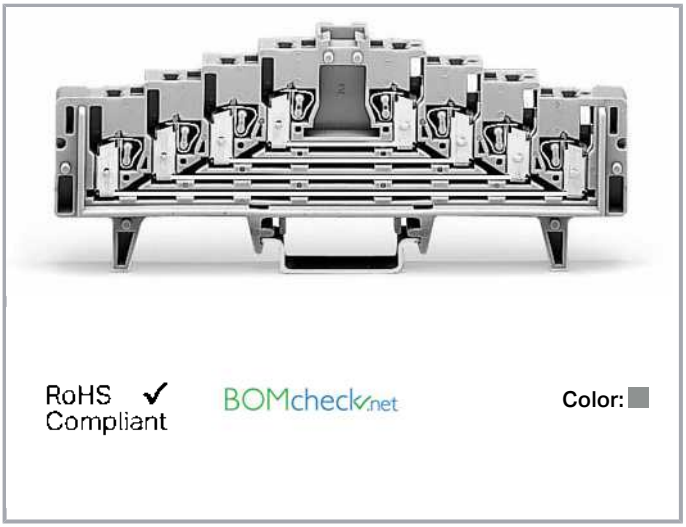
# Data sheet | Item number: 727-220/022-000

4-level terminal block for matrix patching; for 35 x 7.5 mounting rail; 1,50 mm²; gray

www.wago.com/727-220_022-000




## Data

### Electrical data

#### Ratings per IEC/EN 60664-1

| | |
|---|---|
| Rated voltage (III / 3) | 250 V |
| Rated impulse voltage (III / 3) | 4 kV |
| Rated current | 12 A |
| Legend (ratings) | (III / 3) ≙ Overvoltage category III / Pollution degree 3 |

#### Connection data

| | |
|---|---|
| Connection technology | CAGE CLAMP® |
| Actuation type | Operating tool |
| Connectable conductor materials | Copper |
| Solid conductor | 0.08 … 1.5 mm² / 28 … 16 AWG |
| Fine-stranded conductor | 0.08 … 1.5 mm² / 28 … 16 AWG |
| Strip length | 8 … 10 mm / 0.31 … 0.39 inch |
| Total number of connection points | 16 |
| Total number of potentials | 4 |
| Number of levels | 4 |

Subject to changes. Please also observe the further product documentation!

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| | |
|---|---|
| Type of wiring | Front-entry wiring |

## Geometrical Data

| | |
|---|---|
| Width | 7.62 mm / 0.3 inch |
| Height from upper-edge of DIN-35 rail | 44.5 mm / 1.752 inch |
| Depth | 126 mm / 4.961 inch |

## Mechanical data

| | |
|---|---|
| Design | horizontal |
| Type of mounting | DIN-35 rail |
| Marking | a-b-c-d--d-c-b-a |
| Marking level | Center marking |

## Material Data

| | |
|---|---|
| Color | gray |
| Insulating material | Polyamide 66 (PA 66) |
| Fire load | 0.55 MJ |
| Weight | 32 g |

## Commercial data

| | |
|---|---|
| Packaging type | BOX |
| Country of origin | DE |
| GTIN | 4045454188580 |
| Customs Tariff No. | 85369010000 |

## Approvals / Certificates

### Country specific Approvals

| Logo | Approval | Additional Approval Text | Certificate name |
|---|---|---|---|
| | **CCA**<br>DEKRA Certification B.V. | EN 60947 | NTR NL 7485 |
| | **CSA**<br>DEKRA Certification B.V. | C22.2 No. 158 | 70048845 |
| | **KEMA/KEUR** | EN 60947 | 2192101.01 |

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DEKRA Certification B.V.

## Counterpart

## Compatible products

End plate

| | | |
|---|---|---|
| | Item no.: 727-205<br>4-level end plate; marking: 0-1-2-3--3-2-1-0; 7.62 mm thick; orange | www.wago.com/727-205 |
| | Item no.: 727-206<br>4-level end plate; marking: a-b-c-d--d-c-b-a; 7.62 mm thick; orange | www.wago.com/727-206 |
| | Item no.: 727-207<br>4-level end plate; marking: 3-2-1-0--0-1-2-3; 7.62 mm thick; orange | www.wago.com/727-207 |
| | Item no.: 727-208<br>4-level end plate; marking: d-c-b-a--a-b-c-d; 7.62 mm thick; orange | www.wago.com/727-208 |
| | Item no.: 727-217<br>4-level end plate; plain; 7.62 mm thick; orange | www.wago.com/727-217 |
| | Item no.: 727-256<br>4-level end plate; marking: a-b-c-d--d-c-b-a; 7.62 mm thick; gray/gray | www.wago.com/727-256 |
| | Item no.: 727-266<br>4-level end plate; marking: a-b-c-d--d-c-b-a; 7.62 mm thick; blue | www.wago.com/727-266 |

General accessories

| | | |
|---|---|---|
| | Item no.: 249-109<br>Wire harness support; gray | www.wago.com/249-109 |

Jumper

| | | |
|---|---|---|
| | Item no.: 709-107<br>Wire commoning chain; insulated; 32 connections; gray | www.wago.com/709-107 |

Marking accessories

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| | | |
|---|---|---|
| | Item no.: 2009-115<br>WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white | www.wago.com/2009-115 |
| | Item no.: 2009-115/000-002<br>WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow | www.wago.com/2009-115/000-002 |
| | Item no.: 2009-115/000-006<br>WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white | www.wago.com/2009-115/000-006 |
| | Item no.: 2009-115/000-007<br>WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray | www.wago.com/2009-115/000-007 |
| | Item no.: 2009-115/000-012<br>WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white | www.wago.com/2009-115/000-012 |
| | Item no.: 2009-115/000-017<br>WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white | www.wago.com/2009-115/000-017 |
| | Item no.: 2009-115/000-023<br>WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green | www.wago.com/2009-115/000-023 |
| | Item no.: 2009-115/000-024<br>WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white | www.wago.com/2009-115/000-024 |
| | Item no.: 209-128<br>Adaptor; gray | www.wago.com/209-128 |
|  | Item no.: 793-501<br>WMB marking card; as card; not stretchable; plain; snap-on type; white | www.wago.com/793-501 |
| | Item no.: 793-501/000-002<br>WMB marking card; as card; not stretchable; plain; snap-on type; yellow | www.wago.com/793-501/000-002 |
| | Item no.: 793-501/000-005<br>WMB marking card; as card; not stretchable; plain; snap-on type; red | www.wago.com/793-501/000-005 |
| | Item no.: 793-501/000-006<br>WMB marking card; as card; not stretchable; plain; snap-on type; blue | www.wago.com/793-501/000-006 |
| | Item no.: 793-501/000-007<br>WMB marking card; as card; not stretchable; plain; snap-on type; gray | www.wago.com/793-501/000-007 |

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| | | |
|---|---|---|
| | Item no.: 793-501/000-012<br>WMB marking card; as card; not stretchable; plain; snap-on type; orange | www.wago.com/793-501/000-012 |
| | Item no.: 793-501/000-017<br>WMB marking card; as card; not stretchable; plain; snap-on type; light green | www.wago.com/793-501/000-017 |
| | Item no.: 793-501/000-023<br>WMB marking card; as card; not stretchable; plain; snap-on type; green | www.wago.com/793-501/000-023 |
| | Item no.: 793-501/000-024<br>WMB marking card; as card; not stretchable; plain; snap-on type; violet | www.wago.com/793-501/000-024 |
|  | Item no.: 793-5501<br>WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; white | www.wago.com/793-5501 |
| | Item no.: 793-5501/000-002<br>WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; yellow | www.wago.com/793-5501/000-002 |
| | Item no.: 793-5501/000-005<br>WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; red | www.wago.com/793-5501/000-005 |
| | Item no.: 793-5501/000-006<br>WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; blue | www.wago.com/793-5501/000-006 |
| | Item no.: 793-5501/000-007<br>WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; gray | www.wago.com/793-5501/000-007 |
| | Item no.: 793-5501/000-012<br>WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; orange | www.wago.com/793-5501/000-012 |
| | Item no.: 793-5501/000-017<br>WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; green | www.wago.com/793-5501/000-017 |
| | Item no.: 793-5501/000-023<br>WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; light green | www.wago.com/793-5501/000-023 |
| | Item no.: 793-5501/000-024<br>WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; violet | www.wago.com/793-5501/000-024 |

**Insulation stop**

Item no.: 727-197

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|---|---|---|
| | Insulation stop; 0.08 - 0.2 mm² "s" (0.14 mm² "f-st"); 8 pieces/strip; white | www.wago.com/727-197 |
| | Item no.: 727-198<br>Insulation stop; 0.25 mm² “s”; 0.14 - 0.25 mm² “f-st”; 8 pieces/strip; light gray | www.wago.com/727-198 |
| | Item no.: 727-199<br>Insulation stop; 0.25 - 0.5 mm² "s+f-st"; 8 pieces/strip; dark gray | www.wago.com/727-199 |

**ferrule**

| | | |
|---|---|---|
| | Item no.: 216-101<br>Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated | www.wago.com/216-101 |
| | Item no.: 216-102<br>Ferrule; Sleeve for 0.75 mm² / AWG 20; uninsulated; electro-tin plated | www.wago.com/216-102 |
| | Item no.: 216-103<br>Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated | www.wago.com/216-103 |
| | Item no.: 216-104<br>Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated | www.wago.com/216-104 |
| | Item no.: 216-121<br>Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated | www.wago.com/216-121 |
| | Item no.: 216-122<br>Ferrule; Sleeve for 0.75 mm² / AWG 20; uninsulated; electro-tin plated | www.wago.com/216-122 |
| | Item no.: 216-123<br>Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated | www.wago.com/216-123 |
| | Item no.: 216-124<br>Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated | www.wago.com/216-124 |
|  | Item no.: 216-131<br>Ferrule; Sleeve for 0.25 mm² / AWG 24; uninsulated; electro-tin plated | www.wago.com/216-131 |
| | Item no.: 216-132<br>Ferrule; Sleeve for 0.34 mm² / AWG 24; uninsulated; electro-tin plated | www.wago.com/216-132 |
| | Item no.: 216-151<br>Ferrule; Sleeve for 0.25 mm² / AWG 24; uninsulated; electro-tin plated | www.wago.com/216-151 |
| | Item no.: 216-152<br>Ferrule; Sleeve for 0.34 mm² / AWG 24; uninsulated; electro-tin plated | www.wago.com/216-152 |
| | Item no.: 216-201<br>Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white | www.wago.com/216-201 |
| | Item no.: 216-202<br>Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray | www.wago.com/216-202 |
| | Item no.: 216-203<br>Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red | www.wago.com/216-203 |

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|---|---|---|
| | **Item no.: 216-204**<br>Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black | www.wago.com/216-204 |
| | **Item no.: 216-221**<br>Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white | www.wago.com/216-221 |
| | **Item no.: 216-222**<br>Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray | www.wago.com/216-222 |
| | **Item no.: 216-223**<br>Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red | www.wago.com/216-223 |
| | **Item no.: 216-224**<br>Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black | www.wago.com/216-224 |
| | **Item no.: 216-301**<br>Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow | www.wago.com/216-301 |
| | **Item no.: 216-302**<br>Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; green | www.wago.com/216-302 |
| | **Item no.: 216-321**<br>Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow | www.wago.com/216-321 |
| | **Item no.: 216-322**<br>Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; green | www.wago.com/216-322 |
| **check** | | |
| | **Item no.: 210-137**<br>Test plug; 2.3 mm Ø; with 500 mm cable; yellow | www.wago.com/210-137 |
| | **Item no.: 210-297**<br>Step-down test plug; from 4mm socket to 2mm plug; red | www.wago.com/210-297 |
| **tools** | | |
| | **Item no.: 210-647**<br>Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft | www.wago.com/210-647 |
| | **Item no.: 210-719**<br>Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft | www.wago.com/210-719 |
| **Carrier rail** | | |
| | **Item no.: 210-112**<br>Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 25 mm | www.wago.com/210-112 |
| | **Item no.: 210-113**<br>Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715 | www.wago.com/210-113 |
| | **Item no.: 210-114**<br>Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715 | www.wago.com/210-114 |
| | **Item no.: 210-115**<br>Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 18 mm | www.wago.com/210-115 |

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|---|---|---|
| | **Item no.: 210-118**<br>Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715 | www.wago.com/210-118 |
| | **Item no.: 210-196**<br>Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored | www.wago.com/210-196 |
| | **Item no.: 210-197**<br>Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715 | www.wago.com/210-197 |
| | **Item no.: 210-198**<br>Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; copper-colored | www.wago.com/210-198 |
| | **Item no.: 210-504**<br>Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715 | www.wago.com/210-504 |
| | **Item no.: 210-505**<br>Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; galvanized; according to EN 60715 | www.wago.com/210-505 |
| | **Item no.: 210-506**<br>Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715 | www.wago.com/210-506 |
| | **Item no.: 210-508**<br>Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; similar to EN 60715 | www.wago.com/210-508 |

## Downloads

### Documentation

**Additional Information**

| | | | |
|---|---|---|---|
| Technical explanations | Apr 3, 2019 | pdf<br>2.1 MB | Download |

## CAD/CAE-Data

**CAD data**

| | | |
|---|---|---|
| 2D/3D Models 727-220/022-000 | URL | Download |

**CAE data**

| | | |
|---|---|---|
| EPLAN Data Portal 727-220/022-000 | URL | Download |
| WSCAD Universe 727-220/022-000 | URL | Download |

## Installation Notes

**Assembly**

Subject to changes. Please also observe the further product documentation!

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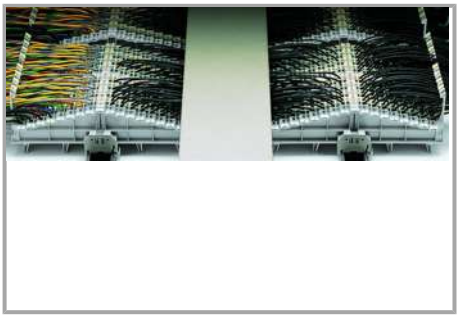
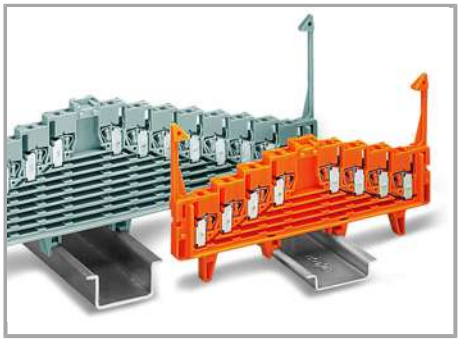


Example:

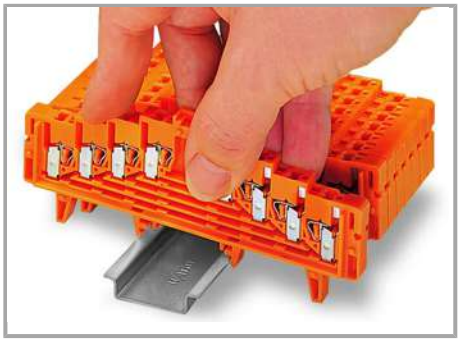
Left: Main cables fed through locking clips on the field side

Right: Control cables fed between locking clips

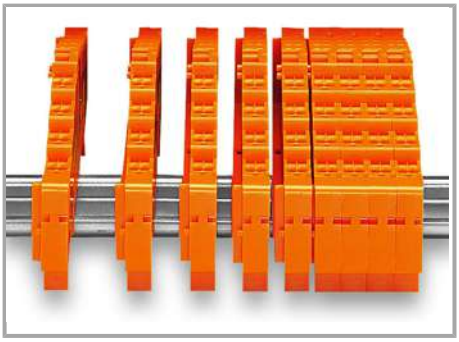
Center: Wiring of both patching sides



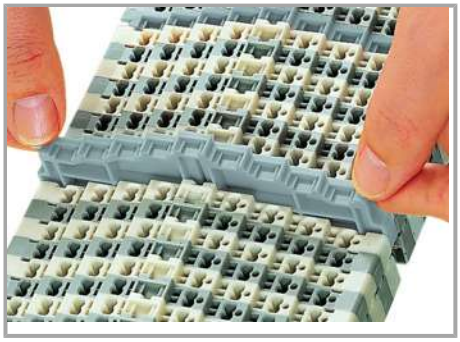
Terminal blocks for DIN 35 x 7.5 mm or DIN 35 x 15 mm rails are available.



Snap individual 4- or 8-level terminal blocks onto the carrier rail.

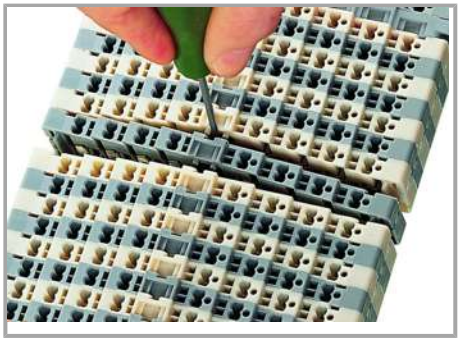


Slide terminal blocks together.



Grip end plate at both sides and:

- push down (assembly)
- 
- pull up (removal)
- 



Open the assembly by laterally sliding a block via operating tool (2.5 x 0.4 mm blade).

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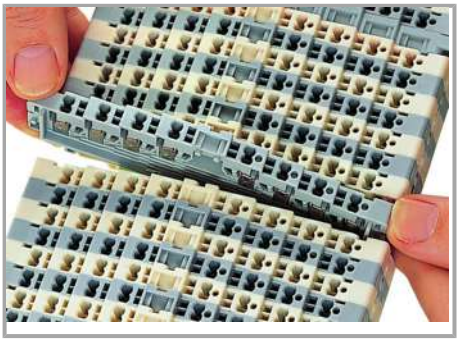
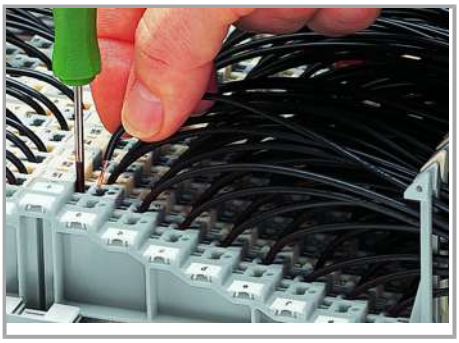


Slide terminal block and remove from the rail with a levering action.

### Inserting a conductor



**CAGE CLAMP® connection**

Inserting a conductor via 210-719 Operating Tool (2.5 x 0.4 mm blade).

Max. cross section for uninsulated ferrules 1 mm² / 18 AWG, for insulated ferrules 0.75 mm² / 20 AWG.

### Testing



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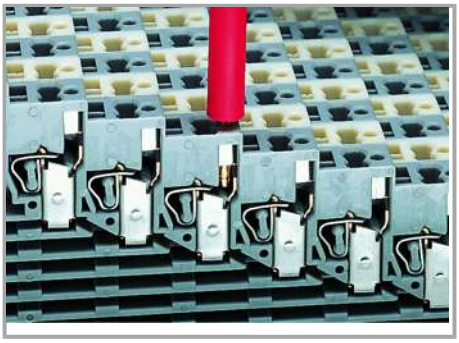
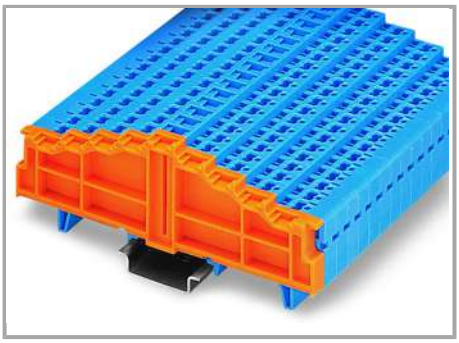


Special test contact for 2.3 mm Ø test plug.

### Ex Application



Blue terminal blocks for matrix patching are suitable for Ex i applications.

Using terminal blocks with locking clips, the wiring space between the terminal strips can be covered with a wiring duct cover.

### Marking



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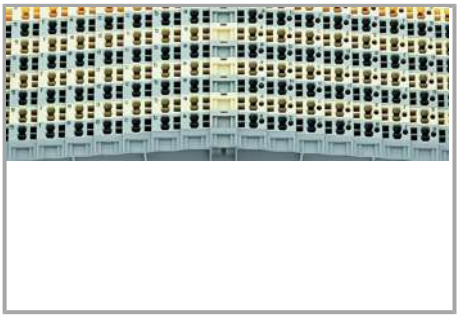
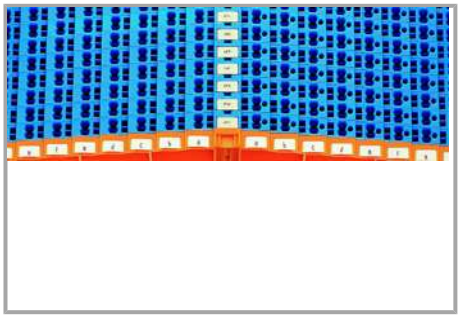


Connection points identified via factory-direct printing



Marking coordinates via WMB Multi Marking System.

Subject to changes. Please also observe the further product documentation!

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