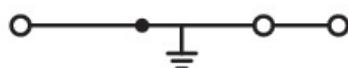




Color: ■ green-yellow



Similar to illustration

## Ground terminal block, 280 Series, green-yellow

Quick and easy connections are guaranteed with this ground terminal block (item number 280-687). Ground terminal blocks connect directly to the mounting rail via an integrated contact foot. This creates an electrical and mechanical connection between the electrical conductors and the mounting adapter. Strip lengths must be between 8 mm and 9 mm when connecting conductors to this ground terminal block. This product features conductor terminals and utilizes CAGE CLAMP®. Our proven universal connection known as CAGE CLAMP® leads the way when it comes to connection technology and electrical interconnections. This ground terminal block is suitable for conductor cross sections ranging from 0.08 mm<sup>2</sup> to 2.5 mm<sup>2</sup>. It features one level and three clamping points that you can use to connect a single potential. The green-yellow 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.. The front-entry wiring allows you to connect copper, aluminum conductors.

## Electrical data

Ratings per		IEC/EN 60947-7-2		
Overvoltage category	III	III	II	
Pollution degree	3	2	2	
Nominal voltage	-	-	-	
Rated surge voltage	-	-	-	
Rated current	-	-	-	

## Connection data

Clamping units	3
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 mm<sup>2</sup>/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 mm<sup>2</sup> = 16 A  
4 mm<sup>2</sup> = 22 A

Solid conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm <sup>2</sup> / 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

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

**Material data**

Note (material data)	<a href="#">Information on material specifications can be found here</a>
Color	green-yellow
Material group	I
Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.11 MJ
Weight	11.3 g

**Environmental requirements**

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

**Commercial data**

Product Group	1 (Rail Mounted Terminal Blocks)
PU (SPU)	100 pcs
Packaging type	Box
Country of origin	DE
GTIN	4045454100148
Customs tariff number	85369010000

**Product Classification**

UNSPSC	39121410
eCl@ss 10.0	27-14-11-41
eCl@ss 9.0	27-14-11-41
ETIM 9.0	EC000901
ETIM 8.0	EC000901
ECCN	NO US CLASSIFICATION

**Environmental Product Compliance**

CAS-No.	7439-92-1
REACH Candidate List Substance	Lead
RoHS Compliance Status	Compliant, No Exemption
SCIP notification number (Austria)	9d1554c7-b1b0-4f1a-901a-7480e3920494
SCIP notification number (Belgium)	e9bd7153-16d1-4939-a930-38c20697ee10
SCIP notification number (Bulgaria)	43dbcac7-f58c-4d0a-bb9c-989237c2089f
SCIP notification number (Czech Republic)	9b1a476b-b347-4812-88e3-1934662d42f8
SCIP notification number (Denmark)	bf7b2d1d-262d-467f-9f41-b78126336f9b
SCIP notification number (Finland)	478669e5-7a8c-4a22-ba18-df8f9ab06213
SCIP notification number (France)	09a37ce9-df33-406a-9494-ed9a0b848843
SCIP notification number (Germany)	2a756951-3163-47ff-a0d6-9a61ed4f78c8
SCIP notification number (Hungary)	d16eb4fa-61c6-4e56-9c6b-7354798ff7b4
SCIP notification number (Italy)	ab5f290a-d886-43ae-9973-7ebcb38118fb
SCIP notification number (Netherlands)	edd9b2ec-0b3d-458c-83bb-fc7f6db70f08
SCIP notification number (Poland)	44a36333-dea0-42f8-954b-8a821f61e97e
SCIP notification number (Romania)	0105d1b8-de69-4809-8446-91bf3725fd8a
SCIP notification number (Sweden)	125f67be-9917-4798-bc68-5bf113bad19f

## 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 UL International Germany GmbH	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	24-0152298-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 280-687

## Documentation

## Bid Text

280-687	19.02.2019	xml 3.13 KB	
280-687	28.02.2017	doc 24.00 KB	

## CAD/CAE-Data

## CAD data

2D/3D Models 280-687



## CAE data

EPLAN Data Portal  
280-687WSCAD Universe  
280-687

ZUKEN Portal 280-687



## 1 Compatible Products

## 1.1 Required Accessories

## 1.1.1 End plate

## 1.1.1.1 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.: 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; simi-  
lar 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; si-  
milar 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



### [Item No.: 216-301](#)

Ferrule; Sleeve for 0.25 mm<sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow

### [Item No.: 216-302](#)

Ferrule; Sleeve for 0.34 mm<sup>2</sup> / 22 AWG; insulated; electro-tin plated; light turquoise

### [Item No.: 216-201](#)

Ferrule; Sleeve for 0.5 mm<sup>2</sup> / 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 mm<sup>2</sup> / AWG 22; un-insulated; electro-tin plated; silver-colored



### [Item No.: 216-202](#)

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray

### [Item No.: 216-102](#)

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / AWG 20; uninsulated; electro-tin plated; silver-colored

### [Item No.: 216-203](#)

Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; red

### [Item No.: 216-103](#)

Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; un-insulated; electro-tin plated



### [Item No.: 216-204](#)

Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; insulated; electro-tin plated; black

### [Item No.: 216-104](#)

Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; un-insulated; electro-tin plated; silver-colored

## 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 mm<sup>2</sup> "s" (0.14 mm<sup>2</sup> "f-st"); 5 pieces/strip; white[Item No.: 280-471](#)Insulation stop; 0.25 - 0.5 mm<sup>2</sup>; 5 pieces/strip; light gray[Item No.: 280-472](#)Insulation stop; 0.75 - 1 mm<sup>2</sup>; 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.: 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.: 709-110](#)Wire commoning chain; 2.5 mm<sup>2</sup>; insulated; black[Item No.: 709-111](#)Wire commoning chain; 2.5 mm<sup>2</sup>; insulated; black[Item No.: 709-112](#)Wire commoning chain; 2.5 mm<sup>2</sup>; insulated; black[Item No.: 210-103](#)

Wire commoning chain; insulated; black

[Item No.: 210-123](#)

Wire commoning chain; insulated; blue

## 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.: 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

## 1.2.6.3 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 - 17.5 mm; stretchable 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 - 17.5 mm; stretchable 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 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; violet

[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.: 793-5501/000-002](#)

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 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

## 1.2.7 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 Push-in type wire jumper

## 1.2.8.1 Jumper

[Item No.: 249-126](#)

Push-in type wire jumper; 0.75 mm<sup>2</sup>; insulated; 110 mm long; black

[Item No.: 249-123](#)

Push-in type wire jumper; 0.75 mm<sup>2</sup>; insulated; 180 mm long; black

[Item No.: 249-127](#)

Push-in type wire jumper; 0.75 mm<sup>2</sup>; insulated; 250 mm long; black

[Item No.: 249-125](#)

Push-in type wire jumper; insulated; 60 mm long; black

## 1.2.9 Test and measurement

## 1.2.9.1 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<sup>2</sup>; gray

[Item No.: 249-147](#)

B-type test plug module; modular; 2,50 mm<sup>2</sup>; gray

[Item No.: 249-142](#)

L-type end module; modular; with rigid contact pin; End module; 1,50 mm<sup>2</sup>; 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<sup>2</sup>; 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<sup>2</sup> - 4 mm<sup>2</sup> tbs; gray

[Item No.: 209-170](#)

Test plug adapter; 8.3 mm wide; for 4 mm Ø test plugs; suitable for 1.5 mm<sup>2</sup> - 10 mm<sup>2</sup> 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<sup>2</sup> - 2.5 mm<sup>2</sup>; gray

## 1.2.10 Tool

## 1.2.10.1 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](#)

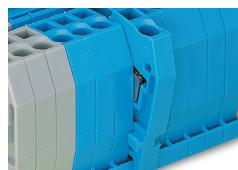
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

[Item No.: 210-657](#)

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

## Installation Notes

## Installation

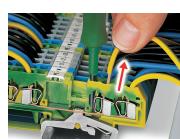


Snapping a ground conductor block onto the DIN-rail automatically makes a direct electrical connection to the rail.

Quick assembly keys prevent reverse mounting.

Removing a terminal block from the assembly.

## 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



Commoning ground conductor terminal blocks with through terminal blocks is possible in one direction only (via rear side of terminal block) using adjacent jumpers. WAGO recommends using yellow-green adjacent jumpers in addition to the required marking of these blocks.

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 mm<sup>2</sup>/16 AWG),
- 280/775/780 Series (2.5 mm<sup>2</sup>/14 AWG)
- 281/769/776/777/781 and 880 Series (4 mm<sup>2</sup>/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.

## Marking



Labeling via WMB Multi Marking System.