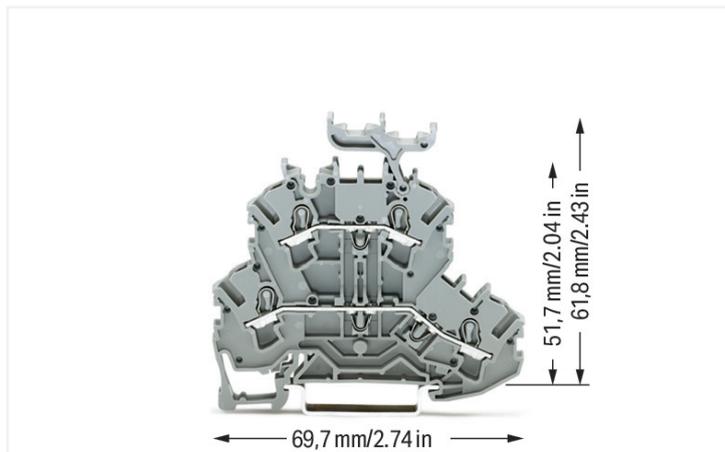


# Data Sheet | Item Number: 2002-2231

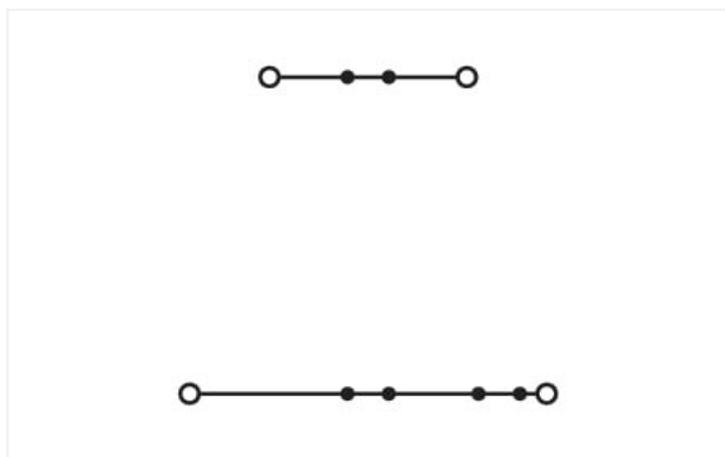
Double-deck terminal block; Through/through terminal block; L/L; with marker carrier; suitable for Ex e II applications; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm<sup>2</sup>; Push-in CAGE CLAMP®; 2,50 mm<sup>2</sup>; gray



<https://www.wago.com/2002-2231>



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	500 V	-	-
Rated surge voltage	6 kV	-	-
Rated current	24 A	-	-
Current at conductor cross-section (max.) mm <sup>2</sup>	28 A	-	-

Approvals per	UL 1059		
Use group	B	C	D
Rated voltage	300 V	300 V	600 V
Rated current	20 A	20 A	5 A

Approvals per	CSA 22.2 No 158		
Use group	B	C	D
Rated voltage	600 V	600 V	-
Rated current	20 A	20 A	-

Ex information	
Reference hazardous areas	See "Downloads – Documentation – Additional Information: Technical Section; Technical Explanations"
Ratings per	ATEX: PTB 03 ATEX 1162 U / IECEx: PTB 03.0004U (Ex eb IIC Gb)
Rated voltage EN (Ex e II)	440 V
Rated current (Ex e II)	20 A
Rated current (Ex e II) with jumper	18 A

### Power Loss

Power loss, per pole (potential)	0.7661 W
Rated current $I_N$ for specified power loss	24 A
Resistance value for specified, current-dependent power loss	0.00133 $\Omega$

### Connection data

Connection points	4
Total number of potentials	2
Number of levels	2
Number of jumper slots	4
Number of jumper slots (rank)	1

### Connection 1

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

### Connection 2

Number of connection points 2	2
-------------------------------	---

### Physical data

Width	5.2 mm / 0.205 inches
Height	69.7 mm / 2.744 inches
Depth from upper-edge of DIN-rail	61.8 mm / 2.433 inches

### Mechanical data

Potential marking	L/L
Mounting type	DIN-35 rail
Marking level	Center/side marking

### Material data

Note (material data)	<a href="#">Information on material specifications can be found here</a>
Color	gray
Material group	I
Insulation material	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.218 MJ
Weight	10.6 g

### Environmental requirements

Processing temperature	-35 ... +85 °C
Continuous operating temperature	-60 ... +105 °C

### Commercial data

Product Group	22 (TOPJOB S)
eCl@ss 10.0	27-14-11-20
eCl@ss 9.0	27-14-11-20
ETIM 8.0	EC000897
ETIM 7.0	EC000897
PU (SPU)	50 pcs
Packaging type	Box
Country of origin	DE
GTIN	4044918965316
Customs tariff number	85369010000

### Environmental Product Compliance

RoHS Compliance Status	Compliant, No Exemption
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### 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	-	-

### Approvals for marine applications



Approval	Standard	Certificate Name
ABS American Bureau of Shipping	EN 60947	20-HG1941090-PDA
DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAE00001V2

### Approvals for hazardous areas



Approval	Standard	Certificate Name
AEx Underwriters Laboratories Inc.	UL 60079	E185892 (AEx eb IIC resp. Ex eb IIC)
ATEX Physikalisch Technische Bundesanstalt (PTB)	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 Zertifizierungsstelle	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)

Approvals for hazardous areas		
INMETRO TÜV Rheinland do Brasil Ltda.	IEC 60079	TÜV 12.1307 U

## Downloads

### Documentation

Additional Information		
Technical Section	pdf 2240.62 KB	<a href="#">↓</a>

Bid Text				
2002-2231	24.04.2019	xml 4.22 KB	<a href="#">↓</a>	
2002-2231	18.04.2019	docx 14.94 KB	<a href="#">↓</a>	

## CAD/CAE-Data

CAD data	
2D/3D Models 2002-2231	<a href="#">↓</a>

CAE data	
EPLAN Data Portal 2002-2231	<a href="#">↓</a>
WSCAD Universe 2002-2231	<a href="#">↓</a>
ZUKEN Portal 2002-2231	<a href="#">↓</a>

## 1 Compatible Products

### 1.1 Required Accessories

#### 1.1.1 End plate

##### 1.1.1.1 End plate

<b>Item No.: 2002-2291</b> End and intermediate plate; 0.8 mm thick; gray	<b>Item No.: 2002-2292</b> End and intermediate plate; 0.8 mm thick; orange	<b>Item No.: 2002-2295</b> Separator plate; oversized upper deck; snap-fit type; 2 mm thick; gray	<b>Item No.: 2002-2296</b> Separator plate; oversized upper deck; snap-fit type; 2 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.: 216-241**  
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.: 216-242**  
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.: 216-243**  
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.: 216-244**  
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.: 216-246**  
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

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 mm<sup>2</sup>; 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



**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



**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



**Item No.: 2002-407**

Jumper; 7-way; insulated; light gray

1.2.6.1 Jumper

 <b>Item No.: 2002-407/000-005</b> Jumper; 7-way; insulated; red	 <b>Item No.: 2002-408/000-006</b> Jumper; 8-way; insulated; blue	 <b>Item No.: 2002-408</b> Jumper; 8-way; insulated; light gray	 <b>Item No.: 2002-408/000-005</b> Jumper; 8-way; insulated; red
 <b>Item No.: 2002-409/000-006</b> Jumper; 9-way; insulated; blue	 <b>Item No.: 2002-409</b> Jumper; 9-way; insulated; light gray	 <b>Item No.: 2002-409/000-005</b> Jumper; 9-way; insulated; red	 <b>Item No.: 2002-440</b> Jumper; from 1 to 10; insulated; light gray
 <b>Item No.: 2002-433</b> Jumper; from 1 to 3; insulated; light gray	 <b>Item No.: 2002-434</b> Jumper; from 1 to 4; insulated; light gray	 <b>Item No.: 2002-435</b> Jumper; from 1 to 5; insulated; light gray	 <b>Item No.: 2002-436</b> Jumper; from 1 to 6; insulated; light gray
 <b>Item No.: 2002-437</b> Jumper; from 1 to 7; insulated; light gray	 <b>Item No.: 2002-438</b> Jumper; from 1 to 8; insulated; light gray	 <b>Item No.: 2002-439</b> Jumper; from 1 to 9; insulated; light gray	 <b>Item No.: 2002-480</b> Staggered jumper; 10-way; insulated; light gray
 <b>Item No.: 2002-481</b> Staggered jumper; 11-way; insulated; light gray	 <b>Item No.: 2002-482</b> Staggered jumper; 12-way; insulated; light gray	 <b>Item No.: 2002-473/011-000</b> Staggered jumper; 2-way; from 1 to 3; insulated; light gray	 <b>Item No.: 2002-472</b> Staggered jumper; 2-way; insulated; light gray
 <b>Item No.: 2002-473</b> Staggered jumper; 3-way; insulated; light gray	 <b>Item No.: 2002-475/011-000</b> Staggered jumper; 3-way; insulated; light gray	 <b>Item No.: 2002-474</b> Staggered jumper; 4-way; insulated; light gray	 <b>Item No.: 2002-475</b> Staggered jumper; 5-way; insulated; light gray
 <b>Item No.: 2002-476</b> Staggered jumper; 6-way; insulated; light gray	 <b>Item No.: 2002-477</b> Staggered jumper; 7-way; insulated; light gray	 <b>Item No.: 2002-478</b> Staggered jumper; 8-way; insulated; light gray	 <b>Item No.: 2002-479</b> Staggered jumper; 9-way; insulated; light gray
 <b>Item No.: 2002-477/011-000</b> Staggered jumper; insulated; light gray	 <b>Item No.: 2002-479/011-000</b> Staggered jumper; insulated; light gray	 <b>Item No.: 2002-481/011-000</b> Staggered jumper; insulated; light gray	 <b>Item No.: 2002-405/011-000</b> Star point jumper; 3-way; insulated; light gray
 <b>Item No.: 2002-492</b> Vertical jumper; insulated; light gray	 <b>Item No.: 2002-492/000-012</b> Vertical jumper; insulated; orange	 <b>Item No.: 210-103</b> Wire commoning chain; insulated; black	 <b>Item No.: 210-123</b> Wire commoning chain; insulated; blue

1.2.7 Marking

1.2.7.1 Marker

 <b>Item No.: 2009-145/000-006</b> Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; blue	 <b>Item No.: 2009-145/000-007</b> Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray	 <b>Item No.: 2009-145/000-023</b> Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green	 <b>Item No.: 2009-145/000-012</b> Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange
 <b>Item No.: 2009-145/000-005</b> Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; red	 <b>Item No.: 2009-145/000-024</b> Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet	 <b>Item No.: 2009-145</b> Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white	 <b>Item No.: 2009-145/000-002</b> Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow
 <b>Item No.: 248-501/000-006</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type; blue	 <b>Item No.: 248-501/000-007</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type; gray	 <b>Item No.: 248-501/000-023</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type; green	 <b>Item No.: 248-501/000-017</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type; light green

1.2.7.1 Marker



**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.: 2009-115/000-023**  
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

1.2.7.2 Marker carrier



**Item No.: 2009-198**  
Adaptor; gray

1.2.7.3 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 mm<sup>2</sup>; insulated; 110 mm long; black



**Item No.: 2009-414/000-005**  
Push-in type wire jumper; 1.5 mm<sup>2</sup>; insulated; 110 mm long; black



**Item No.: 2009-416**  
Push-in type wire jumper; 1.5 mm<sup>2</sup>; 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 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 mm<sup>2</sup>; 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 mm<sup>2</sup>; gray

1.2.11 Tool

1.2.11.1 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



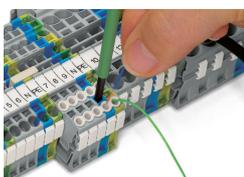
Push-in termination of solid and ferruled conductors



**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.

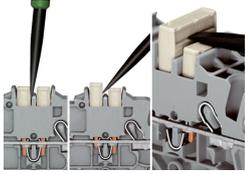


**Inserting a conductor via operating tool:**  
Connecting fine-stranded conductors without ferrules, or small cross-sectional conductors that cannot be pushed in, is performed similarly to the original CAGE CLAMP® – just use an operating tool.  
**Advantage:**  
To open the clamp, the operating tool is inserted vertically. The conductor entry is less than 15 degrees for easier wiring.



Conductor termination – insulation stop

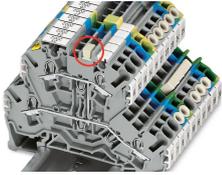
Commoning



**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.

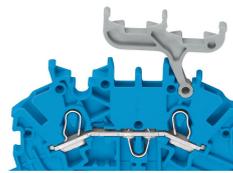
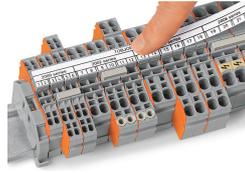
Insert push-in type jumper bar and push down until it hits backstop.

Commoning



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

Marking



Snapping WMB In-line markers into marker slots.

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