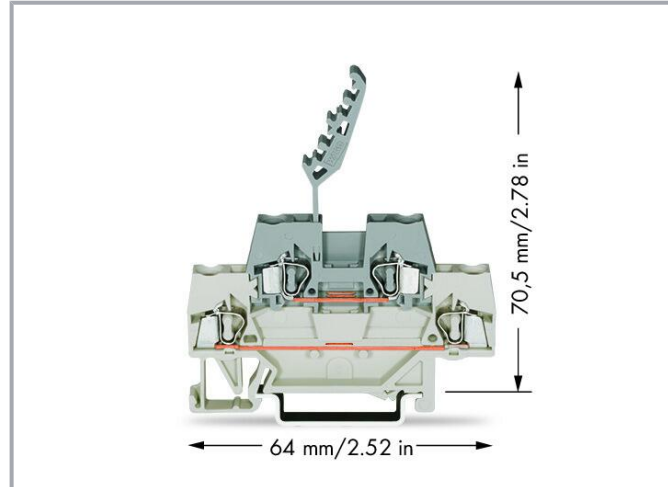
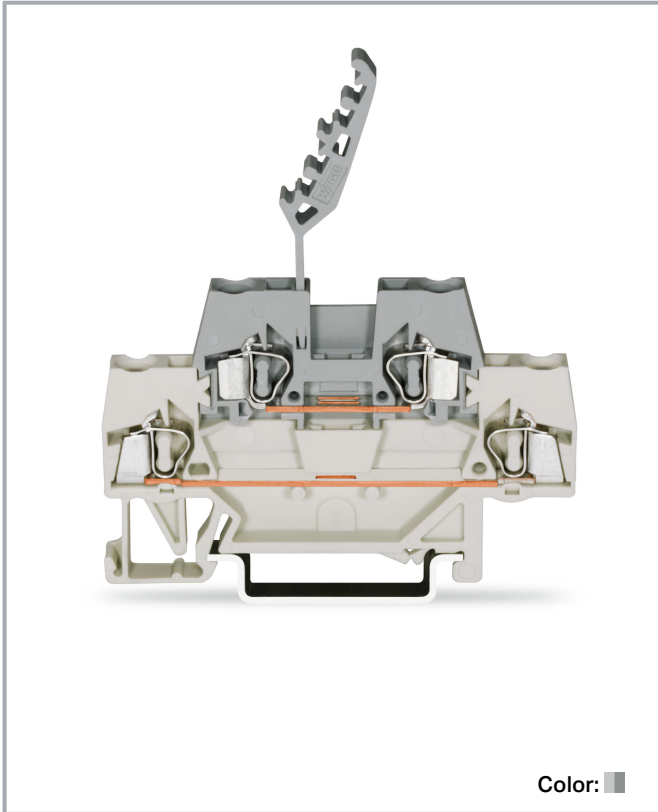


**Data sheet | Item number: 280-541**

Double-deck terminal block; Through/through terminal block; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm<sup>2</sup>; CAGE CLAMP®; 2,50 mm<sup>2</sup>; light gray/gray



[www.wago.com/280-541](http://www.wago.com/280-541)



**Data**

**Electrical data**

**Ratings per IEC/EN**

Ratings per	IEC/EN 60947-7-1
Nominal voltage (III/3)	500 V
Rated impulse voltage (III/3)	6 kV
Rated current	20 A
Legend (ratings)	(III / 3) ≙ Overvoltage category III / Pollution degree 3

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

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## Power loss

Power loss, per pole (potential)	0.532 W
Rated current $I_N$ for specified power loss	20 A
Resistance value for specified, current-dependent power loss	0.001 $\Omega$

## Connection data

Connection points	2
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)

### Terminating Aluminum Conductors

WAGO spring clamp terminal blocks are suitable for solid aluminum conductors up to 4 mm<sup>2</sup>/12 AWG if WAGO "Alu-Plus" Contact Paste 249-130 is used for termination.

"Alu-Plus" Contact Paste Advantages:

- 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.

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



Using terminal blocks with CAGE CLAMP® Spring Pressure Connection Technology, **aluminum conductors must first be cleaned with a blade** and then immediately be inserted into the clamping units filled with "Alu-Plus" Contact Paste.

It is also possible to apply WAGO "Alu-Plus" **additionally** on the whole surface of the aluminum conductor before termination.

Please note that the nominal currents must be adapted to the reduced conductivity of the aluminum conductors::

2.5 mm<sup>2</sup> = 16 A

4 mm<sup>2</sup> = 22 A

Solid conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm <sup>2</sup> / 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	64 mm / 2.52 inches
Depth from upper-edge of DIN-rail	70.5 mm / 2.776 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	light gray/gray
Material group	I
Insulation material	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.145 MJ
Weight	9.9 g

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

## Environmental requirements

Processing temperature	-35 ... +85 °C
Continuous operating temperature	-60 ... +105 °C

## Commercial data


Product Group	1 (Rail Mounted Terminal Blocks)
eCl@ss 10.0	27-14-11-20
eCl@ss 9.0	27-14-11-20
ETIM 8.0	EC000897
ETIM 7.0	EC000897
PU (SPU)	50 pcs
Packaging type	box
Country of origin	CN
GTIN	4050821293699
Customs tariff number	85369010000

## Environmental Product Compliance



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

## Approvals / Certificates

### General approvals





Logo	Approval	Additional Approval Text	Certificate name
	CCA DEKRA Certification B.V.	EN 60947	2157201.01

### Declarations of conformity and manufacturer's declarations

Logo	Approval	Additional Approval Text	Certificate name
	EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-
	UK-Declaration of Conformity WAGO GmbH & Co. KG	-	-



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

## Approvals for marine applications

Logo	Approval	Additional Approval Text	Certificate name
	<b>ABS</b> American Bureau of Shipping	EN 60947	20- HG1941090- PDA
	<b>BV</b> Bureau Veritas S.A.	EN 60947	07436/F0 BV
	<b>DNV GL</b> Det Norske Veritas, Germanischer Lloyd	-	TAE00001V2
	<b>LR</b> Lloyds Register	EN 60947	91/20112 (E9)




## Required accessories

## End plate

End plate		
	<b>Item no.: 280-341</b> End and intermediate plate; 2.5 mm thick; orange	<a href="http://www.wago.com/280-341">www.wago.com/280-341</a>
	<b>Item no.: 280-340</b> End and intermediate plate; 2.5 mm thick; gray	<a href="http://www.wago.com/280-340">www.wago.com/280-340</a>

## Optional accessories

## Carrier rail

Mounting accessories		
	<b>Item no.: 210-197</b> Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715; silver-colored	<a href="http://www.wago.com/210-197">www.wago.com/210-197</a>
	<b>Item no.: 210-198</b> Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; copper-colored	<a href="http://www.wago.com/210-198">www.wago.com/210-198</a>
	<b>Item no.: 210-504</b> Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715; silver-colored	<a href="http://www.wago.com/210-504">www.wago.com/210-504</a>

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

	<b>Item no.: 210-505</b> Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; galvanized; according to EN 60715; silver-colored	<a href="http://www.wago.com/210-505">www.wago.com/210-505</a>
	<b>Item no.: 210-506</b> Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715; silver-colored	<a href="http://www.wago.com/210-506">www.wago.com/210-506</a>
	<b>Item no.: 210-508</b> Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; similar to EN 60715; silver-colored	<a href="http://www.wago.com/210-508">www.wago.com/210-508</a>
	<b>Item no.: 210-113</b> Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored	<a href="http://www.wago.com/210-113">www.wago.com/210-113</a>
	<b>Item no.: 210-118</b> Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored	<a href="http://www.wago.com/210-118">www.wago.com/210-118</a>
	<b>Item no.: 210-112</b> 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	<a href="http://www.wago.com/210-112">www.wago.com/210-112</a>
	<b>Item no.: 210-114</b> Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored	<a href="http://www.wago.com/210-114">www.wago.com/210-114</a>
	<b>Item no.: 210-115</b> 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	<a href="http://www.wago.com/210-115">www.wago.com/210-115</a>
	<b>Item no.: 210-196</b> Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored	<a href="http://www.wago.com/210-196">www.wago.com/210-196</a>
<b>Testing and measuring</b>		
Testing accessories		
	<b>Item no.: 249-141</b> L-type test plug module; modular; with spring-loaded contact pin; Center module; 1,50 mm <sup>2</sup> ; gray	<a href="http://www.wago.com/249-141">www.wago.com/249-141</a>
	<b>Item no.: 249-142</b> L-type end module; modular; with rigid contact pin; End module; 1,50 mm <sup>2</sup> ; gray	<a href="http://www.wago.com/249-142">www.wago.com/249-142</a>
<b>Protective warning marker</b>		
Cover		
	<b>Item no.: 280-415</b> Protective warning marker; for 5 terminal blocks; with high-voltage symbol, black; yellow	<a href="http://www.wago.com/280-415">www.wago.com/280-415</a>
<b>Tool</b>		
Operating tool		
	<b>Item no.: 210-657</b> Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured	<a href="http://www.wago.com/210-657">www.wago.com/210-657</a>

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



**Item no.: 210-658**

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; angled; short; multicoloured

[www.wago.com/210-658](http://www.wago.com/210-658)



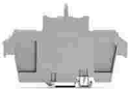
**Item no.: 210-720**

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

[www.wago.com/210-720](http://www.wago.com/210-720)

## Mounting

### 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

[www.wago.com/709-168](http://www.wago.com/709-168)

### Cover



**Item no.: 709-154**

Cover; Type 2; suitable for cover carrier, type 2; 1 m long; transparent

[www.wago.com/709-154](http://www.wago.com/709-154)

### Mounting accessories



**Item no.: 209-106**

Mounting carrier; for isolated mounting on DIN 35 rails; gray

[www.wago.com/209-106](http://www.wago.com/209-106)



**Item no.: 249-116**

Screwless end stop; 6 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray

[www.wago.com/249-116](http://www.wago.com/249-116)

## Insulation stop

### Insulation stop



**Item no.: 280-472**

Insulation stop; 0.75 - 1 mm<sup>2</sup>; 5 pieces/strip; black

[www.wago.com/280-472](http://www.wago.com/280-472)



**Item no.: 280-470**

Insulation stop; 0.08 - 0.2 mm<sup>2</sup> "s" (0.14 mm<sup>2</sup> "f-st"); 5 pieces/strip; white

[www.wago.com/280-470](http://www.wago.com/280-470)



**Item no.: 280-471**

Insulation stop; 0.25 - 0.5 mm<sup>2</sup>; 5 pieces/strip; light gray

[www.wago.com/280-471](http://www.wago.com/280-471)

## Marking accessories

### Marker



**Item no.: 2009-115**

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

[www.wago.com/2009-115](http://www.wago.com/2009-115)

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

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**Item no.: 793-501**

WMB marking card; as card; not stretchable; plain; snap-on type; white

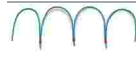



**Item no.: 793-5501**WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; white [www.wago.com/793-5501](http://www.wago.com/793-5501)**Ferrule**

## Ferrule

	<b>Item no.: 216-101</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / AWG 22; uninsulated; electro-tin plated; silver-colored	<a href="http://www.wago.com/216-101">www.wago.com/216-101</a>
	<b>Item no.: 216-104</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; uninsulated; electro-tin plated; silver-colored	<a href="http://www.wago.com/216-104">www.wago.com/216-104</a>
	<b>Item no.: 216-102</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / AWG 20; uninsulated; electro-tin plated; silver-colored	<a href="http://www.wago.com/216-102">www.wago.com/216-102</a>
	<b>Item no.: 216-103</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; uninsulated; electro-tin plated	<a href="http://www.wago.com/216-103">www.wago.com/216-103</a>
	<b>Item no.: 216-203</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; red	<a href="http://www.wago.com/216-203">www.wago.com/216-203</a>
	<b>Item no.: 216-202</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray	<a href="http://www.wago.com/216-202">www.wago.com/216-202</a>
	<b>Item no.: 216-204</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; black	<a href="http://www.wago.com/216-204">www.wago.com/216-204</a>
	<b>Item no.: 216-201</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; white	<a href="http://www.wago.com/216-201">www.wago.com/216-201</a>
	<b>Item no.: 216-301</b> Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow	<a href="http://www.wago.com/216-301">www.wago.com/216-301</a>
	<b>Item no.: 216-302</b> Ferrule; Sleeve for 0.34 mm <sup>2</sup> / 22 AWG; insulated; electro-tin plated; light turquoise	<a href="http://www.wago.com/216-302">www.wago.com/216-302</a>

**Jumpers**

## Jumper

	<b>Item no.: 210-123</b> Wire commoning chain; insulated; blue	<a href="http://www.wago.com/210-123">www.wago.com/210-123</a>
	<b>Item no.: 280-402</b> Jumper; insulated; gray	<a href="http://www.wago.com/280-402">www.wago.com/280-402</a>
	<b>Item no.: 210-103</b> Wire commoning chain; insulated; black	<a href="http://www.wago.com/210-103">www.wago.com/210-103</a>
	<b>Item no.: 281-421</b> Vertical jumper; insulated; gray	<a href="http://www.wago.com/281-421">www.wago.com/281-421</a>



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

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	<p><b>Item no.: 280-492</b> Jumper; 2-way; insulated; gray</p>	<a href="http://www.wago.com/280-492">www.wago.com/280-492</a>
	<p><b>Item no.: 280-409</b> Jumper; insulated; gray</p>	<a href="http://www.wago.com/280-409">www.wago.com/280-409</a>
	<p><b>Item no.: 280-482</b> Jumper; 2-way; insulated; gray</p>	<a href="http://www.wago.com/280-482">www.wago.com/280-482</a>
	<p><b>Item no.: 280-484</b> Jumper; 4-way; insulated; gray</p>	<a href="http://www.wago.com/280-484">www.wago.com/280-484</a>
	<p><b>Item no.: 280-490</b> Jumper; 10-way; insulated; gray</p>	<a href="http://www.wago.com/280-490">www.wago.com/280-490</a>
	<p><b>Item no.: 280-485</b> Jumper; 5-way; insulated; gray</p>	<a href="http://www.wago.com/280-485">www.wago.com/280-485</a>
	<p><b>Item no.: 280-483</b> Jumper; 3-way; insulated; gray</p>	<a href="http://www.wago.com/280-483">www.wago.com/280-483</a>
	<p><b>Item no.: 709-110</b> Wire commoning chain; 2.5 mm<sup>2</sup>; insulated; black</p>	<a href="http://www.wago.com/709-110">www.wago.com/709-110</a>
	<p><b>Item no.: 709-112</b> Wire commoning chain; 2.5 mm<sup>2</sup>; insulated; black</p>	<a href="http://www.wago.com/709-112">www.wago.com/709-112</a>
	<p><b>Item no.: 709-111</b> Wire commoning chain; 2.5 mm<sup>2</sup>; insulated; black</p>	<a href="http://www.wago.com/709-111">www.wago.com/709-111</a>
	<p><b>Item no.: 780-454</b> Staggered jumper; from 1 to 4; insulated; gray</p>	<a href="http://www.wago.com/780-454">www.wago.com/780-454</a>
	<p><b>Item no.: 780-452</b> Staggered jumper; from 1 to 2; insulated; gray</p>	<a href="http://www.wago.com/780-452">www.wago.com/780-452</a>
	<p><b>Item no.: 780-453</b> Staggered jumper; from 1 to 3; insulated; gray</p>	<a href="http://www.wago.com/780-453">www.wago.com/780-453</a>
	<p><b>Item no.: 780-457</b> Staggered jumper; from 1 to 7; insulated; gray</p>	<a href="http://www.wago.com/780-457">www.wago.com/780-457</a>
	<p><b>Item no.: 780-456</b> Staggered jumper; from 1 to 6; insulated; gray</p>	<a href="http://www.wago.com/780-456">www.wago.com/780-456</a>
	<p><b>Item no.: 780-455</b> Staggered jumper; from 1 to 5; insulated; gray</p>	<a href="http://www.wago.com/780-455">www.wago.com/780-455</a>
	<p><b>Item no.: 780-458</b> Staggered jumper; from 1 to 8; insulated; gray</p>	<a href="http://www.wago.com/780-458">www.wago.com/780-458</a>

**Push-in type wire jumper**

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

Jumper



**Item no.: 249-123**

Push-in type wire jumper; 0.75 mm<sup>2</sup>; insulated; 180 mm long; black

[www.wago.com/249-123](http://www.wago.com/249-123)



**Item no.: 249-126**

Push-in type wire jumper; 0.75 mm<sup>2</sup>; insulated; 110 mm long; black

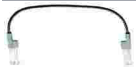
[www.wago.com/249-126](http://www.wago.com/249-126)



**Item no.: 249-127**

Push-in type wire jumper; 0.75 mm<sup>2</sup>; insulated; 250 mm long; black

[www.wago.com/249-127](http://www.wago.com/249-127)



**Item no.: 249-125**

Push-in type wire jumper; insulated; 60 mm long; black

[www.wago.com/249-125](http://www.wago.com/249-125)

**Downloads**

**Documentation**

**Additional Information**

Technical Section	pdf	Download
Technical explanations	2.2 MB	

**CAD/CAE-Data**

**CAE data**

EPLAN Data Portal 280-541	URL	Download
WSCAD Universe 280-541	URL	Download

**Environmental Product Compliance**

**Compliance Search**

Environmental Product Compliance 280-541	URL	Download
Double-deck terminal block; Through/through terminal block; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm <sup>2</sup> ; CAGE CLAMP®; 2,50 mm <sup>2</sup> ; light gray/gray		

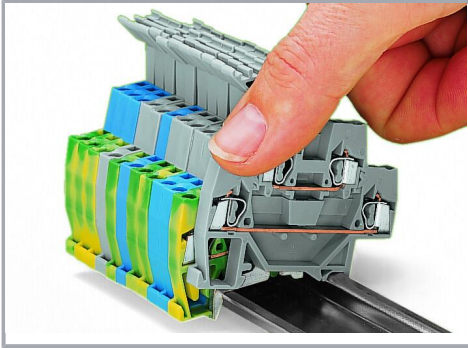
**Installation Notes**

**Installation**

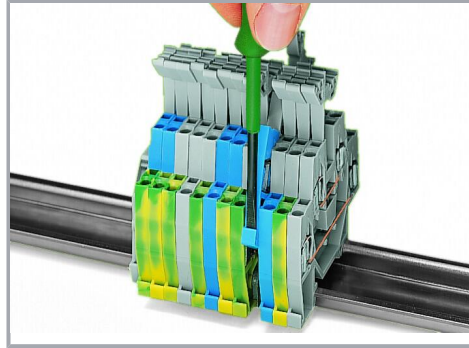
Subject to changes. Please also observe the further product documentation!

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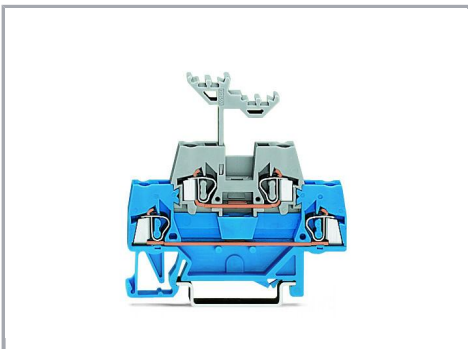
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Snapping a terminal block onto the DIN-rail.

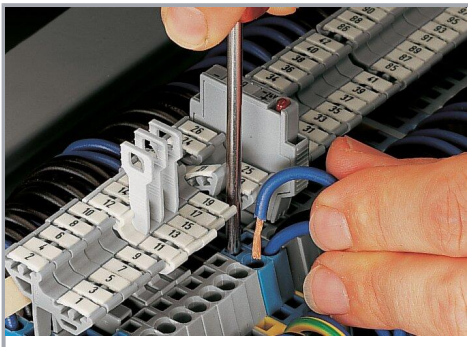


Removing a terminal block from the assembly.

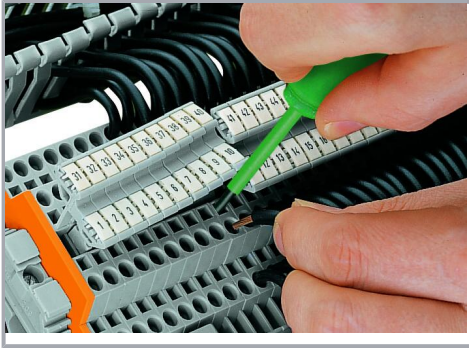


Double-deck terminal blocks accommodate two circuits of different potentials on two decks; different circuits can be differentiated by color coding either deck (280 Series). The lower deck is wider than the upper for easier wiring.

#### Conductor termination

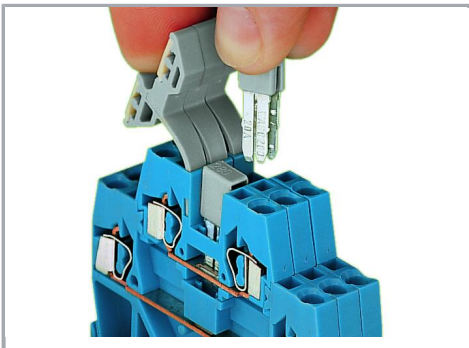


Subject to changes. Please also observe the further product documentation!



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

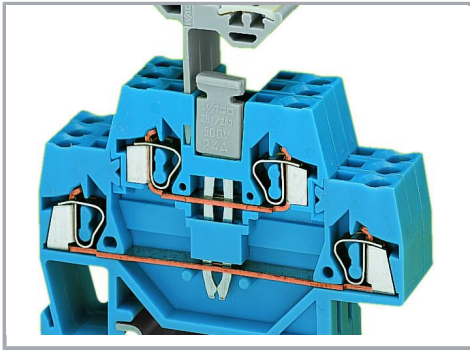


Commoning using an adjacent jumper.

Push jumpers down until fully inserted!

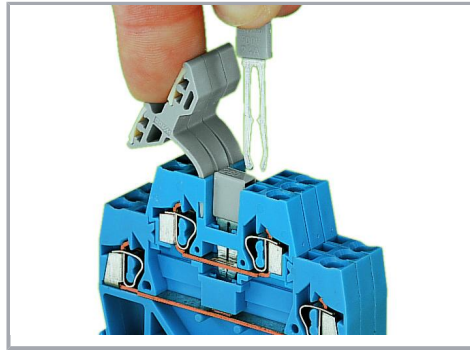
#### Commoning

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

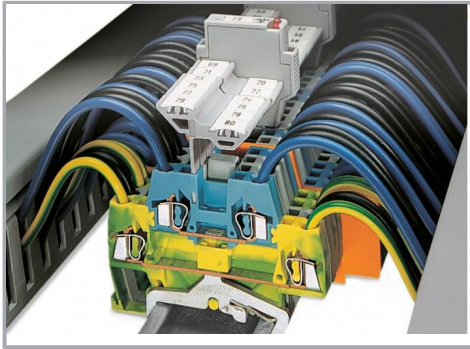


Commoning with a vertical jumper (281-421).

Push vertical jumper down until fully inserted!



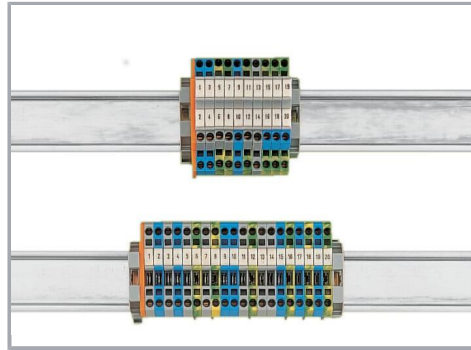
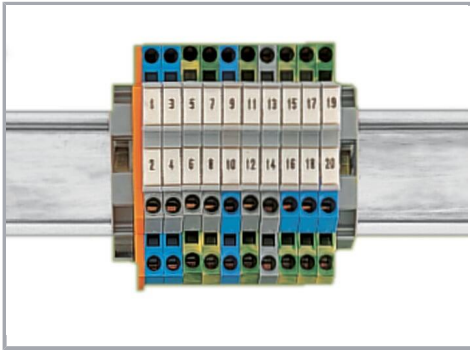
Combining vertical and adjacent jumpers.



Example of a mixed assembly with double-deck terminal blocks.

The 280 Series Double-Deck Terminal Blocks are available with decks of same or different color according to their function. This is an additional visual aid during wiring, service or maintenance.

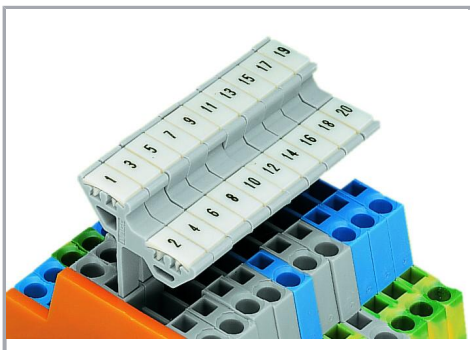
Subject to changes. Please also observe the further product documentation!



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 mm<sup>2</sup> ... 2.5 mm<sup>2</sup> (28 ... 14 AWG).

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

### Marking



Labeling via WMB Multi Marking System.

### Product family

#### Classic

EPSITRON® CLASSIC POWER: The Robust Power Supply – with Integrated TopBoost (Optional)

[Show all products from the family](#)

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