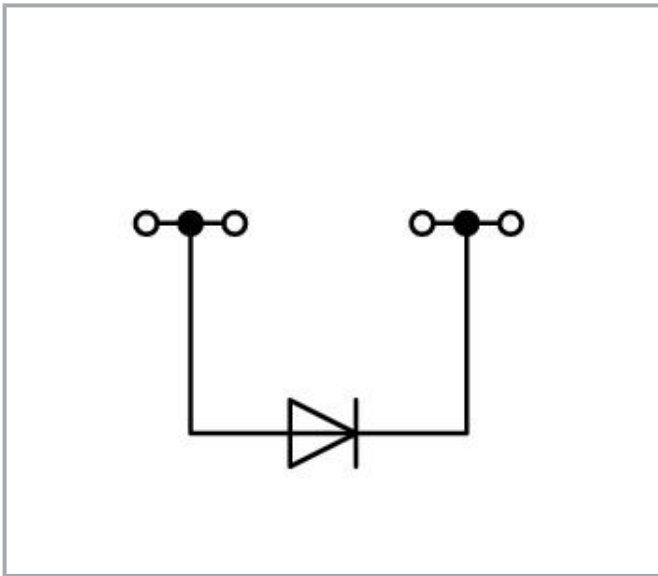
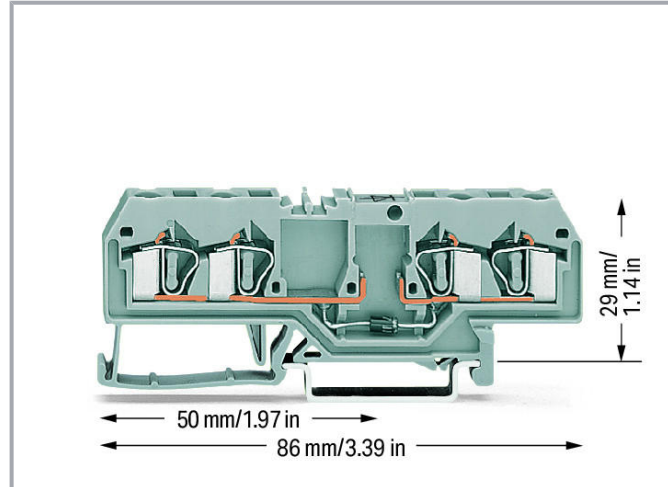
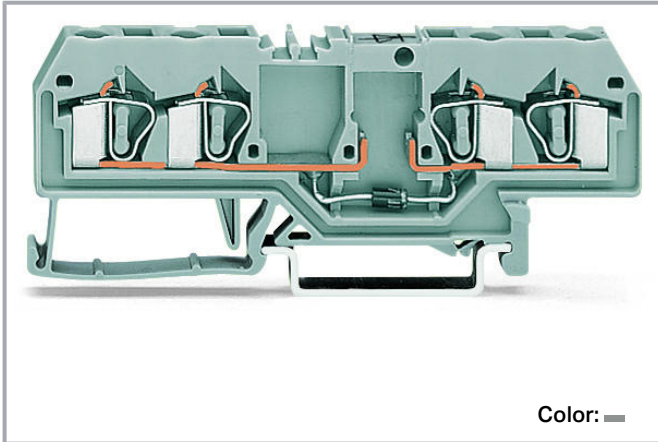


**Data sheet | Item number: 281-665/281-410**

Component terminal block; 4-conductor; with diode 1N4007; anode, left side; for DIN-rail 35 x 15 and 35 x 7.5; 4 mm<sup>2</sup>; CAGE CLAMP®; 4,00 mm<sup>2</sup>; gray



[www.wago.com/281-665\\_281-410](http://www.wago.com/281-665_281-410)



**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.

"Alu-Plus" Contact Paste Advantages:

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

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.



- 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> = 16 A

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

## Data

### Electrical data

Nominal voltage	250 V
Reverse voltage	1,000 V

### Ratings per IEC/EN

Ratings per	IEC/EN 60947-7-1
Rated current	0.5 A

### 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
Wiring type	Front-entry wiring

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

**Physical data**

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

**Mechanical data**

Design	horizontal type
Mounting type	DIN-35 rail
Marking level	Center marking



**Material data**

Color	gray
Insulation material	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.219 MJ
Weight	13.1 g

**Commercial data**



Product Group	1 (Rail Mounted Terminal Blocks)
Packaging type	BOX
Country of origin	CN
GTIN	4050821275534
Customs tariff number	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
	KEMA/KEUR DEKRA Certification B.V.	EN 60947	71-107288


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

## Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
	<b>ABS</b> American Bureau of Shipping	-	20- HG1941090- PDA
	<b>DNV GL</b> Det Norske Veritas, Germanischer Lloyd	-	TAE00001V2




## Required accessories

## End plate


	<b>Item no.: 281-334</b> End and intermediate plate; 2.5 mm thick; gray	<a href="http://www.wago.com/281-334">www.wago.com/281-334</a>
	<b>Item no.: 281-335</b> End and intermediate plate; 2.5 mm thick; orange	<a href="http://www.wago.com/281-335">www.wago.com/281-335</a>

## Optional accessories

## 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>
	<b>Item no.: 210-658</b> Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; angled; short; multicoloured	<a href="http://www.wago.com/210-658">www.wago.com/210-658</a>
	<b>Item no.: 210-720</b> Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured	<a href="http://www.wago.com/210-720">www.wago.com/210-720</a>

















## End plate

	<b>Item no.: 281-338</b> Separator plate; 2 mm thick; oversized; gray	<a href="http://www.wago.com/281-338">www.wago.com/281-338</a>
	<b>Item no.: 281-339</b> Separator plate; 2 mm thick; oversized; orange	<a href="http://www.wago.com/281-339">www.wago.com/281-339</a>

## Jumpers















	<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.: 210-123</b> Wire commoning chain; insulated; blue	<a href="http://www.wago.com/210-123">www.wago.com/210-123</a>

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









	<b>Item no.: 281-482</b> Jumper; insulated; gray	<a href="http://www.wago.com/281-482">www.wago.com/281-482</a>
	<b>Item no.: 281-483</b> Jumper; 3-way; insulated; gray	<a href="http://www.wago.com/281-483">www.wago.com/281-483</a>
	<b>Item no.: 281-485</b> Jumper; 5-way; insulated; gray	<a href="http://www.wago.com/281-485">www.wago.com/281-485</a>
	<b>Item no.: 281-490</b> Jumper; 10-way; insulated; gray	<a href="http://www.wago.com/281-490">www.wago.com/281-490</a>
	<b>Item no.: 281-492</b> Jumper; 2-way; insulated; gray	<a href="http://www.wago.com/281-492">www.wago.com/281-492</a>
	<b>Item no.: 709-110</b> Wire commoning chain; 2.5 mm <sup>2</sup> ; insulated; black	<a href="http://www.wago.com/709-110">www.wago.com/709-110</a>
	<b>Item no.: 709-111</b> Wire commoning chain; 2.5 mm <sup>2</sup> ; insulated; black	<a href="http://www.wago.com/709-111">www.wago.com/709-111</a>
	<b>Item no.: 709-112</b> Wire commoning chain; 2.5 mm <sup>2</sup> ; insulated; black	<a href="http://www.wago.com/709-112">www.wago.com/709-112</a>
<b>Mounting</b>		
	<b>Item no.: 209-106</b> Mounting carrier; for isolated mounting on DIN 35 rails; gray	<a href="http://www.wago.com/209-106">www.wago.com/209-106</a>
	<b>Item no.: 249-116</b> Screwless end stop; 6 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray	<a href="http://www.wago.com/249-116">www.wago.com/249-116</a>
	<b>Item no.: 709-153</b> Cover; Type 1; suitable for cover carrier, type 1; 1 m long; transparent	<a href="http://www.wago.com/709-153">www.wago.com/709-153</a>
<b>Marking accessories</b>		
	<b>Item no.: 2009-115</b> WMB-Inline; for Smart Printer; 1500 pieces on roll; 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; 1500 pieces on roll; 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>
	<b>Item no.: 2009-115/000-006</b> WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; blue	<a href="http://www.wago.com/2009-115/000-006">www.wago.com/2009-115/000-006</a>
	<b>Item no.: 2009-115/000-007</b> WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray	<a href="http://www.wago.com/2009-115/000-007">www.wago.com/2009-115/000-007</a>
	<b>Item no.: 2009-115/000-012</b> WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange	<a href="http://www.wago.com/2009-115/000-012">www.wago.com/2009-115/000-012</a>

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










	<b>Item no.: 2009-115/000-017</b> WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; light green	<a href="http://www.wago.com/2009-115/000-017">www.wago.com/2009-115/000-017</a>
	<b>Item no.: 2009-115/000-023</b> WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green	<a href="http://www.wago.com/2009-115/000-023">www.wago.com/2009-115/000-023</a>
	<b>Item no.: 2009-115/000-024</b> WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet	<a href="http://www.wago.com/2009-115/000-024">www.wago.com/2009-115/000-024</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>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.: 793-501/000-002</b> WMB marking card; as card; not stretchable; plain; snap-on type; yellow	<a href="http://www.wago.com/793-501/000-002">www.wago.com/793-501/000-002</a>
	<b>Item no.: 793-501/000-005</b> WMB marking card; as card; not stretchable; plain; snap-on type; red	<a href="http://www.wago.com/793-501/000-005">www.wago.com/793-501/000-005</a>
	<b>Item no.: 793-501/000-006</b> WMB marking card; as card; not stretchable; plain; snap-on type; blue	<a href="http://www.wago.com/793-501/000-006">www.wago.com/793-501/000-006</a>
	<b>Item no.: 793-501/000-007</b> WMB marking card; as card; not stretchable; plain; snap-on type; gray	<a href="http://www.wago.com/793-501/000-007">www.wago.com/793-501/000-007</a>
	<b>Item no.: 793-501/000-012</b> WMB marking card; as card; not stretchable; plain; snap-on type; orange	<a href="http://www.wago.com/793-501/000-012">www.wago.com/793-501/000-012</a>
	<b>Item no.: 793-501/000-017</b> WMB marking card; as card; not stretchable; plain; snap-on type; light green	<a href="http://www.wago.com/793-501/000-017">www.wago.com/793-501/000-017</a>
	<b>Item no.: 793-501/000-023</b> WMB marking card; as card; not stretchable; plain; snap-on type; green	<a href="http://www.wago.com/793-501/000-023">www.wago.com/793-501/000-023</a>
	<b>Item no.: 793-501/000-024</b> WMB marking card; as card; not stretchable; plain; snap-on type; violet	<a href="http://www.wago.com/793-501/000-024">www.wago.com/793-501/000-024</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>

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

	<b>Item no.: 793-5501/000-002</b> WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; yellow	<a href="http://www.wago.com/793-5501/000-002">www.wago.com/793-5501/000-002</a>
	<b>Item no.: 793-5501/000-005</b> WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; red	<a href="http://www.wago.com/793-5501/000-005">www.wago.com/793-5501/000-005</a>
	<b>Item no.: 793-5501/000-006</b> WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; blue	<a href="http://www.wago.com/793-5501/000-006">www.wago.com/793-5501/000-006</a>
	<b>Item no.: 793-5501/000-007</b> WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; gray	<a href="http://www.wago.com/793-5501/000-007">www.wago.com/793-5501/000-007</a>
	<b>Item no.: 793-5501/000-012</b> WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; orange	<a href="http://www.wago.com/793-5501/000-012">www.wago.com/793-5501/000-012</a>
	<b>Item no.: 793-5501/000-017</b> WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; green	<a href="http://www.wago.com/793-5501/000-017">www.wago.com/793-5501/000-017</a>
	<b>Item no.: 793-5501/000-023</b> WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; light green	<a href="http://www.wago.com/793-5501/000-023">www.wago.com/793-5501/000-023</a>
	<b>Item no.: 793-5501/000-024</b> WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; violet	<a href="http://www.wago.com/793-5501/000-024">www.wago.com/793-5501/000-024</a>

#### Ferrule


	<b>Item no.: 216-106</b> Ferrule; Sleeve for 2.5 mm <sup>2</sup> / AWG 14; uninsulated; electro-tin plated; silver-colored	<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>

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


	<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>
<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; silver-colored	<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; silver-colored	<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; 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.: 210-118</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.: 210-196</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; 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>	

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




 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; galvanized; according to EN 60715; silver-colored [www.wago.com/210-505](http://www.wago.com/210-505)

**Item no.: 210-506**

 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715; silver-colored [www.wago.com/210-506](http://www.wago.com/210-506)

**Item no.: 210-508**

 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; similar to EN 60715; silver-colored [www.wago.com/210-508](http://www.wago.com/210-508)

**Insulation stop**

**Item no.: 281-470**

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/281-470](http://www.wago.com/281-470)

**Item no.: 281-471**

Insulation stop; 0.25 - 0.5 mm<sup>2</sup>; 5 pieces/strip; light gray [www.wago.com/281-471](http://www.wago.com/281-471)

**Item no.: 281-472**

Insulation stop; 0.75 - 1.5 mm<sup>2</sup>; 5 pieces/strip; dark gray [www.wago.com/281-472](http://www.wago.com/281-472)

**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)

**Downloads**

**Documentation**

**Bid Text**

281-665/281-410 doc - Datei	2017 Aug 30	doc 25.6 kB	Download
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281-665/281-410 X81 - Datei	2019 Feb 19	xml 3.3 kB	Download
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**Additional Information**

Technical explanations	2019 Apr 3	pdf 2.2 MB	Download
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**CAD/CAE-Data**

**CAE data**

EPLAN Data Portal 281-665/281-410	URL	Download
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WSCAD Universe 281-665/281-410	URL	Download
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ZUKEN Portal 281-665/281-410

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	URL	Download
WSCAD Universe 281-665/281-410	<a href="#">URL</a>	<a href="#">Download</a>
EPLAN Data Portal 281-665/281-410	<a href="#">URL</a>	<a href="#">Download</a>
<b>CAD data</b>		
2D/3D Models 281-665/281-410	<a href="#">URL</a>	<a href="#">Download</a>

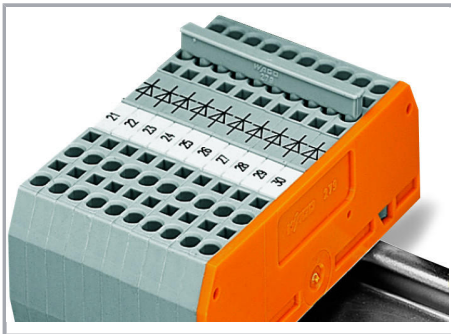
## Environmental Product Compliance

### Compliance Search

Environmental Product Compliance 281-665/281-410	<a href="#">URL</a>	<a href="#">Download</a>
Component terminal block; 4-conductor; with diode 1N4007; anode, left side; for DIN-rail 35 x 15 and 35 x 7.5; 4 mm <sup>2</sup> ; CAGE CLAMP®; 4,00 mm <sup>2</sup> ; gray		

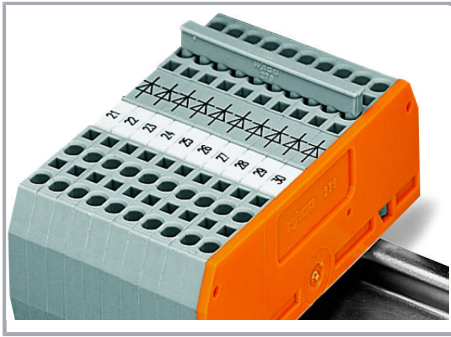
## Installation Notes

### Commoning

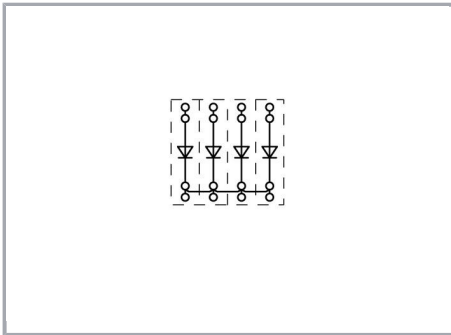


Commoning using comb-style jumper bars:  
Push comb-style jumper bars down until fully inserted.

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



These diode terminal blocks have been specially developed for custom diode circuits, such as lamp test and collective fault signal circuits.



Polarized diode gates with a common cathode can be created using the following terminal blocks:

281-665/281-410 or 281-665/281-411

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