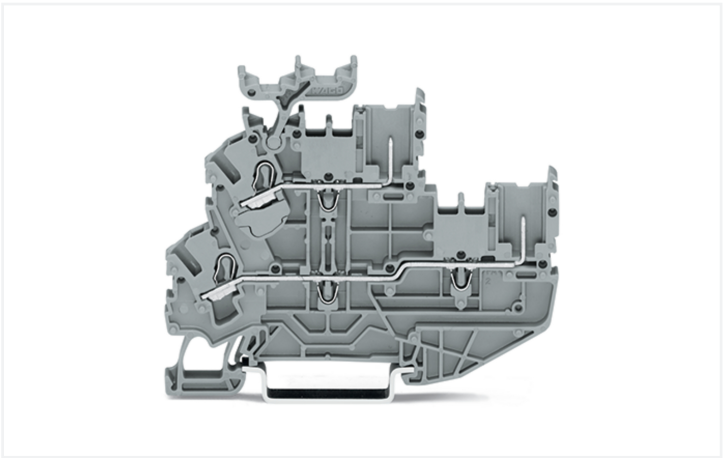
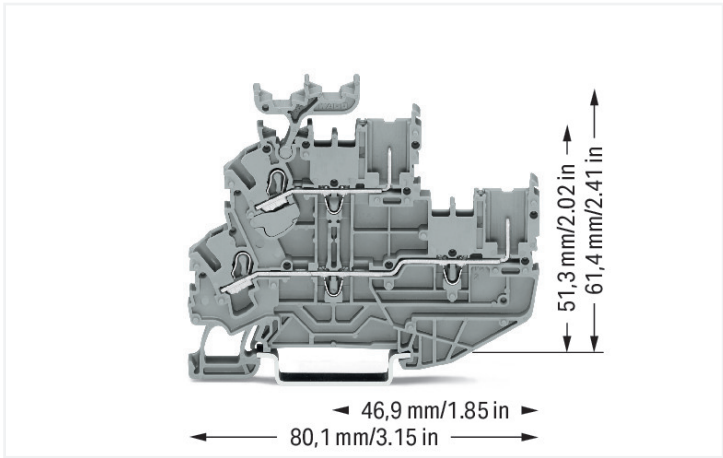


Data Sheet | Item Number: 2022-2231/999-953

1-conductor/1-pin double deck receptacle terminal block; Through/through terminal block; 2.5 mm²; L/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/2022-2231/999-953>



Color: ■ gray

1-conductor/1-pin double-deck carrier terminal block, 2022 Series, gray

Our 1-conductor/1-pin double-deck carrier terminal block (item number 2022-2231/999-953) is designed for seamless electrical installations. Conductors should only be connected to 1-conductor/1-pin double-deck carrier terminal block if their strip length is between 10 and 12 mm . Pluggable rail-mount terminal blocks are hugely popular in switchgear and control systems, for example, in railroad technology. They combine the best of rail-mount terminal blocks and connectors to create the perfect solution. Variable wiring systems make pre-assembly easy, which leads to considerable time and cost savings in production, installation, operation, and maintenance. This product features conductor terminals and utilizes Push-in CAGE CLAMP®. Push-in CAGE CLAMP® connection technology is ideal for connecting all conductor types. Solid and fine-stranded conductors with ferrules can be inserted without needing to use any tools—all thanks to its pluggable design. Depending on the type of conductor, 1-conductor/1-pin double-deck carrier terminal block is designed for conductor cross sections ranging from 0.25 mm² to 4 mm².

An operating tool is used to operate this pluggable rail-mount terminal block. This product is designed for specific Ex applications (please refer to the product datasheet).

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®S-SYSTEM terminal strip.

Electrical data						
Ratings per		IEC/EN 60947-7-1			Approvals per	
					UL 1059	
Overvoltage category		III	III	II	Use group	B C D
Pollution degree		3	2	2	Rated voltage	600 V 600 V -
Nominal voltage		-	-	-	Rated current	20 A 20 A -
Rated impulse withstand voltage		-	-	-		
Rated current		-	-	-		



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)	0.532 W
Rated current I _N for power loss specification	20 A
Resistance value for specified, current-dependent power loss	0.00133 Ω

Ex information	
Rated voltage EN (Ex e II)	630 V

General information	
Wiring direction	Front-entry wiring

Connection Data			
Clamping units	2	Connection 1	
Female plug slots	2	Connection technology	Push-in CAGE CLAMP®
Total number of potentials	2	Actuation type	Operating tool
Number of levels	2	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

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	L/L
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	0.258 MJ
Weight	12 g

Environmental requirements

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

Environmental Testing

Test specification: Railway applications – Rolling stock – Electronic equipment	DIN EN 50155 (VDE 0115-200):2022-06
Test procedure: Railway applications – Rolling stock equipment – Vibration and shock tests	DIN EN 61373 (VDE 0115-0106):2011-04
Spectrum/Mounting location	Service life test, Category 1, Class A/B
Functional test with noise-like oscillations	Test passed according to Section 8 of the standard
Frequency	$f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$
Acceleration	0.101g (highest test level used for all axes)
Test duration per axis	10 min.
Test directions	X, Y and Z axes
Monitoring of contact faults and interruptions	Passed
Voltage drop measurement before and after each axis	Passed
Simulated service life test through increased levels of noise-like oscillations	Test passed according to Section 9 of the standard
Frequency	$f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$
Acceleration	0.572g (highest test level used for all axes)
Test duration per axis	5 h
Test directions	X, Y and Z axes
Extended testing: Monitoring of contact faults and interruptions	Passed
Extended testing: Voltage drop measurement before and after each axis	Passed
Shock test	Test passed according to Section 10 of the standard
Shock pulse form	Half sine
Acceleration	5g (highest test level used for all axes)
Shock duration	30 ms
Number of shocks (per axis)	3 pos. und 3 neg.
Test directions	X, Y and Z axes
Extended testing: Monitoring of contact faults and interruptions	Passed
Extended testing: Voltage drop measurement before and after each axis	Passed
Vibration and shock stress for rolling stock equipment	Passed

Commercial data

PU (SPU)	50 pcs
Packaging type	Box
Country of origin	DE
GTIN	4050821644927
Customs tariff number	85366990990



Product Classification	
UNSPSC	39121410
ETIM 9.0	EC000897
ETIM 10.0	EC000897
ECCN	NO US CLASSIFICATION

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 CSA Group	C22.2 No. 158	2437422	EU-Declaration of Confor- mity WAGO GmbH & Co. KG	-	-
DEKRA DEKRA Certification B.V.	EN 60947	71-145809	Railway WAGO GmbH & Co. KG	-	Z00004394.000
KEMA/KEUR DEKRA Certification B.V.	EN 60947	71-116567	UK-Declaration of Confor- mity WAGO GmbH & Co. KG	-	-
UL Underwriters Laboratories Inc.	UL 1059	E45172			

Approvals for hazardous areas

  		
Approval	Standard	Certificate Name
ATEX Physikalisch Technische Bundesanstalt	EN IEC 60079-0	PTB 13 ATEX 1004 U (II 3 G Ex ec II C Gc)
CCC CNEX	GB/T 3836.3	2020312313000255 (Ex ec IIC Gc)
IECEx Physikalisch Technische Bundesanstalt	IEC 60079-0	IECEx PTB 13.0004U (Ex ec IIC Gc)

Downloads

Environmental Product Compliance	
Compliance Search	
Environmental Product Compliance 2022-2231/999-953	

CAD/CAE-Data			
CAD data			
2D/3D Models 2022-2231/999-953			
			
1 Compatible Products			
1.1 System counterpart			
1.1.1 Female connector/socket			
			
Item No.: 2022-102/999-953 1-conductor female connector; Push-in CAGE CLAMP®; 4 mm²; Pin spacing 5.2 mm; 2-pole; Centered locking levers; 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.: 210-506 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.: 210-508 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.: 210-118 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	

1.3.2.1 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



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.: 216-242

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.: 216-262

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



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.: 216-284

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



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.: 216-266

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.: 216-286

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

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.: 2002-413

Continuous jumper; 3-way; insulated; light gray



Item No.: 2002-415

Continuous jumper; 5-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



1.3.5.1 Jumper

 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	 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

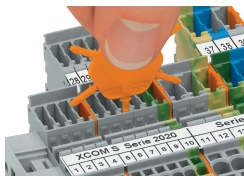
1.3.11.1 Operating tool



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

Installation Notes

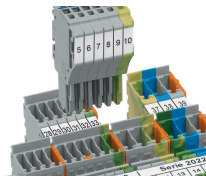
Coding



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

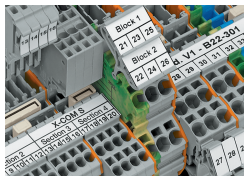


Coding a female plug: remove coding finger using a suitable tool.

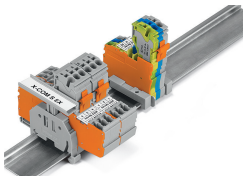


Insert coded female plug into X-COM®S-SYSTEM terminal block assembly.

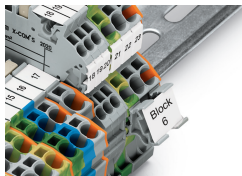
Marking



Clear marking via large marking area



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



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