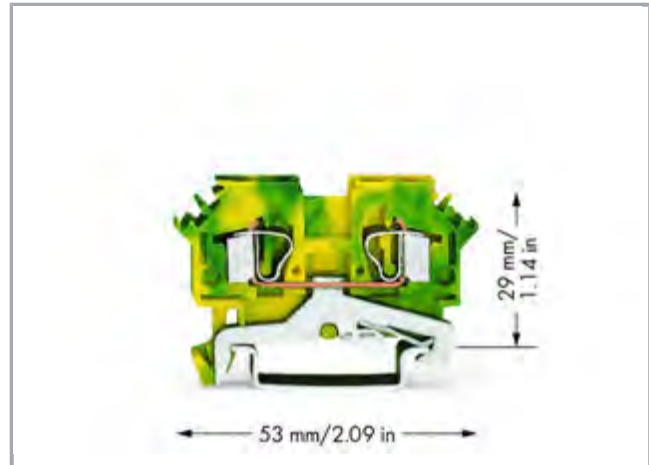


Data sheet | Item number: 281-607

2-conductor ground terminal block; 4 mm²; lateral marker slots; 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

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 60947-7-2
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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

Material Data

Color	green-yellow
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Subject to changes. Please also observe the further product documentation!

Insulation material	Polyamide 66 (PA66)
Fire load	0.118 MJ
Weight	11.3 g

Commercial data

Product Group	1 (Rail Mounted Terminal Blocks)
Packaging type	BOX
Country of origin	DE
GTIN	4044918511971
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
	DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAE00001V2

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



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

Compatible products

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

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

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

**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

**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

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

**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-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-

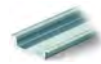
Subject to changes. Please also observe the further product documentation!

on type; violet

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

**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

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

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

**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

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

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

**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

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



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

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

End plate



Item no.: 281-327
Separator plate; 2 mm thick; oversized; orange



Item no.: 281-337
Separator plate; 2 mm thick; oversized; gray

Protective Warning Marker



Item no.: 281-415
Protective warning marker; with high-voltage symbol, black; for 5 terminal blocks; yellow

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

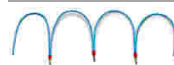


Item no.: 281-472
Insulation stop; 0.75 - 1.5 mm²; 5 pieces/strip; dark gray

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

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



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.: 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

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

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

Downloads

Documentation

Additional Information

Technical explanations

CAD/CAE-Data

CAD data

2D/3D Models 281-607

CAE data

EPLAN Data Portal 281-607

WSCAD Universe 281-607

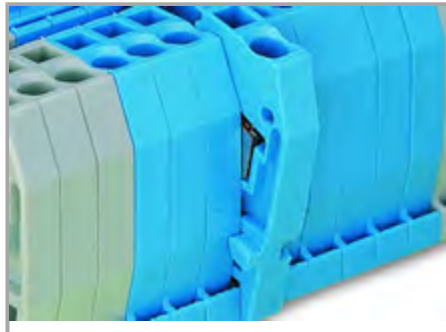
ZUKEN Portal 281-607

Installation Notes

Installation



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.

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 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)
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.

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.

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



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

Testing



Testing with a test plug



Testing with a test plug

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

(picture shows 209-170 Test Plug Adapter).

Marking



Marking via WMB Multi Marking System.

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