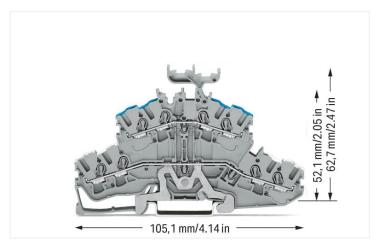
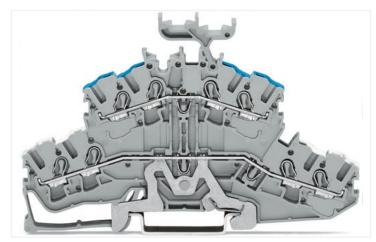
4-conductor double deck terminal block; Shield/through terminal block; 2.5 mm 2 ; Shielding/N; with marker carrier; Blue conductor entry upper deck; for DIN-rail 35 x 15 and 35 x 7.5; Push-in CAGE CLAMP $^{\circ}$; 2,50 mm 2 ; gray

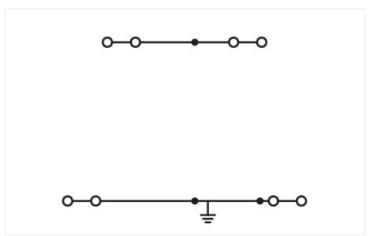


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Color: gray



Similar to illustration

Electrical data			
Ratings per	IEC	'EN 60947-	7-1
Overvoltage category	III	III	II
Pollution degree	3	2	2
Nominal voltage	800 V	-	-
Rated surge voltage	8 kV	-	-
Rated current	24 A	-	-
Current at conductor cross-section (max.) mm ²	28 A	-	-

11			
Use group	В	С	D
Rated voltage	600 V	600 V	-
Rated current	20 A	20 A	-

Approvals per	CSA 22.2 No 158		
Use group	В	С	D
Rated voltage	600 V	600 V	600 V
Rated current	20 A	20 A	20 A

Ex information	
Ratings per	ATEX: PTB 03 ATEX 1162 U / IECEx: PTB 03.0004U (Ex eb IIC Gb)
Rated voltage EN (Ex e II)	550 V
Rated current (Ex e II)	21 A
Rated current (Ex e II) with jumper	17 A

https://www.wago.com/2002-2448

Number of connection points 2





Depending on the conductor characteristic, a conductor with a smaller crosssection can also be inserted via push-in

 $10\dots12\,\text{mm}\,\text{/}\,0.39\dots0.47$ inches

termination.

Connection data				
Connection points	8	Connection 1		
Total number of potentials	2	Connection technology	Push-in CAGE CLAMP®	
Number of levels	2	Number of connection points	4	
Number of jumper slots	2	Actuation type	Operating tool	
Number of jumper slots (rank)	1	Connectable conductor materials	Copper	
		Nominal cross-section	2.5 mm ²	
		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 mm² / 22 14 AWG	
		Fine-stranded conductor; with ferrule;	1 2.5 mm² / 18 14 AWG	

push-in termination

Strip length

Note (conductor cross-section)

	Wiring direction	Front-entry wiring
Connection 2		

Physical data	
Width	5.2 mm / 0.205 inches
Height	105.1 mm / 4.138 inches
Depth from upper-edge of DIN-rail	62.7 mm / 2.469 inches

Mechanical data	
Potential marking	Shield/N
Mounting type	DIN-35 rail
Marking level	Center/side marking

Material data	
Note (material data)	Information on material specifications can be found here
Color	gray
Material group	I
Insulation material	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.31 MJ
Weight	19 g

https://www.wago.com/2002-2448



Environmental requirements

Processing temperature $-35 \dots +85 \,^{\circ}\text{C}$ Continuous operating temperature $-60 \dots +105 \,^{\circ}\text{C}$

Commercial data	
Product Group	22 (TOPJOB S)
eCl@ss 10.0	27-14-11-41
eCl@ss 9.0	27-14-11-41
ETIM 8.0	EC000901
ETIM 7.0	EC000901
PU (SPU)	50 pcs
Packaging type	Box
Country of origin	DE
GTIN	4045454752477
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	UL 1059	E45172

Declarations of conformity and manufacturer's declarations



Approval	Standard	Certificate Name
EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-
Railway WAGO GmbH & Co. KG	-	Railway Ready
UK-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Approvals for marine applications







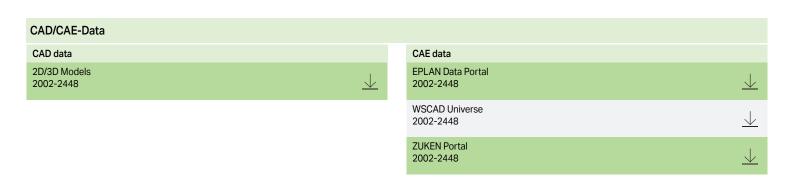
Approval	Standard	Certificate Name
ABS American Bureau of Ship- ping	EN 60947	20-HG1941090-PDA
BV Bureau Veritas S.A.	EN 60947	38586/B0 BV
DNV GL Det Norske Veritas, Ger- manischer Lloyd	-	TAE00001V2

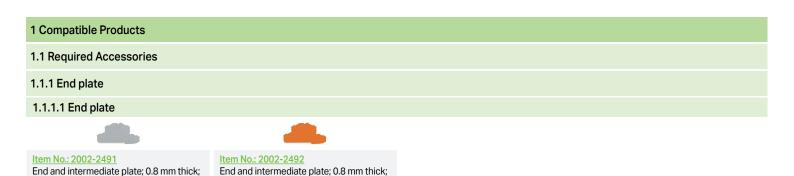
https://www.wago.com/2002-2448



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Documentation						
Additional Information			Bid Text			
Technical Section	pdf 2240.62 KB	<u>↓</u>	2002-2448	23.04.2019	xml 4.05 KB	$\overline{\downarrow}$
			2002-2448	18.04.2019	docx 15.02 KB	$\underline{\downarrow}$





1.2 Optional Accessories

1.2.1 DIN-rail

gray

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

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



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

orange

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

https://www.wago.com/2002-2448



1.2.1.1 Mounting accessories



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



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 Ferrule

1.2.2.1 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



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



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



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.: 216-263

Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red



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



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.: 216-266

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

1.2.3 Installation

1.2.3.1 Cover



Item No.: 709-156

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

1.2.3.2 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



1.2.4 Insulation stop

1.2.4.1 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 mm²; 5 pieces/ strip; dark gray

1.2.5 Jumper

1.2.5.1 Jumper

Item No.: 2002-400

gray



Continuous jumper; 2-way; insulated; light



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



Item No.: 2002-410/000-006

Jumper; 10-way; insulated; blue

Item No.: 2002-410

Jumper; 10-way; insulated; light gray

Item No.: 2002-410/000-005 Jumper; 10-way; insulated; red Item No.: 2002-402/000-006

Jumper; 2-way; insulated; blue



Item No.: 2002-402

Jumper; 2-way; insulated; light gray

Item No.: 2002-402/000-005 Jumper; 2-way; insulated; red Item No.: 2002-403/000-006

Jumper; 3-way; insulated; blue

Item No.: 2002-403

Jumper; 3-way; insulated; light gray



Item No.: 2002-403/000-005

Jumper; 3-way; insulated; red

Item No.: 2002-404/000-006

Jumper; 4-way; insulated; blue

Item No.: 2002-404

Jumper; 4-way; insulated; light gray

Item No.: 2002-404/000-005

Jumper; 4-way; insulated; red



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

Jumper; 5-way; insulated; red

Item No.: 2002-406/000-006

Jumper; 6-way; insulated; blue



Item No.: 2002-406 Jumper; 6-way; insulated; light gray

Item No.: 2002-406/000-005

Jumper; 6-way; insulated; red

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

Jumper; 7-way; insulated; light gray



Item No.: 2002-407/000-005

Jumper; 7-way; insulated; red

Item No.: 2002-408



Jumper; 9-way; insulated; blue

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

Jumper; 8-way; insulated; light gray

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



Item No.: 2002-409/000-006

Item No.: 2002-409

Jumper; 9-way; insulated; light gray

Item No.: 2002-409/000-005 Jumper; 9-way; insulated; red

Item No.: 2002-407

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



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 Jumper; from 1 to 8; insulated; light gray

Jumper; from 1 to 6; insulated; light gray



Item No.: 2002-439

Jumper; from 1 to 9; insulated; light gray

Item No.: 2002-480

Staggered jumper; 10-way; insulated; light

https://www.wago.com/2002-2448

1.2.5.1 Jumper







Item No.: 2002-481

Staggered jumper; 11-way; insulated; light gray

Item No.: 2002-482

gray

gray

Staggered jumper; 12-way; insulated; light gray

Item No.: 2002-473/011-000

Staggered jumper; 2-way; from 1 to 3; insulated; light gray

Item No.: 2002-472

Staggered jumper; 2-way; insulated; light gray





Item No.: 2002-473

Staggered jumper; 3-way; insulated; light gray

Staggered jumper; 3-way; insulated; light

Item No.: 2002-474

Staggered jumper; 4-way; insulated; light gray

Item No.: 2002-475

Staggered jumper; 5-way; insulated; light gray



Item No.: 2002-476

Staggered jumper; 6-way; insulated; light gray

Item No.: 2002-475/011-000

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

Item No.: 2002-479/011-000

Staggered jumper; insulated; light gray

Item No.: 2002-481/011-000

Staggered jumper; insulated; light gray

Item No.: 2002-405/011-000

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



Item No.: 2002-492

Vertical jumper; insulated; light gray

Item No.: 2002-492/000-012

Vertical jumper; insulated; orange

Item No.: 210-103

Wire commoning chain; insulated; black

Item No.: 210-123

Wire commoning chain; insulated; blue

1.2.6 Marking

1.2.6.1 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

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

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.: 2009-145/000-024

Item No.: 248-501/000-007

Item No.: 248-501/000-005

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



Item No.: 2009-145

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



Mini-WSB marking card; as card; not

Item No.: 2009-145/000-002

Item No.: 248-501/000-017

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

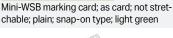


Mini-WSB marking card; as card; not

stretchable; plain; snap-on type; gray

Item No.: 248-501/000-023

stretchable; plain; snap-on type; green

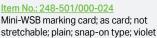


Item No.: 248-501/000-012

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



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



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



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

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; light green



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

https://www.wago.com/2002-2448



1.2.6.1 Marker



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

A



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



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.: 2009-115/000-005

WMB-Inline; for Smart Printer; 1500 pieces 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

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

1.2.6.2 Marker carrier



Item No.: 2009-198 Adaptor; gray

1.2.6.3 Marking strip



Item No.: 2009-110

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

1.2.7 Protective warning marker

1.2.7.1 Cover



Item No.: 2002-115

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

1.2.8 Push-in type wire jumper

1.2.8.1 Jumper



Item No.: 2009-414

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



Item No.: 2009-414/000-005

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

https://www.wago.com/2002-2448



1.2.9 Screwless end stop

1.2.9.1 Mounting accessories



Item No.: 249-117

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



Item No.: 249-116

Screwless end stop; 6 mm wide; for DIN-rail 35×15 and 35×7.5 ; gray

1.2.10 Test and measurement

1.2.10.1 Testing accessories



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

1.2.11 Tool

1.2.11.1 Operating tool



Item No.: 210-658

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

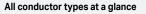


Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

Installation Notes

Conductor termination







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 without ferrules, or small cross-sectional 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 - insulation stop



Commoning



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.



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

Commoning



Commoning two levels via double-deck vertical jumper (2002-492).

Marking



Snapping WMB Inline markers into marker





Double-deck terminal blocks A double-deck marker carrier (2002-121) can be retrofitted to double-deck terminal blocks without a marker carrier.

https://www.wago.com/2002-2448



 $\label{thm:condition} \textbf{Subject to changes. Please also observe the further product documentation!}$

Current addresses can be found at:: www.wago.com

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