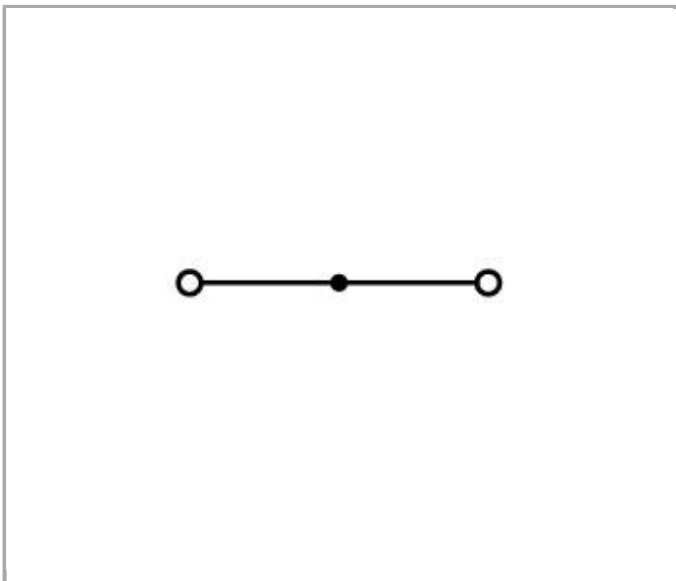
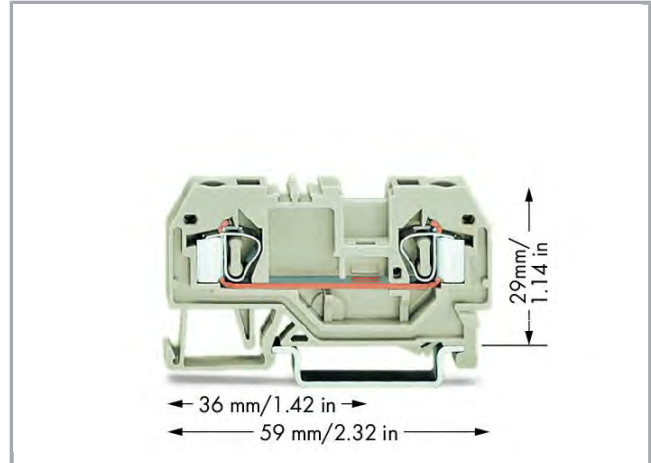
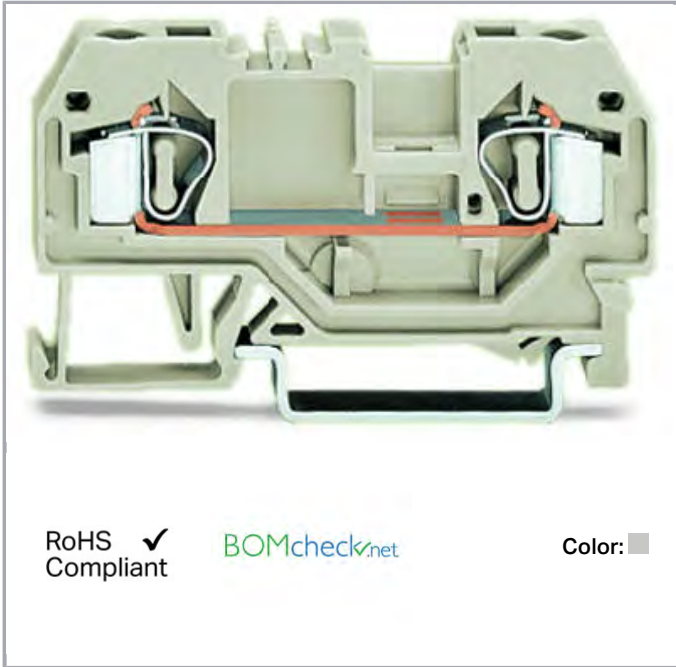


Data sheet | Item number: 281-992

2-conductor through terminal block; 4 mm²; suitable for Ex e II applications;
center marking; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP®; 4,00 mm²;
light gray



Item description

Note:

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



Terminating Aluminum Conductors

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 (14 AWG) = 16 A

4 mm² (12 AWG) = 22 A

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)	30 A

Connection data

Connection technology	CAGE CLAMP®
Actuation type	Operating tool
Connectable conductor materials	Copper Aluminum
Solid conductor	0,08 ... 4 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0,08 ... 4 mm ² / 28 ... 12 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Total number of connection points	2

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

Total number of potentials	1
Number of levels	1
Wiring type	Front-entry wiring

Geometrical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	29 mm / 1.142 inch
Depth	59 mm / 2.323 inch

Mechanical data

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

Material Data

Color	light gray
Insulation material	Polyamide 66 (PA 66)
Fire load	0.141 MJ
Weight	7.8 g

Commercial data

Packaging type	BOX
Country of origin	DE
GTIN	4044918485180
Customs tariff number	85369010000

Approvals / Certificates

Ex-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	ATEX Physikalisch Technische Bundesanstalt (PTB)	-	PTB 00 ATEX 3110 U (II 2 G EEx e II)

Country specific Approvals

Certificate

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

Logo	Approval	Additional Approval Text	name
	CCA DEKRA Certification B.V.	EN 60947, IEC 60947	NTR NL-7454/A1
	CSA DEKRA Certification B.V.	C22.2 No. 158	1505034
	KEMA/KEUR DEKRA Certification B.V.	EN 60947	71-107288

Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
	ABS American Bureau of Shipping	-	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
	UR Underwriters Laboratories Inc.	UL 1059	E45172

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

Counterpart

Compatible products

Jumper



Item no.: 249-123

Push-in type wire jumper; insulated; wire length 180 mm; Conductor cross section 0.75 mm²



Item no.: 249-125

Push-in type wire jumper; insulated; wire length 60 mm; Conductor cross section 0.75 mm²



Item no.: 249-126

Push-in type wire jumper; insulated; wire length 110 mm; Conductor cross section 0.75 mm²



Item no.: 249-127

Push-in type wire jumper; insulated; wire length 250 mm; Conductor cross section 0.75 mm²



Item no.: 281-402

Adjacent jumper; insulated; IN = IN terminal block; gray



Item no.: 281-409

Alternate jumper; insulated; IN = IN terminal block; gray



Item no.: 281-422

Adjacent jumper; insulated; IN = IN terminal block; yellow-green



Item no.: 281-482

Comb-style jumper bar; insulated; 2-way; IN = IN terminal block; gray



Item no.: 281-483

Comb-style jumper bar; insulated; 3-way; IN = IN terminal block; gray



Item no.: 281-485

Comb-style jumper bar; insulated; 5-way; IN = IN terminal block; gray



Item no.: 281-490

Comb-style jumper bar; insulated; 10-way; IN = IN terminal block; gray



Item no.: 281-492

Alternate comb-style jumper bar; insulated; 2-way; IN = IN terminal block; gray



Item no.: 709-110

Wire commoning chain; insulated; 4 connections; 3 x 110 mm; black

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



Item no.: 709-111
Wire commoning chain; insulated; 3 connections; 2 x 120 mm; black



Item no.: 709-112
Wire commoning chain; insulated; 3 connections; 2 x 170 mm; black



Item no.: 781-452
Staggered jumper; insulated; from 1 to 2; Spacing: 6 mm; gray



Item no.: 781-453
Staggered jumper; insulated; from 1 to 3; Spacing: 6 mm; gray



Item no.: 781-454
Staggered jumper; insulated; from 1 to 4; Spacing: 6 mm; gray



Item no.: 781-455
Staggered jumper; insulated; from 1 to 5; Spacing: 6 mm; gray



Item no.: 781-456
Staggered jumper; insulated; from 1 to 6; Spacing: 6 mm; gray

Protective Warning Marker



Item no.: 281-415
Protective warning marker; with high-voltage symbol, black; for 5 terminal blocks; yellow

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

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



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.: 209-140

Group marker carrier; gray



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

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


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.: 793-5501/000-005

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

assembling

Item no.: 209-106

Mounting carrier; for isolated mounting on DIN 35 rails; gray


Item no.: 709-153

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

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

End plate

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



Item no.: 209-190
Separator for Ex e/Ex i applications; 3 mm thick; 90 mm wide; orange



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



Item no.: 209-192
Separator for Ex e/Ex i applications; 3 mm thick; 125.5 mm wide; orange



Item no.: 281-349
End and intermediate plate; 2.5 mm thick; light gray

ferrule



Item no.: 216-106
Ferrule; Sleeve for 2.5 mm² / AWG 14; 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



Item no.: 216-205
Ferrule; Sleeve for 2.08 mm² / AWG 14; insulated; electro-tin plated; yellow



Item no.: 216-206
Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; blue



Item no.: 216-241
Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white



Item no.: 216-242
Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray



Item no.: 216-243
Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red



Item no.: 216-244
Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black



Item no.: 216-246
Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue

Item no.: 216-301
Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow

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


Item no.: 216-302

Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; green

Insulation stop

Item no.: 281-470

Insulation stop; 0.08 - 0.2 mm² "s" (0.14 mm² "f-st"); 5 pieces/strip; white


Item no.: 281-471

Insulation stop; 0.25 - 0.5 mm²; 5 pieces/strip; light gray


Item no.: 281-472

Insulation stop; 0.75 - 1.5 mm²; 5 pieces/strip; dark gray

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


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

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



Downloads

Documentation

Additional Information

Technical explanations

Apr 3, 2019

CAD/CAE-Data

CAD data

2D/3D Models 281-992

CAE data

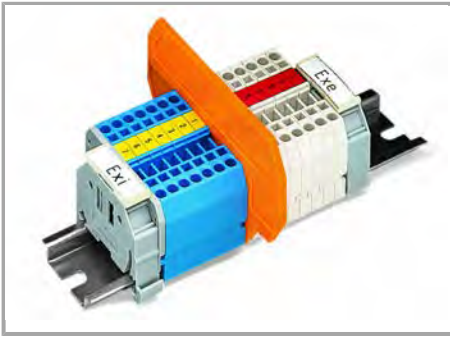
EPLAN Data Portal 281-992

WSCAD Universe 281-992

Installation Notes

Assembly

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



Separator 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 carrier rail.

Compatible with 279 to 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.

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