

Data sheet | Item number: 281-907

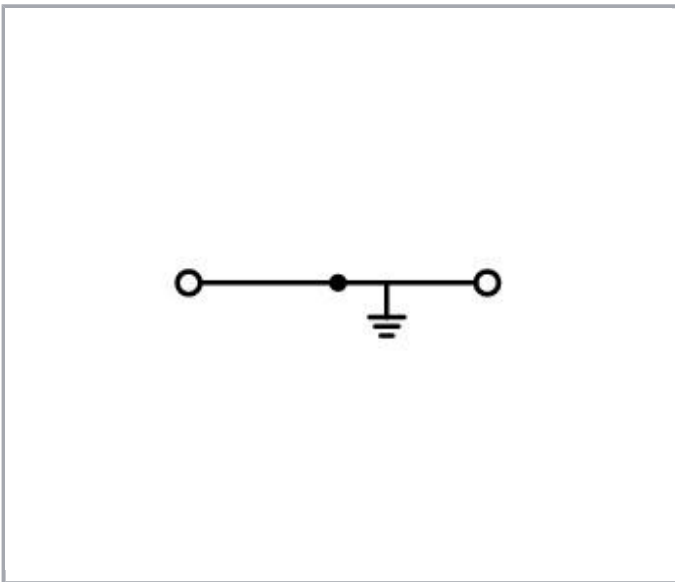
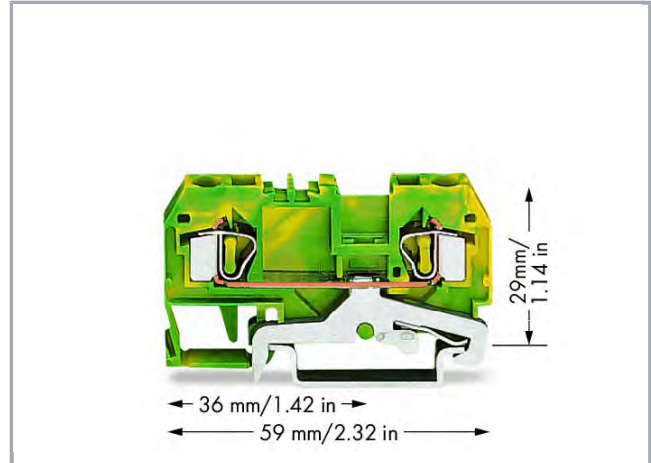
2-conductor ground terminal block; 4 mm²; center marking; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP®; 4,00 mm²; green-yellow



RoHS  Compliant

BOMcheck.net

Color: 



Item description

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

**Note:****Terminating Aluminum Conductors**

WAGO spring clamp terminal blocks are suitable for solid aluminum conductors up to 4 mm²/12 AWG if WAGO "Alu-Plus" Contact Paste is used for termination.

"Alu-Plus" Contact Paste Advantages:

- Automatically destroys the oxide film during clamping.
- Prevents fresh oxidation at the clamping point.
- Prevents electrolytic corrosion between aluminum and copper conductors (in the same terminal block).
- Provides long-term protection against corrosion.

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 mm² = 16 A

4 mm² = 22 A

Data**Electrical data****Ratings per IEC/EN 60664-1**

Ratings per

IEC/EN 60947-7-2

Connection data

Connection technology	CAGE CLAMP®
Actuation type	Operating tool
Connectable conductor materials	Copper Aluminum
Solid conductor	0,08 ... 4 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0,08 ... 4 mm ² / 28 ... 12 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Total number of connection points	2
Total number of potentials	1
Number of levels	1
Wiring type	Front-entry wiring

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

Geometrical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	29 mm / 1.142 inch
Depth	59 mm / 2.323 inch

Mechanical data

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

Material Data

Color	green-yellow
Insulation material	Polyamide 66 (PA 66)
Fire load	0.127 MJ
Weight	12 g

Commercial data

Product Group	1 (Rail Mounted Terminal Blocks)
Packaging type	BOX
Country of origin	DE
GTIN	4044918512046
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
	CSA DEKRA Certification B.V.	C22.2 No. 158	1505034
	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
	ABS American Bureau of Shipping	-	20- HG1941090- PDA
	BV Bureau Veritas S.A.	EN 60947	07436/E0 BV
	DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAE00001V2
	LR Lloyds Register	EN 60947	91/20112 (E9)

UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UL UL International Germany GmbH	UL 1059	20190731- E45172

Counterpart

Compatible products

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

check

	Item no.: 209-170 Test plug adapter; 8.3 mm wide; for 4 mm Ø test plugs; suitable for 1.5 mm ² - 10 mm ² tbs; gray
	Item no.: 249-144 L-type test plug module; modular; with spring-loaded contact pin; Center module; 2,50 mm ² ; gray
	Item no.: 249-146 L-type spacer module; modular; e.g., bridging commoned terminal blocks; gray
	Item no.: 249-147 B-type test plug module; modular; 2,50 mm ² ; gray
	Item no.: 249-148 B-type spacer module; modular; e.g., for bridging commoned terminal blocks; gray
	Item no.: 280-404 Test plug adapter; 5 mm wide; for test plug 210-137 (2.3 mm Ø); suitable for 1.5 mm ² - 4 mm ² tbs; gray
	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
	Item no.: 281-419 Spacer module; modular; bridging commoned terminal blocks; gray

assembling

	Item no.: 209-106 Mounting carrier; for isolated mounting on DIN 35 rails; gray
	Item no.: 709-153 Cover; Type 1; suitable for cover carrier, type 1; 1 m long; transparent

General accessories

	Item no.: 281-407 Test plug; 6 mm wide; Nominal current 24 A; for 0.08 mm ² - 2.5 mm ² ; 2,50 mm ² ; gray
--	--

Carrier rail

	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
	Item no.: 210-113 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715
	Item no.: 210-114 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715
	Item no.: 210-115

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



Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 18 mm



Item no.: 210-118

Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715



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



Item no.: 210-197

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715



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



Item no.: 210-504

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715



Item no.: 210-505

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; galvanized; according to EN 60715



Item no.: 210-506

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715



Item no.: 210-508

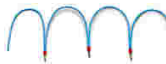
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; similar to EN 60715

Jumper



Item no.: 210-103

Wire commoning chain; insulated; 50 connections; black



Item no.: 210-123

Wire commoning chain; insulated; 50 connections



Item no.: 249-123

Push-in type wire jumper; insulated; wire length 180 mm; Conductor cross section 0.75 mm²



Item no.: 249-125

Push-in type wire jumper; insulated; wire length 60 mm; Conductor cross section 0.75 mm²



Item no.: 249-126

Push-in type wire jumper; insulated; wire length 110 mm; Conductor cross section 0.75 mm²



Item no.: 249-127

Push-in type wire jumper; insulated; wire length 250 mm; Conductor cross section 0.75 mm²



Item no.: 281-402

Adjacent jumper; insulated; IN = IN terminal block; gray



Item no.: 281-409

Alternate jumper; insulated; IN = IN terminal block; gray

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



Item no.: 281-422
Adjacent jumper; insulated; IN = IN terminal block; yellow-green



Item no.: 281-482
Comb-style jumper bar; insulated; 2-way; IN = IN terminal block; gray



Item no.: 281-483
Comb-style jumper bar; insulated; 3-way; IN = IN terminal block; gray



Item no.: 281-485
Comb-style jumper bar; insulated; 5-way; IN = IN terminal block; gray



Item no.: 281-490
Comb-style jumper bar; insulated; 10-way; IN = IN terminal block; gray



Item no.: 281-492
Alternate comb-style jumper bar; insulated; 2-way; IN = IN terminal block; gray



Item no.: 709-110
Wire commoning chain; insulated; 4 connections; 3 x 110 mm; black



Item no.: 709-111
Wire commoning chain; insulated; 3 connections; 2 x 120 mm; black



Item no.: 709-112
Wire commoning chain; insulated; 3 connections; 2 x 170 mm; black



Item no.: 781-452
Staggered jumper; insulated; from 1 to 2; Spacing: 6 mm; gray



Item no.: 781-453
Staggered jumper; insulated; from 1 to 3; Spacing: 6 mm; gray



Item no.: 781-454
Staggered jumper; insulated; from 1 to 4; Spacing: 6 mm; gray



Item no.: 781-455
Staggered jumper; insulated; from 1 to 5; Spacing: 6 mm; gray



Item no.: 781-456
Staggered jumper; insulated; from 1 to 6; Spacing: 6 mm; gray

tools



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



Item no.: 210-658
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; angled; short



Item no.: 210-720
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft

Marking accessories

Item no.: 2009-115

Subject to changes.

	WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white
	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
	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
	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
	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
	Item no.: 2009-115/000-017 WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; light green
	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
	Item no.: 2009-115/000-024 WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet
	Item no.: 209-140 Group marker carrier; gray
	Item no.: 209-141 Group marker carrier; gray
	Item no.: 209-142 Group marker carrier; gray
	Item no.: 209-185 Adaptor; gray
	Item no.: 249-105 Group marker carrier; gray
	Item no.: 793-501 WMB marking card; as card; not stretchable; plain; snap-on type; white
	Item no.: 793-501/000-002 WMB marking card; as card; not stretchable; plain; snap-on type; yellow

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



Item no.: 793-501/000-005

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



Item no.: 793-501/000-006

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



Item no.: 793-501/000-007

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



Item no.: 793-501/000-012

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



Item no.: 793-501/000-017

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



Item no.: 793-501/000-023

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



Item no.: 793-501/000-024

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



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



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



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



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



Item no.: 793-5501/000-007

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; gray



Item no.: 793-5501/000-012

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; orange



Item no.: 793-5501/000-017

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-

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

on type; green



Item no.: 793-5501/000-023

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; light green



Item no.: 793-5501/000-024

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; violet

End plate



Item no.: 281-328

End and intermediate plate; 2.5 mm thick; gray



Item no.: 281-329

End and intermediate plate; 2.5 mm thick; orange



Item no.: 281-330

Separator plate; 2 mm thick; oversized; gray



Item no.: 281-331

Separator plate; 2 mm thick; oversized; orange

Insulation stop



Item no.: 281-470

Insulation stop; 0.08 - 0.2 mm² "s" (0.14 mm² "f-st"); 5 pieces/strip; white



Item no.: 281-471

Insulation stop; 0.25 - 0.5 mm²; 5 pieces/strip; light gray



Item no.: 281-472

Insulation stop; 0.75 - 1.5 mm²; 5 pieces/strip; dark gray

Protective Warning Marker



Item no.: 281-415

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

ferrule



Item no.: 216-106

Ferrule; Sleeve for 2.5 mm² / AWG 14; uninsulated; electro-tin plated



Item no.: 216-201

Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white



Item no.: 216-202

Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray



Item no.: 216-203

Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red



Item no.: 216-204

Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black

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


Item no.: 216-205

 Ferrule; Sleeve for 2.08 mm² / AWG 14; insulated; electro-tin plated; yellow

Item no.: 216-206

 Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; blue

Item no.: 216-241

 Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white

Item no.: 216-242

 Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray

Item no.: 216-243

 Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red

Item no.: 216-244

 Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black

Item no.: 216-246

 Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue

Item no.: 216-301

 Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow

Item no.: 216-302

 Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; green

Downloads

Documentation

Additional Information

Technical explanations

Apr 3, 2019

CAD/CAE-Data

CAD data

2D/3D Models 281-907

CAE data

EPLAN Data Portal 281-907

WSCAD Universe 281-907

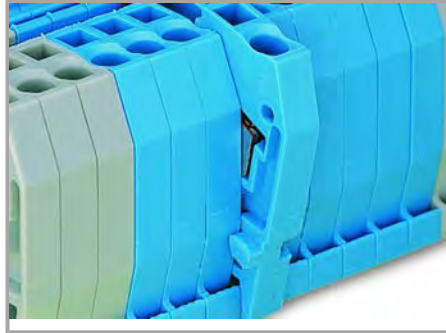
Subject to changes. Please also observe the further product documentation!

Installation Notes

Assembly



By snapping a ground conductor terminal block onto the carrier rail, a direct electrical connection is automatically made to the rail.

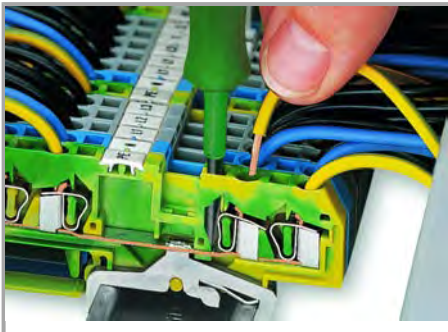


Quick assembly keys prevent reverse mounting.



Removing a terminal block from the assembly.

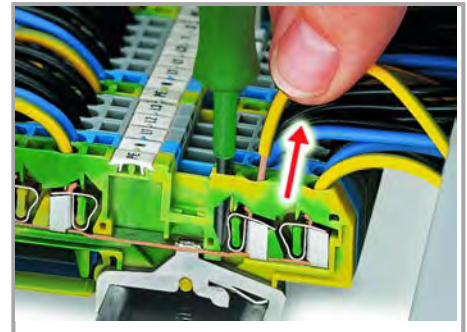
Inserting a conductor



CAGE CLAMP® connection



CAGE CLAMP® connection



CAGE CLAMP® connection
Removing a conductor.

Inserting a conductor.

Inserting a conductor.

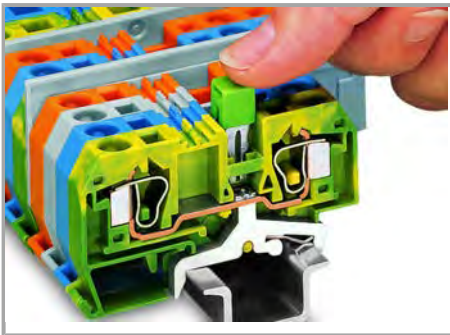
With ferruled conductors, it is necessary to use a terminal block one size larger than the conductor's nominal cross-section.

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



Inserting insulation stops.

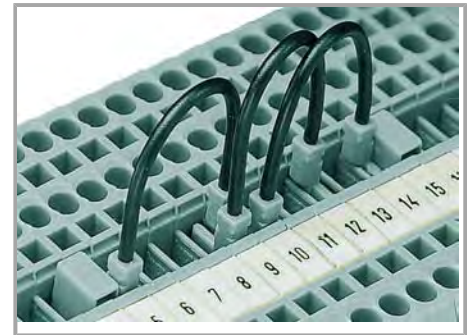
Jumpered



Commoning ground conductor terminal blocks with through terminal blocks is possible in one direction only (via rear side of terminal block) using adjacent jumpers. In addition to the required marking of these blocks, use yellow-green adjacent jumpers.



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



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 mm²/16 AWG),
-
- 280/775/780 Series (2.5 mm²/14 AWG)

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



-
- 281/769/776/777/781 and 880 Series (4 mm²/12 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).

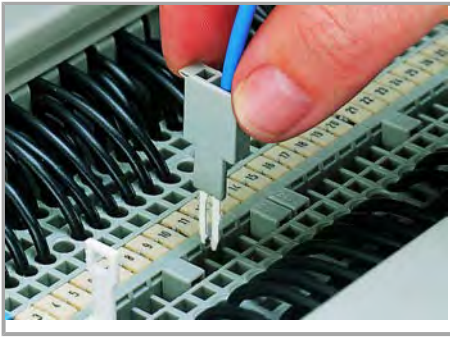
Compared with the 279 Series, the 280/775/780 and 281/776/777/781 Series can also accommodate two wire jumpers, allowing the use of commoning chains. Furthermore, the 280/769/775/780/880 and 281/776/777/781 Series allow both wire jumper and adjacent jumper to be simultaneously plugged into a same terminal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



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

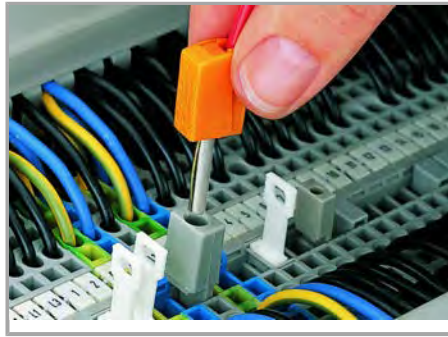
Testing

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



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).

Marking



Marking via WMB Multi Marking System.

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