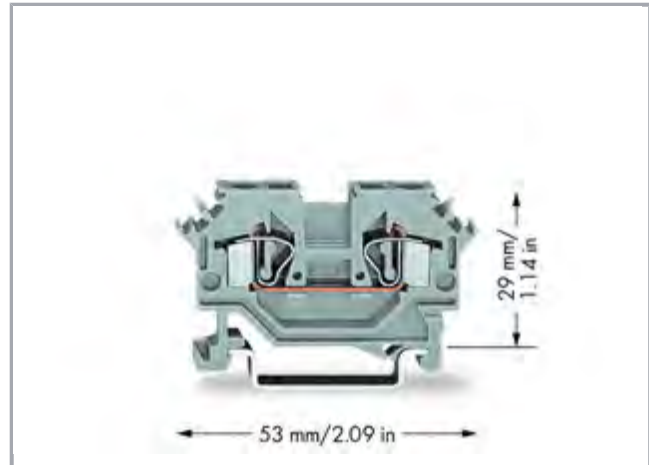
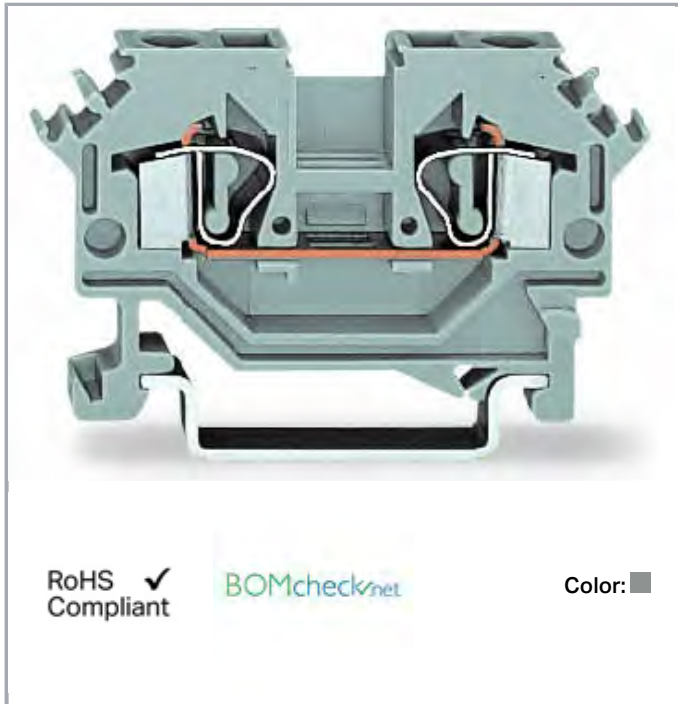


Data sheet | Item number: 281-601

2-conductor through terminal block; 4 mm²; lateral marker slots; for DIN-rail
35 x 15 and 35 x 7.5; CAGE CLAMP®; 4,00 mm²; gray



RoHS
Compliant ✓

BOMcheck.net

Color: ■

Item description

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.

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



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 60947-7-1
Nominal voltage (III/3)	800 V
Rated surge voltage (III/3)	8 kV
Rated current	32 A
Legend (ratings)	(III / 3) $\triangleq$ Overvoltage category III / Pollution degree 3

Connection data

Connection technology	CAGE CLAMP®
Actuation type	Operating tool
Connectable conductor materials	Copper Aluminum
Solid conductor	0.08 ... 4 mm 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

Geometrical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	29 mm / 1.142 inch
Depth	53 mm / 2.087 inch

Mechanical data

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

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

Material Data

Color	gray
Insulation material	Polyamide 66 (PA66)
Fire load	0.128 MJ
Weight	7 g

Commercial data

Product Group	1 (Rail Mounted Terminal Blocks)
Packaging type	BOX
Country of origin	DE
GTIN	4044918500579
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

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

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



	DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAE00001V2
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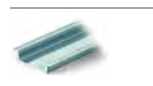
LR Lloyds Register	EN 60947	91/20112 (E9)
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UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UR Underwriters Laboratories Inc.	UL 1059	E45172

Compatible products

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

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

**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

Push-In type wire jumper**Item no.: 249-123**

Push-in type wire jumper; 0.75 mm²; insulated; 180 mm long; black

**Item no.: 249-125**

Push-in type wire jumper; insulated; 60 mm long; black

**Item no.: 249-126**

Push-in type wire jumper; 0.75 mm²; insulated; 110 mm long; black

**Item no.: 249-127**

Push-in type wire jumper; 0.75 mm²; insulated; 250 mm long; black

Protective Warning Marker**Item no.: 281-415**

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

check**Item no.: 209-170**

Test plug adapter; 8.3 mm wide; for 4 mm Ø test plugs; suitable for 1.5 mm² - 10 mm² tbs; gray

**Item no.: 249-144**

L-type test plug module; modular; with spring-loaded contact pin; Center module; 2,50 mm²; gray

**Item no.: 249-145**

L-type end module; modular; with rigid contact pin; End module; 2,50 mm²; gray

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

**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 mm²; 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 mm² - 4 mm² tbs; gray**Item no.: 281-407**Test plug; 6 mm wide; Nominal current 24 A; for 0.08 mm² - 2.5 mm²; 2,50 mm²; 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

End plate**Item no.: 281-327**

Separator plate; 2 mm thick; oversized; orange

**Item no.: 281-337**

Separator plate; 2 mm thick; oversized; gray

**Item no.: 284-334**

Step-down cover plate; 1 mm thick; for 2-, 3- and 4-conductor terminal blocks; gray

**Item no.: 284-344**

Step-down cover plate; 1 mm thick; for 2-, 3- and 4-conductor terminal blocks; 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**assembling****Item no.: 209-106**

Mounting carrier; for isolated mounting on DIN 35 rails; gray

**Item no.: 249-116**

Screwless end stop; 6 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray

Item no.: 709-153

Cover; Type 1; suitable for cover carrier, type 1; 1 m long; transparent

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



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
	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

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

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

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

**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-

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

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-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

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



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

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

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

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

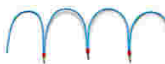
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft

Jumper



Item no.: 210-103

Wire commoning chain; insulated; black



Item no.: 210-123

Wire commoning chain; insulated; blue



Item no.: 281-402

Jumper; insulated; gray



Item no.: 281-409

Jumper; insulated; gray



Item no.: 281-422

Jumper; insulated; yellow-green



Item no.: 281-482

Jumper; insulated; gray



Item no.: 281-483

Jumper; 3-way; insulated; gray



Item no.: 281-485

Jumper; 5-way; insulated; gray



Item no.: 281-490

Jumper; 10-way; insulated; gray



Item no.: 281-492

Jumper; 2-way; insulated; gray



Item no.: 283-414

Step-down jumper; insulated; gray



Item no.: 284-414

Step-down jumper; insulated; gray

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



Item no.: 709-110
Wire commoning chain; 2.5 mm²; insulated; black



Item no.: 709-111
Wire commoning chain; 2.5 mm²; insulated; black



Item no.: 709-112
Wire commoning chain; 2.5 mm²; insulated; black



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



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



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



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



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

Downloads

Documentation

Additional Information

Technical explanations

CAD/CAE-Data

CAD data

2D/3D Models 281-601

CAE data

EPLAN Data Portal 281-601

WSCAD Universe 281-601

ZUKEN Portal 281-601

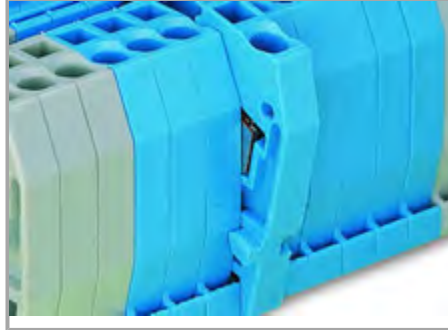
Subject to changes. Please also observe the further product documentation!

Installation Notes

Installation



Snapping a terminal block onto the carrier rail.



Quick assembly keys prevent reverse mounting.



Removing a terminal block from the assembly.



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

Conductor termination

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



CAGE CLAMP® connection

Inserting a conductor.



CAGE CLAMP® connection

Inserting a conductor.



CAGE CLAMP® connection
Removing 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.

Commoning

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



Commoning using an adjacent jumper (280-402) and alternate jumper (280-409). Push jumper down until fully inserted.

Testing



Testing with a test plug

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



Testing with a test plug

(picture shows 209-170 Test Plug Adapter).



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

Cover

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



Protective warning markers inserted into the operating slots.

Marking



Marking via WMB Multi Marking System.

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