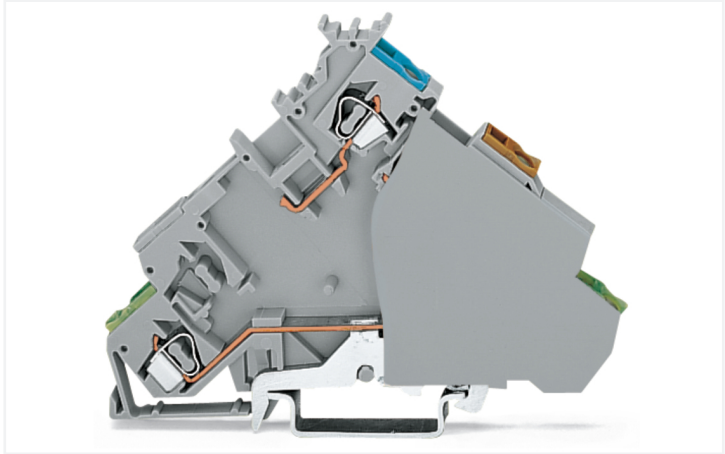
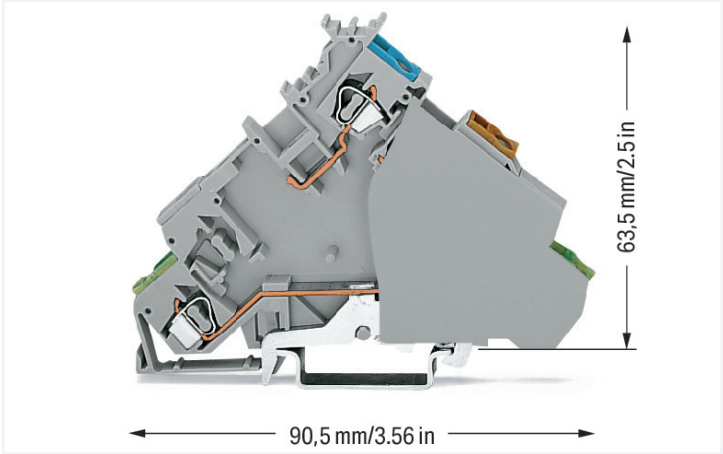


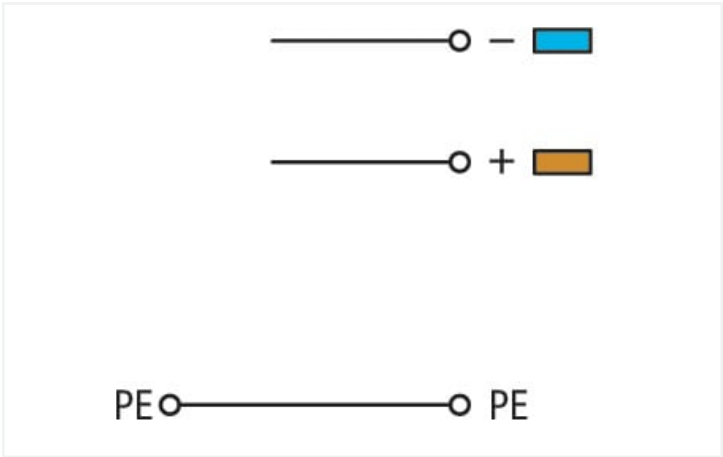
Data Sheet | Item Number: 280-577

4-conductor sensor supply terminal block; with ground contact; with end plate; with colored conductor entries; 2.5 mm²; CAGE CLAMP®; 2,50 mm²; gray

<https://www.wago.com/280-577>



Color: ■ gray



Sensor terminal block, 280 Series, operating tool

This sensor terminal block (item number 280-577) provides hassle-free electrical installations. Conductors should only be connected to this sensor terminal block if their strip length is between 8 mm and 9 mm. Featuring conductor terminals along with CAGE CLAMP®, this connector outperforms the competition. Our celebrated universal connection known as CAGE CLAMP® is industry-leading when it comes to connection technology and electrical interconnections. Depending on the conductor type, this sensor terminal block is designed for conductor cross sections ranging from 0.08 mm² to 2.5 mm². It has four levels. Three potentials can connect using the four clamping points The gray housing is made of polyamide (PA66) for insulation. These function terminal blocks are mounted using DIN-35 rails..

Electrical data			
Ratings per IEC/EN		Power Loss	
Nominal voltage (III/3)	400 V	Power loss, per pole (potential)	0.532 W
Rated impulse withstand voltage (III / 3)	6 kV	Rated current I _N for specified power loss	20 A
Rated current	20 A	Resistance value for specified, current-dependent power loss	0.00133 Ω
Legend (ratings)	(III / 3) ≙ Overvoltage category III / Pollution degree 3		



Connection data

Clamping units	4
Total number of potentials	3
Number of levels	4

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 "Alu-Plus" Contact Paste [249-130](#) 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 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 = 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

Physical data

Width	6 mm / 0.236 inches
Height	90.5 mm / 3.563 inches
Depth from upper-edge of DIN-rail	63.5 mm / 2.5 inches

Mechanical data

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



Material data		
Note (material data)		Information on material specifications can be found here
Color	gray	
Material group	I	
Insulation material (main housing)	Polyamide (PA66)	
Flammability class per UL94	V0	
Fire load	0.433 MJ	
Weight	20 g	

Environmental requirements		
Processing temperature	-35 ... +85 °C	
Continuous operating temperature	-60 ... +105 °C	

Commercial data		
Product Group	1 (Rail Mounted Terminal Blocks)	
eCl@ss 10.0	27-14-11-28	
eCl@ss 9.0	27-14-11-28	
ETIM 9.0	EC000900	
ETIM 8.0	EC000900	
PU (SPU)	20 pcs	
Packaging type	Box	
Country of origin	DE	
GTIN	4045454093891	
Customs tariff number	85369010000	

Environmental Product Compliance		
CAS-No.	7439-92-1	
REACH Candidate List Substance	Lead	
RoHS Compliance Status	Compliant, No Exemption	
SCIP notification number (Austria)	9520f455-4efd-4344-a152-bc9379f88c42	
SCIP notification number (Belgium)	741457ef-1b95-4b70-890d-dd787cfdcf37	
SCIP notification number (Bulgaria)	04bf4b22-9450-4202-80c3-aa5e76ada93f	
SCIP notification number (Czech Republic)	6aee7f51-a90a-42d6-b16b-7100f21a71dc	
SCIP notification number (Denmark)	a1318be2-cece-4be6-9963-3b6467e8f76f	
SCIP notification number (Finland)	8b2755dc-164a-44a8-9ca3-07d9b94bd381	
SCIP notification number (France)	6b74a0e5-62f2-4863-8839-1cf7b2980580	
SCIP notification number (Germany)	fe00c0b7-443b-40a9-ada4-a291cc689d32	
SCIP notification number (Hungary)	23dc1ed7-75e6-40fb-bf28-95e05fe1fe8b	
SCIP notification number (Italy)	306625e0-2041-42c3-a31b-06422a41e3d8	
SCIP notification number (Netherlands)	5d171a93-790a-4476-8d45-6ee1c7b64ff6	
SCIP notification number (Poland)	a322291e-3680-4111-89fd-d19dfd4685e3	
SCIP notification number (Romania)	fbab35aa-a49f-4ab1-93aa-770fa3452074	
SCIP notification number (Sweden)	f005e2c3-5a0f-4843-b092-2d010424e337	



Approvals / Certificates

General approvals



Approval	Standard	Certificate Name
CCA DEKRA Certification B.V.	EN 60947	2160584.53
CSA DEKRA Certification B.V.	C22.2	1536071
UR Underwriters Laboratories Inc.	UL 1059	E45172

Declarations of conformity and manufacturer's declarations

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

Approvals for marine applications



Approval	Standard	Certificate Name
ABS American Bureau of Ship- ping	EN 60947	20-HG1941090-PDA
DNV GL Det Norske Veritas, Ger- manischer Lloyd	-	TAE00001V2

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product
Compliance 280-577



Documentation

Additional Information

Technical Section	pdf 2246.92 KB	
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Bid Text

280-577	19.02.2019	xml 3.33 KB	
280-577	14.03.2017	doc 25.00 KB	



CAD/CAE-Data	
CAE data	
EPLAN Data Portal 280-577	
WSCAD Universe 280-577	

1 Compatible Products
1.1 Optional Accessories
1.1.1 DIN-rail
1.1.1.1 Mounting accessories

 Item No.: 210-196 Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm thick; 2 m long; unslopped; similar to EN 60715; silver-colored	 Item No.: 210-198 Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslopped; according to EN 60715; copper-colored	 Item No.: 210-508 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slopped; 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; slopped; similar to EN 60715; silver-colored
 Item No.: 210-506 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslopped; 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; unslopped; similar to EN 60715; silver-colored	 Item No.: 210-118 Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslopped; according to EN 60715; silver-colored	 Item No.: 210-115 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slopped; 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; slopped; 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; slopped; 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; unslopped; according to EN 60715; silver-colored	 Item No.: 210-505 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslopped; galvanized; according to EN 60715; silver-colored

1.1.2 Ferrulle
1.1.2.1 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; un-insulated; 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 / AWG 20; un-insulated; 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; un-insulated; 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; un-insulated; electro-tin plated; silver-colored		



1.1.3 Installation

1.1.3.1 Cover



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

1.1.3.2 Cover carrier



Item No.: 709-168
Cover carrier; Type 2; incl. fixing/retaining screws and knurled nut; suitable for 283 to 285 Series rail-mounted terminal blocks; suitable for 279 to 281 Series double- and triple-deck terminal blocks; suitable for 780 to 785, 775, 776 and 777 Series TOP-JOB® rail-mounted terminal blocks; suitable for 280 Series sensor and actuator terminal blocks; suitable for 282 Series disconnect/test terminal blocks for transformer circuits; gray

1.1.3.3 Mounting accessories



Item No.: 249-116
Screwless end stop; 6 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray

1.1.4 Insulation stop

1.1.4.1 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

1.1.5 Jumper

1.1.5.1 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.: 280-402
Jumper; insulated; gray



Item No.: 780-452
Staggered jumper; from 1 to 2; insulated; gray



Item No.: 780-453
Staggered jumper; from 1 to 3; insulated; gray



Item No.: 780-454
Staggered jumper; from 1 to 4; insulated; gray



Item No.: 780-455
Staggered jumper; from 1 to 5; insulated; gray



Item No.: 780-456
Staggered jumper; from 1 to 6; insulated; gray



1.1.5.1 Jumper

 Item No.: 780-457 Staggered jumper; from 1 to 7; insulated; gray	 Item No.: 780-458 Staggered jumper; from 1 to 8; 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.: 210-103 Wire commoning chain; insulated; black	 Item No.: 210-123 Wire commoning chain; insulated; blue	

1.1.6 Marking

1.1.6.1 Marker

 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.: 793-5501/000-023 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.: 793-5501/000-017 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.: 793-5501/000-012 WMB marking card; as card; for terminal block width 5 - 5.2 mm; plain; snap-on type; orange	 Item No.: 793-5501/000-005 WMB marking card; as card; for terminal block width 5 - 5.2 mm; plain; snap-on type; red	 Item No.: 793-5501/000-024 WMB marking card; as card; for terminal block width 5 - 5.2 mm; plain; snap-on type; violet	 Item No.: 793-5501 WMB marking card; as card; for terminal block width 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 - 5.2 mm; plain; snap-on type; yellow	 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.: 793-501/000-023 WMB marking card; as card; not stretchable; plain; snap-on type; green
 Item No.: 793-501/000-017 WMB marking card; as card; not stretchable; plain; snap-on type; light green	 Item No.: 793-501/000-012 WMB marking card; as card; not stretchable; plain; snap-on type; orange	 Item No.: 793-501/000-005 WMB marking card; as card; not stretchable; plain; snap-on type; red	 Item No.: 793-501/000-024 WMB marking card; as card; not stretchable; plain; snap-on type; violet
 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.: 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.: 2009-115/000-023 WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green	 Item No.: 2009-115/000-017 WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; light green	 Item No.: 2009-115/000-012 WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange	 Item No.: 2009-115/000-024 WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet
 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		

1.1.7 Protective warning marker

1.1.7.1 Cover



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

1.1.8 Push-in type wire jumper

1.1.8.1 Jumper



Item No.: 249-126
Push-in type wire jumper; 0.75 mm²; insulated; 110 mm long; black



Item No.: 249-123
Push-in type wire jumper; 0.75 mm²; insulated; 180 mm long; black



Item No.: 249-127
Push-in type wire jumper; 0.75 mm²; insulated; 250 mm long; black



Item No.: 249-125
Push-in type wire jumper; insulated; 60 mm long; black

1.1.9 Test and measurement

1.1.9.1 Testing accessories



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

1.1.10 Tool

1.1.10.1 Operating tool



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



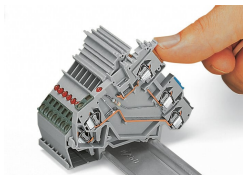
Item No.: 210-720
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured



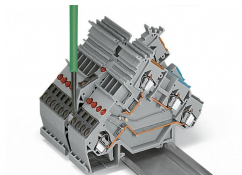
Item No.: 210-657
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured

Installation Notes

Installation

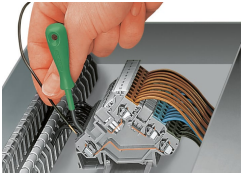
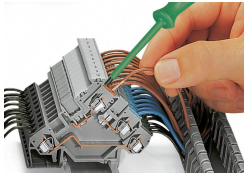


Snapping a terminal block onto the DIN-rail.
Terminal blocks with a grounding foot automatically establish a direct contact to the rail.



Removing the terminal block from DIN-rail.
Notice: Remove jumper contacts first!

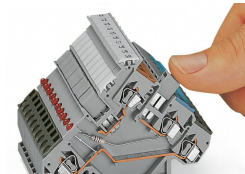
Conductor termination



CAGE CLAMP® connection
Inserting a conductor via straight operating tool (210-720).

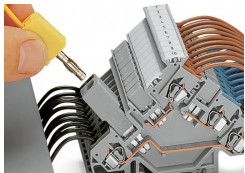
CAGE CLAMP® connection
Inserting a conductor via angled operating tool (210-658).

Commoning



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

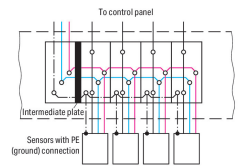
Testing



Testing via banana plug and test plug adapter (209-170).

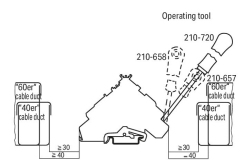
Testing via voltage tester directly on the current bar.

Application



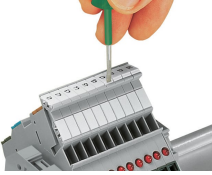
Power supply from control panel side

Installation



Min. mounting distance – terminal blocks to cable duct

Marking



Labeling via WMB Multi Marking System.