mm | **209-191** | 50 (2x25) |

**Cover plate,**



| | | |
|---|---|---|
| 1 mm thick | | |
| gray | **284-336** | 100 |
| orange | **284-346** | 100 |

## 279 Series Accessories

Appropriate marking systems: WMB/WFB
(see Section 13)

**Insulation stop,** ❺



| | | |
|---|---|---|
| 5 pcs/strip, | | |
| 0.08 - 0.2 mm² "s" (0.14 mm² "f-st") | | |
| white | **279-470** | 200 (8x25) |

**Insulation stop,** ❺



| | | |
|---|---|---|
| 5 pcs/strip, | | |
| 0.25 mm² | | |
| dark gray | **279-471** | 200 (8x25) |

**Adjacent jumper,** insulated,



| | | |
|---|---|---|
| $I_N$ 15 A | | |
| gray | **279-402** | 200 (8x25) |
| yellow-green | **279-422** | 200 (8x25) |

**Alternate jumper,** insulated,



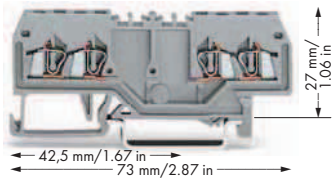
| | | |
|---|---|---|
| $I_N$ 15 A | | |
| gray | **279-409** | 100 (4x25) |

**Push-in type wire jumper,** ❺



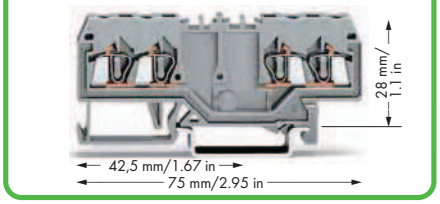
| | | |
|---|---|---|
| insulated, | | |
| $I_N$ 9 A, | | |
| wire size 0.75 mm² | | |
| L = 60 mm | **249-125** | 10 |
| L = 110 mm | **249-126** | 10 |
| L = 250 mm | **249-127** | 10 |

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




**Double-potential terminal blocks**
with double marker slot centered on terminal block
gray 279-826
light gray Ⓔx279-995
Packing unit: 100 pcs

**Notice: These double-potential terminal blocks cannot be commoned with adjacent jumpers!**
For technical data and accessories,
see www.wagocatalog.com




**Double-potential terminal blocks**
with double marker slot centered on terminal block
gray 280-826
light gray Ⓔx280-995
Packing unit: 100 pcs

**Notice: These double-potential terminal blocks cannot be commoned with adjacent jumpers!**
For technical data and accessories,
see www.wagocatalog.com

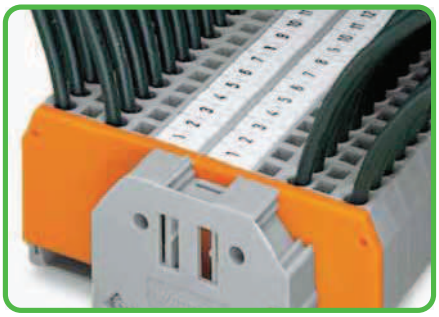
❶ 800 V = rated voltage
8 kV = rated surge voltage
3 = pollution degree
(also see Section 14)

❷ Strip length, see packaging or instructions.

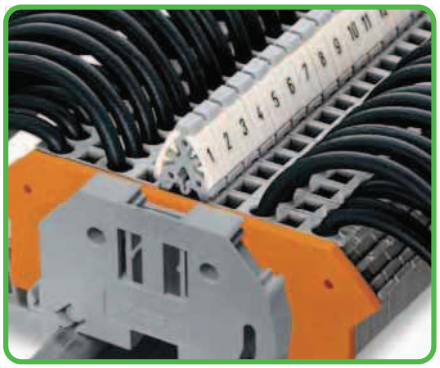
❸ Suitable for Ex i applications

❹ Suitable for Ex e II applications
0.2 mm² - 1.5 mm²/AWG 24 - 16
550 V, 15 A
(also see Section 14)

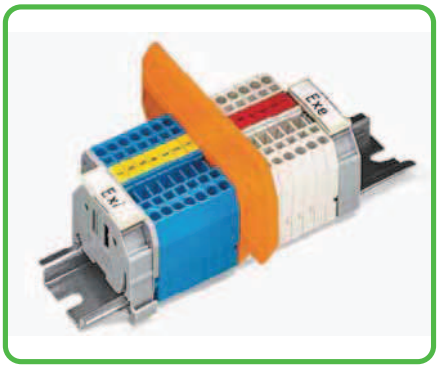
❺ See application notes for:
Insulation stop, page 199
Push-in type wire jumper, page 201
Step-down jumper, pages 178 – 179
Banana plug, page 198
Comb-style jumper bar, page 200
Operating tool, page 200



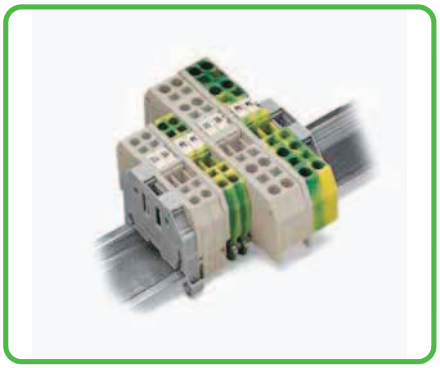
WMB markers provide marking directly on terminal block.
For WMB Multi marking system, see Section 13.



Terminal block marking with double marker carriers
Item No. 209-128
For terminal blocks with side marking,
see online catalog at www.wagocatalog.com




**Separator 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 carrier rail.
Suitable for 279 to 282 Series terminal blocks.
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.

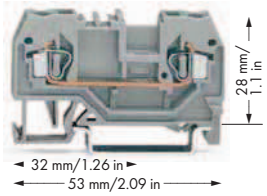
## 279 Series Accessories

| | | | |
|---|---|---|---|
| **Step-down jumper,** insulated, | | | |
| ❺ | $I_N$ 15 A | | |
| | gray | **284-414** | 50 (2x25) |
| **Cover plate,** | | | |
| | 1 mm thick | | |
| | gray | **284-334** | 100 |
| | orange | **284-344** | 100 |
| **Protective warning marker,** | | | |
| | with high-voltage symbol, black, | | |
| | for 5 terminal blocks | | |
| | yellow | **279-415** | 100 (4x25) |
| **Test plug adapter,** 8.3 mm wide, | | | |
| | for terminal blocks 1.5 - 10 mm², | | |
| | for test plug 4 mm Ø | | |
| | gray | **209-170** | 50 (2x25) |
| **Banana plug,** | | | |
| ❺ | for socket 4 mm Ø, | | |
| | color mixed | | |
| | | **215-111** | 50 |
| **Test plug adapter,** 5 mm wide, | | | |
| | for terminal blocks 1.5 - 4 mm², | | |
| | for 210-137 test plug 2.3 mm Ø | | |
| | gray | **280-404** | 100 (4x25) |
| **Test plug,** | | | |
| | with 500 mm cable, | | |
| | 2.3 mm Ø | | |
| | yellow | **210-137** | 50 |
| **Comb-style jumper bar,** insulated, | | | |
| ❺ | $I_N$ = $I_N$ terminal block | | |
| | 2-way | **279-482** | 200 (8x25) |
| | 3-way | **279-483** | 200 (8x25) |
| **Comb-style jumper bar,** insulated, | | | |
| | $I_N$ = $I_N$ terminal block | | |
| | 10-way | **279-490** | 50 (2x25) |
| **Alternate comb-style jumper bar,** | | | |
| | insulated, | | |
| | $I_N$ = $I_N$ terminal block | | |
| | 2-way | **279-492** | 200 (8x25) |
| **Operating tool,** of insulating material | | | |
| | 2-way | **279-432** | 1 |
| | 3-way | **279-433** | 1 |
| **Operating tool,** of insulating material | | | |
| | 10-way | **279-440** | 1 |

# Through/Ground Conductor/Shield and Ex Terminal Blocks 2.5 mm² 280 Series

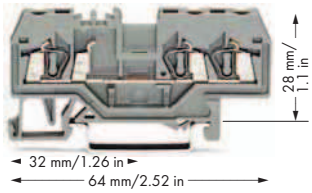
| 0.08 - 2.5 mm² | AWG 28 - 12 * |
|---|---|
| 800 V/8 kV/3 ❶ | 600 V, 20 A |
| $I_N$ 24 A | 600 V, 25 A |

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



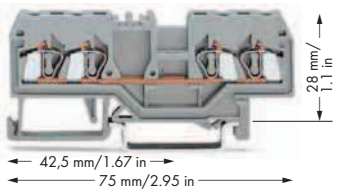

| 0.08 - 2.5 mm² | AWG 28 - 12 * |
|---|---|
| 800 V/8 kV/3 ❶ | 600 V, 20 A |
| $I_N$ 24 A | 600 V, 15 A |

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




| 0.08 - 2.5 mm² | AWG 28 - 12 * |
|---|---|
| 800 V/8 kV/3 ❶ | 600 V, 20 A |
| $I_N$ 20 A | 600 V, 25 A |

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




| | Item No. | Pack. Unit |
|---|---|---|
| **2-conductor through terminal block** | | |
| gray | **280-901** | 100 |
| blue | **280-904** ❸ | 100 |
| orange | **280-902** | 100 |
| red | **280-903** | 100 |
| black | **280-905** | 100 |
| yellow | **280-906** | 100 |
| light gray Ex | **280-992** ❹ | 100 |
| **2-conductor ground terminal block** | | |
| green-yellow | **280-907** | 100 |
| green-yellow Ex | **280-907/999-950** ❹ | 100 |
| **Other terminal blocks with the same profile:** | | |
| Diode | **280-915/281-410** | Page 256 |
| Disconnect | **280-912** | Page 206 |
| Carrier | **280-916** | Page 232 |

| | Item No. | Pack. Unit |
|---|---|---|
| **3-conductor through terminal block** | | |
| gray | **280-681** | 100 |
| blue | **280-684** ❸ | 100 |
| orange | **280-650** | 100 |
| red | **280-653** | 100 |
| black | **280-671** | 100 |
| yellow | **280-672** | 100 |
| light gray Ex | **280-993** ❹ | 100 |
| **3-conductor ground terminal block** | | |
| green-yellow | **280-687** | 100 |
| green-yellow Ex | **280-687/999-950** ❹ | 100 |
| **Other terminal blocks with the same profile:** | | |
| Diode | **280-673/281-410** | Page 256 |
| Disconnect | **280-683** | Page 206 |
| Carrier | **280-610** | Page 232 |

| | Item No. | Pack. Unit |
|---|---|---|
| **4-conductor through terminal block** | | |
| gray | **280-833** | 100 |
| blue | **280-834** ❸ | 100 |
| orange | **280-835** | 100 |
| red | **280-830** | 100 |
| black | **280-831** | 100 |
| yellow | **280-832** | 100 |
| light gray Ex | **280-994** ❹ | 100 |
| **4-conductor ground terminal block** | | |
| green-yellow | **280-837** | 100 |
| green-yellow Ex | **280-837/999-950** ❹ | 100 |
| **4-conductor shield terminal block** | | |
| white | **280-838** | 100 |
| **Other terminal blocks with the same profile:** | | |
| Diode | **280-815/281-410** | Page 256 |
| LED | **280-809/281-434** | Page 256 |
| Disconnect | **280-836** | Page 206 |
| Disc., test & meas. | **280-829** | Page 206 |
| Carrier | **280-816** | Page 232 |
| Double-potential | **280-826** | Page 163 |

## Item-Specific Accessories

**End and intermediate plate,** 2.5 mm thick



| | | |
|---|---|---|
| orange | **280-309** | 100 (4x25) |
| gray | **280-308** | 100 (4x25) |
| light gray | **280-356** | 100 (4x25) |

**Separator,** oversized, 2 mm thick



| | | |
|---|---|---|
| orange | **280-311** | 100 (4x25) |
| gray | **280-310** | 100 (4x25) |
| light gray | **280-357** | 100 (4x25) |

**Ex e/Ex i separator,** orange,



| | | |
|---|---|---|
| 3 mm thick | | |
| 90 mm | **209-190** | 50 (2x25) |
| 120 mm | **209-191** | 50 (2x25) |

**Spacer of same shape,**



| | | |
|---|---|---|
| 5 mm thick | | |
| orange | **280-902/056-000** | |
| | | 100 (4x25) |

## Item-Specific Accessories

**End and intermediate plate,** 2.5 mm thick



| | | |
|---|---|---|
| orange | **280-326** | 100 (4x25) |
| gray | **280-324** | 100 (4x25) |
| light gray | **280-358** | 100 (4x25) |

**Separator,** oversized, 2 mm thick



| | | |
|---|---|---|
| orange | **280-346** | 100 (4x25) |
| gray | **280-344** | 100 (4x25) |
| light gray | **280-359** | 100 (4x25) |

**Ex e/Ex i separator,** orange,



| | | |
|---|---|---|
| 3 mm thick | | |
| 120 mm | **209-191** | 50 (2x25) |

**Spacer of same shape,**



| | | |
|---|---|---|
| 5 mm thick | | |
| orange | **280-650/056-000** | |
| | | 100 |

## Item-Specific Accessories

**End and intermediate plate,** 2.5 mm thick



| | | |
|---|---|---|
| orange | **280-315** | 100 (4x25) |
| gray | **280-314** | 100 (4x25) |
| light gray | **280-352** | 100 (4x25) |

**Separator,** oversized, 2 mm thick



| | | |
|---|---|---|
| orange | **280-335** | 100 (4x25) |
| gray | **280-334** | 100 (4x25) |
| light gray | **280-353** | 100 (4x25) |

**Ex e/Ex i separator,** orange,



| | | |
|---|---|---|
| 3 mm thick | | |
| 120 mm | **209-191** | 50 (2x25) |

**Spacer of same shape,**



| | | |
|---|---|---|
| 5 mm thick | | |
| orange | **280-835/056-000** | |
| | | 100 (4x25) |

**Cover plate,**



| | | |
|---|---|---|
| 1 mm thick | | |
| gray | **284-336** | 100 |
| orange | **284-346** | 100 |

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