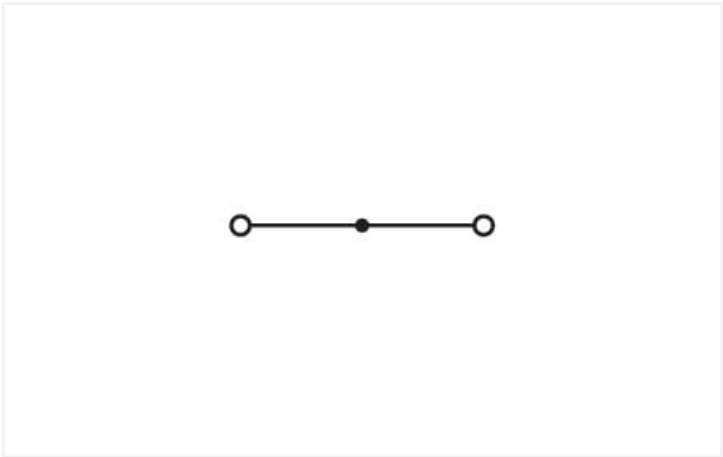


Color: ■ gray



Similar to illustration

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



Connection points	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</p> <p>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 be 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::</p> <p>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	50 mm / 1.969 inches
Depth from upper-edge of DIN-rail	28 mm / 1.102 inches

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






Material data	
Note (material data)	Information on material specifications can be found here
Color	gray
Material group	I
Insulation material	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.175 MJ
Weight	4.8 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	27-14-11-20
eCl@ss 9.0	27-14-11-20
ETIM 8.0	EC000897
ETIM 7.0	EC000897
PU (SPU)	100 pcs
Packaging type	Box
Country of origin	DE
GTIN	4044918465298
Customs tariff number	85369010000

Environmental Product Compliance	
RoHS Compliance Status	Compliant, No Exemption

Approvals / Certificates											
General approvals		Declarations of conformity and manufacturer's declarations									
  											
Approval	Standard	Certificate Name									
CCA DEKRA Certification B.V.	EN 60947	2157201.01									
CSA DEKRA Certification B.V.	C22.2	1536071									
UL Underwriters Laboratories Inc.	UL 1059	E45172									
		<table><tr><th>Approval</th><th>Standard</th><th>Certificate Name</th></tr><tr><td>EU-Declaration of Confor- mity WAGO GmbH & Co. KG</td><td>-</td><td>-</td></tr><tr><td>UK-Declaration of Confor- mity WAGO GmbH & Co. KG</td><td>-</td><td>-</td></tr></table>	Approval	Standard	Certificate Name	EU-Declaration of Confor- mity WAGO GmbH & Co. KG	-	-	UK-Declaration of Confor- mity WAGO GmbH & Co. KG	-	-
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
BV Bureau Veritas S.A.	EN 60947	07436/F0 BV
DNV GL Det Norske Veritas, Ger- manischer Lloyd	-	TAE00001V2
LR Lloyds Register	EN 60947	91/20112 (E9)

Downloads

Environmental Product Compliance

Compliance Search
Environmental Product Compliance 280-601



Documentation

Additional Information
Technical Section

pdf
2142.18 KB



CAD/CAE-Data

CAD data
2D/3D Models 280-601



CAE data
EPLAN Data Portal 280-601
WSCAD Universe 280-601
ZUKEN Portal 280-601



1 Compatible Products

1.1 Required Accessories

1.1.1 End plate

1.1.1.1 End plate

**Item No.: 280-330**

End and intermediate plate; 2.5 mm thick; gray

**Item No.: 280-331**

End and intermediate plate; 2.5 mm thick; orange

**Item No.: 280-338**

Separator plate; 2 mm thick; oversized; gray

**Item No.: 280-328**

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; unsloated; similar to EN 60715; silver-colored

**Item No.: 210-198**

Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unsloated; according to EN 60715; copper-colored

**Item No.: 210-508**

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; sloated; 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; sloated; similar to EN 60715; silver-colored

**Item No.: 210-506**

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unsloated; 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; unsloated; similar to EN 60715; silver-colored

**Item No.: 210-118**

Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unsloated; according to EN 60715; silver-colored

**Item No.: 210-115**

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; sloated; 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; sloated; 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; sloated; 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; unsloated; according to EN 60715; silver-colored

**Item No.: 210-505**

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unsloated; 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; 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



1.2.3.1 Ferrule



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



Item No.: 216-104
Ferrule; Sleeve for 1.5 mm² / AWG 16; un-
insulated; electro-tin plated; silver-colo-
red

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



1.2.6.1 Jumper





 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
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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
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1.2.8 Plug

1.2.8.1 Diode plug

 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
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1.2.8.2 Empty component plug housing



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

1.2.8.3 LED plug



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.: 280-803/281-411
Component plug; 2-pole; with diode 1N4007; 10 mm wide; 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 mm ² ; gray	 Item No.: 249-142 L-type end module; modular; with rigid contact pin; End module; 1,50 mm ² ; 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 mm ² ; 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 mm ² - 4 mm ² tbs; gray	 Item No.: 209-170 Test plug adapter; 8.3 mm wide; for 4 mm Ø test plugs; suitable for 1.5 mm ² - 10 mm ² 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 mm ² - 2.5 mm ² ; 2,50 mm ² ; gray		

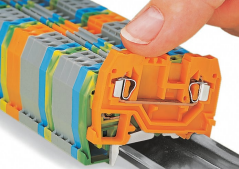
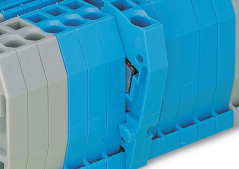
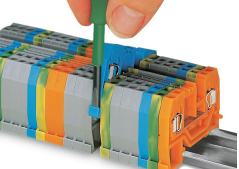

1.2.12 Tool

1.2.12.1 Operating tool

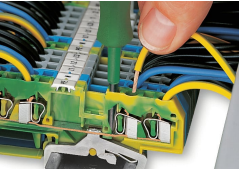
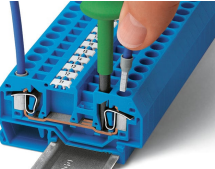

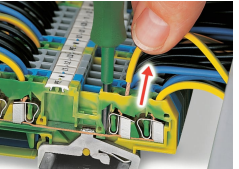
 Item No.: 210-658 Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; angled; short; multicoloured	 Item No.: 210-720 Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured	 Item No.: 210-657 Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated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

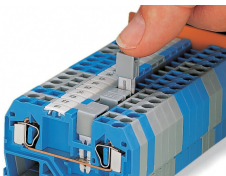
Installation

			
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

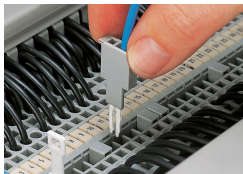
			
CAGE CLAMP® connection Inserting a conductor.	CAGE CLAMP® connection Inserting a conductor. With ferruled conductors, it is necessary to use a terminal block one size larger than the conductor's nominal cross-section.	Inserting insulation stops.	CAGE CLAMP® connection Removing a solid conductor.

Commoning



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

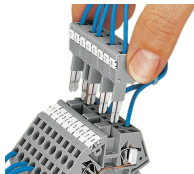
Testing



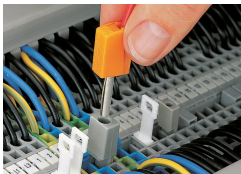
Testing with a test plug.
Picture shows a test plug fitted with CAGE CLAMP®.



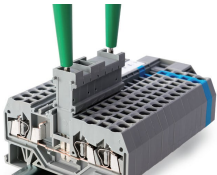
L-type test plug modules fitted with CAGE CLAMP®



B-type test plug modules fitted with CAGE CLAMP®

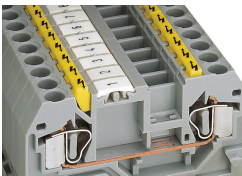


Testing with a test plug.
Picture shows a test plug adapter (209-170).



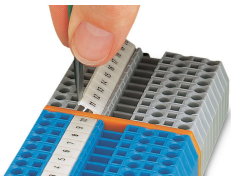
Test plugs modules are directly plugged into the jumper contact slot of the current bar.

Cover

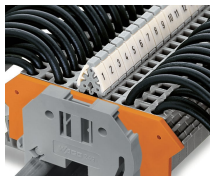


Protective warning markers inserted into the operating slots

Marking



Labeling via WMB Multi Marking System.



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