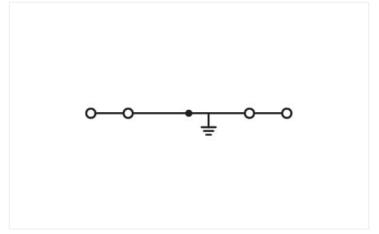
4-conductor ground terminal block; 1.5 mm<sup>2</sup>; suitable for Ex e II applications; center marking; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP<sup>®</sup>; 1,50 mm<sup>2</sup>; green-yellow



https://www.wago.com/279-837/999-950





Color: green-yellow

Similar to illustration

Similar to illustration

# Ground terminal block, 279 Series, CAGE CLAMP®

Our ground terminal block (item number 279-837/999-950) ensures effortless electrical installations. Our ground terminal blocks create a direct connection between the mounting rail and the electrical conductors thanks to an integrated mounting foot. This connection ensures both electrical and mechanical stability between the conductors and the mounting adapter. Conductors can only be connected to this ground terminal block if their strip length is between 8 mm and 9 mm. This product incorporates conductor terminals and utilizes CAGE CLAMP®. Our tried-and-tested universal connection known as CAGE CLAMP® is the industry standard when it comes to connection technology and electrical interconnections. Depending on the type of conductor, this ground terminal block is ideal for conductor cross sections ranging from 0.08 mm² to 1.5 mm². It features one level and four clamping points that you can use to connect a single potential. The green-yellow 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 makes it possible to connect copper 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	-	-	-

Ex information  Reference hazardous areas  See application instructions in section "Knowledge and Downloads – Documentation – Additional Information: Technical Section; Technical Explications"		
"Knowledge and Downloads – Documentation – Additio- nal Information: Technical Section; Tech-	Ex information	
	Reference hazardous areas	"Knowledge and Downloads – Documentation – Additio- nal Information: Technical Section; Tech-

Connection data		
Clamping units	4	
Total number of potentials	1	
Number of levels	1	

Connection 1	
Connection technology	CAGE CLAMP®
Actuation type	Operating tool
Connectable conductor materials	Copper
Solid conductor	0.08 1.5 mm² / 28 16 AWG
Fine-stranded conductor	0.08 1.5 mm² / 28 16 AWG
Strip length	8 9 mm / 0.31 0.35 inches
Wiring direction	Front-entry wiring

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# Physical data

 Width
 4 mm / 0.157 inches

 Height
 73 mm / 2.874 inches

 Depth from upper-edge of DIN-rail
 27 mm / 1.063 inches

# Mechanical data

Designhorizontal typeMounting typeDIN-35 railMarking levelCenter marking

# Material data

Note (material data)

<u>Information on material specifications can be found here</u>

Color green-yellow

Material group

Insulation material (main housing) Polyamide (PA66)

Flammability class per UL94 V0
Fire load 0.104 MJ
Weight 9.9 g

## **Environmental requirements**

Processing temperature  $-35 \dots +85 \, ^{\circ} \text{C}$ Continuous operating temperature  $-60 \dots +105 \, ^{\circ} \text{C}$ 

# Commercial data

27-14-11-41 eCl@ss 10.0 27-14-11-41 eCl@ss 9.0 ETIM 9.0 EC000901 **ETIM 8.0** EC000901 PU (SPU) 100 pcs Box Packaging type DE Country of origin **GTIN** 4045454085292 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) c4f4bfb9-cac3-42dc-b8aa-4352fc04cd1d SCIP notification number (Belgium) a7f7cd94-79d6-4596-a855-5e8b0a7e8ca3 SCIP notification number (Bulgaria) 5653eb6a-be9b-413a-aaf2-bae3870d3c08 SCIP notification number (Czech Republic) d33bb93f-fe69-45a6-9d96-e5d1db6a8dd5 SCIP notification number (Denmark) 01c95445-ea37-4866-ab4f-ee6c0a661ca4 SCIP notification number (Finland) 52d99afa-d61a-4ed9-bb91-fa395f3ca502 SCIP notification number (France) db12bb3b-cc21-452f-bf90-f25a88232d28 SCIP notification number (Germany) bb67b546-4333-4636-8677-8c0e9c5d7af6 SCIP notification number (Hungary) f7afce40-d85f-4342-b85f-d4114871bf72 d11b5a47-47e2-4163-a6f6-a46d36546b80 SCIP notification number (Italy) SCIP notification number (Netherlands) ef7ff010-39h6-40aa-ba53-3fdfa9cdd90e SCIP notification number (Poland) 87cbf62f-2a30-4f9d-af89-ac48e1409b4a SCIP notification number (Romania) 102fabe7-fb9a-44ec-ae63-82daf7d963d2 eb551d1c-a798-4ec0-8222-859118eceh6a SCIP notification number (Sweden)

https://www.wago.com/279-837/999-950



# Approvals / Certificates

# Declarations of conformity and manufacturer's declarations

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

Downloads		
Environmental Product Compliance		
Compliance Search		
Environmental Product Compliance 279-837/999-950	$\perp$	



CAD/CAE-Data	
CAD data	CAE data
2D/3D Models 279-837/999-950	EPLAN Data Portal 279-837/999-950
	WSCAD Universe 279-837/999-950
	ZUKEN Portal 279-837/999-950

https://www.wago.com/279-837/999-950



# 1 Compatible Products

## 1.1 Required Accessories

# 1.1.1 End plate

# 1.1.1.1 End plate

. .

Item No.: 279-348

End and intermediate plate; 2 mm thick; light gray

Item No.: 209-191
Separator for Ex e/Ex i applications; 3 mm thick; 120 mm wide; orange

Item No.: 279-349
Separator plate: 2 mm th

Separator plate; 2 mm thick; oversized; light gray

# 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



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 Ferrule

# 1.2.2.1 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 mm<sup>2</sup> / 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; uninsulated; electro-tin plated; silver-colored



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; uninsulated; electro-tin plated

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## 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 DINrail 35 x 15 and 35 x 7.5; gray

# 1.2.4 Insulation stop

# 1.2.4.1 Insulation stop





# Item No.: 279-470

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.: 279-471

Insulation stop; 0.25 mm²; 5 pieces/strip; dark gray

# 1.2.5 Jumper

# 1.2.5.1 Jumper

Item No.: 279-490



Jumper; 10-way; insulated; gray



<u>Item No.: 279-482</u> Jumper; 2-way; insulated; gray





<u>Item No.: 279-492</u> Jumper; 2-way; insulated; gray



Item No.: 279-483

Jumper; 3-way; insulated; gray

Item No.: 279-402
Jumper; insulated; gray

Item No.: 279-409

Jumper; insulated; gray

Item No.: 279-422

Jumper; insulated; yellow-green

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# 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.: 209-141

Group marker carrier; gray



Item No.: 209-142 Group marker carrier; gray

Item No.: 249-105

# 1.2.6.3 Marker

Item No.: 209-140

Group marker carrier; gray





WMB marking card; as card; stretchable 4 - 4.2 mm; plain; snap-on type; blue



WMB marking card; as card; stretchable 4 - 4.2 mm; plain; snap-on type; light green

WMB marking card; as card; stretchable

4 - 4.2 mm; plain; snap-on type; white



Item No.: 793-4501

## Item No.: 793-4501/000-017

4 - 4.2 mm; plain; snap-on type; orange



WMB marking card; as card; stretchable

4 - 4.2 mm; plain; snap-on type; brown

## Item No.: 793-4501/000-012

Item No.: 793-4501/000-014

WMB marking card; as card; stretchable



# Item No.: 793-4501/000-002

WMB marking card; as card; stretchable 4 - 4.2 mm; plain; snap-on type; yellow



# Item No.: 2009-114/000-006

Item No.: 793-4501/000-007

Item No.: 793-4501/000-005

WMB marking card; as card; stretchable

WMB marking card; as card; stretchable

4 - 4.2 mm; plain; snap-on type; red

4 - 4.2 mm; plain; snap-on type; gray

WMB-Inline; for Smart Printer; 2000 pieces on roll; stretchable 4 - 4.2 mm; plain; snap-on type; blue



Item No.: 2009-114/000-005 WMB-Inline; for Smart Printer; 2000 pieces on roll; stretchable 4 - 4.2 mm; plain; snap-on type; red



## Item No.: 793-4501/000-023

Group marker carrier; gray

WMB marking card; as card; stretchable 4 - 4.2 mm; plain; snap-on type; green



## Item No.: 793-4501/000-024

WMB marking card; as card; stretchable 4 - 4.2 mm; plain; snap-on type; violet



# Item No.: 2009-114/000-007

WMB-Inline; for Smart Printer; 2000 pieces on roll; stretchable 4 - 4.2 mm; plain; snap-on type; gray



# Item No.: 2009-114/000-023

WMB-Inline; for Smart Printer; 2000 pieces on roll; stretchable 4 - 4.2 mm; plain; snap-on type; green



# Item No.: 2009-114/000-012

WMB-Inline; for Smart Printer; 2000 pieces on roll; stretchable 4 - 4.2 mm; plain; snap-on type; orange



# Item No.: 2009-114

WMB-Inline; for Smart Printer; 2000 pieces on roll; stretchable 4 - 4.2 mm; plain; snap-on type; white

# Item No.: 2009-114/000-002

WMB-Inline; for Smart Printer; 2000 pieces on roll; stretchable 4 - 4.2 mm; plain; snap-on type; yellow

## Item No.: 2009-114/000-024

WMB-Inline; for Smart Printer; 2000 pieces on roll; stretchable 4 - 4.2 mm; plain; snap-on type; violet

# 1.2.7 Protective warning marker

# 1.2.7.1 Cover



# Item No.: 279-415

Protective warning marker; 5-pole; with high-voltage symbol, black; yellow

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# 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 mm²; 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 Tool

# 1.2.9.1 Operating tool

Item No.: 210-719

Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft

Item No.: 210-648

Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft; angled; short

Item No.: 210-647

Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft; 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.

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# W/AGO

# 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 yellowgreen adjacent jumpers in addition to the required marking of these blocks.



## **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 touchproof, 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



Commoning using comb-style jumper

Push comb-style jumper bars down until fully inserted.

# Marking



Labeling via WMB Multi Marking System.

# Ex application



# Separator plate for Ex e/Ex i applications

According to EN 50020, a minimum distance of 50 mm must be kept between live parts of Ex e and Ex i circuits. The use of Ex e/Ex i separators is a space-saving solution when Ex e and Ex i terminal blocks are mounted on a common DINrail.

For 279 ... 282 Series:

209-190 for 2-conductor terminal blocks 209-191 for 2-, 3-, 4-conductor terminal blocks



# End and intermediate plate

In order to meet creepage and clearance requirements for Ex e applications, it is necessary to insert an end or intermediate plate between a through and a ground conductor terminal block.



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