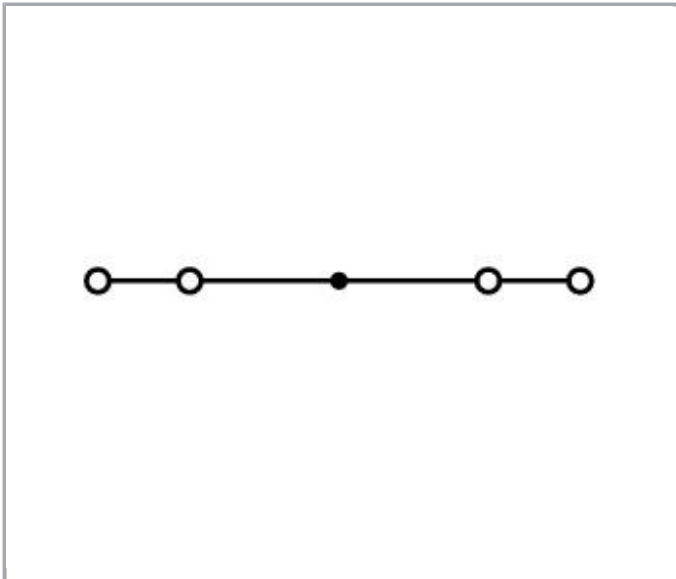
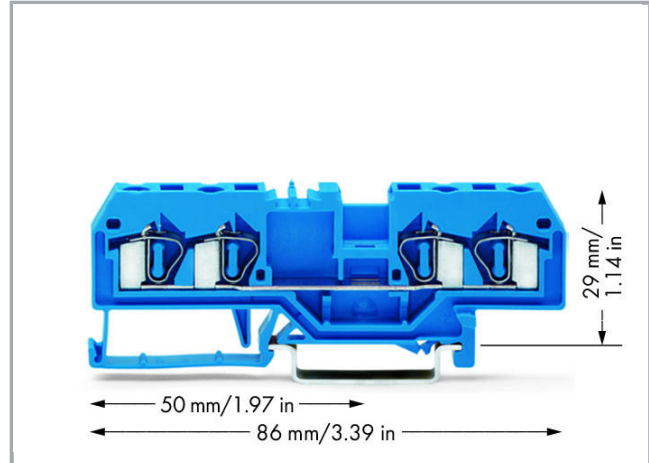
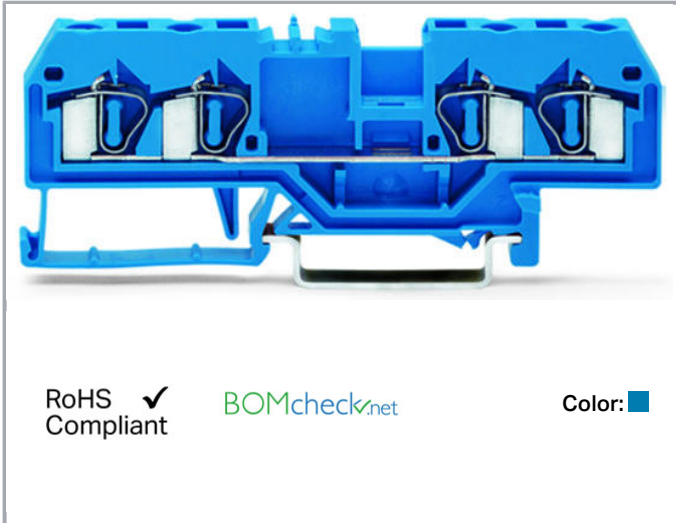


## Data sheet | Item number: 281-654

4-conductor through terminal block; 4 mm<sup>2</sup>; suitable for Ex i applications;  
center marking; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP®; 4,00 mm<sup>2</sup>;  
blue



[www.wago.com/281-654](http://www.wago.com/281-654)



### Item description

#### 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 is used for termination.

Subject to changes.

WAGO Kontakttechnik GmbH & Co. KG  
Hansastr. 27  
32423 Minden  
Phone: +49571 887-0 | Fax: +49571 887-169  
Email: [info.de@wago.com](mailto:info.de@wago.com) | Web: [www.wago.com](http://www.wago.com)

Do you have any questions about our products?  
We are always happy to take your call at +49 (571) 887-44222.



#### "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.

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> (14 AWG) = 16 A

4 mm<sup>2</sup> (12 AWG) = 22 A

## Data

### Electrical data

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

Rated voltage (III / 3)	800 V
Rated impulse voltage (III / 3)	8 kV
Rated current	26 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 Aluminum
Solid conductor	0.08 ... 4 mm <sup>2</sup> / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 4 mm <sup>2</sup> / 28 ... 12 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Total number of connection points	4
Total number of potentials	1
Number of levels	1
Type of wiring	Front-entry wiring

Subject to changes.

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## Geometrical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-35 rail	29 mm / 1.142 inch
Depth	86 mm / 3.386 inch

## Mechanical data

Design	horizontal
Type of mounting	DIN-35 rail
Marking level	Center marking

## Material Data




Color	blue
Insulating material	Polyamide 66 (PA 66)
Fire load	0.205 MJ
Weight	11.2 g

## Commercial data

Packaging type	BOX
Country of origin	DE
GTIN	4044918486453
Customs Tariff No.	85369010000




## Approvals / Certificates

### Country specific Approvals


Logo	Approval	Additional Approval Text	Certificate name
	CCA DEKRA Certification B.V.	EN 60947, IEC 60947	NTR NL-7454/A1
	CSA DEKRA Certification B.V.	C22.2 No. 158	1505034
	KEMA/KEUR DEKRA Certification B.V.	EN 60947	71-107288

Subject to changes.

## Ship Approvals



Logo	Approval	Additional Approval Text	Certificate name
	<b>ABS</b> American Bureau of Shipping	-	14- HG1293677- PDA
	<b>DNV GL</b> Det Norske Veritas, Germanischer Lloyd	-	TAE00001V2
	<b>LR</b> Lloyds Register	EN 60947	91/20112 (E9)

## UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	<b>UL</b> Underwriters Laboratories Inc.	UL 1059	20170731- E45172

## Compatible products
















## Marking accessories

	<b>Item no.: 2009-115</b> WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; white	<a href="http://www.wago.com/2009-115">www.wago.com/2009-115</a>
	<b>Item no.: 2009-115/000-002</b> WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; yellow	<a href="http://www.wago.com/2009-115/000-002">www.wago.com/2009-115/000-002</a>

Subject to changes.

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	<p><b>Item no.: 2009-115/000-006</b> WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; blue</p>	<a href="http://www.wago.com/2009-115/000-006">www.wago.com/2009-115/000-006</a>
	<p><b>Item no.: 2009-115/000-007</b> WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; gray</p>	<a href="http://www.wago.com/2009-115/000-007">www.wago.com/2009-115/000-007</a>
	<p><b>Item no.: 2009-115/000-012</b> WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; orange</p>	<a href="http://www.wago.com/2009-115/000-012">www.wago.com/2009-115/000-012</a>
	<p><b>Item no.: 2009-115/000-017</b> WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; light green</p>	<a href="http://www.wago.com/2009-115/000-017">www.wago.com/2009-115/000-017</a>
	<p><b>Item no.: 2009-115/000-023</b> WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; green</p>	<a href="http://www.wago.com/2009-115/000-023">www.wago.com/2009-115/000-023</a>
	<p><b>Item no.: 2009-115/000-024</b> WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; violet</p>	<a href="http://www.wago.com/2009-115/000-024">www.wago.com/2009-115/000-024</a>
	<p><b>Item no.: 209-140</b> Group marker carrier</p>	<a href="http://www.wago.com/209-140">www.wago.com/209-140</a>
	<p><b>Item no.: 209-141</b> Group marker carrier</p>	<a href="http://www.wago.com/209-141">www.wago.com/209-141</a>
	<p><b>Item no.: 209-142</b> Group marker carrier</p>	<a href="http://www.wago.com/209-142">www.wago.com/209-142</a>
	<p><b>Item no.: 209-185</b> Adaptor</p>	<a href="http://www.wago.com/209-185">www.wago.com/209-185</a>
	<p><b>Item no.: 249-105</b> Group marker carrier</p>	<a href="http://www.wago.com/249-105">www.wago.com/249-105</a>
	<p><b>Item no.: 793-501</b> WMB marking card; as card; not stretchable; plain; snap-on type; white</p>	<a href="http://www.wago.com/793-501">www.wago.com/793-501</a>
	<p><b>Item no.: 793-501/000-002</b> WMB marking card; as card; not stretchable; plain; snap-on type; yellow</p>	<a href="http://www.wago.com/793-501/000-002">www.wago.com/793-501/000-002</a>
	<p><b>Item no.: 793-501/000-005</b> WMB marking card; as card; not stretchable; plain; snap-on type; red</p>	<a href="http://www.wago.com/793-501/000-005">www.wago.com/793-501/000-005</a>
	<p><b>Item no.: 793-501/000-006</b> WMB marking card; as card; not stretchable; plain; snap-on type; blue</p>	<a href="http://www.wago.com/793-501/000-006">www.wago.com/793-501/000-006</a>

Subject to changes.



**Item no.: 793-501/000-007**  
WMB marking card; as card; not stretchable; plain; snap-on type; gray

[www.wago.com/793-501/000-007](http://www.wago.com/793-501/000-007)



**Item no.: 793-501/000-012**  
WMB marking card; as card; not stretchable; plain; snap-on type; orange

[www.wago.com/793-501/000-012](http://www.wago.com/793-501/000-012)



**Item no.: 793-501/000-017**  
WMB marking card; as card; not stretchable; plain; snap-on type; light green

[www.wago.com/793-501/000-017](http://www.wago.com/793-501/000-017)



**Item no.: 793-501/000-023**  
WMB marking card; as card; not stretchable; plain; snap-on type; green

[www.wago.com/793-501/000-023](http://www.wago.com/793-501/000-023)



**Item no.: 793-501/000-024**  
WMB marking card; as card; not stretchable; plain; snap-on type; violet

[www.wago.com/793-501/000-024](http://www.wago.com/793-501/000-024)



**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)



**Item no.: 793-5501/000-002**  
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](http://www.wago.com/793-5501/000-002)



**Item no.: 793-5501/000-005**  
WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type; red

[www.wago.com/793-5501/000-005](http://www.wago.com/793-5501/000-005)



**Item no.: 793-5501/000-006**  
WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type; blue

[www.wago.com/793-5501/000-006](http://www.wago.com/793-5501/000-006)



**Item no.: 793-5501/000-007**  
WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type; gray

[www.wago.com/793-5501/000-007](http://www.wago.com/793-5501/000-007)



**Item no.: 793-5501/000-012**  
WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type; orange

[www.wago.com/793-5501/000-012](http://www.wago.com/793-5501/000-012)



**Item no.: 793-5501/000-017**  
WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type; light green

[www.wago.com/793-5501/000-017](http://www.wago.com/793-5501/000-017)



**Item no.: 793-5501/000-023**  
WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type; green












[www.wago.com/793-5501/000-023](http://www.wago.com/793-5501/000-023)


















**Item no.: 793-5501/000-024**  
WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type; violet

[www.wago.com/793-5501/000-024](http://www.wago.com/793-5501/000-024)

Subject to changes.

ferrule		
	<b>Item no.: 216-106</b> Ferrule; Sleeve for 2.5 mm <sup>2</sup> / AWG 14; uninsulated; electro-tin plated	<a href="http://www.wago.com/216-106">www.wago.com/216-106</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.: 216-202</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.: 216-203</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.: 216-204</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.: 216-205</b> Ferrule; Sleeve for 2.08 mm <sup>2</sup> / AWG 14; insulated; electro-tin plated; yellow	<a href="http://www.wago.com/216-205">www.wago.com/216-205</a>
	<b>Item no.: 216-206</b> Ferrule; Sleeve for 2.5 mm <sup>2</sup> / AWG 14; insulated; electro-tin plated; blue	<a href="http://www.wago.com/216-206">www.wago.com/216-206</a>
	<b>Item no.: 216-241</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white	<a href="http://www.wago.com/216-241">www.wago.com/216-241</a>
	<b>Item no.: 216-242</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray	<a href="http://www.wago.com/216-242">www.wago.com/216-242</a>
	<b>Item no.: 216-243</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red	<a href="http://www.wago.com/216-243">www.wago.com/216-243</a>
	<b>Item no.: 216-244</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black	<a href="http://www.wago.com/216-244">www.wago.com/216-244</a>
	<b>Item no.: 216-246</b> Ferrule; Sleeve for 2.5 mm <sup>2</sup> / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue	<a href="http://www.wago.com/216-246">www.wago.com/216-246</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; green	<a href="http://www.wago.com/216-302">www.wago.com/216-302</a>
check		
	<b>Item no.: 209-170</b> 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	<a href="http://www.wago.com/209-170">www.wago.com/209-170</a>
	<b>Item no.: 249-144</b> L-type test plug module; modular; with spring-loaded contact pin; Center module; 2,50 mm <sup>2</sup> ; gray	<a href="http://www.wago.com/249-144">www.wago.com/249-144</a>

Subject to changes.

	<b>Item no.: 249-146</b> L-type spacer module; modular; e.g., bridging commoned terminal blocks; gray	<a href="http://www.wago.com/249-146">www.wago.com/249-146</a>
	<b>Item no.: 249-147</b> B-type test plug module; modular; 2,50 mm <sup>2</sup> ; gray	<a href="http://www.wago.com/249-147">www.wago.com/249-147</a>
	<b>Item no.: 249-148</b> B-type spacer module; modular; e.g., for bridging commoned terminal blocks; gray	<a href="http://www.wago.com/249-148">www.wago.com/249-148</a>
	<b>Item no.: 280-404</b> Test plug adapter; 5 mm wide; for test plug 210-137 (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.: 281-418</b> Test plug module; modular; suitable for all WAGO 281, 776, 777 and 781 series rail-mounted terminal blocks with jumper slots in the current bar; gray	<a href="http://www.wago.com/281-418">www.wago.com/281-418</a>
	<b>Item no.: 281-419</b> Spacer module; modular; bridging commoned terminal blocks; gray	<a href="http://www.wago.com/281-419">www.wago.com/281-419</a>
<b>Carrier rail</b>		
	<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	<a href="http://www.wago.com/210-112">www.wago.com/210-112</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	<a href="http://www.wago.com/210-113">www.wago.com/210-113</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	<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	<a href="http://www.wago.com/210-115">www.wago.com/210-115</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	<a href="http://www.wago.com/210-118">www.wago.com/210-118</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>Item no.: 210-197</b> Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715	<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	<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	<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	<a href="http://www.wago.com/210-506">www.wago.com/210-506</a>

Subject to changes.





**Item no.: 210-508**  
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](http://www.wago.com/210-508)

**End plate**



**Item no.: 209-191**  
Separator for Ex e/Ex i applications; 3 mm thick; 120 mm wide; orange

[www.wago.com/209-191](http://www.wago.com/209-191)



**Item no.: 209-192**  
Separator for Ex e/Ex i applications; 3 mm thick; 125.5 mm wide; orange

[www.wago.com/209-192](http://www.wago.com/209-192)



**Item no.: 281-334**  
End and intermediate plate; 2.5 mm thick; gray

[www.wago.com/281-334](http://www.wago.com/281-334)



**Item no.: 281-335**  
End and intermediate plate; 2.5 mm thick; orange

[www.wago.com/281-335](http://www.wago.com/281-335)



**Item no.: 281-338**  
Separator plate; 2 mm thick; oversized; gray

[www.wago.com/281-338](http://www.wago.com/281-338)



**Item no.: 281-339**  
Separator plate; 2 mm thick; oversized; orange

[www.wago.com/281-339](http://www.wago.com/281-339)



**Item no.: 284-336**  
Step-down cover plate; 1 mm thick; for 4-conductor 279-831, 280-833 and 281-652 terminal blocks; gray

[www.wago.com/284-336](http://www.wago.com/284-336)



**Item no.: 284-346**  
Step-down cover plate; 1 mm thick; for 4-conductor 279-831, 280-833 and 281-652 terminal blocks; orange

[www.wago.com/284-346](http://www.wago.com/284-346)

**General accessories**



**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)

**tools**



**Item no.: 210-657**  
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short

[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

[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

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

**assembling**



**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.: 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)

**Protective Warning Marker**






**Item no.: 281-415**  
Protective warning marker; with high-voltage symbol, black; for 5 terminal blocks; yellow


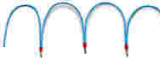












[www.wago.com/281-415](http://www.wago.com/281-415)

Subject to changes.












### Insulation stop

	<b>Item no.: 281-470</b> Insulation stop; 0.08 - 0.2 mm <sup>2</sup> "s" (0.14 mm <sup>2</sup> "f-st"); 5 pieces/strip; white	<a href="http://www.wago.com/281-470">www.wago.com/281-470</a>
	<b>Item no.: 281-471</b> Insulation stop; 0.25 - 0.5 mm <sup>2</sup> ; 5 pieces/strip; light gray	<a href="http://www.wago.com/281-471">www.wago.com/281-471</a>
	<b>Item no.: 281-472</b> Insulation stop; 0.75 - 1.5 mm <sup>2</sup> ; 5 pieces/strip; dark gray	<a href="http://www.wago.com/281-472">www.wago.com/281-472</a>

### Jumper

	<b>Item no.: 210-103</b> Wire commoning chain; insulated; 50 connections; black	<a href="http://www.wago.com/210-103">www.wago.com/210-103</a>
	<b>Item no.: 210-123</b> Wire commoning chain; insulated; 50 connections	<a href="http://www.wago.com/210-123">www.wago.com/210-123</a>
	<b>Item no.: 249-123</b> Push-in type wire jumper; insulated; wire length 180 mm; Conductor cross section 0.75 mm <sup>2</sup>	<a href="http://www.wago.com/249-123">www.wago.com/249-123</a>
	<b>Item no.: 249-125</b> Push-in type wire jumper; insulated; wire length 60 mm; Conductor cross section 0.75 mm <sup>2</sup>	<a href="http://www.wago.com/249-125">www.wago.com/249-125</a>
	<b>Item no.: 249-126</b> Push-in type wire jumper; insulated; wire length 110 mm; Conductor cross section 0.75 mm <sup>2</sup>	<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; insulated; wire length 250 mm; Conductor cross section 0.75 mm <sup>2</sup>	<a href="http://www.wago.com/249-127">www.wago.com/249-127</a>
	<b>Item no.: 281-402</b> Adjacent jumper; insulated; IN = IN terminal block; gray	<a href="http://www.wago.com/281-402">www.wago.com/281-402</a>
	<b>Item no.: 281-409</b> Alternate jumper; insulated; IN = IN terminal block; gray	<a href="http://www.wago.com/281-409">www.wago.com/281-409</a>
	<b>Item no.: 281-422</b> Adjacent jumper; insulated; IN = IN terminal block; yellow-green	<a href="http://www.wago.com/281-422">www.wago.com/281-422</a>
	<b>Item no.: 281-482</b> Comb-style jumper bar; insulated; 2-way; IN = IN terminal block; gray	<a href="http://www.wago.com/281-482">www.wago.com/281-482</a>
	<b>Item no.: 281-483</b> Comb-style jumper bar; insulated; 3-way; IN = IN terminal block; gray	<a href="http://www.wago.com/281-483">www.wago.com/281-483</a>
	<b>Item no.: 281-485</b> Comb-style jumper bar; insulated; 5-way; IN = IN terminal block; gray	<a href="http://www.wago.com/281-485">www.wago.com/281-485</a>
	<b>Item no.: 281-490</b> Comb-style jumper bar; insulated; 10-way; IN = IN terminal block; gray	<a href="http://www.wago.com/281-490">www.wago.com/281-490</a>
	<b>Item no.: 281-492</b> Alternate comb-style jumper bar; insulated; 2-way; IN = IN terminal block; gray	<a href="http://www.wago.com/281-492">www.wago.com/281-492</a>

Subject to changes.

	<b>Item no.: 283-414</b> Step-down jumper; insulated; from 16 mm <sup>2</sup> to 4 mm <sup>2</sup> ; Nominal current 32 A; gray	<a href="http://www.wago.com/283-414">www.wago.com/283-414</a>
	<b>Item no.: 284-413</b> Step-down jumper; insulated; from 10/6 mm <sup>2</sup> to 6/4 mm <sup>2</sup> ; Nominal current 30 A; gray	<a href="http://www.wago.com/284-413">www.wago.com/284-413</a>
	<b>Item no.: 284-414</b> Step-down jumper; insulated; from 10/6 mm <sup>2</sup> to 4/2.5/1.5 mm <sup>2</sup> ; Nominal current 15 A; gray	<a href="http://www.wago.com/284-414">www.wago.com/284-414</a>
	<b>Item no.: 709-110</b> Wire commoning chain; insulated; 4 connections; 3 x 110 mm; black	<a href="http://www.wago.com/709-110">www.wago.com/709-110</a>
	<b>Item no.: 709-111</b> Wire commoning chain; insulated; 3 connections; 2 x 120 mm; black	<a href="http://www.wago.com/709-111">www.wago.com/709-111</a>
	<b>Item no.: 709-112</b> Wire commoning chain; insulated; 3 connections; 2 x 170 mm; black	<a href="http://www.wago.com/709-112">www.wago.com/709-112</a>
	<b>Item no.: 781-452</b> Staggered jumper; insulated; from 1 to 2; Spacing: 6 mm; gray	<a href="http://www.wago.com/781-452">www.wago.com/781-452</a>
	<b>Item no.: 781-453</b> Staggered jumper; insulated; from 1 to 3; Spacing: 6 mm; gray	<a href="http://www.wago.com/781-453">www.wago.com/781-453</a>
	<b>Item no.: 781-454</b> Staggered jumper; insulated; from 1 to 4; Spacing: 6 mm; gray	<a href="http://www.wago.com/781-454">www.wago.com/781-454</a>
	<b>Item no.: 781-455</b> Staggered jumper; insulated; from 1 to 5; Spacing: 6 mm; gray	<a href="http://www.wago.com/781-455">www.wago.com/781-455</a>
	<b>Item no.: 781-456</b> Staggered jumper; insulated; from 1 to 6; Spacing: 6 mm; gray	<a href="http://www.wago.com/781-456">www.wago.com/781-456</a>

## Downloads

### Documentation

#### Bid Text

281-654 X81 - Datei	Feb 19, 2019	xml 3.3 kB	Download
281-654 doc - Datei	Feb 28, 2017	doc 24.6 kB	Download

#### Additional Information

Technical explanations	Apr 3, 2019	pdf 2.1 MB	Download
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## CAD/CAE-Data

Subject to changes.

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### CAD data

2D/3D Models 281-654

URL

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### CAE data

EPLAN Data Portal 281-654

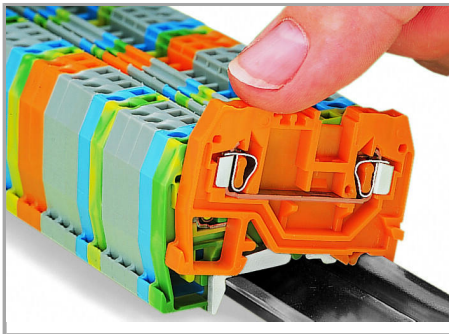
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WSCAD Universe 281-654

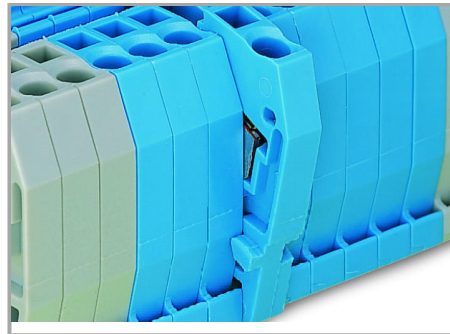
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## Installation Notes

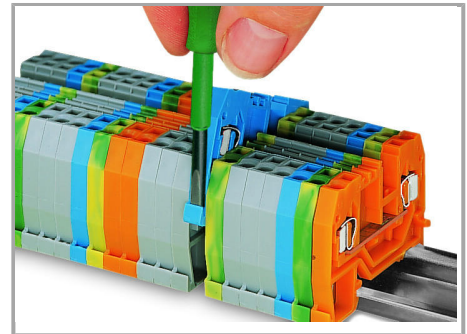
### Assembly



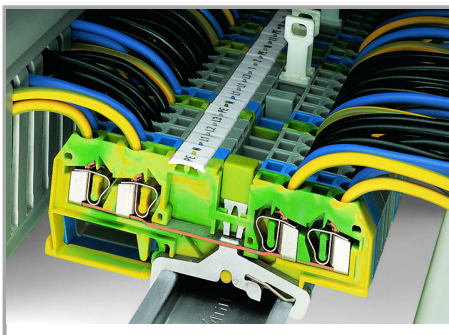
Snapping a terminal block onto the carrier rail.



Quick assembly keys prevent reverse mounting.



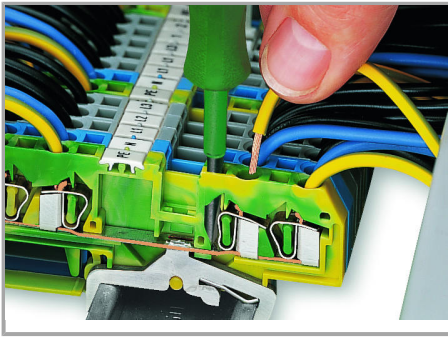
Removing a terminal block from the assembly.



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

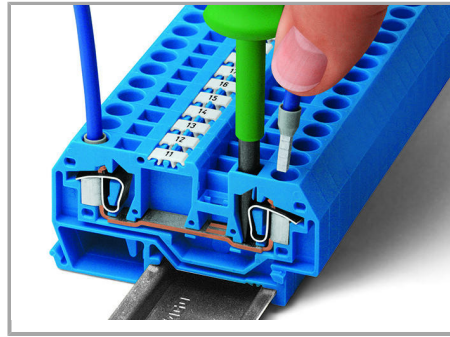
### Inserting a conductor

Subject to changes.



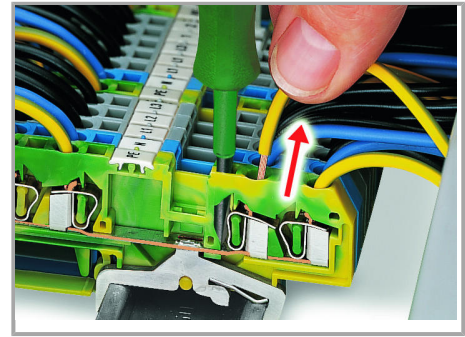
CAGE CLAMP® connection

Inserting a conductor.



CAGE CLAMP® connection

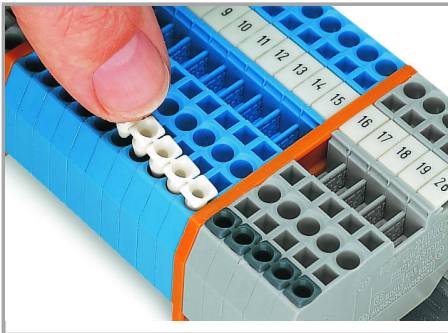
Inserting a conductor.



CAGE CLAMP®-Anschluss

Leiter lösen.

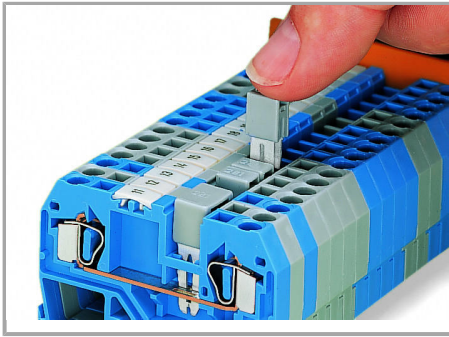
With ferruled conductors, it is necessary to use a terminal block one size larger than the conductor's nominal cross-section.



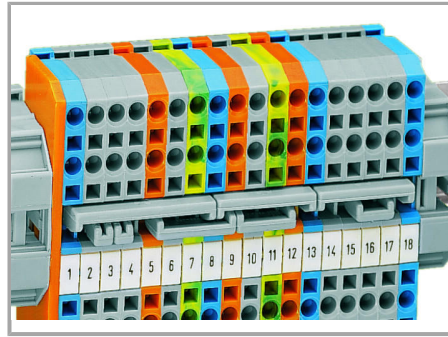
Inserting insulation stops.

**Jumpered**

Subject to changes.



Commoning using an adjacent jumper (280-402).

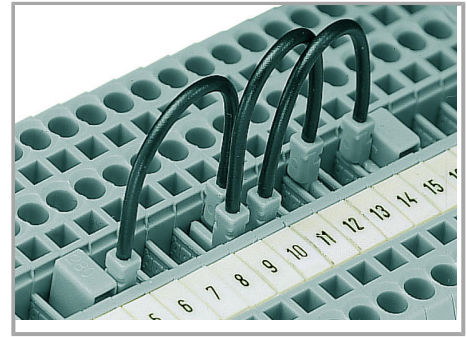


Staggered jumpers for sophisticated circuit requirements – push jumpers down until fully inserted.

Push jumper down until fully inserted.

Subject to changes.





Subject to changes.

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## 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:

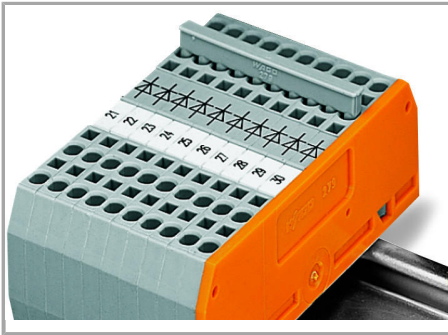
- 279 Series (1.5 mm<sup>2</sup>/16 AWG),
- 
- 280/775/780 Series (2.5 mm<sup>2</sup>/14 AWG)
- 
- 281/769/776/777/781 and 880 Series (4 mm<sup>2</sup>/12 AWG)
- 

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).

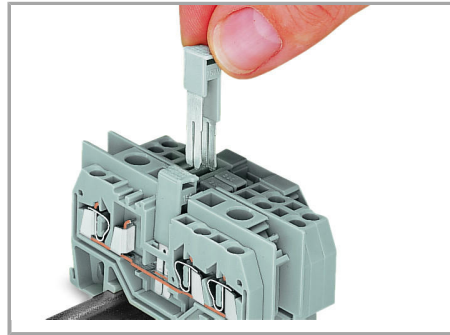
Compared with the 279 Series, the 280/775/780 and 281/776/777/781 Series can also accommodate two wire jumpers, allowing the use of commoning chains. Furthermore, the 280/769/775/780/880 and 281/776/777/781 Series allow both wire jumper and adjacent jumper to be simultaneously plugged into a same terminal block.

Subject to changes.



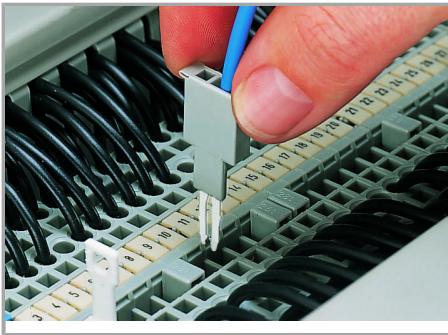


Brücken mit Brückungskämmen  
Brückungskämme bis zum Anschlag  
hinunterdrücken.



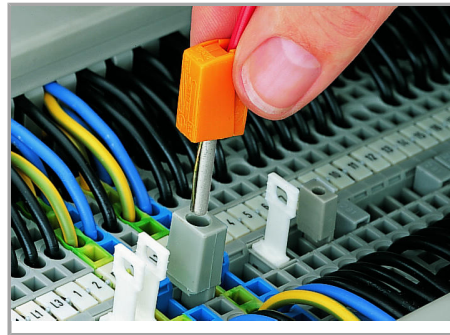
Commoning terminal blocks of different  
sizes via step-down jumpers.

### Testing



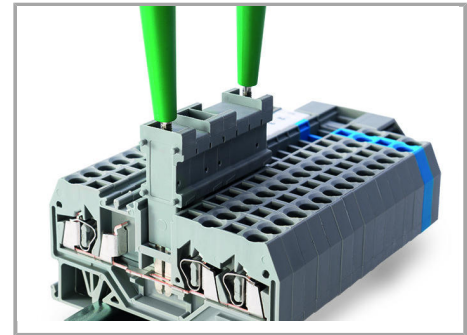
Testing with a test plug

(picture shows a test plug fitted with  
CAGE CLAMP®).



Testing with a test plug

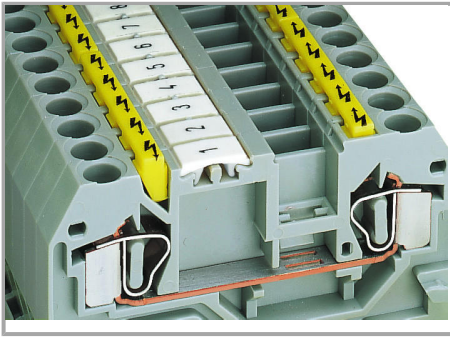
(picture shows 209-170 Test Plug Adapter).



The test plug modules are directly plugged  
into the jumper contact slot of the current  
bar.

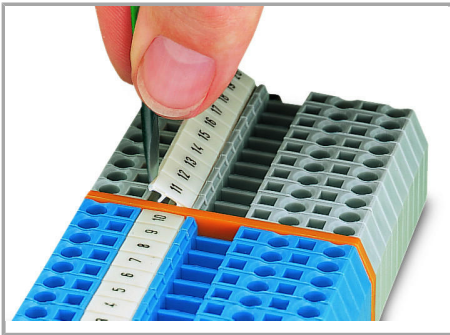
### Cover

Subject to changes.



Protective warning markers inserted into the operating slots.

### Marking



Marking via WMB Multi Marking System.

Subject to changes.