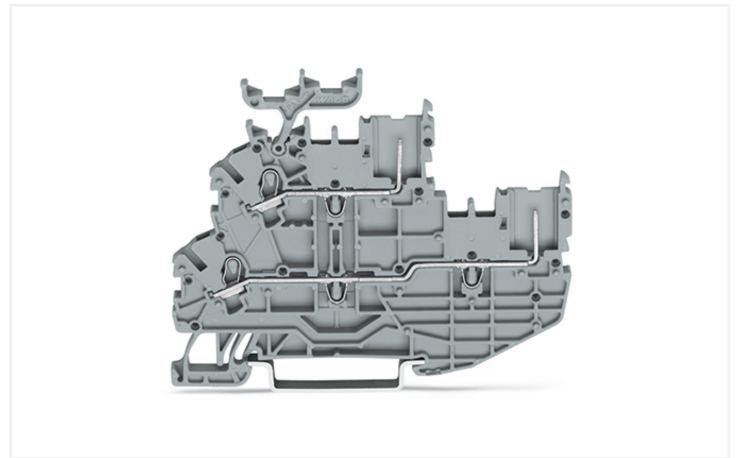
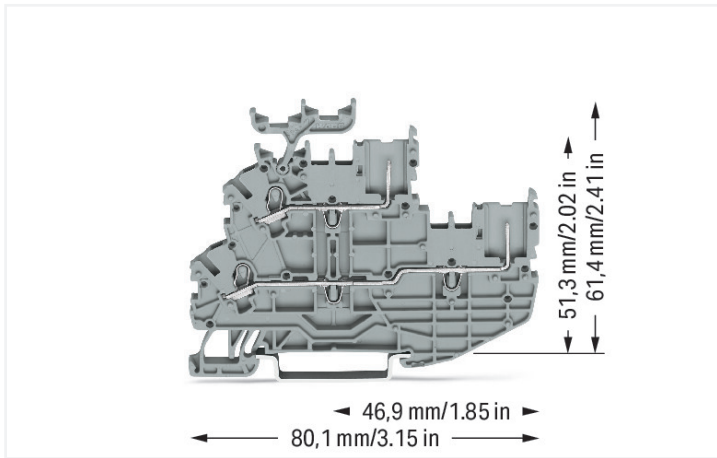


## Data Sheet | Item Number: 2020-2231

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 mm<sup>2</sup>; gray



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



Color: ■ gray

1-conductor/1-pin double-deck carrier terminal block, 2020 Series, operating tool

1-conductor/1-pin double-deck carrier terminal block (item number 2020-2231) simplifies electrical installations. Strip lengths must be between 9 and 11 mm when connecting conductors to 1-conductor/1-pin double-deck carrier terminal block. 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. Featuring conductor terminals along with Push-in CAGE CLAMP®, this product outperforms the competition. Our Push-in CAGE CLAMP® is a universal, maintenance-free connection solution for all conductor types, offering a key advantage: 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. Depending on the conductor type, 1-conductor/1-pin double-deck carrier terminal block is designed for conductor cross sections ranging from 0.14 mm<sup>2</sup> to 1.5 mm<sup>2</sup>.

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		
Overtoltage 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 $\Omega$

General information	
Wiring direction	Front-entry wiring

## 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 mm <sup>2</sup>
Solid conductor	0.14 ... 1.5 mm <sup>2</sup> / 24 ... 16 AWG
Solid conductor; push-in termination	0.5 ... 1.5 mm <sup>2</sup> / 20 ... 16 AWG
Fine-stranded conductor	0.14 ... 1.5 mm <sup>2</sup> / 24 ... 16 AWG
Fine-stranded conductor; with insulated ferrule	0.14 ... 0.75 mm <sup>2</sup> / 24 ... 18 AWG
Fine-stranded conductor; with ferrule; push-in termination	0.5 ... 0.75 mm <sup>2</sup> / 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)	<a href="#">Information on material specifications can be found here</a>
Color	gray
Material group	I
Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.175 MJ
Weight	8.8 g

### Environmental requirements

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

### 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 10.0	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
PRS Polski Rejestr Statków	-	TE/1094/880590/23

**Downloads**

**Environmental Product Compliance**

Compliance Search	
Environmental Product Compliance 2020-2231	<a href="#">↓</a>

**Documentation**

Bid Text			
2020-2231	19.02.2019	xml 4.17 KB	<a href="#">↓</a>
2020-2231	07.08.2018	docx 15.14 KB	<a href="#">↓</a>

**CAD/CAE-Data**

CAD data	
2D/3D Models 2020-2231	<a href="#">↓</a>

CAE data	
EPLAN Data Portal 2020-2231	<a href="#">↓</a>
WSCAD Universe 2020-2231	<a href="#">↓</a>
ZUKEN Portal 2020-2231	<a href="#">↓</a>

**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 mm<sup>2</sup>; Pin spacing 3.5 mm; 2-pole; 1,50 mm<sup>2</sup>; gray

**Item No.: 2020-202**  
2-conductor female connector; Push-in CAGE CLAMP®; 1.5 mm<sup>2</sup>; Pin spacing 3.5 mm; 2-pole; 1,50 mm<sup>2</sup>; 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 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.: 216-243**

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

#### 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; 0.5 mm<sup>2</sup>; 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 mm<sup>2</sup>; insulated; 110 mm long; gray



**Item No.: 2009-406**

Push-in type wire jumper; 0.75 mm<sup>2</sup>; insulated; 250 mm long; gray



**Item No.: 2009-402**

Push-in type wire jumper; 0.75 mm<sup>2</sup>; 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 0,5mm<sup>2</sup>

### 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

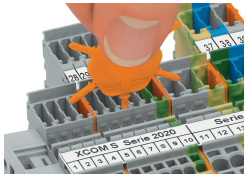


**Item No.: 210-647**

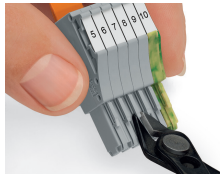
Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft; multicoloured

## Installation Notes

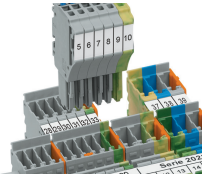
### Coding



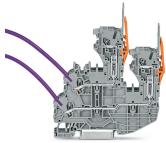
Insert coding pin into the corresponding slot and twist it off.



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

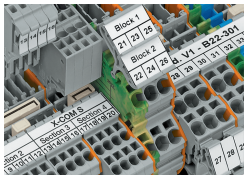


Insert coded female plug into X-COM®S-SYSTEM terminal block assembly.

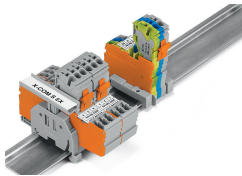


1-conductor female plug  
Double-deck carrier terminal blocks can be commoned via 2000 Series Push-In Type Jumper Bars and tested via 859-500 Test Pin.

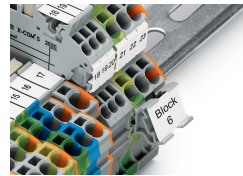
### Marking



Clear marking via large marking area



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



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