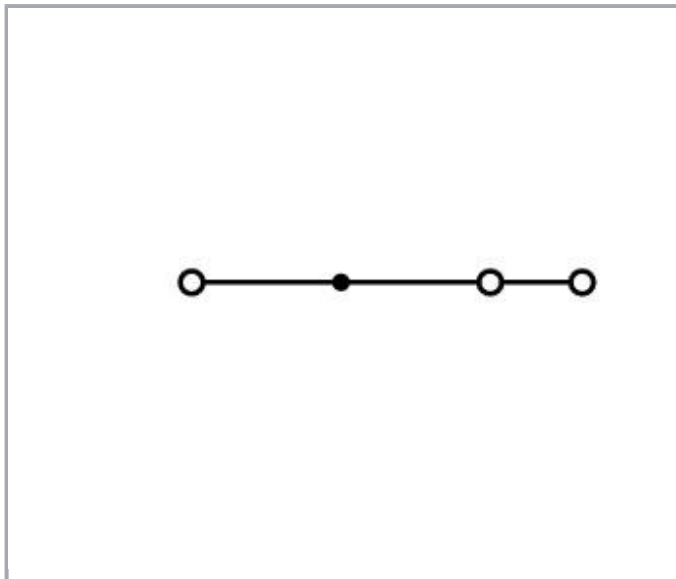
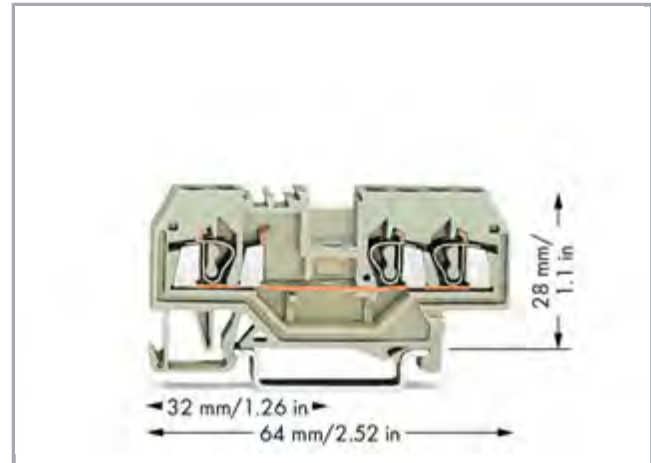
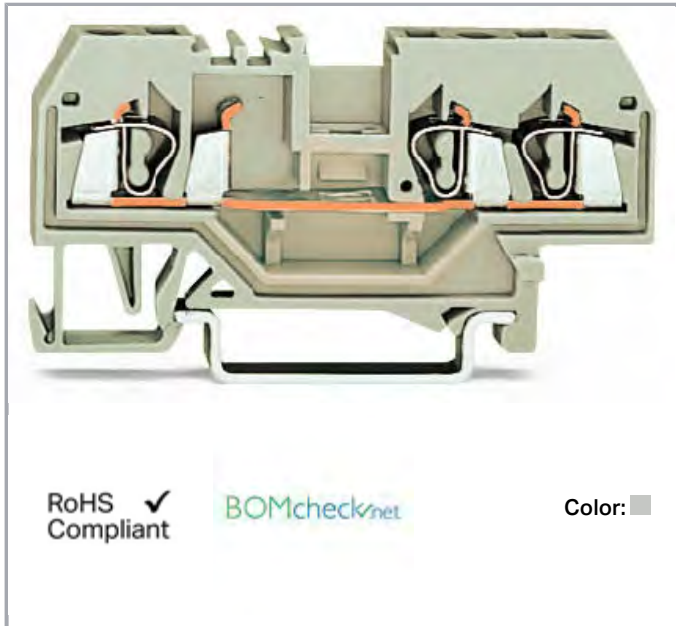


Data sheet | Item number: 280-993

3-conductor through terminal block; 2.5 mm²; suitable for Ex e II applications; center marking; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP®; 2,50 mm²; light gray



Item description

Note:
Terminating Aluminum Conductors

Subject to changes. Please also observe the further product documentation!



WAGO spring clamp terminal blocks are suitable for solid aluminum conductors up to 4 mm²/12 AWG if WAGO "Alu-Plus" Contact Paste 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 mm² = 16 A

4 mm² = 22 A

Safety information 1:

Using staggered jumpers reduces the maximum rated voltage to 275 V.

Data

Electrical data

Ratings per IEC/EN 60664-1

Ratings per	IEC/EN 60947-7-1
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Approvals Ex

Rated voltage EN (Ex e II)	550 V
Rated current (Ex e II)	22 A

Connection data

Connection technology	CAGE CLAMP®
Actuation type	Operating tool
Connectable conductor materials	Copper Aluminum
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Subject to changes. Please also observe the further product documentation!



Total number of connection points	3
Total number of potentials	1
Number of levels	1
Wiring type	Front-entry wiring
Note (conductor cross-section)	12 AWG: THHN, THWN

Geometrical Data

Width	5 mm / 0.197 inch
Height from upper-edge of DIN-rail	28 mm / 1.102 inch
Depth	64 mm / 2.52 inch

Mechanical data

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

Material Data

Color	light gray
Insulation material	Polyamide 66 (PA66)
Fire load	0.123 MJ
Weight	7.6 g

Commercial data

Packaging type	BOX
Country of origin	DE
GTIN	4044918391474
Customs tariff number	85369010000

Approvals / Certificates

Ex-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	AEx	UL 60079	E185892 sec.1
	UL International Germany GmbH c/o Physikalisch Technische Bundesanstalt		
	ATEX	EN 60079	PTB 99

Subject to changes. Please also observe the further product documentation!



Physikalisch Technische Bundesanstalt (PTB)

ATEX
3109 U

Country specific Approvals

Logo	Approval	Additional Approval Text	Certificate name
	CCA DEKRA Certification B.V.	EN 60947	2157201.01
	CSA DEKRA Certification B.V.	C22.2	1536071
	EAC Brjansker Zertifizierungsstelle	TP TC 012/2011	RU C-DE. AM02.B. 00127/19

Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
	ABS American Bureau of Shipping	EN 60947	20- HG1941090- PDA
	BV Bureau Veritas S.A.	EN 60947	07436/E0 BV
	DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAE00001V2
	LR Lloyds Register	EN 60947	91/20112 (E9)

UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UL	UL 1059	20170731-

Subject to changes. Please also observe the further product documentation!



Underwriters Laboratories Inc.

E45172

Compatible products

Push-In type wire jumper

**Item no.: 249-123**Push-in type wire jumper; 0.75 mm²; insulated; 180 mm long; black**Item no.: 249-125**

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

**Item no.: 249-126**Push-in type wire jumper; 0.75 mm²; insulated; 110 mm long; black**Item no.: 249-127**Push-in type wire jumper; 0.75 mm²; insulated; 250 mm long; black

Carrier rail

**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

**Item no.: 210-113**

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715

**Item no.: 210-114**

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715

**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

**Item no.: 210-118**

Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715

**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.: 210-197

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715

Subject to changes. Please also observe the further product documentation!

**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.: 210-504**

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715

**Item no.: 210-505**

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; galvanized; according to EN 60715

**Item no.: 210-506**

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715

**Item no.: 210-508**

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; similar to EN 60715

Jumper**Item no.: 280-402**

Jumper; insulated; gray

**Item no.: 280-409**

Jumper; insulated; gray

**Item no.: 280-422**

Jumper; insulated; yellow-green

**Item no.: 280-482**

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.: 280-490**

Jumper; 10-way; insulated; gray

**Item no.: 280-492**

Jumper; 2-way; insulated; gray

**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

Subject to changes. Please also observe the further product documentation!



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

assembling



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



Item no.: 709-153
Cover; Type 1; suitable for cover carrier, type 1; 1 m long; transparent

End plate



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



Item no.: 280-359
Separator plate; 2 mm thick; oversized; light gray

ferrule



Item no.: 216-101
Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated



Item no.: 216-102
Ferrule; Sleeve for 0.75 mm² / AWG 20; uninsulated; electro-tin plated



Item no.: 216-103
Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated



Item no.: 216-104
Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated



Item no.: 216-201
Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white



Item no.: 216-202
Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray



Item no.: 216-203
Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red



Item no.: 216-204
Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black

Subject to changes. Please also observe the further product documentation!

Item no.: 216-301Ferrule; 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; green**tools****Item no.: 210-657**

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

**Item no.: 210-658**

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

**Item no.: 210-720**

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

Marking accessories**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

**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.: 2009-115/000-012**

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange

**Item no.: 2009-115/000-017**

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; light green

**Item no.: 2009-115/000-023**

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green

**Item no.: 2009-115/000-024**

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet

**Item no.: 209-128**

Adaptor; gray

**Item no.: 209-140**

Group marker carrier; gray

Subject to changes. Please also observe the further product documentation!



Item no.: 209-141
Group marker carrier; gray



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



Item no.: 209-185
Adaptor; gray



Item no.: 249-105
Group marker carrier; gray



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.: 793-501/000-005
WMB marking card; as card; not stretchable; plain; snap-on type; red



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.: 793-501/000-012
WMB marking card; as card; not stretchable; plain; snap-on type; orange



Item no.: 793-501/000-017
WMB marking card; as card; not stretchable; plain; snap-on type; light green



Item no.: 793-501/000-023
WMB marking card; as card; not stretchable; plain; snap-on type; green



Item no.: 793-501/000-024
WMB marking card; as card; not stretchable; 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

Subject to changes. Please also observe the further product documentation!

**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.: 793-5501/000-006**

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.: 793-5501/000-012**

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.: 793-5501/000-017**

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.: 793-5501/000-023**

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.: 793-5501/000-024**

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; violet

Protective Warning Marker

**Item no.: 280-415**

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

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

Downloads

Documentation

Bid Text

280-993

doc - Datei

280-993

Subject to changes. Please also observe the further product documentation!



280-993

GAEB X81 - Datei

Additional Information

Technical explanations

CAD/CAE-Data

CAD data

2D/3D Models 280-993

CAE data

EPLAN Data Portal 280-993

WSCAD Universe 280-993

ZUKEN Portal 280-993

Installation Notes

Installation

Subject to changes. Please also observe the further product documentation!



Separator for Ex e/Ex i applications



End and intermediate plate

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 carrier rail.

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.

Compatible with 279 to 282 Series:

209-190 for 2-conductor terminal blocks

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

Subject to changes. Please also observe the further product documentation!