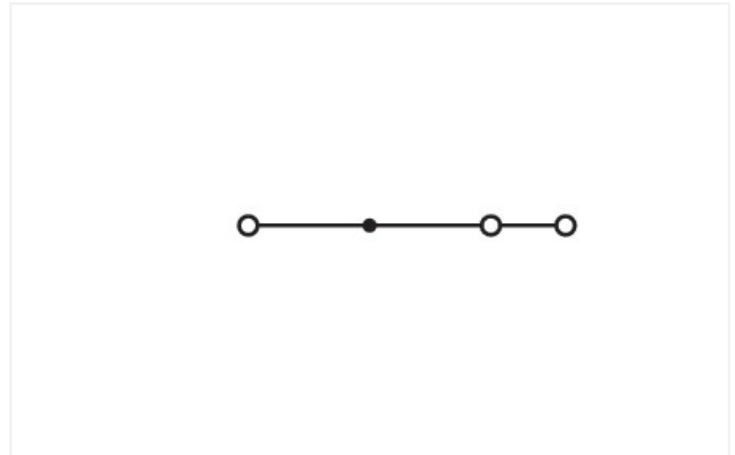


## Data Sheet | Item Number: 781-993

3-conductor through terminal block; 4 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®; 4,00 mm<sup>2</sup>; light gray

<https://www.wago.com/781-993>



Color: ■ light gray

Similar to illustration

Similar to illustration

Through terminal block, 781 Series, light gray

Our through terminal block (item number 781-993) ensures effortless electrical installations. Conductors should only be connected to this through terminal block if their strip length is between 9 and 10 mm. This product incorporates conductor terminals and utilizes CAGE CLAMP®. Our CAGE CLAMP® connection provides a reliable and maintenance-free way to connect all types of conductors. You do not need to prepare the conductor in any way, such as crimping ferrules. Depending on the type of conductor, this through terminal block is ideal for conductor cross sections ranging from 0.08 mm<sup>2</sup> to 4 mm<sup>2</sup>.

### Electrical data

Ratings per	IEC/EN 60947-7-1		
Overtoltage category	III	III	II
Pollution degree	3	2	2
Nominal voltage	-	-	-
Rated impulse withstand voltage	-	-	-
Rated current	-	-	-

### Ex information

Reference to hazardous areas	See "Downloads – Documentation – Additional Information: Technical Section; Technical Explanations"
Rated voltage EN (Ex e II)	750 V
Rated current (Ex e II)	27 A

### Power Loss

Power loss, per pole (potential)	0.729 W
Rated current I <sub>N</sub> for power loss specification	27 A
Resistance value for specified, current-dependent power loss	0.001 Ω

### General information

Wiring direction	Front-entry wiring
------------------	--------------------

### 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
Solid conductor	0.08 ... 4 mm <sup>2</sup> / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 4 mm <sup>2</sup> / 28 ... 12 AWG

### Connection 1

Strip length 9 ... 10 mm / 0.35 ... 0.39 inches

Wiring direction Front-entry wiring

### Physical data

Width 6 mm / 0.236 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) [Information on material specifications can be found here](#)

Color light gray

Material group I

Insulation material (main housing) Polyamide (PA66)

Flammability class per UL94 V0

Fire load 0.211 MJ

Weight 11.5 g

### Environmental requirements

Processing temperature -35 ... +85 °C

Continuous operating temperature -60 ... +105 °C

### Commercial data

PU (SPU) 50 pcs

Packaging type Box

Country of origin DE

GTIN 4044918501309

Customs tariff number 85369010000

### Product Classification

UNSPSC 39121410

eCl@ss 10.0 27-14-11-20

eCl@ss 9.0 27-14-11-20

ETIM 9.0 EC000897

ETIM 10.0 EC000897

ECCN NO US CLASSIFICATION

**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
KEMA/KEUR DEKRA Certification B.V.	EN 60947	71-107288
UR Underwriters Laboratories Inc.	UL 1059	E45172

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	-	24-0152298-PDA
DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAE00001V2
PRS Polski Rejestr Statków	-	TE/1094/880590/23

**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 3129 U (II 2 G Ex eb IIC Gb bzw. I M Ex eb I Mb)
CCC CNEX	GB/T 3836.3	2020312313000253 (Ex eb IIC Gb, Ex eb I Mb)

**Downloads**

**Environmental Product Compliance**

<b>Compliance Search</b>	
Environmental Product Compliance 781-993	<a href="#">↓</a>

**Documentation**

Bid Text			
781-993	19.02.2019	xml 3.41 KB	<a href="#">↓</a>
781-993	02.03.2017	doc 25.00 KB	<a href="#">↓</a>

CAD/CAE-Data

CAD data

2D/3D Models 781-993



CAE data

EPLAN Data Portal  
781-993



WSCAD Universe  
781-993



ZUKEN Portal 781-993



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.: 210-196**

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 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 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.: 216-131**

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



**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.: 216-141**

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.: 216-242**

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.: 216-142**

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.: 216-243**

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.: 216-143**

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



**Item No.: 216-244**

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



**Item No.: 216-264**

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



**Item No.: 216-284**

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



**Item No.: 216-144**

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



**Item No.: 216-246**

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



**Item No.: 216-266**

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



**Item No.: 216-286**

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



**Item No.: 216-106**

Ferrule; Sleeve for 2.5 mm<sup>2</sup> / AWG 14; uninsulated; electro-tin plated; silver-colored



**Item No.: 216-267**

Ferrule; Sleeve for 4 mm<sup>2</sup> / AWG 12; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray



**Item No.: 216-287**

Ferrule; Sleeve for 4 mm<sup>2</sup> / AWG 12; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray



**Item No.: 216-207**

Ferrule; Sleeve for 4 mm<sup>2</sup> / AWG 12; insulated; electro-tin plated; gray



**Item No.: 216-107**

Ferrule; Sleeve for 4 mm<sup>2</sup> / AWG 12; uninsulated; electro-tin plated

## 1.2.4 Installation

### 1.2.4.1 Cover



**Item No.: 709-154**

Cover; Type 2; suitable for cover carrier, type 2; 1 m long; transparent

### 1.2.4.2 Cover carrier



**Item No.: 709-168**

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

## 1.2.5 Insulation stop

### 1.2.5.1 Insulation stop



**Item No.: 281-470**

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.: 281-471**

Insulation stop; 0.25 - 0.5 mm<sup>2</sup>; 5 pieces/strip; light gray



**Item No.: 281-472**

Insulation stop; 0.75 - 1.5 mm<sup>2</sup>; 5 pieces/strip; dark gray

## 1.2.6 Jumper

### 1.2.6.1 Jumper



**Item No.: 281-490**

Jumper; 10-way; insulated; gray



**Item No.: 281-482**

Jumper; 2-way; insulated; gray



**Item No.: 281-492**

Jumper; 2-way; insulated; gray



**Item No.: 281-483**

Jumper; 3-way; insulated; gray



**Item No.: 281-485**

Jumper; 5-way; insulated; gray



**Item No.: 281-402**

Jumper; insulated; gray



**Item No.: 281-409**

Jumper; insulated; gray



**Item No.: 281-422**

Jumper; insulated; yellow-green



**Item No.: 781-452**

Staggered jumper; from 1 to 2; insulated; gray



**Item No.: 781-453**

Staggered jumper; from 1 to 3; insulated; gray



**Item No.: 781-454**

Staggered jumper; from 1 to 4; insulated; gray



**Item No.: 781-455**

Staggered jumper; from 1 to 5; insulated; gray

1.2.6.1 Jumper



**Item No.: 781-456**  
Staggered jumper; from 1 to 6; 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



**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.: 281-415**

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

## 1.2.9 Push-in type wire jumper

### 1.2.9.1 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

## 1.2.10 Tool

### 1.2.10.1 Operating tool



**Item No.: 210-720**

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

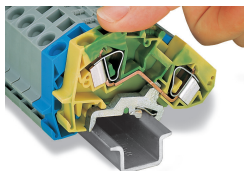


**Item No.: 777-310**

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.

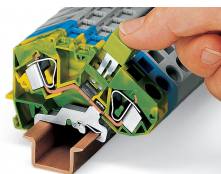
## Conductor termination



**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!