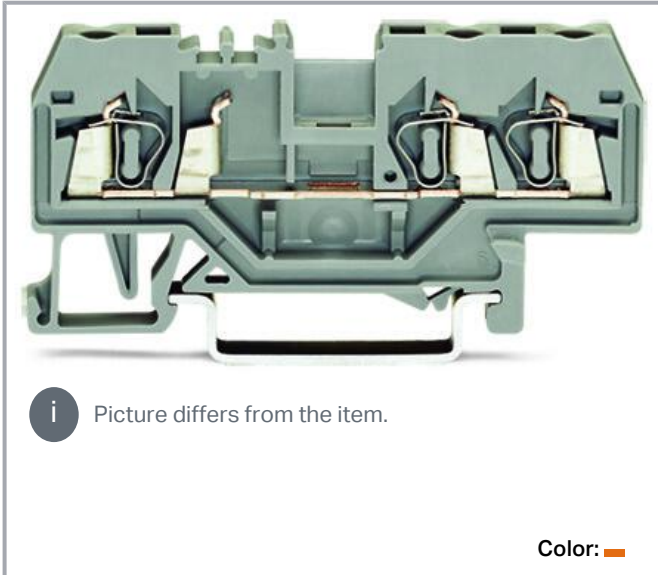


## Data sheet | Item number: 280-650

3-conductor through terminal block; 2.5 mm<sup>2</sup>; center marking; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP®; 2,50 mm<sup>2</sup>; orange

[www.wago.com/280-650](http://www.wago.com/280-650)



**i** Picture differs from the item.

Color:

### Data

#### Electrical data

#### Ratings per IEC/EN

Ratings per	IEC/EN 60947-7-1
Nominal voltage (III/3)	800 V
Rated impulse voltage (III/3)	8 kV
Rated current	24 A
Legend (ratings)	(III / 3) ≙ Overvoltage category III / Pollution degree 3

#### Ratings per UL 1059

Approvals per	UL 1059
Rated voltage UL (Use Group C)	600 V
Rated current UL (Use Group C)	20 A

#### Ratings per CSA

Approvals per	CSA 22.2 No 158
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Subject to changes. Please also observe the further product documentation!

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Rated voltage CSA (Use Group C)	600 V
Rated current CSA (Use Group C)	24 A

### Power loss

Power loss, per pole (potential)	0.766 W
Rated current $I_N$ for specified power loss	24 A
Resistance value for specified, current-dependent power loss	0.001 $\Omega$

### Connection data

Connection points	3
Total number of potentials	1
Number of levels	1

### Connection 1

Connection technology	CAGE CLAMP <sup>®</sup>
Actuation type	Operating tool
Connectable conductor materials	Copper Aluminum
Connectable conductor materials (note)	<b>Terminating Aluminum Conductors</b>

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	28 mm / 1.102 inches

### Mechanical Data

Mounting type	DIN-35 rail
Marking level	Center marking

### Material Data

Note (material data)	Information on material specifications can be found <a href="#">here</a>
Color	orange
Material group	I
Insulation material	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.123 MJ
Weight	7.6 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




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)	100 pcs
Packaging type	box
Country of origin	DE
GTIN	4044918391139
Customs tariff number	8536901000

## Environmental Product Compliance

RoHS Compliance Status	Compliant, No Exemption
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## Approvals / Certificates

### General approvals

Logo	Approval	Additional Approval Text	Certificate name
	CCA DEKRA Certification B.V.	EN 60947	2157201.01
	CSA DEKRA Certification B.V.	C22.2	1536071
	UL Underwriters Laboratories Inc.	UL 1059	E45172

### Declarations of conformity and manufacturer's declarations

Logo	Approval	Additional Approval Text	Certificate name
	EU-Declaration of Conformity	-	-

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







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UK-Declaration of Conformity

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## 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.: 280-324</b> End and intermediate plate; 2.5 mm thick; gray	<a href="http://www.wago.com/280-324">www.wago.com/280-324</a>
	<b>Item no.: 280-326</b> End and intermediate plate; 2.5 mm thick; orange	<a href="http://www.wago.com/280-326">www.wago.com/280-326</a>

## Optional accessories

## Tool

## Operating tool



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

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Item no.: 210-657

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

[www.wago.com/210-657](http://www.wago.com/210-657)



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)

## Jumpers

### Jumper



Item no.: 210-123

Wire commoning chain; insulated; blue

[www.wago.com/210-123](http://www.wago.com/210-123)



Item no.: 280-402

Jumper; insulated; gray

[www.wago.com/280-402](http://www.wago.com/280-402)



Item no.: 210-103

Wire commoning chain; insulated; black

[www.wago.com/210-103](http://www.wago.com/210-103)



Item no.: 280-492

Jumper; 2-way; insulated; gray

[www.wago.com/280-492](http://www.wago.com/280-492)



Item no.: 280-409

Jumper; insulated; gray

[www.wago.com/280-409](http://www.wago.com/280-409)



Item no.: 280-422

Jumper; insulated; yellow-green

[www.wago.com/280-422](http://www.wago.com/280-422)



Item no.: 280-482

Jumper; 2-way; insulated; gray

[www.wago.com/280-482](http://www.wago.com/280-482)



Item no.: 280-484

Jumper; 4-way; insulated; gray

[www.wago.com/280-484](http://www.wago.com/280-484)



Item no.: 280-490

Jumper; 10-way; insulated; gray

[www.wago.com/280-490](http://www.wago.com/280-490)



Item no.: 280-485

Jumper; 5-way; insulated; gray

[www.wago.com/280-485](http://www.wago.com/280-485)



Item no.: 280-483

Jumper; 3-way; insulated; gray

[www.wago.com/280-483](http://www.wago.com/280-483)



Item no.: 284-414

Step-down jumper; from 284/282 to 281/280/279 series; insulated; gray

[www.wago.com/284-414](http://www.wago.com/284-414)

Item no.: 709-110

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

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Wire commoning chain; 2.5 mm<sup>2</sup>; insulated; black[www.wago.com/709-110](http://www.wago.com/709-110)**Item no.: 709-112**Wire commoning chain; 2.5 mm<sup>2</sup>; insulated; black[www.wago.com/709-112](http://www.wago.com/709-112)**Item no.: 709-111**Wire commoning chain; 2.5 mm<sup>2</sup>; insulated; black[www.wago.com/709-111](http://www.wago.com/709-111)**Item no.: 780-454**

Staggered jumper; from 1 to 4; insulated; gray

[www.wago.com/780-454](http://www.wago.com/780-454)**Item no.: 780-452**

Staggered jumper; from 1 to 2; insulated; gray

[www.wago.com/780-452](http://www.wago.com/780-452)**Item no.: 780-453**

Staggered jumper; from 1 to 3; insulated; gray

[www.wago.com/780-453](http://www.wago.com/780-453)**Item no.: 780-457**

Staggered jumper; from 1 to 7; insulated; gray

[www.wago.com/780-457](http://www.wago.com/780-457)**Item no.: 780-456**

Staggered jumper; from 1 to 6; insulated; gray

[www.wago.com/780-456](http://www.wago.com/780-456)**Item no.: 780-455**

Staggered jumper; from 1 to 5; insulated; gray

[www.wago.com/780-455](http://www.wago.com/780-455)**Item no.: 780-458**

Staggered jumper; from 1 to 8; insulated; gray

[www.wago.com/780-458](http://www.wago.com/780-458)

## Testing and measuring

### Testing accessories

**Item no.: 209-170**Test plug adapter; 8.3 mm wide; for 4 mm Ø test plugs; suitable for 1.5 mm<sup>2</sup> - 10 mm<sup>2</sup> tbs; gray[www.wago.com/209-170](http://www.wago.com/209-170)**Item no.: 281-407**Test plug; 6 mm wide; Nominal current 24 A; for 0.08 mm<sup>2</sup> - 2.5 mm<sup>2</sup>; 2,50 mm<sup>2</sup>; gray[www.wago.com/281-407](http://www.wago.com/281-407)**Item no.: 249-106**B-type test plug module; modular; 1,50 mm<sup>2</sup>; gray[www.wago.com/249-106](http://www.wago.com/249-106)**Item no.: 249-107**

B-type spacer module; modular; e.g., for bridging commoned terminal blocks; gray

[www.wago.com/249-107](http://www.wago.com/249-107)**Item no.: 249-141**L-type test plug module; modular; with spring-loaded contact pin; Center module; 1,50 mm<sup>2</sup>; gray[www.wago.com/249-141](http://www.wago.com/249-141)**Item no.: 249-143**

L-type spacer module; modular; e.g., bridging commoned terminal blocks; gray

[www.wago.com/249-143](http://www.wago.com/249-143)**Item no.: 249-142**L-type end module; modular; with rigid contact pin; End module; 1,50 mm<sup>2</sup>; gray[www.wago.com/249-142](http://www.wago.com/249-142)

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

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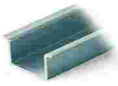

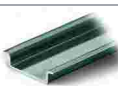
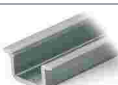


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	<b>Item no.: 280-418</b> Test plug module; modular; suitable for all WAGO 280 and 780 Series rail-mounted terminal blocks with jumper slots in the current bar; gray	<a href="http://www.wago.com/280-418">www.wago.com/280-418</a>
	<b>Item no.: 280-404</b> Test plug adapter; 5 mm wide; for test plug (2.3 mm Ø); suitable for 1.5 mm <sup>2</sup> - 4 mm <sup>2</sup> tbs; gray	<a href="http://www.wago.com/280-404">www.wago.com/280-404</a>
	<b>Item no.: 280-419</b> Spacer module; modular; bridging commoned terminal blocks; gray	<a href="http://www.wago.com/280-419">www.wago.com/280-419</a>
<b>Carrier rail</b>		
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>
	<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>

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



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>
End plate		
End plate		
	<b>Item no.: 284-334</b> Step-down cover plate; 1 mm thick; for 2-, 3- and 4-conductor terminal blocks; gray	<a href="http://www.wago.com/284-334">www.wago.com/284-334</a>
	<b>Item no.: 284-344</b> Step-down cover plate; 1 mm thick; for 2-, 3- and 4-conductor terminal blocks; orange	<a href="http://www.wago.com/284-344">www.wago.com/284-344</a>
Push-in type wire jumper		
Jumper		
	<b>Item no.: 249-123</b> Push-in type wire jumper; 0.75 mm <sup>2</sup> ; insulated; 180 mm long; black	<a href="http://www.wago.com/249-123">www.wago.com/249-123</a>
	<b>Item no.: 249-126</b> Push-in type wire jumper; 0.75 mm <sup>2</sup> ; insulated; 110 mm long; black	<a href="http://www.wago.com/249-126">www.wago.com/249-126</a>
	<b>Item no.: 249-127</b> Push-in type wire jumper; 0.75 mm <sup>2</sup> ; insulated; 250 mm long; black	<a href="http://www.wago.com/249-127">www.wago.com/249-127</a>

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



**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)

**Protective warning marker**

Cover



**Item no.: 280-415**  
Protective warning marker; for 5 terminal blocks; with high-voltage symbol, black; yellow

[www.wago.com/280-415](http://www.wago.com/280-415)

**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)

**Mounting**

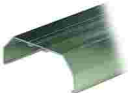
Cover carrier



**Item no.: 709-167**  
Cover carrier; Type 1; incl. fixing/retaining screws and knurled nut; suitable for 279 to 282 and 880 Series rail-mounted terminal blocks; suitable for 264 Series miniature rail-mounted terminal blocks; suitable for 270 Series sensor and actuator terminal blocks; gray

[www.wago.com/709-167](http://www.wago.com/709-167)

Cover



**Item no.: 709-153**  
Cover; Type 1; suitable for cover carrier, type 1; 1 m long; transparent

[www.wago.com/709-153](http://www.wago.com/709-153)

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)

**Marking accessories**

Double marker carrier



**Item no.: 209-128**  
Adaptor; gray

[www.wago.com/209-128](http://www.wago.com/209-128)














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!

	<b>Item no.: 793-501</b> WMB marking card; as card; not stretchable; plain; snap-on type; white	<a href="http://www.wago.com/793-501">www.wago.com/793-501</a>
	<b>Item no.: 793-5501</b> WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; white	<a href="http://www.wago.com/793-5501">www.wago.com/793-5501</a>
<b>Group marker carrier</b>		
	<b>Item no.: 209-142</b> Group marker carrier; gray	<a href="http://www.wago.com/209-142">www.wago.com/209-142</a>
	<b>Item no.: 209-141</b> Group marker carrier; gray	<a href="http://www.wago.com/209-141">www.wago.com/209-141</a>
	<b>Item no.: 209-140</b> Group marker carrier; gray	<a href="http://www.wago.com/209-140">www.wago.com/209-140</a>
	<b>Item no.: 249-105</b> Group marker carrier; gray	<a href="http://www.wago.com/249-105">www.wago.com/249-105</a>
<b>Plugs</b>		
<b>Neon indicator module</b>		
	<b>Item no.: 280-803/281-417</b> Component plug; 2-pole; 10 mm wide; gray	<a href="http://www.wago.com/280-803/281-417">www.wago.com/280-803/281-417</a>
	<b>Item no.: 280-803/281-418</b> Component plug; 2-pole; 10 mm wide; gray	<a href="http://www.wago.com/280-803/281-418">www.wago.com/280-803/281-418</a>
<b>Diode plug</b>		
	<b>Item no.: 280-803/281-420</b> Component plug; 2-pole; with rectifier diode and LED; 10 mm wide; gray	<a href="http://www.wago.com/280-803/281-420">www.wago.com/280-803/281-420</a>
<b>LED plug</b>		
	<b>Item no.: 280-803/281-411</b> Component plug; 2-pole; with diode 1N4007; 10 mm wide; gray	<a href="http://www.wago.com/280-803/281-411">www.wago.com/280-803/281-411</a>
	<b>Item no.: 280-803/281-414</b> Component plug; 2-pole; LED (red); 48 VDC; 10 mm wide; gray	<a href="http://www.wago.com/280-803/281-414">www.wago.com/280-803/281-414</a>
	<b>Item no.: 280-803/281-413</b> Component plug; 2-pole; LED (red); 24 VDC; 10 mm wide; gray	<a href="http://www.wago.com/280-803/281-413">www.wago.com/280-803/281-413</a>
	<b>Item no.: 280-803/281-415</b> Component plug; 2-pole; LED (red); 10 mm wide; gray	<a href="http://www.wago.com/280-803/281-415">www.wago.com/280-803/281-415</a>

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

	<b>Item no.: 280-803/281-416</b> Component plug; 2-pole; LED (red); 10 mm wide; gray	<a href="http://www.wago.com/280-803/281-416">www.wago.com/280-803/281-416</a>
Empty component plug housing		
	<b>Item no.: 280-803</b> Empty component plug housing; 10 mm wide; Type 4; 2-pole; gray	<a href="http://www.wago.com/280-803">www.wago.com/280-803</a>

## Downloads

### Documentation

#### Bid Text

280-650 X81 - Datei	2019 Feb 19	xml 3.3 kB	Download
280-650 doc - Datei	2017 Feb 28	doc 24.6 kB	Download

#### Additional Information

Technical Section Technical explanations		pdf 2.2 MB	Download
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## CAD/CAE-Data

### CAD data

2D/3D Models 280-650		URL	Download
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### CAE data

ZUKEN Portal 280-650		URL	Download
WSCAD Universe 280-650		URL	Download
EPLAN Data Portal 280-650		URL	Download

## Environmental Product Compliance

### Compliance Search

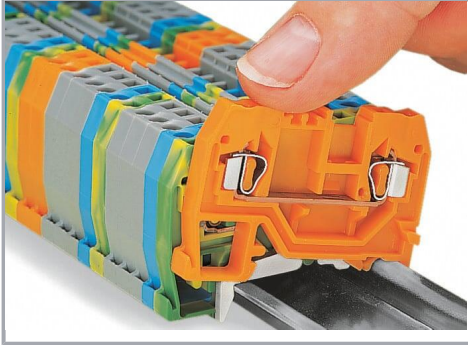
Environmental Product Compliance 280-650		URL	Download
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Subject to changes. Please also observe the further product documentation!

3-conductor through terminal block; 2.5 mm<sup>2</sup>; center marking; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP®; 2,50 mm<sup>2</sup>; orange

## Installation Notes

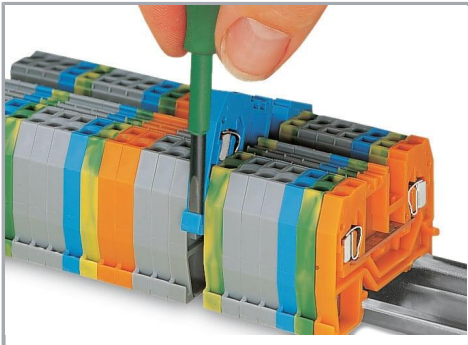
### Installation



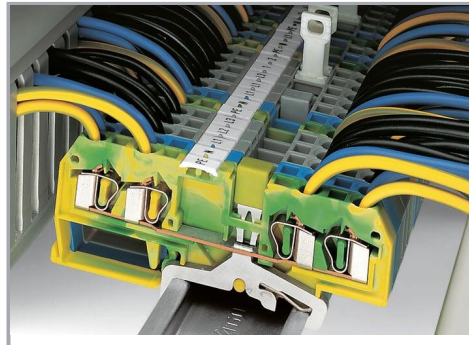
Snapping a terminal block onto the DIN-rail.



Quick assembly keys prevent reverse mounting.



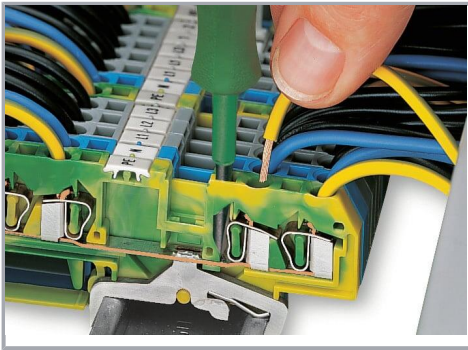
Removing a terminal block from the assembly.



Steel DIN-rails are not suited for PEN (ground and N-conductor) applications per EN 60947-7-2 (VDE 0611, Part 3).

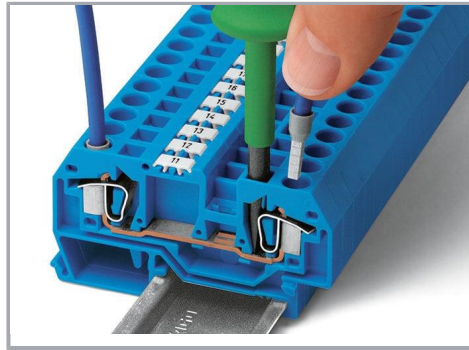
### Conductor termination

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



**CAGE CLAMP® connection**

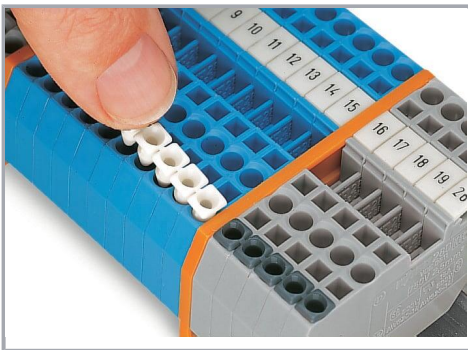
Inserting a conductor.



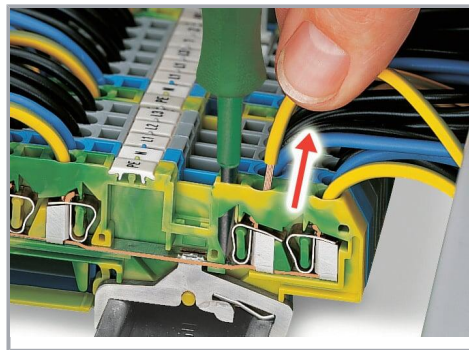
**CAGE CLAMP® connection**

Inserting a conductor.

With ferruled conductors, it is necessary to use a terminal block one size larger than the conductor's nominal cross-section.



Inserting insulation stops.

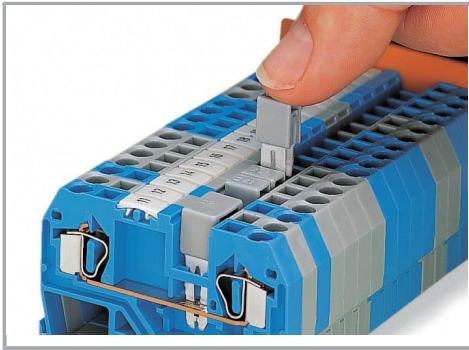


**CAGE CLAMP® connection**

Removing a solid conductor.

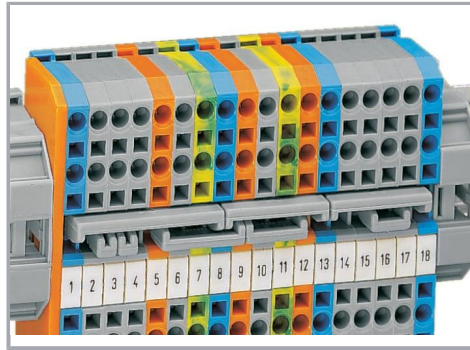
### Commoning

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



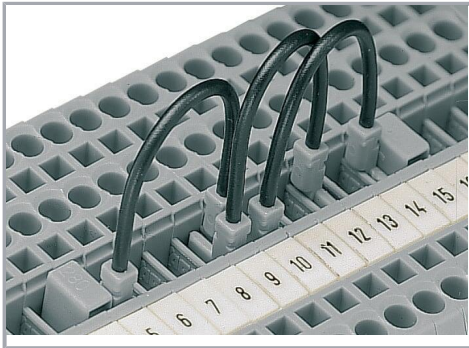
Commoning using an adjacent jumper.

Push jumper down until fully inserted!



Staggered jumpers are suitable for sophisticated circuit requirements. Push jumpers down until fully inserted!

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



### Push-In Type Wire Jumpers

When installing machines or control systems, it is often necessary to make an additional connection between two terminal blocks that are not next to each other on the rail. In such cases, WAGO's touch-proof, push-in type wire jumpers are the ideal solution.

These jumpers are compatible with the following rail-mount terminal blocks:

- 279 Series (1.5 mm<sup>2</sup>/16 AWG),
- 280/775/780 Series (2.5 mm<sup>2</sup>/14 AWG)
- 281/769/776/777/781 and 880 Series (4 mm<sup>2</sup> /12 AWG)

They are available in three conductor lengths (60, 110 and 250 mm), allowing up to 60 terminal blocks to be commoned depending on their width (see table on the right).

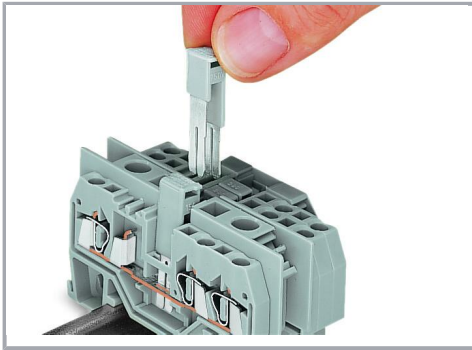
The 280/775/780 and 281/776/777/781 Series Terminal Blocks accept two wire jumpers, allowing the use of commoning chains. Furthermore, the 280/769/775/780 /880 and 281/776/777/781 Series allow both wire jumper and adjacent jumper to be simultaneously plugged into a same terminal block.



Commoning using comb-style jumper bars:  
Push comb-style jumper bars down until fully inserted.

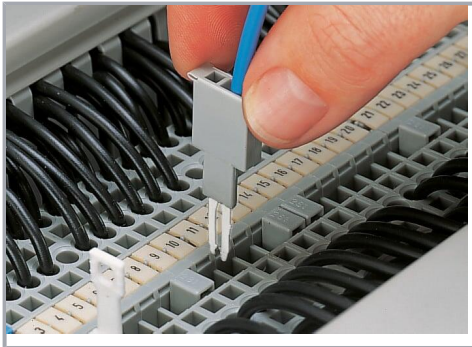
Subject to changes. Please also observe the further product documentation!





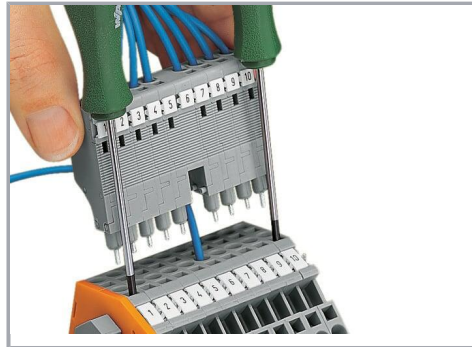
Commoning terminal blocks of different sizes via step-down jumpers.

### Testing

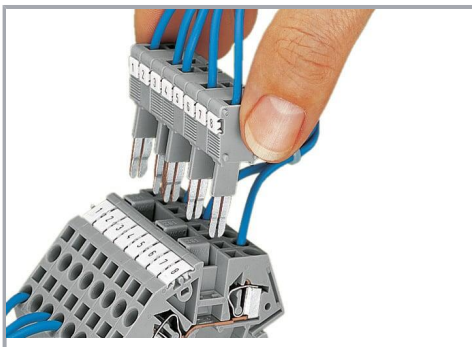


Testing with a test plug.

Picture shows a test plug fitted with CAGE CLAMP®.

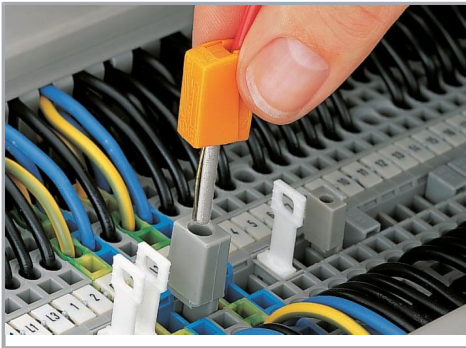


L-type test plug modules fitted with CAGE CLAMP®



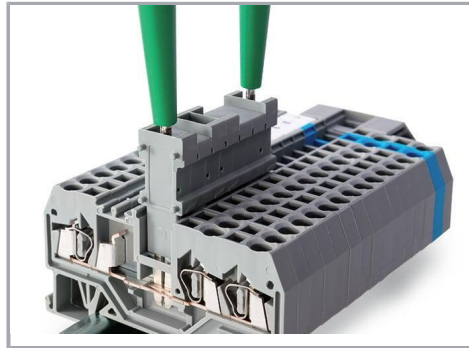
B-type test plug modules fitted with CAGE CLAMP®

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



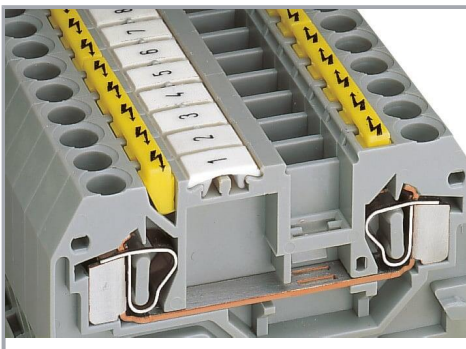
Testing with a test plug.

Picture shows a test plug adapter (209-170).



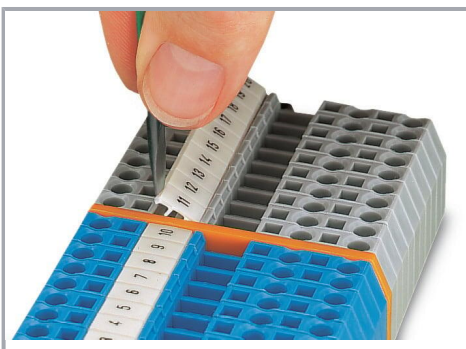
Test plugs modules are directly plugged into the jumper contact slot of the current bar.

### Cover



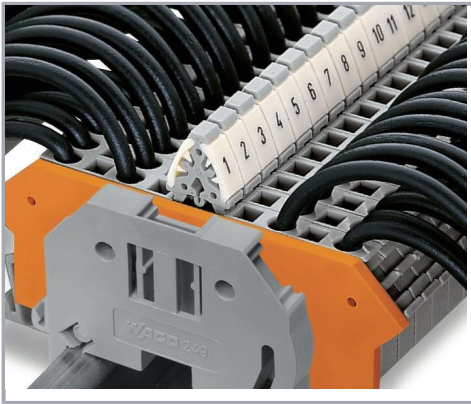
Protective warning markers inserted into the operating slots

### Marking



Labeling via WMB Multi Marking System.

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



Terminal block marking with double marker carriers (209-128) Terminal blocks with side marking

## 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!