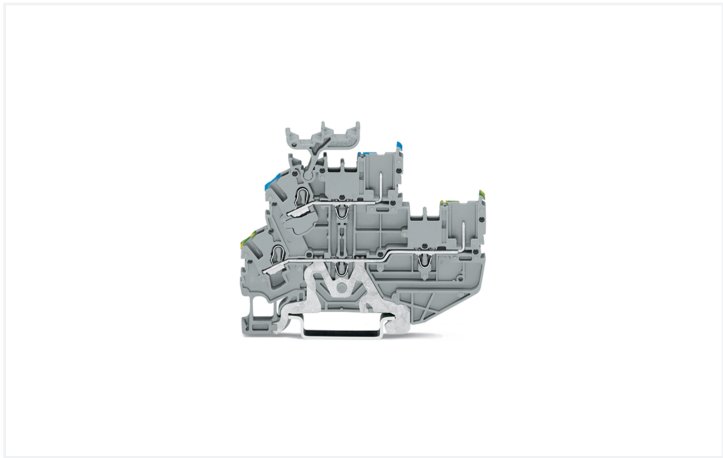


Data Sheet | Item Number: 2022-2227

1-conductor/1-pin double deck receptacle terminal block; Ground conductor/through terminal block; 2.5 mm²; PE/L; without 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/2022-2227>



Color: ■ gray

Similar to illustration

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

Enjoy convenient electrical installations with 1-conductor/1-pin double-deck carrier terminal block (item number 2022-2227). 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 primarily found in switchgear units and control systems, most notably in railroad technology. These innovative systems combine the properties of rail-mount terminal blocks and connectors for a flexible and reliable wiring system. You also have the option of pre-assembling installations, which not only makes production but also installation, operation, and maintenance more efficient and cost-effective. Featuring conductor terminals along with Push-in CAGE CLAMP®, this connector delivers reliable performance. Push-in CAGE CLAMP® connection technology is ideal for connecting all conductor types. It allows direct insertion of both solid and fine-stranded conductors with ferrules without needing to use any tools—all thanks to its pluggable design. 1-conductor/1-pin double-deck carrier terminal block is suitable for conductor cross sections ranging from 0.25 mm² to 4 mm².

This pluggable rail-mount terminal block is operated with an operating tool.

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		690 V	-	-	Rated current	20 A 20 A -
Rated impulse withstand voltage		6 kV	-	-		
Rated current		24 A	-	-		
Current at conductor cross-section (max.) mm²		28 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 power loss specification	24 A
Resistance value for specified, current-dependent power loss	0.00133 Ω

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
Number of jumper slots	4	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		51.3 mm / 2.02 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	0.244 MJ
Weight	14.6 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

Product Group	18 (X-COM-System)
PU (SPU)	50 pcs
Packaging type	Box
Country of origin	DE
GTIN	4045454916558
Customs tariff number	85366990990



Product Classification	
UNSPSC	39121410
eCl@ss 10.0	27-14-11-41
eCl@ss 9.0	27-14-11-41
ETIM 9.0	EC000901
ETIM 10.0	EC000901
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
CSA CSA Group	C22.2 No. 158	2437422
DEKRA DEKRA Certification B.V.	EN 60947	71-145809
KEMA/KEUR DEKRA Certification B.V.	EN 60947	71-116567
UL Underwriters Laboratories Inc.	UL 1059	E45172
Approval	Standard	Certificate Name
EU-Declaration of Confor- mity WAGO GmbH & Co. KG	-	-
Railway WAGO GmbH & Co. KG	-	Z00004394.000
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	24-0152298-PDA
DNV GL Det Norske Veritas, Ger- manischer Lloyd	-	TAE00001V2
PRS Polski Rejestr Statków	-	TE/1094/880590/23

Downloads	
Environmental Product Compliance	
Compliance Search	
Environmental Product Compliance 2022-2227	



Documentation

Bid Text			
2022-2227	19.02.2019	xml 4.06 KB	↓
2022-2227	14.05.2019	docx 15.59 KB	↓

CAD/CAE-Data

CAD data	
2D/3D Models 2022-2227	↓

CAE data	
EPLAN Data Portal 2022-2227	↓
WSCAD Universe 2022-2227	↓
ZUKEN Portal 2022-2227	↓

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.: 216-242
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



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

1.3.5.1 Jumper

**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 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

1.3.6.2 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

1.3.6.3 Marker carrier

**Item No.: 2002-121**

Adaptor; gray

**Item No.: 2002-161**

Adaptor; gray

**Item No.: 2009-198**

Adaptor; gray

1.3.6.4 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; insu-
lated; 110 mm long; black



Item No.: 2009-414/000-005
Push-in type wire jumper; 1.5 mm²; insu-
lated; 110 mm long; black



Item No.: 2009-416
Push-in type wire jumper; 1.5 mm²; insu-
lated; 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.: 2009-174
Test plug adapter; for 4 mm Ø test plugs;
for testing TOPJOB®S rail-mounted termi-
nal 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.: 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

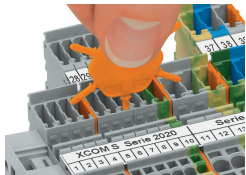
1.3.11.1 Operating tool



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

Installation Notes

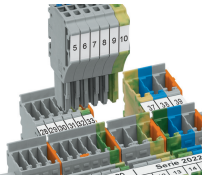
Coding



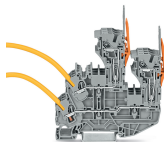
Insert coding pin into the corresponding slot and twist it off.



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

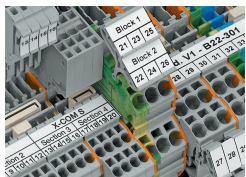


Insert coded female plug into X-COM®S-SYSTEM terminal block assembly.

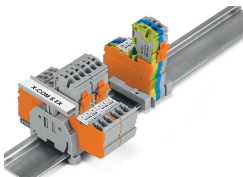


1-conductor female plug
Double-deck carrier terminal blocks can be commoned via 2002 Series Push-In Type Jumper Bars and tested via 859-500 Test Pin.

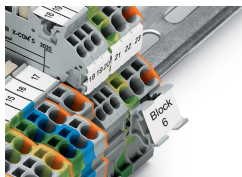
Marking



Clear marking via large marking area



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



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