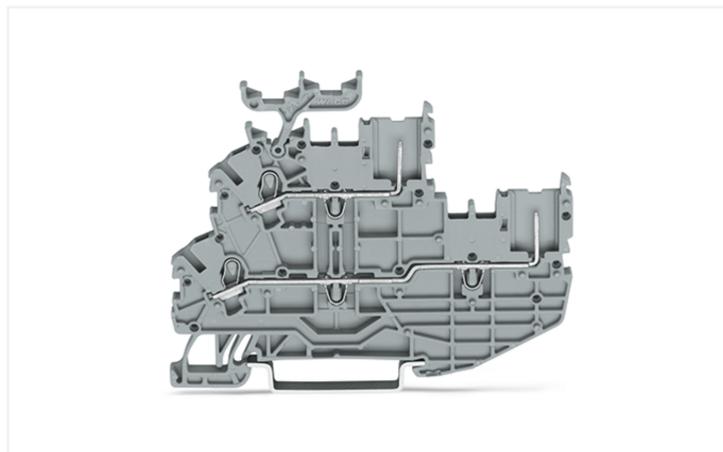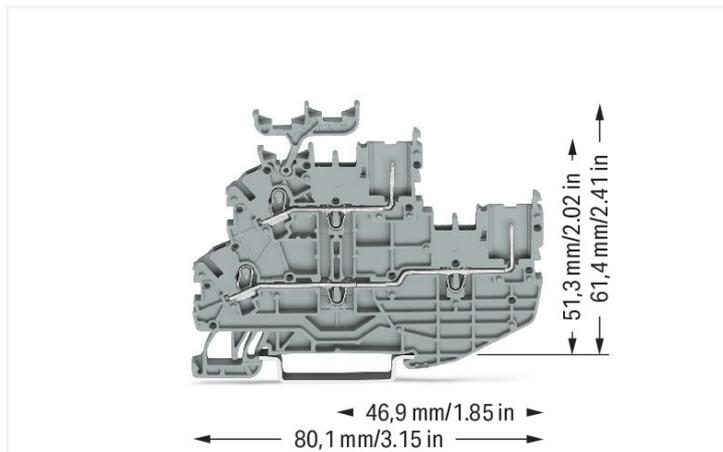# Data Sheet | Item Number: 2020-2231

1-conductor/1-pin double deck receptacle terminal block; Through/through terminal block; L/L; with marker carrier; for DIN-rail 35 x 15 and 35 x 7.5; Push-in CAGE CLAMP®; 1,00 mm²; gray

https://www.wago.com/2020-2231

Color: ■ gray

Double-deck terminal block, 2020 Series, operating tool

This double-deck terminal block (item number 2020-2231) is designed for seamless electrical installations. Pluggable rail-mount terminal blocks are primarily found in switchgear units and control systems, most notably in railroad technology. These innovative systems combine the benefits 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. The double-deck terminal block also serves as a through terminal block. Rated current and voltage are key factors to consider when selecting a pluggable rail-mount terminal block, as they indicate how the product can be used. This product has a rated voltage of 500 V and a rated current of 13.5 A. Conductors can only be connected to this double-deck terminal block if their strip length is between 9 mm and 11 mm. This product incorporates conductor terminals and utilizes Push-in CAGE CLAMP®. Our Push-in CAGE CLAMP® is a universal, maintenance-free connection solution for all conductor types, boasting a key feature: both solid and fine-stranded conductors with ferrules can be directly inserted without the need for tools or any preparation, such as crimping the ferrule. This double-deck terminal block is suitable for conductor cross sections ranging from 0.14 mm² to 1.5 mm². It has two levels. Two potentials can connect using the two clamping points The gray housing is made of polyamide (PA66) for insulation. An operating tool is used to operate this pluggable rail-mount terminal block. These pluggable rail-mount terminal blocks are mounted using DIN-35 rails.. You can connect copper conductors thanks to 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®S-SYSTEM terminal strip.

Electrical data

Ratings per	IEC/EN 60947-7-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Nominal voltage	500 V	-	-
Rated impulse withstand voltage	6 kV	-	-
Rated current	13.5 A	-	-

Approvals per	UL 1059		
Use group	B	C	D
Rated voltage	300 V	300 V	300 V
Rated current	15 A	15 A	15 A

Approvals per	CSA 22.2 No 158		
Use group	B	C	D
Rated voltage	300 V	300 V	-
Rated current	10 A	10 A	-

Power Loss	
Power loss, per pole (potential)	0.4338 W
Rated current I_N for power loss specification	13.5 A
Resistance value for specified, current-dependent power loss	0.00238 Ω

Connection data

Clamping units	2
Female plug slots	2
Total number of potentials	2
Number of levels	2
Number of jumper slots	4

Connection 1

Connection technology	Push-in CAGE CLAMP®
Actuation type	Operating tool
Connectable conductor materials	Copper
Nominal cross-section	1 mm²
Solid conductor	0.14 … 1.5 mm² / 24 … 16 AWG
Solid conductor; push-in termination	0.5 … 1.5 mm² / 20 … 16 AWG
Fine-stranded conductor	0.14 … 1.5 mm² / 24 … 16 AWG
Fine-stranded conductor; with insulated ferrule	0.14 … 0.75 mm² / 24 … 18 AWG
Fine-stranded conductor; with ferrule; push-in termination	0.5 … 0.75 mm² / 20 … 18 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	9 … 11 mm / 0.35 … 0.43 inches
Wiring direction	Front-entry wiring

Physical data

Width	3.5 mm / 0.138 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
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	0.193 MJ
Weight	8.8 g

Environmental requirements

Processing temperature	-35 … +85 ℃
Continuous operating temperature	-60 … +105 ℃

Commercial data

Product Group	18 (X-COM-System)
PU (SPU)	50 pcs
Packaging type	Box
Country of origin	CN
GTIN	4050821049579
Customs tariff number	85366990990

Product Classification

UNSPSC	39121410
eCl@ss 10.0	27-14-11-20
eCl@ss 9.0	27-14-11-20
ETIM 9.0	EC000897
ETIM 8.0	EC000897
ECCN	NO US CLASSIFICATION

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 7617
CSA DEKRA Certification B.V.	C22.2	2516073
KEMA/KEUR DEKRA Certification B.V.	EN 60947	71-100670
UL UL International Germany GmbH	UL 1059	E 45172

Declarations of conformity and manufacturer's declarations

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

Approvals for marine applications

Approval	Standard	Certificate Name
ABS American Bureau of Shipping	EN 60947	24-0152298-PDA
DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAE00001V2

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 2020-2231	↓

Documentation

Bid Text

2020-2231	19.02.2019	xml 4.17 KB	↓
2020-2231	07.08.2018	docx 15.14 KB	↓

CAD/CAE-Data

CAD data		**CAE data**	
2D/3D Models 2020-2231	↓	EPLAN Data Portal 2020-2231	↓
		WSCAD Universe 2020-2231	↓
		ZUKEN Portal 2020-2231	↓

1 Compatible Products

1.1 System counterpart

1.1.1 Female connector/socket

Item No.: 2020-102
1-conductor female connector; Push-in CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 2-pole; 1,50 mm²; gray

Item No.: 2020-202
2-conductor female connector; Push-in CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 2-pole; 1,50 mm²; gray

1.2 Required Accessories

1.2.1 End plate

1.2.1.1 End plate

Item No.: 2020-2291
End and intermediate plate; 1 mm thick; gray

Item No.: 2020-2292
End and intermediate plate; 1 mm thick; orange

1.3 Optional Accessories

1.3.1 Coding

1.3.1.1 Coding

Item No.: 2020-100
Carrier with 6 coding pins; for coding of female plugs; for carrier terminal blocks; 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.: 210-197
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715; silver-colored

Item No.: 210-114
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.: 210-113
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; 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.: 216-243
Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red

1.3.4 Jumper

1.3.4.1 Jumper

Item No.: 2000-406/020-000
Delta jumper; insulated; light gray

Item No.: 2000-410/000-006
Jumper; 10-way; insulated; blue

Item No.: 2000-410
Jumper; 10-way; insulated; light gray

Item No.: 2000-410/000-005
Jumper; 10-way; insulated; red

Item No.: 2000-402/000-006
Jumper; 2-way; insulated; blue

Item No.: 2000-402
Jumper; 2-way; insulated; light gray

Item No.: 2000-402/000-005
Jumper; 2-way; insulated; red

Item No.: 2000-402/000-018
Jumper; 2-way; insulated; yellow-green

Item No.: 2000-403/000-006
Jumper; 3-way; insulated; blue

Item No.: 2000-403
Jumper; 3-way; insulated; light gray

Item No.: 2000-403/000-005
Jumper; 3-way; insulated; red

Item No.: 2000-404/000-006
Jumper; 4-way; insulated; blue

Item No.: 2000-404
Jumper; 4-way; insulated; light gray

Item No.: 2000-404/000-005
Jumper; 4-way; insulated; red

Item No.: 2000-405/000-006
Jumper; 5-way; insulated; blue

Item No.: 2000-405
Jumper; 5-way; insulated; light gray

1.3.4.1 Jumper

Item No.: 2000-405/000-005
Jumper; 5-way; insulated; red

Item No.: 2000-406/000-006
Jumper; 6-way; insulated; blue

Item No.: 2000-406
Jumper; 6-way; insulated; light gray

Item No.: 2000-406/000-005
Jumper; 6-way; insulated; red

Item No.: 2000-407/000-006
Jumper; 7-way; insulated; blue

Item No.: 2000-407
Jumper; 7-way; insulated; light gray

Item No.: 2000-407/000-005
Jumper; 7-way; insulated; red

Item No.: 2000-408/000-006
Jumper; 8-way; insulated; blue

Item No.: 2000-408
Jumper; 8-way; insulated; light gray

Item No.: 2000-408/000-005
Jumper; 8-way; insulated; red

Item No.: 2000-409/000-006
Jumper; 9-way; insulated; blue

Item No.: 2000-409
Jumper; 9-way; insulated; light gray

Item No.: 2000-409/000-005
Jumper; 9-way; insulated; red

Item No.: 2000-440
Jumper; from 1 to 10; insulated; light gray

Item No.: 2000-433/000-006
Jumper; from 1 to 3; insulated; blue

Item No.: 2000-433
Jumper; from 1 to 3; insulated; light gray

Item No.: 2000-433/000-005
Jumper; from 1 to 3; insulated; red

Item No.: 2000-434
Jumper; from 1 to 4; insulated; light gray

Item No.: 2000-435
Jumper; from 1 to 5; insulated; light gray

Item No.: 2000-436
Jumper; from 1 to 6; insulated; light gray

Item No.: 2000-437
Jumper; from 1 to 7; insulated; light gray

Item No.: 2000-438
Jumper; from 1 to 8; insulated; light gray

Item No.: 2000-439
Jumper; from 1 to 9; insulated; light gray

Item No.: 2000-405/011-000
Star point jumper; 3-way; insulated; light gray

Item No.: 2000-492
Vertical jumper; insulated; light gray

Item No.: 210-103
Wire commoning chain; insulated; black

Item No.: 210-123
Wire commoning chain; insulated; blue

1.3.5 Marking

1.3.5.1 Marker

Item No.: 793-3501
WMB marking card; as card; plain; snap-on type; white

Item No.: 2009-113
WMB-Inline; for Smart Printer; 2300 pieces on roll; plain; snap-on type; white

1.3.5.2 Marking strip

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

1.3.6 Protective warning marker

1.3.6.1 Cover

Item No.: 2000-115
Protective warning marker; for 5 terminal blocks; with high-voltage symbol, black; yellow

1.3.7 Push-in type wire jumper

1.3.7.1 Jumper

Item No.: 2009-404
Push-in type wire jumper; 0.75 mm²; insulated; 110 mm long; gray

Item No.: 2009-406
Push-in type wire jumper; 0.75 mm²; insulated; 250 mm long; gray

Item No.: 2009-402
Push-in type wire jumper; 0.75 mm²; insulated; 60 mm long; gray

1.3.8 Screwless end stop

1.3.8.1 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

1.3.9 Test and measurement

1.3.9.1 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

1.3.10 Tool

1.3.10.1 Operating tool

Item No.: 210-719
Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft

Item No.: 210-648
Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft; angled; short
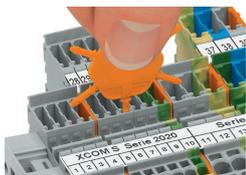
Item No.: 210-647
Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft; multicoloured
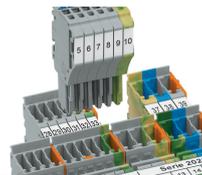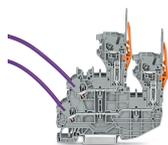
Installation Notes

Coding

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

Coding a female plug: remove coding finger using a suitable tool.
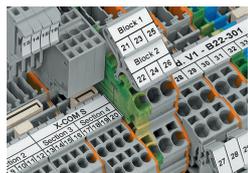
Insert coded female plug into X-COM®S-SYSTEM terminal block assembly.

1-conductor female plug
Double-deck carrier terminal blocks can be commoned via 2000 Series Push-In Type Jumper Bars and tested via 859-500 Test Pin.
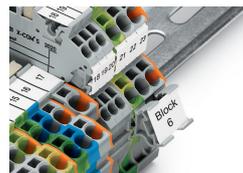
Marking

Clear marking via large marking area

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

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

Subject to changes. Please also observe the further product documentation!

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