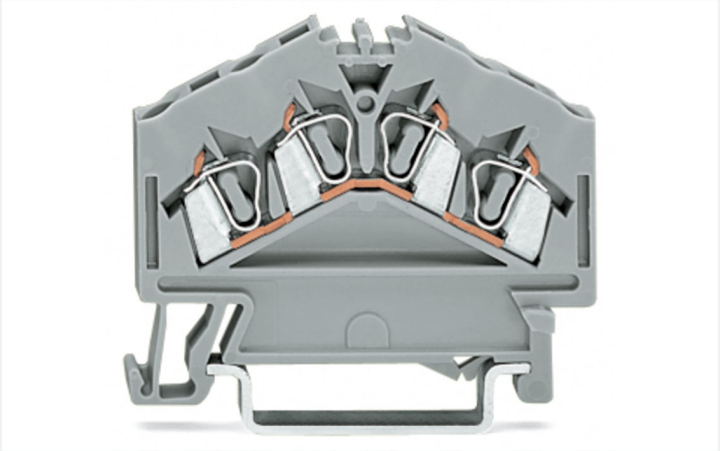
Data Sheet | Item Number: 280-946

4-conductor through terminal block; 2.5 mm²; center marking; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP®; 2,50 mm²; orange

https://www.wago.com/280-946



Color: orange

Similar to illustration

Similar to illustration

Through terminal block, 280 Series, operating tool

Our through terminal block (item number 280-946) ensures effortless electrical installations. Strip lengths must be between 8 and 9 mm when connecting conductors to this through terminal block. Whether for use in industry or building installations, our rail-mount through terminal blocks allow you to quickly and securely connect electrical conductors. They're perfect for either classic through-wiring or distributing potential, depending on the variant. This product features conductor terminals and utilizes CAGE CLAMP®. Our CAGE CLAMP® connection provides a convenient and maintenance-free way to connect all types of conductors. You do not need to prepare the conductor in any way, such as crimping ferrules. This through terminal block is suitable for conductor cross sections ranging from 0.08 mm² to 2.5 mm².

This through rail-mount terminal block is operated with an operating tool.

Notes

Safety Information	Notice: This terminal block cannot be commoned with adjacent jumpers.

Electrical data

Ratings per IEC/EN 60947-7-1

Overvoltage category	III	III	II
Pollution degree	3	2	2
Nominal voltage	800 V	-	-
Rated impulse withstand voltage	8 kV	-	-
Rated current	24 A	-	-

Power Loss

Power loss, per pole (potential)	0.7661 W
Rated current I_N for power loss specification	24 A
Resistance value for specified, current-dependent power loss	0.00133 Ω

General information

Wiring direction	Front-entry wiring, angled

Connection Data

Clamping units	4
Total number of potentials	1
Number of levels	1

Connection 1

Connection technology	CAGE CLAMP®
Actuation type	Operating tool
Connectable conductor materials	Copper Aluminum
Connectable conductor materials (note)	**Terminating Aluminum Conductors** WAGO Spring-Clamp Terminal Blocks are suitable for solid aluminum conductors up to 4 mm²/12 AWG if WAGO Aluminum Contact Paste 249-130 is used for termination. Aluminum 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 inserted into the clamping units filled with aluminum contact paste. It is also possible to apply WAGO Aluminum Contact Paste **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
Solid conductor	0.08 … 2.5 mm² / 28 … 12 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 12 AWG
Note (conductor cross-section)	12 AWG: THHN, THWN
Strip length	8 … 9 mm / 0.31 … 0.35 inches
Wiring direction	Front-entry wiring, angled

Physical data

Width	5 mm / 0.197 inches
Height	50.5 mm / 1.988 inches
Depth from upper-edge of DIN-rail	36.5 mm / 1.437 inches

Mechanical data

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

Continued on next page

Material data

Note (material data)	Information on material specifications can be found here
Color	orange
Material group	I
Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.111 MJ
Weight	7.4 g

Environmental requirements

Processing temperature	-35 … +85 °C
Continuous operating temperature	-60 … +105 °C

Commercial data

PU (SPU)	100 pcs
Packaging type	Box
Country of origin	PL
GTIN	4044918457132
Customs tariff number	85369010000

Product Classification

UNSPSC	39121410
eCl@ss 10.0	27-14-11-20
eCl@ss 9.0	27-14-11-20
ETIM 9.0	EC000897
ETIM 10.0	EC000897
ECCN	NO US CLASSIFICATION

Environmental Product Compliance

RoHS Compliance Status	Compliant,No Exemption

Approvals / Certificates

General approvals

Approval	Standard	Certificate Name
CSA DEKRA Certification B.V.	C22.2	1536071
KEMA/KEUR DEKRA Certification B.V.	EN 60947	71-154769
UL Underwriters Laboratories Inc.	UL 1059	20190731-E45172

Declarations of conformity and manufacturer's declarations

Approval	Standard	Certificate Name
EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-
UK-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Continued on next page

Approvals for marine applications



Approval	Standard	Certificate Name
ABS American Bureau of Shipping	EN 60947	24-0152298-PDA
BV Bureau Veritas S.A.	EN 60947	07436/G0 BV
DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAE00001V2

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 280-946

Documentation

Bid Text

280-946	19.02.2019	xml 3.39 KB
280-946	28.02.2017	doc 24.50 KB

CAD/CAE-Data

CAD data

2D/3D Models 280-946

CAE data

EPLAN Data Portal 280-946

WSCAD Universe 280-946

ZUKEN Portal 280-946

Continued on next page

1 Compatible Products

1.1 Required Accessories

1.1.1 End plate

1.1.1.1 End plate



Item No.: 280-312
End and intermediate plate; 2.5 mm thick; gray



Item No.: 280-313
End and intermediate plate; 2.5 mm thick; orange



Item No.: 280-348
Separator plate; 2.5 mm thick; oversized; gray



Item No.: 280-318
Separator plate; 2.5 mm thick; oversized; orange

1.2 Optional Accessories

1.2.1 DIN-rail

1.2.1.1 Mounting accessories



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.: 210-198
Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; copper-colored



Item No.: 210-508
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; 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; silver-colored



Item No.: 210-506
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715; silver-colored



Item No.: 210-114
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored



Item No.: 210-118
Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored



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; silver-colored



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; silver-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; silver-colored



Item No.: 210-113
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored



Item No.: 210-505
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; galvanized; according to EN 60715; silver-colored

1.2.2 Ferrule

1.2.2.1 Ferrule



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; light turquoise

Item No.: 216-201
Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; electrolytic copper; acc. to DIN 46228, Part 4/09.90; white



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

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



Item No.: 216-102
Ferrule; Sleeve for 0.75 mm² / 18 AWG; uninsulated; electro-tin plated; silver-colored

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



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



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



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

Continued on next page

1.2.3 Installation

1.2.3.1 Cover



Item No.: 709-153
Cover; Type 1; suitable for cover carrier, type 1; 1 m long; transparent

1.2.3.2 Cover carrier



Item No.: 709-167
Cover carrier; Type 1; incl. fixing/retaining screws and knurled nut; suitable for 279 to 282 and 880 Series rail-mounted terminal blocks; suitable for 264 Series miniature rail-mounted terminal blocks; suitable for 270 Series sensor and actuator terminal blocks; gray

1.2.3.3 Mounting accessories



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

1.2.4 Insulation stop

1.2.4.1 Insulation stop



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



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



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

1.2.5 Jumper

1.2.5.1 Jumper



Item No.: 280-490
Jumper; 10-way; insulated; gray



Item No.: 280-482
Jumper; 2-way; insulated; gray



Item No.: 280-492
Jumper; 2-way; insulated; gray



Item No.: 280-483
Jumper; 3-way; insulated; gray



Item No.: 280-484
Jumper; 4-way; insulated; gray



Item No.: 280-485
Jumper; 5-way; insulated; gray



Item No.: 210-103
Wire commoning chain; 0.5 mm²; insulated; black



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.: 210-123
Wire commoning chain; insulated; blue

Continued on next page

1.2.6 Marking

1.2.6.1 Double marker carrier



Item No.: 209-128
Adaptor; gray

1.2.6.2 Group marker carrier



Item No.: 249-105
Group marker carrier; gray

1.2.6.3 Marker

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.: 793-501
WMB marking card; as card; not stretchable; plain; snap-on type; white



Item No.: 2009-115
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

1.2.7 Protective warning marker

1.2.7.1 Cover



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

1.2.8 Test and measurement

1.2.8.1 Testing accessories



Item No.: 249-142
L-type end module; modular; with rigid contact pin; End module; 1,50 mm²; gray



Item No.: 249-143
L-type spacer module; modular; e.g., bridging commoned terminal blocks; gray



Item No.: 249-141
L-type test plug module; modular; with spring-loaded contact pin; Center module; 1,50 mm²; gray

1.2.9 Tool

1.2.9.1 Operating tool



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



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

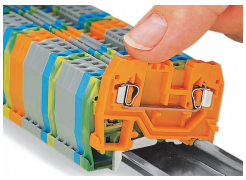


Item No.: 210-657
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured

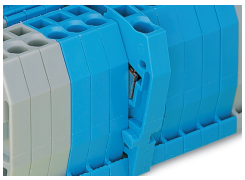
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Installation Notes

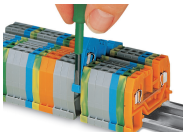
Installation



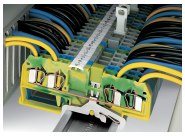
Snapping a terminal block onto the DIN-rail.



Quick assembly keys prevent reverse mounting.

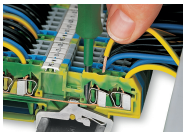


Removing a terminal block from the assembly.

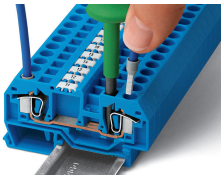


Steel DIN-rails are not suited for PEN (ground and N-conductor) applications per EN 60947-7-2 (VDE 0611, Part 3).

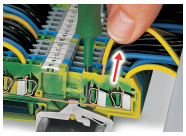
Conductor termination



CAGE CLAMP® connection
Inserting a conductor.



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



CAGE CLAMP® connection
Removing a solid conductor.



Inserting insulation stops.

Commoning



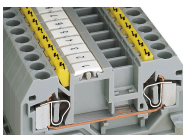
4-conductor through terminal blocks, angled type,
formation of groups with 3-way, comb-style jumper bars

Testing



L-type test plug modules fitted with CAGE CLAMP®

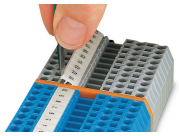
Cover



Protective warning markers inserted into the operating slots

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Marking



Labeling via WMB Multi Marking System.