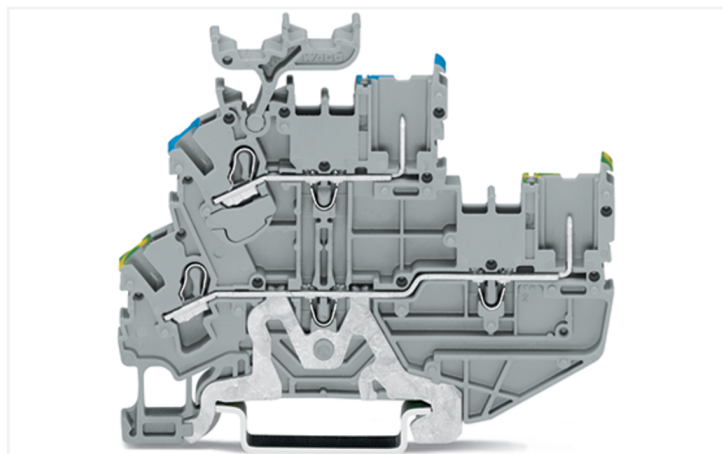


Data Sheet | Item Number: 2022-2257

1-conductor/1-pin double deck receptacle terminal block; Ground conductor/
through terminal block; 2.5 mm²; PE/L; with marker carrier; for DIN-rail 35 x 15 and
35 x 7.5; Push-in CAGE CLAMP®; 2,50 mm²; gray

<https://www.wago.com/2022-2257>



Color: gray

Similar to illustration

Double-deck terminal block, 2022 Series, Push-in CAGE CLAMP®

This double-deck terminal block (item number 2022-2257) simplifies electrical installations. Pluggable rail-mount terminal blocks are mainly used in switchgear units and control systems (e.g., in railroad technology). They are essentially a combination of rail-mount terminal blocks and pluggable connectors. You can also pre-assemble installations thanks to the variable wiring system. This saves both time and money during manufacture, installation, operation, and maintenance. The double-deck terminal block also serves as a through terminal block as well as a ground terminal block. Our pluggable rail-mount terminal block is rated for 690 V and is designed for use with a rated current of up to 24 A. Strip lengths must be between 10 mm and 12 mm when connecting conductors to this double-deck terminal block. This product features conductor terminal and utilizes Push-in CAGE CLAMP®. Our Push-in CAGE CLAMP® is a universal, maintenance-free connection solution for all conductor types, offering a key advantage: It allows direct insertion of both solid and fine-stranded conductors with ferrules without needing tools. No preparation is required; for example, crimping the conductor's ferrule is not necessary. Depending on the type of conductor, this double-deck terminal block is ideal for conductor cross sections ranging from 0.25 mm² to 4 mm². It has two levels. Two potentials can connect using the two clamping points. The gray housing is made of polyamide (PA66) for insulation. This pluggable rail-mount terminal block is operated with an operating tool. These pluggable rail-mount terminal blocks are mounted using DIN-35 rails. Conductors made of copper can be connected via front-entry wiring. The four jumper slots enable potential distribution to other clamping points.

Notes

Safety Information

A separator plate (Item No. 209-191) or a 10 mm end stop (Item No. 249-117) must be placed at the end of a WAGO X-COM®-SYSTEM terminal strip.

Electrical data

Ratings per	IEC/EN 60947-7-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Nominal voltage	690 V	-	-
Rated surge voltage	6 kV	-	-
Rated current	24 A	-	-
Current at conductor cross-section (max.) mm ²	28 A	-	-

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

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



Connection data																										
Clamping units	2	<div>Connection 1</div> <table><tr><td>Connection technology</td><td>Push-in CAGE CLAMP®</td></tr><tr><td>Actuation type</td><td>Operating tool</td></tr><tr><td>Connectable conductor materials</td><td>Copper</td></tr><tr><td>Nominal cross-section</td><td>2.5 mm²</td></tr><tr><td>Solid conductor</td><td>0.25 ... 4 mm² / 22 ... 12 AWG</td></tr><tr><td>Solid conductor; push-in termination</td><td>0.75 ... 4 mm² / 18 ... 12 AWG</td></tr><tr><td>Fine-stranded conductor</td><td>0.25 ... 4 mm² / 22 ... 12 AWG</td></tr><tr><td>Fine-stranded conductor; with insulated ferrule</td><td>0.25 ... 2.5 mm² / 22 ... 14 AWG</td></tr><tr><td>Fine-stranded conductor; with ferrule; push-in termination</td><td>1 ... 2.5 mm² / 18 ... 14 AWG</td></tr><tr><td>Note (conductor cross-section)</td><td>Depending on the conductor characteristic, a conductor with a smaller cross-section can also be inserted via push-in termination.</td></tr><tr><td>Strip length</td><td>10 ... 12 mm / 0.39 ... 0.47 inches</td></tr><tr><td>Wiring direction</td><td>Front-entry wiring</td></tr></table>	Connection technology	Push-in CAGE CLAMP®	Actuation type	Operating tool	Connectable conductor materials	Copper	Nominal cross-section	2.5 mm²	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; 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
Connection technology	Push-in CAGE CLAMP®																									
Actuation type	Operating tool																									
Connectable conductor materials	Copper																									
Nominal cross-section	2.5 mm²																									
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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; 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																									
Female plug slots	2																									
Total number of potentials	2																									
Number of levels	2																									
Number of jumper slots	4																									

Physical data		
Width	5.2 mm / 0.205 inches	
Height	80.1 mm / 3.154 inches	
Depth from upper-edge of DIN-rail	61.4 mm / 2.417 inches	

Mechanical data		
Potential marking	PE/L	
Design	horizontal type	
Mounting type	DIN-35 rail	
Marking level	Side marking	

Material data		
Note (material data)	Information on material specifications can be found here	
Color	gray	
Material group	I	
Insulation material (main housing)	Polyamide (PA66)	
Flammability class per UL94	V0	
Fire load	0.267 MJ	
Weight	15.1 g	

Environmental requirements										
Processing temperature	-35 ... +85 °C	<div>Environmental Testing (Environmental Conditions)</div> <table><tr><td>Test specification Railway applications – Rolling stock – Electronic equipment</td><td>DIN EN 50155 (VDE 0115-200):2022-06</td></tr><tr><td>Test procedure Railway applications – Rolling stock equipment – Shock and vibration tests</td><td>DIN EN 61373 (VDE 0115-0106):2011-04</td></tr><tr><td>Spectrum/Installation location</td><td>Service life test, Category 1, Class A/B</td></tr><tr><td>Function test with noise-like vibration</td><td>Test passed according to Section 8 of the standard</td></tr></table>	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
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									
Continuous operating temperature	-60 ... +105 °C									







Environmental Testing (Environmental Conditions)	
Frequency	f ₁ = 5 Hz to f ₂ = 150 Hz f ₁ = 5 Hz to f ₂ = 150 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
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	18 (X-COM-System)
PU (SPU)	50 pcs
Packaging type	Box
Country of origin	DE
GTIN	4045454994792
Customs tariff number	85366990990

Product classification	
UNSPSC	39121410

Environmental Product Compliance	
RoHS Compliance Status	Compliant, No Exemption





Approvals / Certificates					
General approvals			Declarations of conformity and manufacturer's declarations		
  					
Approval	Standard	Certificate Name	Approval	Standard	Certificate Name
CSA DEKRA Certification B.V.	C22.2 No. 158	2437422	EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-
KEMA/KEUR DEKRA Certification B.V.	EN 60947	71-116567	Railway WAGO GmbH & Co. KG	-	Z00004394.000
UL Underwriters Laboratories Inc.	UL 1059	E45172			



Declarations of conformity and manufacturer's declarations


UK-Declaration of Confor-	-	-
mity		
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
LR Lloyds Register	EN 60947	91/20112 (E9)

Downloads





Environmental Product Compliance

Compliance Search
Environmental Product Compliance 2022-2257


Documentation

Additional Information				Bid Text			
Technical Section	pdf	2246.92 KB		2022-2257	19.02.2019	xml	4.06 KB
							
				2022-2257	14.05.2019	docx	15.58 KB
							

CAD/CAE-Data

CAD data				CAE data			
2D/3D Models				EPLAN Data Portal			
2022-2257				2022-2257			
				WSCAD Universe			
				2022-2257			
				ZUKEN Portal			
				2022-2257			



1 Compatible Products

1.1 System counterpart

1.1.1 Female connector/socket



Item No.: 2022-101
1-conductor female connector; Push-in CAGE CLAMP®; 4 mm²; Pin spacing 5.2 mm; 1-pole; 4,00 mm²; gray

1.2 Required Accessories

1.2.1 End plate

1.2.1.1 End plate



Item No.: 2022-2291
End and intermediate plate; 1 mm thick; gray



Item No.: 2022-2292
End and intermediate plate; 1 mm thick; orange

1.3 Optional Accessories

1.3.1 Coding

1.3.1.1 Coding



Item No.: 2022-100
Carrier with 6 coding pins; for coding of female plugs; orange

1.3.2 DIN-rail

1.3.2.1 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



1.3.3 Ferrule

1.3.3.1 Ferrule



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.: 216-263
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.: 216-246
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.: 216-242
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.: 216-244
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.: 216-266
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



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.: 216-264
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.: 216-286
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.: 216-243
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.: 216-284
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

1.3.4 Insulation stop

1.3.4.1 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

1.3.5 Jumper

1.3.5.1 Jumper



Item No.: 2002-400
Continuous jumper; 2-way; insulated; light gray



Item No.: 2002-423
Continuous jumper; from 1 to 3; insulated; light gray



Item No.: 2002-424/000-005
Continuous jumper; from 1 to 4; insulated; red



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



Item No.: 2002-403/000-006
Jumper; 3-way; insulated; blue



Item No.: 2002-413
Continuous jumper; 3-way; insulated; light gray



Item No.: 2002-423/000-005
Continuous jumper; from 1 to 3; insulated; red



Item No.: 2002-406/020-000
Delta jumper; insulated; light gray



Item No.: 2002-402/000-006
Jumper; 2-way; insulated; blue



Item No.: 2002-403
Jumper; 3-way; insulated; light gray



Item No.: 2002-415
Continuous jumper; 5-way; insulated; light gray



Item No.: 2002-424/000-006
Continuous jumper; from 1 to 4; insulated; blue



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



Item No.: 2002-402
Jumper; 2-way; insulated; light gray



Item No.: 2002-403/000-005
Jumper; 3-way; insulated; red



Item No.: 2002-423/000-006
Continuous jumper; from 1 to 3; insulated; blue



Item No.: 2002-424
Continuous jumper; from 1 to 4; insulated; light gray



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







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



Item No.: 2002-404/000-006
Jumper; 4-way; insulated; blue



1.3.5.1 Jumper

 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	 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 Jumper; 9-way; insulated; red	 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 Jumper; from 1 to 6; insulated; light gray	 Item No.: 2002-437 Jumper; from 1 to 7; insulated; light gray	 Item No.: 2002-438 Jumper; from 1 to 8; 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 gray	 Item No.: 2002-481 Staggered jumper; 11-way; insulated; light gray	 Item No.: 2002-482 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	 Item No.: 2002-475/011-000 Staggered jumper; 3-way; insulated; light gray
 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.: 2002-477 Staggered jumper; 7-way; insulated; light 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	 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		



1.3.6 Marking

1.3.6.1 Marker



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.: 248-501
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white



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.: 2009-115
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

1.3.6.2 Marker carrier



Item No.: 2009-198
Adaptor; gray

1.3.6.3 Marking strip



Item No.: 2009-110
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white

1.3.7 Protective warning marker

1.3.7.1 Cover



Item No.: 2002-115
Protective warning marker; for 5 terminal blocks; with high-voltage symbol, black; yellow

1.3.8 Push-in type wire jumper

1.3.8.1 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



1.3.9 Screwless end stop

1.3.9.1 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 x 15 and 35 x 7.5; gray

1.3.10 Test and measurement

1.3.10.1 Testing accessories



Item No.: 859-500
WAGO Test pin; 1 mm Ø; 30 V AC / 60 V DC; CAT0; 1 A; 10 mm uninsulated; Test lead for soldering up to 0,5mm²

1.3.11 Tool

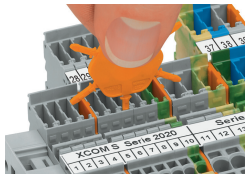
1.3.11.1 Operating tool



Item No.: 210-720
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

Installation Notes

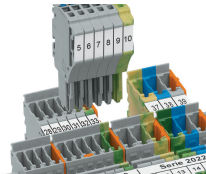
Coding



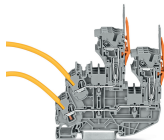
Insert coding pin into the corresponding slot and twist it off.



Coding a female plug: remove coding finger using a suitable tool.

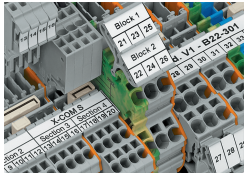


Insert coded female plug into X-COM®S-SYSTEM terminal block assembly.

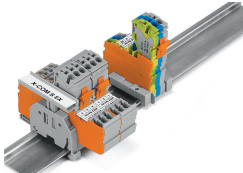


1-conductor female plug
Double-deck carrier terminal blocks can be commoned via 2002 Series Push-In Type Jumper Bars and tested via 859-500 Test Pin.

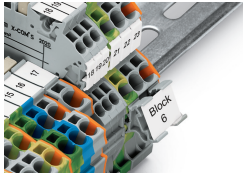
Marking



Clear marking via large marking area



Group marking with height-adjustable group marker carrier (2009-163)



Marking via marker carrier (Item No. 2009-198)