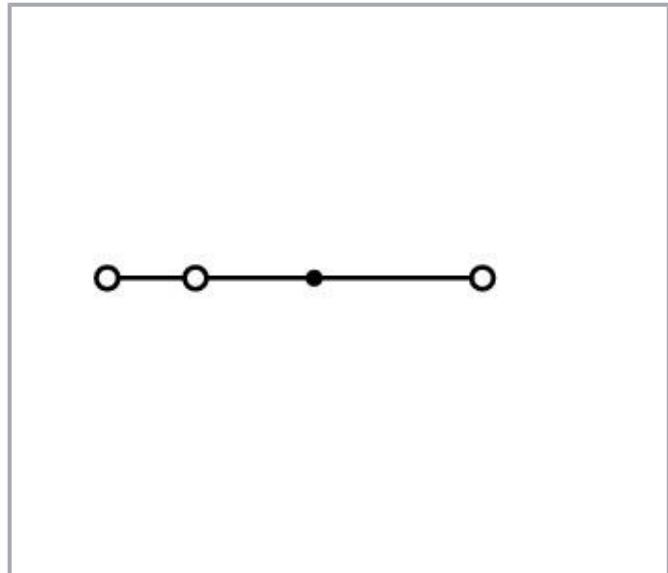
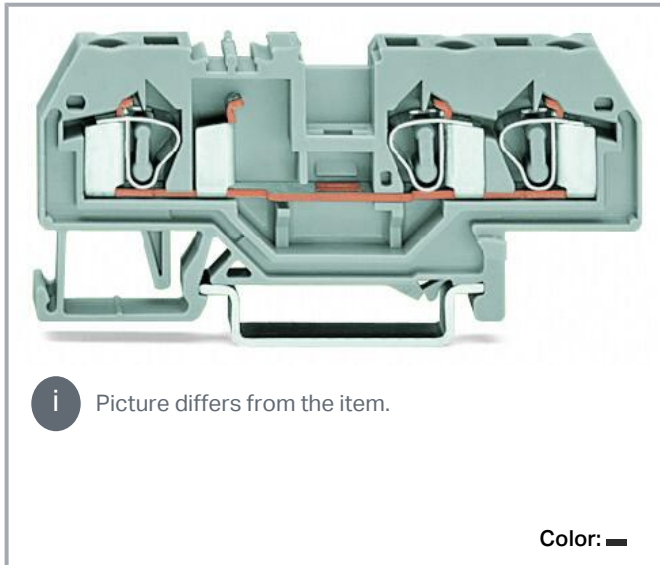


## Data sheet | Item number: 281-685

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



[www.wago.com/281-685](http://www.wago.com/281-685)



## 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	32 A
Legend (ratings)	(III / 3) ≙ Overvoltage category III / Pollution degree 3

#### Power loss

Power loss, per pole (potential)	1.024 W
Rated current $I_N$ for specified power loss	32 A
Resistance value for specified, current-dependent power loss	0.001 Ω

#### Connection data

Connection points	3
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Subject to changes. Please also observe the further product documentation!

WAGO GmbH & Co. KG  
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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.



Total number of potentials	1
Number of levels	1

## Connection 1

Connection technology	CAGE CLAMP®
Actuation type	Operating tool
Connectable conductor materials	Copper Aluminum

Connectable conductor materials (note)	<p><b>Terminating Aluminum Conductors</b></p> <p>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.</p>
--	---

### "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> = 16 A

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

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 inches
Wiring direction	Front-entry wiring

## Physical data

Width	6 mm / 0.236 inches
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Height	73.5 mm / 2.894 inches
Depth from upper-edge of DIN-rail	29 mm / 1.142 inches

**Mechanical Data**

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

**Material Data**

Note (material data)	Information on material specifications can be found here
Color	black
Material group	I
Insulation material	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.174 MJ
Weight	10.9 g

**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)	50 pcs
Packaging type	box
Country of origin	DE
GTIN	4044918484954
Customs tariff number	85369010000





**Environmental Product Compliance**

RoHS Compliance Status	Compliant, No Exemption
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Subject to changes. Please also observe the further product documentation!

## Approvals / Certificates



### General approvals

Logo	Approval	Additional Approval Text	Certificate name
	<b>CCA</b> DEKRA Certification B.V.	IEC 60947	NTR NL-7454/A1
	<b>CSA</b> DEKRA Certification B.V.	C22.2 No. 158	1505034
	<b>KEMA/KEUR</b> DEKRA Certification B.V.	EN 60947	71-107288
	<b>UL</b> Underwriters Laboratories Inc.	UL 1059	E45172

### Declarations of conformity and manufacturer's declarations

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

### Approvals for marine applications

Logo	Approval	Additional Approval Text	Certificate name
	<b>ABS</b> American Bureau of Shipping	-	20-HG1941090-PDA
	<b>BV</b> Bureau Veritas S.A.	EN 60947	07436/F0 BV

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

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**DNV GL**  
Det Norske Veritas, Germanischer Lloyd

-

TAE00001V2



**LR**  
Lloyds Register

EN 60947

91/20112  
(E9)

## Required accessories

### End plate

#### End plate



**Item no.: 281-324**  
End and intermediate plate; 2.5 mm thick; gray

[www.wago.com/281-324](http://www.wago.com/281-324)

**Item no.: 281-326**  
End and intermediate plate; 2.5 mm thick; orange

[www.wago.com/281-326](http://www.wago.com/281-326)

## Optional accessories

### Carrier rail

#### Mounting accessories



**Item no.: 210-197**  
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715; silver-colored

[www.wago.com/210-197](http://www.wago.com/210-197)

**Item no.: 210-198**  
Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; copper-colored

[www.wago.com/210-198](http://www.wago.com/210-198)

**Item no.: 210-504**  
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715; silver-colored

[www.wago.com/210-504](http://www.wago.com/210-504)

**Item no.: 210-505**  
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)

**Item no.: 210-113**  
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored

[www.wago.com/210-113](http://www.wago.com/210-113)

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



**Item no.: 210-118**

Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored [www.wago.com/210-118](http://www.wago.com/210-118)



**Item no.: 210-112**

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 [www.wago.com/210-112](http://www.wago.com/210-112)



**Item no.: 210-114**

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored [www.wago.com/210-114](http://www.wago.com/210-114)



**Item no.: 210-115**

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 [www.wago.com/210-115](http://www.wago.com/210-115)



**Item no.: 210-196**

Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored [www.wago.com/210-196](http://www.wago.com/210-196)

**End plate**

End plate



**Item no.: 284-334**

Step-down cover plate; 1 mm thick; for 2-, 3- and 4-conductor terminal blocks; gray [www.wago.com/284-334](http://www.wago.com/284-334)



**Item no.: 284-344**

Step-down cover plate; 1 mm thick; for 2-, 3- and 4-conductor terminal blocks; orange [www.wago.com/284-344](http://www.wago.com/284-344)

**Jumpers**

Jumper



**Item no.: 210-123**

Wire commoning chain; insulated; blue [www.wago.com/210-123](http://www.wago.com/210-123)



**Item no.: 210-103**

Wire commoning chain; insulated; black [www.wago.com/210-103](http://www.wago.com/210-103)



**Item no.: 281-402**

Jumper; insulated; gray [www.wago.com/281-402](http://www.wago.com/281-402)



**Item no.: 283-414**

Step-down jumper; from 283 to 281 series; insulated; gray [www.wago.com/283-414](http://www.wago.com/283-414)



**Item no.: 281-409**

Jumper; insulated; gray [www.wago.com/281-409](http://www.wago.com/281-409)



**Item no.: 281-422**

Jumper; insulated; yellow-green [www.wago.com/281-422](http://www.wago.com/281-422)



**Item no.: 281-485**











Jumper; 5-way; insulated; gray [www.wago.com/281-485](http://www.wago.com/281-485)






**Item no.: 281-490**

Jumper; 10-way; insulated; gray [www.wago.com/281-490](http://www.wago.com/281-490)












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

	<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.: 281-482</b> Jumper; 2-way; 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.: 284-414</b> Step-down jumper; from 284/282 to 281/280/279 series; insulated; gray	<a href="http://www.wago.com/284-414">www.wago.com/284-414</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.: 709-112</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>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.: 781-453</b> Staggered jumper; from 1 to 3; insulated; gray	<a href="http://www.wago.com/781-453">www.wago.com/781-453</a>
	<b>Item no.: 781-452</b> Staggered jumper; from 1 to 2; insulated; gray	<a href="http://www.wago.com/781-452">www.wago.com/781-452</a>
	<b>Item no.: 781-455</b> Staggered jumper; from 1 to 5; insulated; gray	<a href="http://www.wago.com/781-455">www.wago.com/781-455</a>
	<b>Item no.: 781-454</b> Staggered jumper; from 1 to 4; insulated; gray	<a href="http://www.wago.com/781-454">www.wago.com/781-454</a>
	<b>Item no.: 781-456</b> Staggered jumper; from 1 to 6; insulated; gray	<a href="http://www.wago.com/781-456">www.wago.com/781-456</a>

#### Marking accessories

Marker		
	<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.: 2009-115/000-007</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.: 2009-115/000-017</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>

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

	<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.: 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.: 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; light 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; 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>
	<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.: 793-501/000-007</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.: 793-501/000-017</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>

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





**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.: 793-501/000-023**  
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.: 793-501/000-006**  
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)



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

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



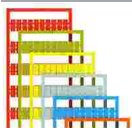
**Item no.: 793-501/000-024**  
WMB marking card; as card; not stretchable; plain; snap-on type; violet

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



**Item no.: 793-5501/000-005**  
WMB marking card; as card; for terminal block width 5 - 17.5 mm; 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.: 793-5501/000-002**  
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.: 793-5501/000-006**  
WMB marking card; as card; for terminal block width 5 - 17.5 mm; 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**  
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.: 2009-115/000-012**  
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange

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

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






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

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

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

Group marker carrier

	<b>Item no.:</b> 209-142 Group marker carrier; gray	<a href="http://www.wago.com/209-142">www.wago.com/209-142</a>
	<b>Item no.:</b> 209-141 Group marker carrier; gray	<a href="http://www.wago.com/209-141">www.wago.com/209-141</a>
	<b>Item no.:</b> 209-140 Group marker carrier; gray	<a href="http://www.wago.com/209-140">www.wago.com/209-140</a>



**Item no.:** 249-105

Group marker carrier; gray

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

Protective warning marker

Cover





**Item no.:** 281-415

Protective warning marker; for 5 terminal blocks; with high-voltage symbol, black; yellow

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

Ferrule



Ferrule

	<b>Item no.:</b> 216-106 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.:</b> 216-203 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.:</b> 216-206 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.:</b> 216-202 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.:</b> 216-204 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.:</b> 216-205 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.:</b> 216-201 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.:</b> 216-241 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.:</b> 216-242 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>




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.

	<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; light turquoise	<a href="http://www.wago.com/216-302">www.wago.com/216-302</a>


### Tool

Operating tool		
	<b>Item no.: 210-657</b> Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured	<a href="http://www.wago.com/210-657">www.wago.com/210-657</a>
	<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>

### 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>
	<b>Item no.: 249-125</b> Push-in type wire jumper; insulated; 60 mm long; black	<a href="http://www.wago.com/249-125">www.wago.com/249-125</a>

### Mounting

Cover carrier		
	<b>Item no.: 709-167</b> 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	<a href="http://www.wago.com/709-167">www.wago.com/709-167</a>
Cover		

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



**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)

#### Insulation stop

##### 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)

#### 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.: 281-418**  
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

[www.wago.com/281-418](http://www.wago.com/281-418)



**Item no.: 281-419**  
Spacer module; modular; bridging commoned terminal blocks; gray

[www.wago.com/281-419](http://www.wago.com/281-419)



**Item no.: 249-145**  
L-type end module; modular; with rigid contact pin; End module; 2,50 mm<sup>2</sup>; gray

[www.wago.com/249-145](http://www.wago.com/249-145)



**Item no.: 249-146**  
L-type spacer module; modular; e.g., bridging commoned terminal blocks; gray

[www.wago.com/249-146](http://www.wago.com/249-146)



**Item no.: 249-147**  
B-type test plug module; modular; 2,50 mm<sup>2</sup>; gray

[www.wago.com/249-147](http://www.wago.com/249-147)



**Item no.: 249-148**  
B-type spacer module; modular; e.g., for bridging commoned terminal blocks; gray

[www.wago.com/249-148](http://www.wago.com/249-148)



**Item no.: 249-144**  
L-type test plug module; modular; with spring-loaded contact pin; Center module; 2,50 mm<sup>2</sup>; gray

[www.wago.com/249-144](http://www.wago.com/249-144)

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

Item no.: 280-404

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[www.wago.com/280-404](http://www.wago.com/280-404)

## Downloads

### Documentation

#### Bid Text

281-685 X81 - Datei	2019 Feb 19	xml 3.3 kB	Download
281-685 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 281-685		URL	Download
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### CAE data

EPLAN Data Portal 281-685		URL	Download
WSCAD Universe 281-685		URL	Download
ZUKEN Portal 281-685		URL	Download

## Environmental Product Compliance

### Compliance Search

Environmental Product Compliance 281-685 3-conductor through terminal block; 4 mm <sup>2</sup> ; center marking; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP®; 4,00 mm <sup>2</sup> ; black		URL	Download
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Subject to changes. Please also observe the further product documentation!

## Installation Notes

### Installation



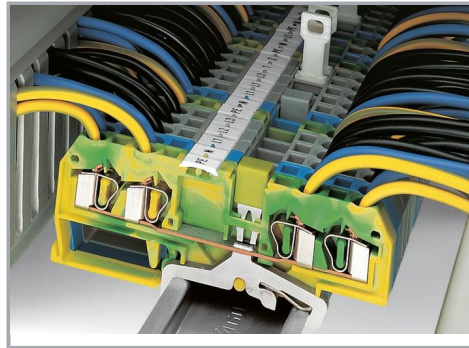
Snapping a terminal block onto the DIN-rail.



Quick assembly keys prevent reverse mounting.



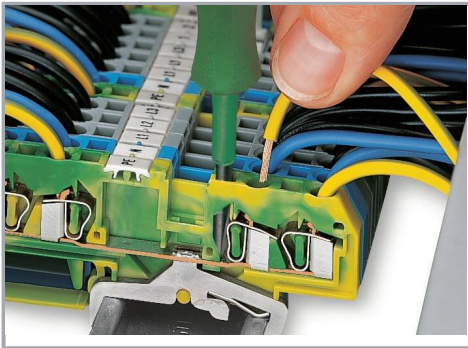
Removing a terminal block from the assembly.



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

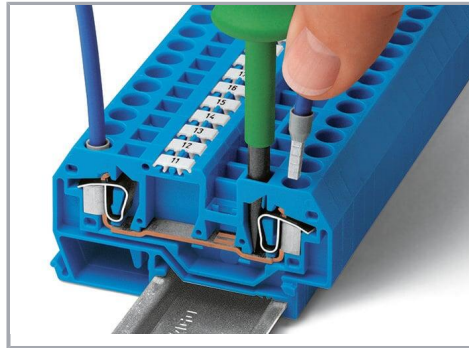
### Conductor termination

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



**CAGE CLAMP® connection**

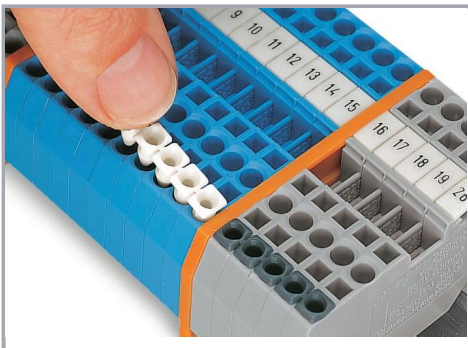
Inserting a conductor.



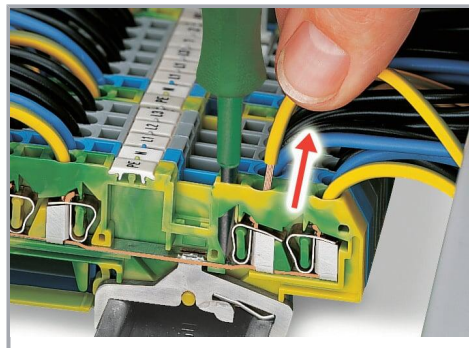
**CAGE CLAMP® connection**

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.

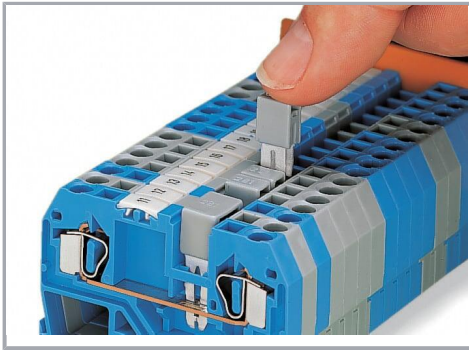


**CAGE CLAMP® connection**

Removing a solid conductor.

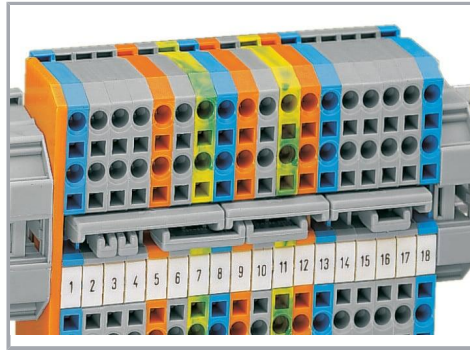
### Commoning

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



Commoning using an adjacent jumper.

Push jumper down until fully inserted!

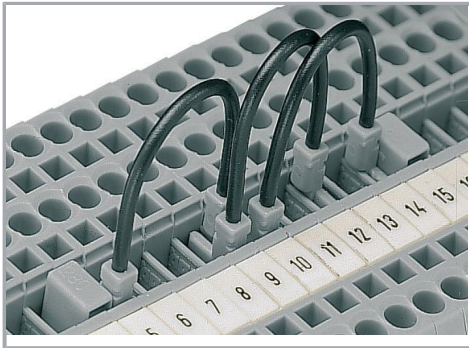


Staggered jumpers are suitable for

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)

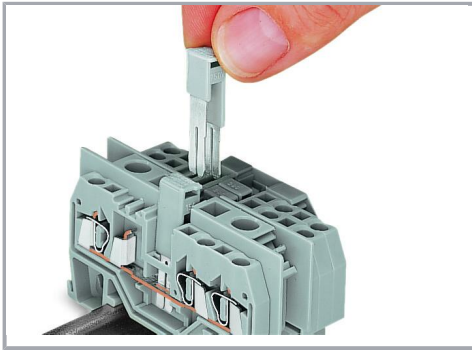
They are available in three conductor lengths (60, 110 and 250 mm), allowing up to 60 terminal blocks to be commoned depending on their width (see table on the right).

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.



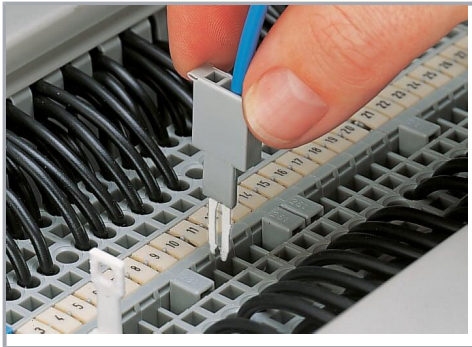
Commoning using comb-style jumper bars:  
Push comb-style jumper bars down until fully inserted.

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



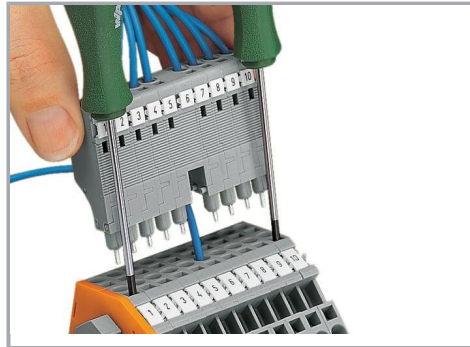
Commoning terminal blocks of different sizes via step-down jumpers.

### Testing

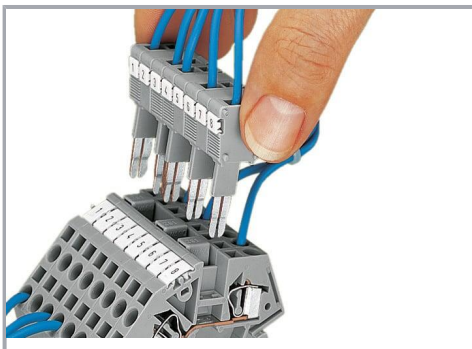


Testing with a test plug.

Picture shows a test plug fitted with CAGE CLAMP®.

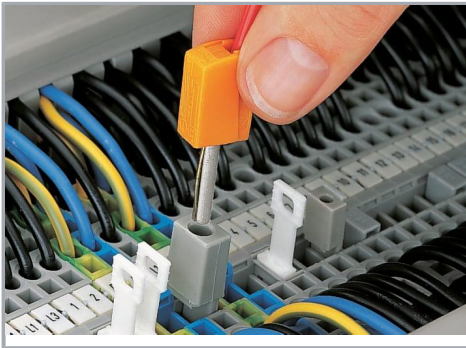


L-type test plug modules fitted with CAGE CLAMP®



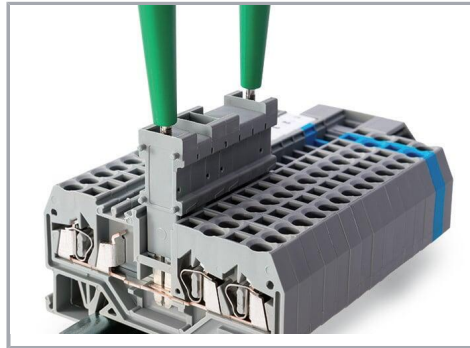
B-type test plug modules fitted with CAGE CLAMP®

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



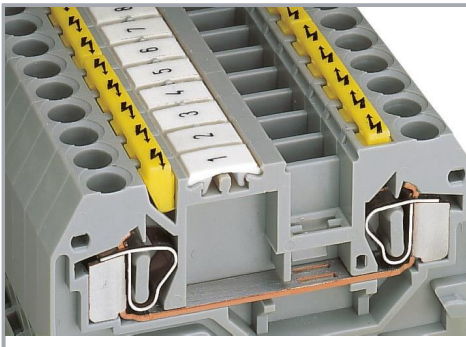
Testing with a test plug.

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



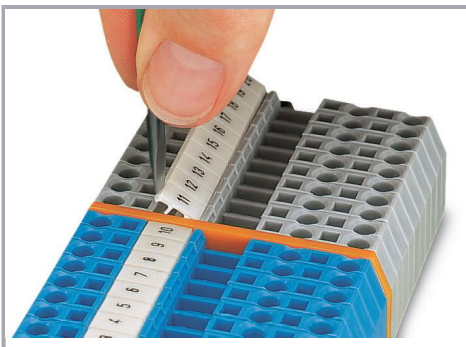
Test plugs modules are directly plugged into the jumper contact slot of the current bar.

### 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!