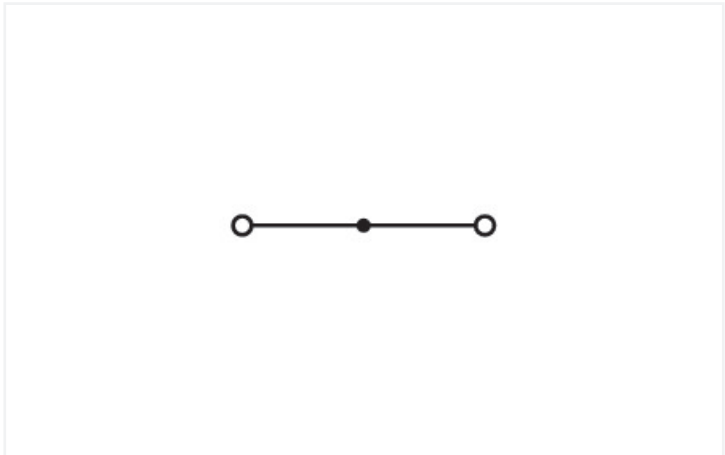


Color: ■ red

Similar to illustration



Similar to illustration

Through terminal block, 280 Series, operating tool

Connect conductors quickly and easily with this through terminal block (item number 280-903). Whether for industrial or building applications, you can use our through terminal blocks to connect electrical conductors quickly and safely. We offer variants for both classic through-wiring and potential distribution. Rated current and voltage are key factors to consider when selecting a through rail-mount terminal block, as they determine the product's suitability for different applications. This product has a rated voltage of 800 V and a rated current of 24 A. Conductors should only be connected to this through terminal block if their strip length is between 8 mm and 9 mm. Featuring conductor terminals along with CAGE CLAMP®, this connector is highly versatile. Our renowned universal connection known as CAGE CLAMP® leads the way when it comes to connection technology and electrical interconnections. Depending on the type of conductor, this through terminal block is designed for conductor cross sections ranging from 0.08 mm² to 2.5 mm². It has one level. The single potential can connect using the two clamping points. The red housing is made of polyamide (PA66) for insulation. This through rail-mount terminal block is operated with an operating tool. These through rail-mount terminal blocks are mounted using DIN-35 rails.. Conductors made of copper, aluminum can be connected thanks to front-entry wiring.

Electrical data				
Ratings per		IEC/EN 60947-7-1		
Overvoltage category		III	III	II
Pollution degree		3	2	2
Nominal voltage		800 V	-	-
Rated surge voltage		8 kV	-	-
Rated current		24 A	-	-
Approvals per		UL 1059		
Use group		B	C	D
Rated voltage		-	600 V	-
Rated current		-	20 A	-
Approvals per		CSA 22.2 No 158		
Use group		B	C	D
Rated voltage		-	600 V	-
Rated current		-	24 A	-
Power Loss				
Power loss, per pole (potential)		0.7661 W		
Rated current I _N for specified power loss		24 A		
Resistance value for specified, current-dependent power loss		0.00133 Ω		



Connection data		
Clamping units	2	
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)	<p>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.</p> <p>"Alu-Plus" Contact Paste Advantages:</p> <ul style="list-style-type: none">• 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. <p>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.</p> <p>It is also possible to apply WAGO "Alu-Plus" additionally on the whole surface of the aluminum conductor before termination.</p> <p>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</p>	
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	5 mm / 0.197 inches
Height	53 mm / 2.087 inches
Depth from upper-edge of DIN-rail	28 mm / 1.102 inches

Mechanical data	
Mounting type	DIN-35 rail
Marking level	Center marking



Material data		
Note (material data)		Information on material specifications can be found here
Color	red	
Material group	I	
Insulation material (main housing)	Polyamide (PA66)	
Flammability class per UL94	V0	
Fire load	0.107 MJ	
Weight	5.3 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	4044918391832	
Customs tariff number	85369010000	

Product classification		
UNSPSC	39121402	
eCl@ss 10.0	27-14-11-20	
eCl@ss 9.0	27-14-11-20	
ETIM 9.0	EC000897	
ETIM 8.0	EC000897	
ECCN	NO US CLASSIFICATION	




Environmental Product Compliance		
RoHS Compliance Status	Compliant, No Exemption	

Approvals / Certificates

General approvals			Declarations of conformity and manufacturer's declarations		
  			Approval	Standard	Certificate Name
Approval	Standard	Certificate Name	EU-Declaration of Confor-		
CSA	C22.2	1536071	mity		
DEKRA Certification B.V.			WAGO GmbH & Co. KG		
KEMA/KEUR	EN 60947	71-154769	UK-Declaration of Confor-		
DEKRA Certification B.V.			mity		
UL	UL 1059	E45172	WAGO GmbH & Co. KG		
Underwriters Laboratories Inc.					



Approvals for marine applications



		
Approval	Standard	Certificate Name
ABS American Bureau of Ship- ping	EN 60947	20-HG1941090-PDA
BV Bureau Veritas S.A.	EN 60947	07436/F0 BV
DNV GL Det Norske Veritas, Ger- manischer Lloyd	-	TAE00001V2

Downloads

Environmental Product Compliance

Compliance Search
Environmental Product Compliance 280-903























Documentation

Bid Text			
280-903	19.02.2019	xml 3.27 KB	
280-903	28.02.2017	doc 24.00 KB	

CAD/CAE-Data

CAD data
2D/3D Models 280-903

CAE data
EPLAN Data Portal 280-903
WSCAD Universe 280-903
ZUKEN Portal 280-903

1 Compatible Products			
1.1 Required Accessories			
1.1.1 End plate			
1.1.1.1 End plate			
			
Item No.: 280-308 End and intermediate plate; 2.5 mm thick; gray	Item No.: 280-309 End and intermediate plate; 2.5 mm thick; orange	Item No.: 280-310 Separator plate; 2 mm thick; oversized; gray	Item No.: 280-311 Separator plate; 2 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 End plate			
1.2.2.1 End plate			
			
Item No.: 284-334 Step-down cover plate; 1 mm thick; for 2-, 3- and 4-conductor terminal blocks; gray	Item No.: 284-344 Step-down cover plate; 1 mm thick; for 2-, 3- and 4-conductor terminal blocks; orange		
1.2.3 Ferrule			
1.2.3.1 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



1.2.3.1 Ferrule



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; 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

1.2.4 Installation

1.2.4.1 Cover



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

1.2.4.2 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

1.2.4.3 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

1.2.5 Insulation stop

1.2.5.1 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



1.2.6 Jumper

1.2.6.1 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.: 280-409](#)
Jumper; insulated; gray



[Item No.: 280-422](#)
Jumper; insulated; yellow-green



[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



[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.: 284-414](#)
Step-down jumper; from 284/282 to 281/280/279 series; 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

1.2.7 Marking

1.2.7.1 Double marker carrier



[Item No.: 209-128](#)
Adaptor; gray

1.2.7.2 Group marker carrier



[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.: 249-105](#)
Group marker carrier; gray

1.2.7.3 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

1.2.8 Plug

1.2.8.1 Component module with diode



[Item No.: 280-803/281-411](#)
Component plug; 2-pole; with diode 1N4007; 10 mm wide; gray



[Item No.: 280-803/281-420](#)
Component plug; 2-pole; with rectifier diode and LED; 10 mm wide; gray



[Item No.: 280-803/281-421](#)
Component plug; 2-pole; with rectifier diode and LED; 10 mm wide; gray

1.2.8.2 Component module with LED



[Item No.: 280-803/281-415](#)
Component plug; 2-pole; LED (red); 10 mm wide; gray



[Item No.: 280-803/281-416](#)
Component plug; 2-pole; LED (red); 10 mm wide; gray



[Item No.: 280-803/281-413](#)
Component plug; 2-pole; LED (red); 24 VDC; 10 mm wide; gray



[Item No.: 280-803/281-414](#)
Component plug; 2-pole; LED (red); 48 VDC; 10 mm wide; gray



[Item No.: 280-803/281-420](#)
Component plug; 2-pole; with rectifier diode and LED; 10 mm wide; gray



[Item No.: 280-803/281-421](#)
Component plug; 2-pole; with rectifier diode and LED; 10 mm wide; gray

1.2.8.3 Empty component plug housing



[Item No.: 280-803](#)
Empty component plug housing; 10 mm wide; Type 4; 2-pole; gray

1.2.8.4 Neon indicator module



[Item No.: 280-803/281-417](#)
Component plug; 2-pole; 10 mm wide; gray



[Item No.: 280-803/281-418](#)
Component plug; 2-pole; 10 mm wide; gray

1.2.9 Protective warning marker

1.2.9.1 Cover



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

1.2.10 Push-in type wire jumper

1.2.10.1 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

1.2.11 Test and measurement

1.2.11.1 Testing accessories



Item No.: 249-107
B-type spacer module; modular; e.g., for bridging commoned terminal blocks; gray



Item No.: 249-106
B-type test plug module; modular; 1,50 mm²; gray



Item No.: 249-147
B-type test plug module; modular; 2,50 mm²; gray



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



Item No.: 280-419
Spacer module; modular; bridging commoned terminal blocks; gray



Item No.: 280-404
Test plug adapter; 5 mm wide; for test plug (2.3 mm Ø); suitable for 1.5 mm² - 4 mm² tbs; gray



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.: 280-418
Test plug module; modular; suitable for all WAGO 280 and 780 Series rail-mounted terminal blocks with jumper slots in the current bar; gray



Item No.: 281-407
Test plug; 6 mm wide; Nominal current 24 A; for 0.08 mm² - 2.5 mm²; gray

1.2.12 Tool

1.2.12.1 Operating tool



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



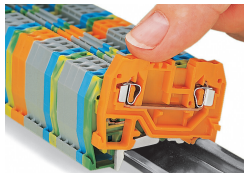
Item No.: 210-720
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured



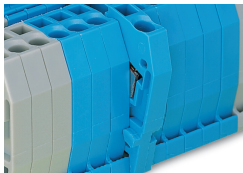
Item No.: 210-657
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured

Installation Notes

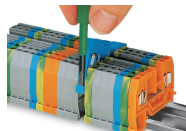
Installation



Snapping a terminal block onto the DIN-rail.



Quick assembly keys prevent reverse mounting.

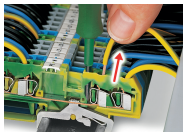
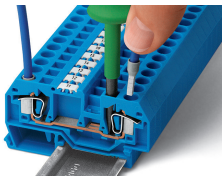


Removing a terminal block from the assembly.



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

Conductor termination



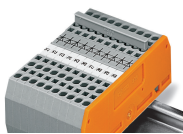
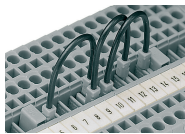
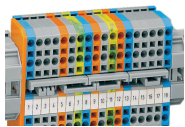
CAGE CLAMP® connection
Inserting a conductor.

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.

Inserting insulation stops.

CAGE CLAMP® connection
Removing a solid conductor.

Commoning



Commoning using an adjacent jumper.
Push jumper down until fully inserted!

Staggered jumpers are suitable for sophisticated circuit requirements. Push jumpers down until fully inserted!

Push-In Type 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.

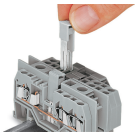
These jumpers are compatible with the following rail-mount terminal blocks:

- 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 (see table on the right).

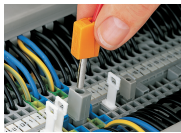
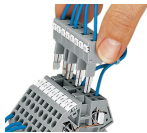
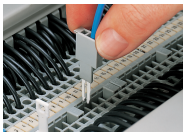
The 280/775/780 and 281/776/777/781 Series Terminal Blocks accept two wire jumpers, allowing the use of commoning chains. Furthermore, the 280/769/775/780/880 and 281/776/777/781 Series allow both wire jumper and adjacent jumper to be simultaneously plugged into a same terminal block.

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



Commoning terminal blocks of different sizes via step-down jumpers.

Testing

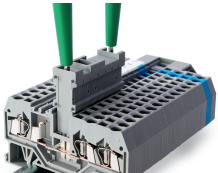


Testing with a test plug.
Picture shows a test plug fitted with CAGE CLAMP®.

L-type test plug modules fitted with CA-GE CLAMP®

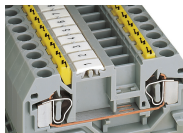
B-type test plug modules fitted with CA-GE CLAMP®

Testing with a test plug.
Picture shows a test plug adapter (209-170).



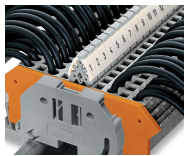
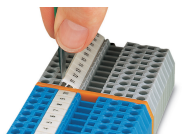
Test plugs modules are directly plugged into the jumper contact slot of the current bar.

Cover



Protective warning markers inserted into the operating slots

Marking



Labeling via WMB Multi Marking System.

Terminal block marking with double marker carriers (209-128) Terminal blocks with side marking