



Color: light gray



Similar to illustration

### Electrical data

IEC/EN 60947-7-1		
Overvoltage category	III	III
Pollution degree	3	2
Nominal voltage	-	-
Rated surge voltage	-	-
Rated current	-	-

### Ex information

Reference hazardous areas	See "Downloads – Documentation – Additional Information: Technical Section; Technical Explanations"
Rated voltage EN (Ex e II)	750 V
Rated current (Ex e II)	23 A

### Power Loss

Power loss, per pole (potential)	0.7036 W
Rated current $I_N$ for specified power loss	23 A
Resistance value for specified, current-dependent power loss	0.00133 $\Omega$

### Connection data

Connection points	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

## Connection 1

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 <a href="https://www.wago.com/249-130">249-130</a> 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 be 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
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Wiring direction	Front-entry wiring
------------------	--------------------

## Physical data

Width	5 mm / 0.197 inches
Height	77 mm / 3.031 inches
Depth from upper-edge of DIN-rail	43.5 mm / 1.713 inches

## Mechanical data

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

## Material data

Note (material data)	<a href="https://www.wago.com/us/material-specifications">Information on material specifications can be found here</a>
Color	light gray
Material group	I
Insulation material	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.174 MJ
Weight	9.1 g

**Environmental requirements**

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

**Commercial data**

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)	50 pcs
Packaging type	Box
Country of origin	DE
GTIN	4044918544696
Customs tariff number	85369010000

**Environmental Product Compliance**

RoHS Compliance Status	Compliant, No Exemption
------------------------	-------------------------

**Approvals / Certificates****General approvals**

Approval	Standard	Certificate Name
CCA DEKRA Certification B.V.	EN 60947	2157201.01
CSA CSA Group	C22.2	1536074
UR Underwriters Laboratories Inc.	UL 1059	E45172

**Declarations of conformity and manufacturer's declarations**

Approval	Standard	Certificate Name
ATEX-Attestation of Conformity WAGO GmbH & Co. KG	-	-
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
DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAE00001V2

**Approvals for hazardous areas**

Approval	Standard	Certificate Name
AEx UL International Germany GmbH c/o Physikalisch Technische Bundesanstalt	UL 60079	E185892 (AEx e II C resp. Ex e II C)
ATEX Physikalisch Technische Bundesanstalt (PTB)	-	PTB 00 ATEX 3128 U (II 2 G Ex eb IIC Gb bzw. I M 2 Ex eb I Mb)
EAC Brjansker Zertifizierungsstelle	TP TC 012/2011	RU C-DE.AM02. B.00127/19 (Ex e IIC Gb U)

## Downloads

### Environmental Product Compliance

#### Compliance Search

Environmental Product  
Compliance 780-993



## Documentation

### Additional Information

Technical Section

pdf  
2240.62 KB



### Bid Text

780-993

19.02.2019

xml  
3.45 KB



780-993

02.03.2017

doc  
25.00 KB



## CAD/CAE-Data

### CAD data

2D/3D Models 780-993



### CAE data

EPLAN Data Portal  
780-993



WSCAD Universe  
780-993



ZUKEN Portal 780-993



## 1 Compatible Products

### 1.1 Required Accessories

#### 1.1.1 End plate

##### 1.1.1.1 End plate



[Item No.: 780-317](#)

End and intermediate plate; 1.5 mm thick;  
orange

### 1.2 Optional Accessories

#### 1.2.1 DIN-rail

##### 1.2.1.1 Mounting accessories



[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

## 1.2.1.1 Mounting accessories

[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.: 209-192](#)

Separator for Ex e/Ex i applications; 3 mm thick; 125.5 mm wide; orange

## 1.2.3 Ferrule

## 1.2.3.1 Ferrule

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

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

[Item No.: 216-321](#)

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

[Item No.: 216-151](#)

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

[Item No.: 216-131](#)

Ferrule; Sleeve for 0.25 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated; silver-colored

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

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

[Item No.: 216-322](#)

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

[Item No.: 216-132](#)

Ferrule; Sleeve for 0.34 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated

[Item No.: 216-152](#)

Ferrule; Sleeve for 0.34 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated

[Item No.: 216-241](#)

Ferrule; Sleeve for 0.5 mm<sup>2</sup> / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white

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

Ferrule; Sleeve for 0.5 mm<sup>2</sup> / 20 AWG; insulated; electro-tin plated; white

[Item No.: 216-221](#)

Ferrule; Sleeve for 0.5 mm<sup>2</sup> / 20 AWG; insulated; electro-tin plated; white

[Item No.: 216-141](#)

Ferrule; Sleeve for 0.5 mm<sup>2</sup> / 20 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92

[Item No.: 216-101](#)

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

[Item No.: 216-121](#)

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

[Item No.: 216-242](#)

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray

[Item No.: 216-262](#)

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray

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

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

[Item No.: 216-222](#)

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

[Item No.: 216-142](#)

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92

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

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

[Item No.: 216-122](#)

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

[Item No.: 216-243](#)

Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red

[Item No.: 216-263](#)

Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red

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

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

### 1.2.3.1 Ferrule

			
<b>Item No.: 216-223</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; red	<b>Item No.: 216-103</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; uninsulated; electro-tin plated	<b>Item No.: 216-143</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92	<b>Item No.: 216-123</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; uninsulated; electro-tin plated; silver-colored
			
<b>Item No.: 216-204</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; black	<b>Item No.: 216-224</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; black	<b>Item No.: 216-244</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black	<b>Item No.: 216-264</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black
			
<b>Item No.: 216-284</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black	<b>Item No.: 216-124</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; uninsulated; electro-tin plated	<b>Item No.: 216-144</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92; silver-colored	<b>Item No.: 216-104</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; uninsulated; electro-tin plated; silver-colored
			
<b>Item No.: 216-205</b> Ferrule; Sleeve for 2.08 mm <sup>2</sup> / AWG 14; insulated; electro-tin plated; yellow	<b>Item No.: 216-206</b> Ferrule; Sleeve for 2.5 mm <sup>2</sup> / AWG 14; insulated; electro-tin plated; blue	<b>Item No.: 216-246</b> Ferrule; Sleeve for 2.5 mm <sup>2</sup> / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue	<b>Item No.: 216-266</b> Ferrule; Sleeve for 2.5 mm <sup>2</sup> / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue
			
<b>Item No.: 216-286</b> Ferrule; Sleeve for 2.5 mm <sup>2</sup> / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue	<b>Item No.: 216-106</b> Ferrule; Sleeve for 2.5 mm <sup>2</sup> / AWG 14; uninsulated; electro-tin plated; silver-colored		

### 1.2.4 Installation

#### 1.2.4.1 Cover


<b>Item No.: 709-154</b> Cover; Type 2; suitable for cover carrier, type 2; 1 m long; transparent

#### 1.2.4.2 Cover carrier


<b>Item No.: 709-168</b> Cover carrier; Type 2; incl. fixing/retaining screws and knurled nut; suitable for 283 to 285 Series rail-mounted terminal blocks; suitable for 279 to 281 Series double- and triple-deck terminal blocks; suitable for 780 to 785, 775, 776 and 777 Series TOP-JOB® rail-mounted terminal blocks; suitable for 280 Series sensor and actuator terminal blocks; suitable for 282 Series disconnect/test terminal blocks for transformer circuits; 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 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

### 1.2.6 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.: 280-402

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

### 1.2.7 Marking

#### 1.2.7.1 Group marker carrier



#### Item No.: 249-105

Group marker carrier; gray

### 1.2.7.2 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

## 1.2.7.2 Marker

[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

## 1.2.8 Protective warning marker

## 1.2.8.1 Cover

[Item No.: 280-415](#)

Protective warning marker; for 5 terminal blocks; with high-voltage symbol; black; yellow

## 1.2.9 Tool

## 1.2.9.1 Operating tool

[Item No.: 210-720](#)

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

[Item No.: 777-310](#)

Operating tool; Specially designed blade; for TOPJOB® Terminal Blocks; orange

## Installation Notes

### Installation



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

Removing a terminal block from the assembly.

## Conductor termination



### Insulation stop

Prevents the conductor insulation from being pushed into the clamping unit. (Available for terminal blocks up to 4 mm<sup>2</sup>/12 AWG)

## 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.

## Commoning



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