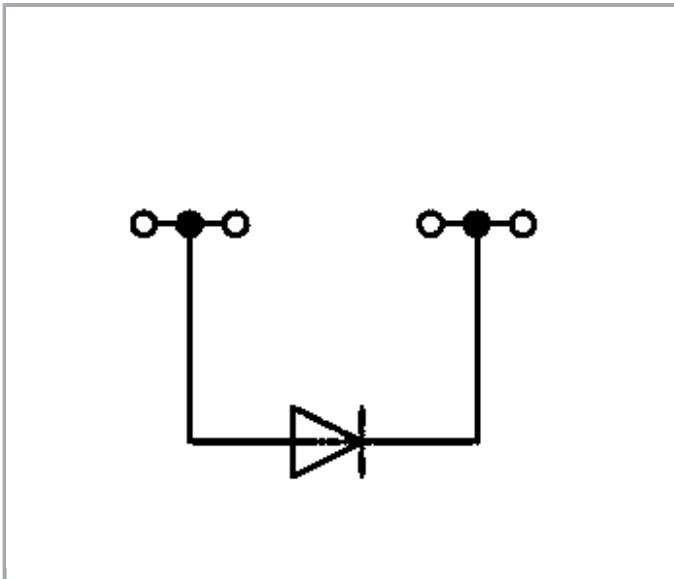
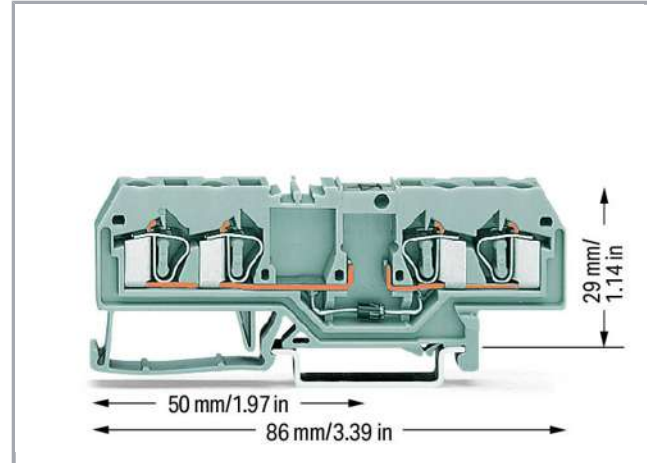
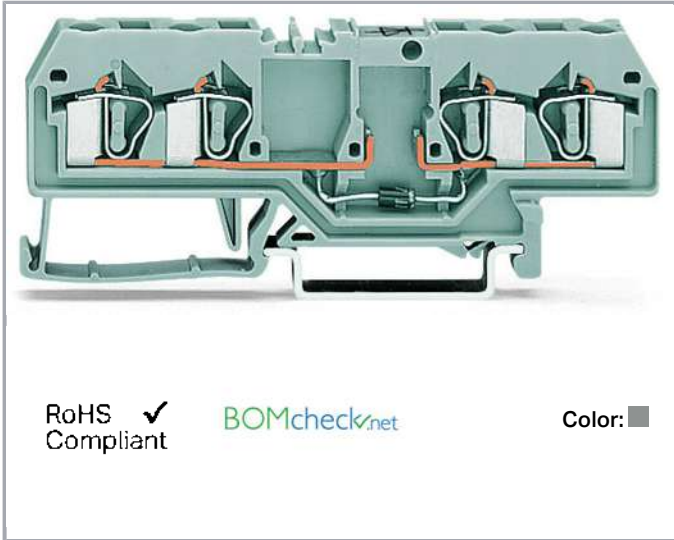


**Data sheet | Item number: 281-665/281-410**

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.

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

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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

Nominal voltage	250 V
Reverse voltage	1,000 V

### Ratings per IEC/EN 60664-1

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
Type of wiring	Front-entry wiring

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

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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	gray
Insulating material	Polyamide 66 (PA 66)
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 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
	KEMA/KEUR DEKRA Certification B.V.	EN 60947	71-107288

### Ship Approvals

Certificate









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

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


















## Counterpart

## Compatible products

### 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.: 281-482</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>

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

	<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>
	<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>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. Please also observe the further product documentation!



**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)

**Marking accessories**



**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)



**Item no.: 2009-115/000-002**

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

[www.wago.com/2009-115/000-002](http://www.wago.com/2009-115/000-002)



**Item no.: 2009-115/000-006**

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

[www.wago.com/2009-115/000-006](http://www.wago.com/2009-115/000-006)



**Item no.: 2009-115/000-007**

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

[www.wago.com/2009-115/000-007](http://www.wago.com/2009-115/000-007)



**Item no.: 2009-115/000-012**

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

[www.wago.com/2009-115/000-012](http://www.wago.com/2009-115/000-012)



**Item no.: 2009-115/000-017**

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

[www.wago.com/2009-115/000-017](http://www.wago.com/2009-115/000-017)



**Item no.: 2009-115/000-023**

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

[www.wago.com/2009-115/000-023](http://www.wago.com/2009-115/000-023)



**Item no.: 2009-115/000-024**

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

[www.wago.com/2009-115/000-024](http://www.wago.com/2009-115/000-024)



**Item no.: 249-105**

Group marker carrier; gray

[www.wago.com/249-105](http://www.wago.com/249-105)



**Item no.: 793-501**

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

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



**Item no.: 793-501/000-002**

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

[www.wago.com/793-501/000-002](http://www.wago.com/793-501/000-002)



**Item no.: 793-501/000-005**

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

[www.wago.com/793-501/000-005](http://www.wago.com/793-501/000-005)



**Item no.: 793-501/000-006**

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

[www.wago.com/793-501/000-006](http://www.wago.com/793-501/000-006)

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	<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>
	<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-	<a href="http://www.wago.com/793-5501/000-024">www.wago.com/793-5501/000-024</a>

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

on type; violet

**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)

**End plate**



**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)

**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)

**ferrule**



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

[www.wago.com/216-106](http://www.wago.com/216-106)



**Item no.: 216-201**  
Ferrule; Sleeve for 0.5 mm<sup>2</sup> / 20 AWG; insulated; electro-tin plated; white

[www.wago.com/216-201](http://www.wago.com/216-201)



**Item no.: 216-202**  
Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray

[www.wago.com/216-202](http://www.wago.com/216-202)



**Item no.: 216-203**  
Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; red

[www.wago.com/216-203](http://www.wago.com/216-203)



**Item no.: 216-204**  
Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; insulated; electro-tin plated; black

[www.wago.com/216-204](http://www.wago.com/216-204)



**Item no.: 216-205**  
Ferrule; Sleeve for 2.08 mm<sup>2</sup> / AWG 14; insulated; electro-tin plated; yellow

[www.wago.com/216-205](http://www.wago.com/216-205)













**Item no.: 216-206**  
Ferrule; Sleeve for 2.5 mm<sup>2</sup> / AWG 14; insulated; electro-tin plated; blue

[www.wago.com/216-206](http://www.wago.com/216-206)

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>Protective Warning Marker</b>		
	<b>Item no.: 281-415</b> Protective warning marker; with high-voltage symbol, black; for 5 terminal blocks; yellow	<a href="http://www.wago.com/281-415">www.wago.com/281-415</a>
<b>Insulation stop</b>		
	<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>

## Downloads

### Documentation

#### Bid Text

281-665/281-410 doc - Datei	Aug 30, 2017	doc 25.6 kB	Download
281-665/281-410 GAEB X81 - Datei	Feb 19, 2019	xml 3.3 kB	Download

#### Additional Information

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

### CAD data

2D/3D Models 281-665/281-410	<a href="#">URL</a>	<a href="#">Download</a>
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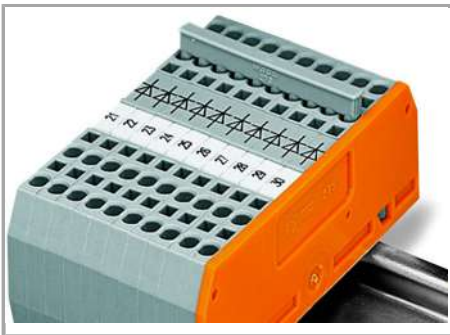
### CAE data

EPLAN Data Portal 281-665/281-410	<a href="#">URL</a>	<a href="#">Download</a>
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WSCAD Universe 281-665/281-410	<a href="#">URL</a>	<a href="#">Download</a>
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## Installation Notes

### Jumpered

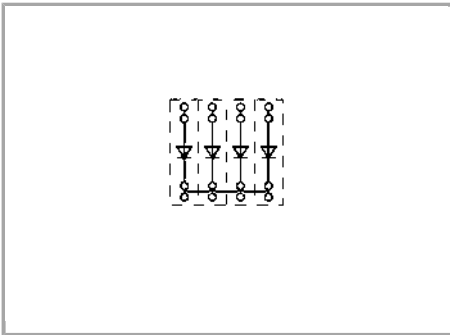


Commoning using comb-style jumper bars.  
Push comb-style jumper bars down until fully inserted.

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

281-665/281-400 or 281-665/281-401

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