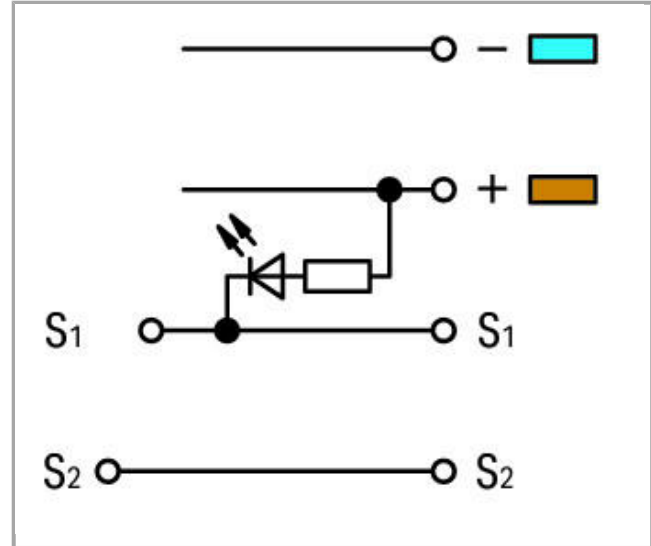
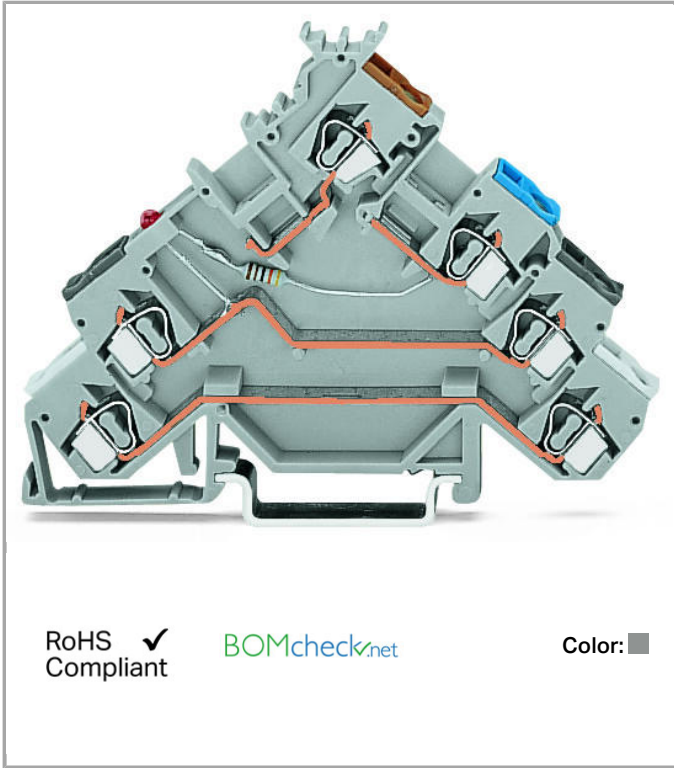


Data sheet | Item number: 280-581/281-413

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
--------	--------

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	793-5501
		/000-012
	Item no.: 793-5501/000-017 WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type; light green	793-5501
		/000-017
	Item no.: 793-5501/000-023 WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type; green	793-5501
		/000-023
	Item no.: 793-5501/000-024 WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type; violet	793-5501
		/000-024
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 mm ²	249-123
	Item no.: 249-125 Push-in type wire jumper; insulated; wire length 60 mm; Conductor cross section 0.75 mm ²	249-125
	Item no.: 249-126 Push-in type wire jumper; insulated; wire length 110 mm; Conductor cross section 0.75 mm ²	249-126
	Item no.: 249-127 Push-in type wire jumper; insulated; wire length 250 mm; Conductor cross section 0.75 mm ²	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 mm ² / AWG 22; uninsulated; electro-tin plated	216-101
	Item no.: 216-102 Ferrule; Sleeve for 0.75 mm ² / AWG 20; uninsulated; electro-tin plated	216-102
	Item no.: 216-103 Ferrule; Sleeve for 1 mm ² / AWG 18; uninsulated; electro-tin plated	216-103
	Item no.: 216-104 Ferrule; Sleeve for 1.5 mm ² / AWG 16; uninsulated; electro-tin plated	216-104
	Item no.: 216-201 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; insulated; electro-tin plated; white	216-201
	Item no.: 216-202 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; gray	216-202
	Item no.: 216-203 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; red	216-203
	Item no.: 216-204 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; black	216-204
	Item no.: 216-301 Ferrule; Sleeve for 0.25 mm ² / 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
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
End plate		
	Item no.: 280-320 End and intermediate plate; 1 mm thick; for quadruple-deck terminal blocks; gray	280-320



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

Downloads

Documentation

Bid Text

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Additional Information

Technical explanations

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