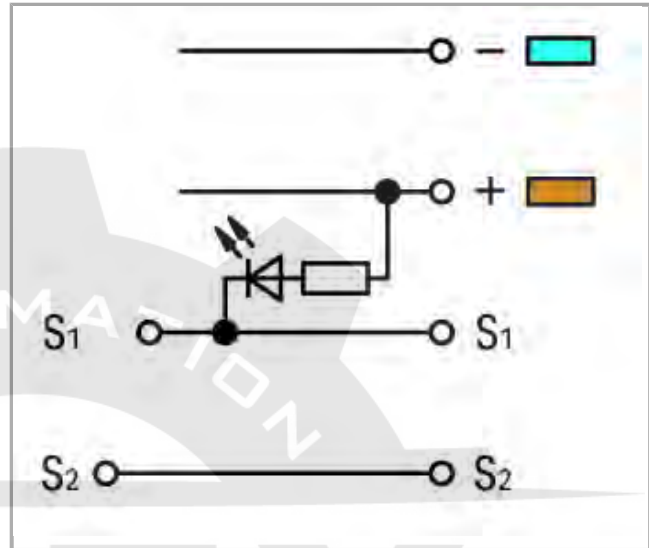
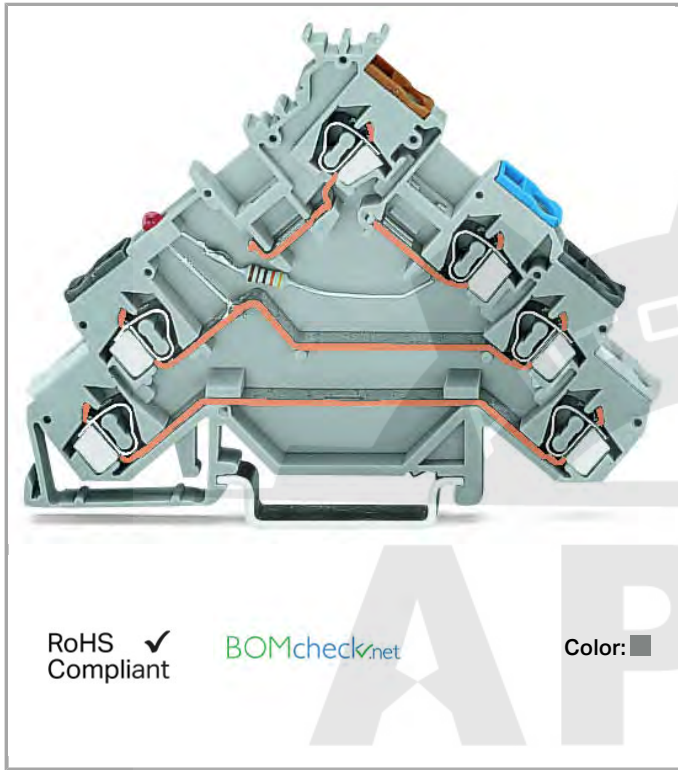


Data sheet | Item number: 280-581/281-413

4-conductor sensor terminal block; LED (red); for NPN-(low-side) switching sensors; with colored conductor entries; 2.5 mm²; CAGE CLAMP®; 2,50 mm2; gray



280-581_281-413



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.

Please note that the nominal currents must be adapted to the reduced conductivity of the aluminum conductors:

2.5 mm² (14 AWG) = 16 A

4 mm² (12 AWG) = 22 A**Safety information 1:**

LED power consumption: 4.8mA

Data**Electrical data**

Voltage type (1)	DC
Nominal voltage	24 V

Ratings per IEC/EN 60664-1

Rated current	20 A
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Connection data

Connection technology	CAGE CLAMP®
Actuation type	Operating tool
Connectable conductor materials	Copper Aluminum
Solid conductor	0.08 2.5 mm ² / 28 12 AWG
Fine-stranded conductor	0.08 2.5 mm ² / 28 12 AWG
Strip length	8 9 mm / 0.31 0.35 inch
Note (conductor cross-section)	12 AWG: THHN, THWN
Total number of connection points	7
Total number of potentials	4
Number of levels	4
Type of wiring	Front-entry wiring

Geometrical Data

Width	5 mm / 0.197 inch
Height from upper-edge of DIN-35 rail	63.5 mm / 2.5 inch
Depth	90.5 mm / 3.563 inch

Mechanical data

Design	angled
Type of mounting	DIN-35 rail
Marking level	Center marking

Material Data

Color	gray
Insulating material	Polyamide 66 (PA 66)
Fire load	0.226 MJ

Weight	16.1 g
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Commercial data

Product Group	1 (Rail Mounted Terminal Blocks)
Country of origin	DE
GTIN	4050821864691
Customs Tariff No.	85369010000

Approvals / Certificates

Radio-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	CCA DEKRA Certification B.V.	EN 60947	2160584.53

Country specific Approvals

Logo	Approval	Additional Approval Text	Certificate name
	ABS American Bureau of Shipping	EN 60947	14-HG1293677-PDA
	CCA DEKRA Certification B.V.	EN 60947	2160584.53

Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
	ABS American Bureau of Shipping	EN 60947	14-HG1293677-PDA
	DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAE00001V2

Other Approvals

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



UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UR Underwriters Laboratories Inc.	UL 1059	20190731-E45172

Compatible products

Marking accessories

	Item no.: 2009-115 WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; white	2009-115
	Item no.: 2009-115/000-002 WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; yellow /000-002	2009-115
	Item no.: 2009-115/000-006 WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; blue /000-006	2009-115
	Item no.: 2009-115/000-007 WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; gray /000-007	2009-115
	Item no.: 2009-115/000-012 WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; orange /000-012	2009-115
	Item no.: 2009-115/000-017 WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; light green /000-017	2009-115
	Item no.: 2009-115/000-023 WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; green /000-023	2009-115

	Item no.: 2009-115/000-024 WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type; violet	2009-115 /000-024
	Item no.: 793-501 WMB marking card; as card; not stretchable; plain; snap-on type; white	793-501
	Item no.: 793-501/000-002 WMB marking card; as card; not stretchable; plain; snap-on type; white	793-501 /000-002
	Item no.: 793-501/000-005 WMB marking card; as card; not stretchable; plain; snap-on type; white	793-501 /000-005
	Item no.: 793-501/000-006 WMB marking card; as card; not stretchable; plain; snap-on type; white	793-501 /000-006
	Item no.: 793-501/000-007 WMB marking card; as card; not stretchable; plain; snap-on type; white	793-501 /000-007
	Item no.: 793-501/000-012 WMB marking card; as card; not stretchable; plain; snap-on type; white	793-501 /000-012
	Item no.: 793-501/000-017 WMB marking card; as card; not stretchable; plain; snap-on type; white	793-501 /000-017
	Item no.: 793-501/000-023 WMB marking card; as card; not stretchable; plain; snap-on type; white	793-501 /000-023
	Item no.: 793-501/000-024 WMB marking card; as card; not stretchable; plain; snap-on type; white	793-501 /000-024
	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	793-5501
	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	793-5501 /000-002
	Item no.: 793-5501/000-005 WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type; red	793-5501 /000-005
	Item no.: 793-5501/000-006 WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type; blue	793-5501 /000-006
	Item no.: 793-5501/000-007 WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type; gray	793-5501 /000-007

**Item no.: 793-5501/000-012**

WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type; orange

/000-012

793-5501

**Item no.: 793-5501/000-017**

WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type; light green

/000-017

793-5501

**Item no.: 793-5501/000-023**

WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type; green

/000-023

793-5501

**Item no.: 793-5501/000-024**

WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type; violet

/000-024

793-5501

Jumper**Item no.: 210-103**

Wire commoning chain; insulated; 50 connections; black

210-103

**Item no.: 210-123**

Wire commoning chain; insulated; 50 connections

210-123

**Item no.: 249-123**Push-in type wire jumper; insulated; wire length 180 mm; Conductor cross section 0.75 mm²

249-123

**Item no.: 249-125**Push-in type wire jumper; insulated; wire length 60 mm; Conductor cross section 0.75 mm²

249-125

**Item no.: 249-126**Push-in type wire jumper; insulated; wire length 110 mm; Conductor cross section 0.75 mm²

249-126

**Item no.: 249-127**Push-in type wire jumper; insulated; wire length 250 mm; Conductor cross section 0.75 mm²

249-127

**Item no.: 280-402**

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

280-402

**Item no.: 280-482**

Comb-style jumper bar; insulated; 2-way; IN = IN terminal block; gray

280-482

**Item no.: 280-483**

Comb-style jumper bar; insulated; 3-way; IN = IN terminal block; gray

280-483

**Item no.: 280-484**

Comb-style jumper bar; insulated; 4-way; IN = IN terminal block; gray

280-484

**Item no.: 280-485**

Comb-style jumper bar; insulated; 5-way; IN = IN terminal block; gray

280-485

**Item no.: 280-490**

Comb-style jumper bar; insulated; 10-way; IN = IN terminal block; gray

280-490

**Item no.: 280-492**

Alternate comb-style jumper bar; insulated; 2-way; IN = IN terminal block; gray

280-492

**Item no.: 709-110**

Wire commoning chain; insulated; 4 connections; 3 x 110 mm; black

709-110



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

709-111



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

709-112



Item no.: 780-452
Staggered jumper; insulated; from 1 to 2; Spacing: 5 mm; suitable for 2-conductor female plugs; gray

780-452



Item no.: 780-453
Staggered jumper; insulated; from 1 to 3; Spacing: 5 mm; suitable for 2-conductor female plugs; gray

780-453



Item no.: 780-454
Staggered jumper; insulated; from 1 to 4; Spacing: 5 mm; suitable for 2-conductor female plugs; gray

780-454



Item no.: 780-455
Staggered jumper; insulated; from 1 to 5; Spacing: 5 mm; suitable for 2-conductor female plugs; gray

780-455



Item no.: 780-456
Staggered jumper; insulated; from 1 to 6; Spacing: 5 mm; suitable for 2-conductor female plugs; gray

780-456



Item no.: 780-457
Staggered jumper; insulated; from 1 to 7; Spacing: 5 mm; suitable for 2-conductor female plugs; gray

780-457



Item no.: 780-458
Staggered jumper; insulated; from 1 to 8; Spacing: 5 mm; suitable for 2-conductor female plugs; gray

780-458

Protective Warning Marker

Item no.: 280-415
Protective warning marker; with high-voltage symbol, black; for 5 terminal blocks; yellow

280-415

ferrule

Item no.: 216-101
Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated

216-101



Item no.: 216-102
Ferrule; Sleeve for 0.75 mm² / AWG 20; uninsulated; electro-tin plated

216-102



Item no.: 216-103
Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated

216-103



Item no.: 216-104
Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated

216-104



Item no.: 216-201
Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white

216-201



Item no.: 216-202
Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray

216-202



Item no.: 216-203
Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red

216-203



Item no.: 216-204
Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black

216-204

Item no.: 216-301
Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow

216-301

	Item no.: 216-302 Ferrule; Sleeve for 0.34 mm ² / 22 AWG; insulated; electro-tin plated; green	216-302
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tools

	Item no.: 210-657 Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short	210-657
	Item no.: 210-658 Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; angled; short	210-658
	Item no.: 210-720 Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft	210-720

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	210-112
	Item no.: 210-113 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715	210-113
	Item no.: 210-114 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715	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	210-115
	Item no.: 210-118 Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715	210-118
	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	210-196
	Item no.: 210-197 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715	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	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	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	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	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	210-508

assembling

	Item no.: 709-154 Cover; Type 2; suitable for cover carrier, type 2; 1 m long; transparent	709-154
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End plate

	Item no.: 280-320 End and intermediate plate; 1 mm thick; for quadruple-deck terminal blocks; gray	280-320
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**Item no.: 280-323**

End and intermediate plate; 1 mm thick; for quadruple-deck terminal blocks; orange

280-323

Insulation stop**Item no.: 280-470**Insulation stop; 0.08 - 0.2 mm² "s" (0.14 mm² "f-st"); 5 pieces/strip; white

280-470

**Item no.: 280-471**Insulation stop; 0.25 - 0.5 mm²; 5 pieces/strip; light gray

280-471

**Item no.: 280-472**Insulation stop; 0.75 - 1 mm²; 5 pieces/strip

280-472

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Technical explanations

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