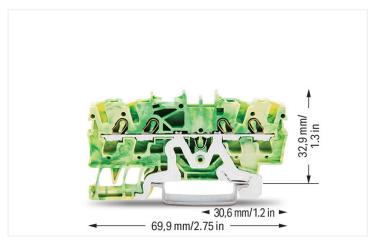
4-conductor ground terminal block; 2.5 mm<sup>2</sup>; suitable for Ex e II applications; side and center marking; for DIN-rail 35 x 15 and 35 x 7.5; Push-in CAGE CLAMP®; 2,50 mm<sup>2</sup>; green-yellow

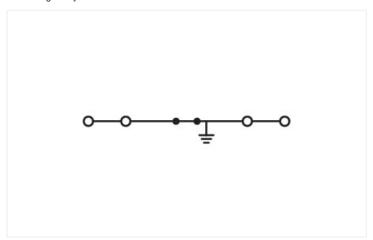


https://www.wago.com/2002-1407





Color: green-yellow



Similar to illustration

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 "Downloads – Documentation – Additional Information: Technical Section; Technical Explications"

Connection data		
Clamping units	4	
Total number of potentials	1	
Number of levels	1	
Number of jumper slots	2	

Connection 1	
Connection technology	Push-in CAGE CLAMP®
Actuation type	Operating tool
Connectable conductor materials	Copper
Nominal cross-section	2.5 mm <sup>2</sup>
Solid conductor	0.25 4 mm² / 22 12 AWG
Solid conductor; push-in termination	0.75 4 mm² / 18 12 AWG
Fine-stranded conductor	0.25 4 mm² / 22 12 AWG
Fine-stranded conductor; with insulated ferrule	0.25 2.5 mm <sup>2</sup> / 22 14 AWG

https://www.wago.com/2002-1407

Mechanical data



 Connection 1

 Fine-stranded conductor; with ferrule; push-in termination
 1 ... 2.5 mm² / 18 ... 14 AWG

 Note (conductor cross-section)
 Depending on the conductor characteristic, a conductor with a smaller cross-section can also be inserted via push-in termination.

 Strip length
 10 ... 12 mm / 0.39 ... 0.47 inches

 Wiring direction
 Front-entry wiring

Physical data	
Width	5.2 mm / 0.205 inches
Height	69.9 mm / 2.752 inches
Depth from upper-edge of DIN-rail	32.9 mm / 1.295 inches

Wiconamour data		
Mounting type	DIN-35 rail	
Marking level	Center/side marking	
Material data		

Material data	
Note (material data)	Information on material specifications can be found here
Color	green-yellow
Material group	1
Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	VO
Fire load	0.152 MJ
Weight	10.4 g

Environmental requirements			
Processing temperature	-35 +85 ℃	<b>Environmental Testing (Environme</b>	ntal Conditions)
Continuous operating temperature -60 +105 °C	Test specification Railway applications – Rolling stock – Electronic equipment	DIN EN 50155 (VDE 0115-200):2022-06	
	Test procedure Railway applications – Rolling stock equipment – Shock and vibration tests	DIN EN 61373 (VDE 0115-0106):2011-04	
	Spectrum/Installation location	Service life test, Category 1, Class A/B	
	Function test with noise-like vibration	Test passed according to Section 8 of the standard	
		Frequency	$f_1 = 5 \text{ Hz to } f_2 = 150 \text{ Hz}$ $f_1 = 5 \text{ Hz to } f_2 = 150 \text{ Hz}$
	Acceleration	0.101g (highest test level used for all axes)     0.572g (highest test level used for all axes)     5g (highest test level used for all axes)	
		Test duration per axis	10 min. 5 h
	Test directions	X, Y and Z axes X, Y and Z axes X, Y and Z axes	
	Monitoring for contact faults/interruptions	Passed	
	Voltage drop measurement before and after each axis	Passed	

https://www.wago.com/2002-1407



Environmental Testing (Environmental Conditions)		
Simulated service life test through increased levels of noise-like vibration	Test passed according to Section 9 of the standard	
Extended test scope: Monitoring for contact faults/interruptions	Passed Passed	
Extended test scope: Voltage drop measurement before and after each axis	Passed Passed	
Shock test	Test passed according to Section 10 of the standard	
Shock form	Half sine	
Shock duration	30 ms	
Number of shocks per axis	3 pos. und 3 neg.	
Vibration and shock stress for rolling stock equipment	Passed	

Commercial data	
Product Group	22 (TOPJOB S)
eCl@ss 10.0	27-14-11-41
eCl@ss 9.0	27-14-11-41
ETIM 9.0	EC000901
ETIM 8.0	EC000901
PU (SPU)	100 pcs
Packaging type	Box
Country of origin	DE
GTIN	4017332999311
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	NTR NL 7941
CSA DEKRA Certification B.V.	C22.2 No. 158	1536069
KEMA/KEUR DEKRA Certification B.V.	EN 60947	71-124163
UL 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	-	-
Railway WAGO GmbH & Co. KG	-	Railway Ready
UK-Declaration of Conformity WAGO GmbH & Co. KG	-	-

https://www.wago.com/2002-1407



# Approvals for marine applications







Approval	Standard	Certificate Name
ABS American Bureau of Ship- ping	EN 60947	20-HG1941090-PDA
BV Bureau Veritas S.A.	EN 60947	38586/B0 BV
DNV GL Det Norske Veritas, Ger- manischer Lloyd	-	TAE00001V2

# Approvals for hazardous areas





ERE Ex IECEX

Approval	Standard	Certificate Name
AEx Underwriters Laboratories Inc.	UL 60079	E185892 (AEx eb IIC resp. Ex eb IIC)
ATEX Physikalisch Technische Bundesanstalt	EN 60079	PTB 03 ATEX 1162 U (II2G Ex eb IIC Gb, IM2 Ex eb IMb)
CCC CNEX	GB/T 3836.3	2020312313000238 (Ex eb IIC Gb, Ex eb I Mb)
EAC Brjansker Zertifizierungs- stelle	TP TC 012/2011	RU C-DE.AM02. B.00127/19 (Ex e IIC Gb U)
IECEx Physikalisch Technische Bundesanstalt	IEC 60079	IECEx PTB 03.0004U (Ex eb IIC Gb or Ex eb I Mb)
INMETRO TÜV Rheinland do Brasil Ltda.	IEC 60079	TÜV 12.1307 U

# Downloads **Environmental Product Compliance** Compliance Search Environmental Product Compliance 2002-1407

Documentation						
Additional Information			Bid Text			
Technical Section	pdf 2246.92 KB	$\underline{\downarrow}$	2002-1407	29.04.2019	xml 3.80 KB	$\underline{\downarrow}$
			2002-1407	23.04.2019	docx 14.61 KB	$\underline{\downarrow}$

CAD/CAE-Data	
CAD data	CAE data
2D/3D Models 2002-1407	EPLAN Data Portal 2002-1407
	WSCAD Universe 2002-1407
	ZUKEN Portal 2002-1407



# 1 Compatible Products

#### 1.1 Required Accessories

# 1.1.1 End plate

# 1.1.1.1 End plate

Item No.: 2002-1491

arav



End and intermediate plate; 0.8 mm thick;

Item No.: 2002-1492

End and intermediate plate; 0.8 mm thick; orange



Item No.: 209-191

Separator for Ex e/Ex i applications; 3 mm thick; 120 mm wide; orange

# 1.2 Optional Accessories

# 1.2.1 DIN-rail

#### 1.2.1.1 Mounting accessories



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



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



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



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



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.: 2002-1493

Seperator plate; 2 mm thick; oversized; gray

Item No.: 2002-1494

Seperator plate; 2 mm thick; oversized; orange

# 1.2.3 Ferrule

# 1.2.3.1 Ferrule



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

# <u>Item No.: 216-242</u>

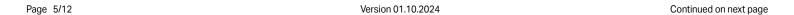
Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray

# Item No.: 216-262

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



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# 1.2.3.1 Ferrule

# Item No.: 216-263

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.: 216-264

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 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 mm² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue

#### 1.2.4 Installation

#### 1.2.4.1 Cover



### Item No.: 709-156

Cover; Type 3; suitable for cover carrier, type 3; 1 m long; transparent

#### 1.2.4.2 Cover carrier



## Item No.: 709-169

Cover carrier; Type 3; 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

# 1.2.5 Insulation stop

# 1.2.5.1 Insulation stop





# Item No.: 2002-171

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

# Item No.: 2002-172

Insulation stop; 0.75 - 1 mm<sup>2</sup>; 5 pieces/ strip; dark gray

# 1.2.6 Jumper

# 1.2.6.1 Jumper



# Item No.: 2002-400

Continuous jumper; 2-way; insulated; light gray

# A

# Item No.: 2002-423/000-006

Continuous jumper; from 1 to 3; insulated; blue



# Item No.: 2002-423

Continuous jumper; from 1 to 3; insulated; light gray



# Item No.: 2002-423/000-005

Continuous jumper; from 1 to 3; insulated; red



# Item No.: 2002-424/000-006

Continuous jumper; from 1 to 4; insulated; blue

# Item No.: 2002-424

Continuous jumper; from 1 to 4; insulated; light gray



# Item No.: 2002-424/000-005

Continuous jumper; from 1 to 4; insulated; red



Item No.: 2002-406/020-000

Delta jumper; insulated; light gray

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#### 1.2.6.1 Jumper



11111111

Item No.: 2002-410 Jumper; 10-way; insulated; light gray



Item No.: 2002-402/000-006

Jumper; 2-way; insulated; blue



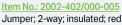
Item No.: 2002-402



Item No.: 2002-403/000-006



Jumper; 2-way; insulated; light gray



Item No.: 2002-410/000-005

Jumper; 10-way; insulated; red

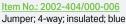
Jumper; 3-way; insulated; blue



Item No.: 2002-403/000-005

Item No.: 2002-410/000-006 Jumper; 10-way; insulated; blue

Jumper; 3-way; insulated; red

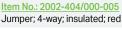


Item No.: 2002-404





Jumper; 4-way; insulated; light gray





Item No.: 2002-405/000-006

Jumper; 5-way; insulated; blue

Item No.: 2002-405

Jumper; 5-way; insulated; light gray

Item No.: 2002-405/000-005

Item No.: 2002-406/000-006



Jumper; 6-way; insulated; light gray

Jumper; 5-way; insulated; red

Jumper; 6-way; insulated; blue



Item No.: 2002-406

Item No.: 2002-406/000-005 Jumper; 6-way; insulated; red Item No.: 2002-407/000-006 Jumper; 7-way; insulated; blue Item No.: 2002-407

Jumper; 7-way; insulated; light gray



Item No.: 2002-407/000-005

Jumper; 7-way; insulated; red



Item No.: 2002-408/000-006 Jumper; 8-way; insulated; blue

Item No.: 2002-408

Jumper; 8-way; insulated; light gray

Item No.: 2002-408/000-005 Jumper; 8-way; insulated; red



Item No.: 2002-409/000-006

Jumper; 9-way; insulated; blue

Item No.: 2002-409

Jumper; 9-way; insulated; light gray

Item No.: 2002-409/000-005

Item No.: 2002-440 Jumper; from 1 to 10; insulated; light gray Jumper; 9-way; insulated; red



Item No.: 2002-433 Jumper; from 1 to 3; insulated; light gray Item No.: 2002-434

Jumper; from 1 to 4; insulated; light gray

Item No.: 2002-435 Jumper; from 1 to 5; insulated; light gray

Item No.: 2002-436

Item No.: 2002-437 Jumper; from 1 to 7; insulated; light gray

Item No.: 2002-438

Item No.: 2002-439

Jumper; from 1 to 6; insulated; light gray

MINISTER SERVE

MIXIDIALA

Jumper; from 1 to 8; insulated; light gray

Jumper; from 1 to 9; insulated; light gray

Item No.: 2002-480

Staggered jumper; 10-way; insulated; light gray



Staggered jumper; 11-way; insulated; light

Item No.: 2002-482

Staggered jumper; 12-way; insulated;

light gray

gray

Item No.: 2002-473/011-000

gray

gray

Item No.: 2002-472 Staggered jumper; 2-way; insulated; light



Item No.: 2002-475/011-000 Staggered jumper; 3-way; insulated; light

sulated; light gray

Item No.: 2002-474

Staggered jumper; 2-way; from 1 to 3; in-

Item No.: 2002-475 Staggered jumper; 5-way; insulated; light



Staggered jumper; 3-way; insulated; light

gray

Item No.: 2002-473

Item No.: 2002-481

gray

Item No.: 2002-479/011-000

Item No.: 2002-477 Staggered jumper; 7-way; insulated; light

Staggered jumper; 4-way; insulated; light gray



Item No.: 2002-476

Staggered jumper; 6-way; insulated; light gray

gray

Item No.: 2002-478

Staggered jumper; 8-way; insulated; light gray

Item No.: 2002-479 Staggered jumper; 9-way; insulated; light gray



Item No.: 2002-477/011-000

Staggered jumper; insulated; light gray

Staggered jumper; insulated; light gray

Item No.: 2002-481/011-000 Staggered jumper; insulated; light gray

Item No.: 2002-405/011-000



Wire commoning chain; insulated; black

Item No.: 210-103

Item No.: 210-123

Wire commoning chain; insulated; blue

Star point jumper; 3-way; insulated; light gray



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#### 1.2.7 Marking

## 1.2.7.1 Group marker carrier



Item No.: 2009-191

Group marker carrier; gray

Item No.: 2009-192

Group marker carrier; gray

Item No.: 2009-193

Group marker carrier; gray

# 1.2.7.2 Marker

#### Item No.: 2009-145/000-006

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; blue

#### Item No.: 2009-145/000-007

Item No.: 2009-145/000-024

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray

Mini-WSB Inline; for Smart Printer; 1700

pieces on roll; stretchable 5 - 5.2 mm;

#### Item No.: 2009-145/000-023

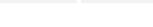
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green

#### Item No.: 2009-145/000-012

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange

# Item No.: 2009-145/000-005

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; red



#### Item No.: 2009-145

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

#### Item No.: 2009-145/000-002

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow



# Item No.: 248-501/000-006

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; blue

# Item No.: 248-501/000-007

plain; snap-on type; violet

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; gray

## Item No.: 248-501/000-023

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; green

# Item No.: 248-501/000-017

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; light green



#### Item No.: 248-501/000-012

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; orange

# Item No.: 248-501/000-005

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; red

# Item No.: 248-501/000-024

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; violet

### Item No.: 248-501

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white



# Item No.: 248-501/000-002

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; yellow

# 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.: 793-5501/000-014

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

# 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.: 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.: 2009-115/000-017

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



WMB-Inline; for Smart Printer; 1500 pie-

### Item No.: 2009-115/000-023 WMB-Inline; for Smart Printer; 1500 pie-

ces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green

### 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.: 2009-115/000-005

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ces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; red

# 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

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# 1.2.7.3 Marker carrier



Item No.: 2002-161
Adaptor; gray

Item No.: 2009-198 Adaptor; gray

# 1.2.7.4 Marking strip



Item No.: 2009-110

Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white

# 1.2.8 Protective warning marker

# 1.2.8.1 Cover



Item No.: 2002-115

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.: 2009-414
Push-in type wire jumper; 1.5 mm²; insulated; 110 mm long; black



Push-in type wire jumper; 1.5 mm²; insulated; 110 mm long; black

Item No.: 2009-416

Push-in type wire jumper; 1.5 mm²; insulated; 250 mm long; black

Item No.: 2009-414/000-006

Push-in type wire jumper; insulated; 110 mm long; black



Item No.: 2009-412

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

# 1.2.10 Screwless end stop

# 1.2.10.1 Mounting accessories





Item No.: 249-117

Screwless end stop; 10 mm wide; for DIN-rail  $35 \times 15$  and  $35 \times 7.5$ ; gray

Item No.: 249-116

Screwless end stop; 6 mm wide; for DINrail 35 x 15 and 35 x 7.5; gray

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#### 1.2.11 Test and measurement

## 1.2.11.1 Testing accessories

#### Item No.: 2002-560

Modular TOPJOB®S connector; modular; for jumper contact slot; 10-pole; 2,50 mm²; gray

### Item No.: 2002-511

Modular TOPJOB®S connector; modular; for jumper contact slot; 1-pole; 2,50 mm²; gray

#### Item No.: 2002-552

Modular TOPJOB®S connector; modular; for jumper contact slot; 2-pole; 2,50 mm²; grav

#### Item No.: 2002-553

Modular TOPJOB®S connector; modular; for jumper contact slot; 3-pole; 2,50 mm²; grav

#### Item No.: 2002-554

Modular TOPJOB®S connector; modular; for jumper contact slot; 4-pole; 2,50 mm²; gray

#### Item No.: 2002-555

Modular TOPJOB®S connector; modular; for jumper contact slot; 5-pole; 2,50 mm²; gray

#### Item No.: 2002-556

Modular TOPJOB®S connector; modular; for jumper contact slot; 6-pole; 2,50 mm²; gray

# Item No.: 2002-557

Modular TOPJOB®S connector; modular; for jumper contact slot; 7-pole; 2,50 mm²; gray

### Item No.: 2002-558

Modular TOPJOB®S connector; modular; for jumper contact slot; 8-pole; 2,50 mm²; gray

### Item No.: 2002-559

Modular TOPJOB®S connector; modular; for jumper contact slot; 9-pole; 2,50 mm²; gray

## Item No.: 2002-549

Spacer module; modular; e.g., for bridging commoned terminal blocks; gray

## Item No.: 2009-174

Test plug adapter; for 4 mm Ø test plugs; for testing TOPJOB®S rail-mounted terminal blocks; gray

## Item No.: 2009-182

Testing tap; for max. 2.5 mm²; tool-free connection for individual test wires 0.08 - 2.5 mm; gray

#### Item No.: 2002-649

TOPJOB®S L-type spacer module; modular; e.g., for bridging commoned terminal blocks; gray

#### Item No.: 2002-611

TOPJOB®S L-type test plug module; modular; 1-pole; 2,50 mm²; gray

# 1.2.12 Tool

# 1.2.12.1 Operating tool

## Item No.: 210-658

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

## Item No.: 210-720

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

# Installation Notes

# Conductor termination



### All conductor types at a glance



Push-in termination of solid and ferruled conductors



# Inserting a conductor via push-in termination:

Solid conductors with cross-sections from either one size above, or up to two sizes below, the rated cross-section can be simply pushed in – no tools needed.



# **Inserting a conductor via operating tool:** Connecting fine-stranded conductors wi-

thout ferrules, or small cross-sectional conductors with the conductors that cannot be pushed in, is performed similarly to the original CAGE CLAMP® – just use an operating tool.

# Advantage:

To open the clamp, the operating tool is inserted vertically. The conductor entry is less than 15 degrees for easier wiring.



# Conductor termination



Conductor termination – insulation stop

# Commoning



Insert push-in type jumper bar and push down until it hits backstop.

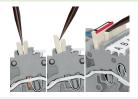


Removing a push-in type jumper bar: Insert the operating tool between the jumper and partition wall of the dual jumper slots, then lift up the jumper. Place the operating tool in the center of jumpers for up to five contacts (see above), or alternately on both sides for jumpers with more than five contacts.

# Commoning



Orient the staggered jumpers' red stripes on the inside.
Insert the staggered jumper and push down until it hits the backstop.



Removing a staggered jumper: Insert the operating tool between the staggered jumpers, then lift up the jumper.

# Commoning



Continuous jumpers (2002 Series) readily connect an endless number of terminal blocks to each other via single jumper slot. Use the second jumper slot for additional commoning or testing.



The 1-to-3 adjacent jumper for continuous commoning enables every other terminal block to be commoned. For example, positive and negative potentials can be accommodated alongside each other.



This star point jumper has been specially developed to create a "star point" and is used on motor terminal boards equipped with Rail-Mount Terminal Blocks TOP-JOB® S.



This delta jumper has been specially developed to create a delta configuration and is used on motor terminal boards equipped with rail-mount terminal blocks TOPJOB® S.



Push down the wire jumper until fully inserted. Lift the jumper with an operating tool for rewiring.

https://www.wago.com/2002-1407



# Testing



The modular TOPJOB® S connectors also connect conductors of the same size as the terminal blocks being used.



TOPJOB® S Connectors with a 2 mm Ø test socket for testing voltage via 2-pole voltage tester



Rail-mount terminal block assembly for electric motor wiring



L-type test plug module – cross-sectional view of contacts



Test plug adapter (2009-174, CAT I) for 4 mm  $\emptyset$  plugs – compatible with 2000 to 2016 Series



Testing tap (2009-182) for tool-free connection of test cables up to 2.5 mm<sup>2</sup> (12 AWG) – compatible with 2000 to 2016 Series

# Marking



Snapping WMB Inline markers into marker slots.



TOPJOB® S 2009-193 Group Marker Carrier (equipped with a marking strip) for all 2001 to 2016 Series TOPJOB® S Rail-Mount Terminal Blocks
Do not use on an end plate!



Using marker carriers for marking strips (2002-161) in jumper slots.

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