

Color: ■ blue



Similar to illustration

Through terminal block, 280 Series, blue

This through terminal block (item number 280-684) is designed for quick and simple connections. Whether in industrial or building applications, our rail-mount through terminal blocks are the perfect solution to quickly and securely connect electrical conductors. Depending on the version, you can use them for either typical through-wiring or potential distribution. Rated current and voltage are important parameters 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. Ensure that the strip lengths are between 8 mm and 9 mm when connecting conductors to this through terminal block. This product features conductor terminals and utilizes CAGE CLAMP®. Our tried-and-tested universal connection known as CAGE CLAMP® is the industry standard for connection technology and electrical interconnections. Depending on the type of conductor, this through terminal block is suitable for conductor cross sections ranging from 0.08 mm² to 2.5 mm². It has one level. You can connect a single potential using the three clamping points. The blue housing is made of polyamide (PA66) for insulation. An operating tool is used to operate this through rail-mount terminal block. These through rail-mount terminal blocks are mounted using DIN-35 rails. The front-entry wiring means you can connect copper, aluminum conductors.

Electrical data

IEC/EN 60947-7-1			UL 1059						
Ratings per	Overvoltage category	III	III	II	Approvals per	Use group	B	C	D
Overvoltage category	III				Rated voltage	-	600 V	-	
Pollution degree	3	2	2		Rated current	-	20 A	-	
Nominal voltage	800 V	-	-						
Rated surge voltage	8 kV	-	-						
Rated current	24 A	-	-						

Approvals per			CSA 22.2 No 158			Power Loss		
Use group	B	C	D			Power loss, per pole (potential)	0.7661 W	
Rated voltage	-	600 V	-			Rated current I_N for specified power loss	24 A	
Rated current	-	24 A	-			Resistance value for specified, current-dependent power loss	0.00133 Ω	

Connection data			Connection 1												
Clamping units	3		Connection technology	CAGE CLAMP®											
Total number of potentials	1		Actuation type	Operating tool											
Number of levels	1		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 mm ² /12 AWG if WAGO "Alu-Plus" Contact Paste 249-130 is used for termination.												
"Alu-Plus" Contact Paste Advantages:															
<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. 															
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 mm ² = 16 A 4 mm ² = 22 A															
<table border="1"> <tbody> <tr> <td>Solid conductor</td> <td>0.08 ... 2.5 mm² / 28 ... 12 AWG</td> </tr> <tr> <td>Fine-stranded conductor</td> <td>0.08 ... 2.5 mm² / 28 ... 12 AWG</td> </tr> <tr> <td>Note (conductor cross-section)</td> <td>12 AWG: THHN, THWN</td> </tr> <tr> <td>Strip length</td> <td>8 ... 9 mm / 0.31 ... 0.35 inches</td> </tr> <tr> <td>Wiring direction</td> <td>Front-entry wiring</td> </tr> </tbody> </table>						Solid conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG	Fine-stranded conductor	0.08 ... 2.5 mm ² / 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
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG														
Fine-stranded conductor	0.08 ... 2.5 mm ² / 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	64 mm / 2.52 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	blue
Material group	I
Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	VO
Fire load	0.123 MJ
Weight	7.6 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 9.0	EC000897
ETIM 8.0	EC000897
PU (SPU)	100 pcs
Packaging type	Box
Country of origin	DE
GTIN	4044918391412
Customs tariff number	85369010000

Environmental Product Compliance

RoHS Compliance Status	Compliant, No Exemption
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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

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

Approvals for marine applications



Approval	Standard	Certificate Name
ABS American Bureau of Shipping	EN 60947	20-HG1941090-PDA
BV Bureau Veritas S.A.	EN 60947	07436/F0 BV
DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAE00001V2
LR Lloyds Register	EN 60947	91/20112 (E9)

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 280-684



Documentation

Additional Information

Technical Section

pdf
2246.92 KB

Bid Text

280-684

19.02.2019

xml
3.24 KB

280-684

28.02.2017

doc
24.00 KB

CAD/CAE-Data

CAD data

2D/3D Models 280-684



CAE data

EPLAN Data Portal
280-684WSCAD Universe
280-684

ZUKEN Portal 280-684



1 Compatible Products

1.1 Required Accessories

1.1.1 End plate



[Item No.: 280-324](#)

End and intermediate plate; 2.5 mm thick; gray

[Item No.: 280-326](#)

End and intermediate plate; 2.5 mm thick; orange

[Item No.: 209-191](#)

Separator for Ex e/Ex i applications; 3 mm thick; 120 mm wide; orange

[Item No.: 280-344](#)

Separator plate; 2 mm thick; oversized; gray



[Item No.: 280-346](#)

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 15 mm; 1.5 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

**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; 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; 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

1.2.4 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.: 209-141](#)

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

[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; 2,50 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](#)

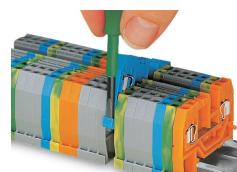
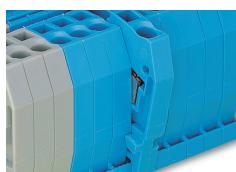
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

[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.

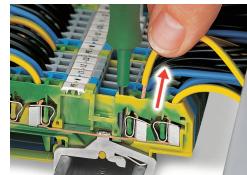
Removing a terminal block from the assembly.

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

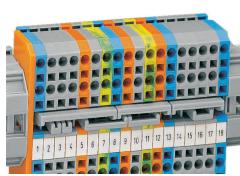
Conductor termination

**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.

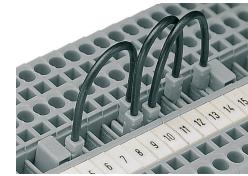
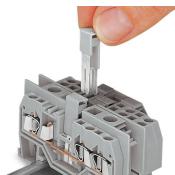
Inserting insulation stops.

**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.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®.



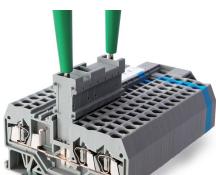
L-type test plug modules fitted with CAGE CLAMP®



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