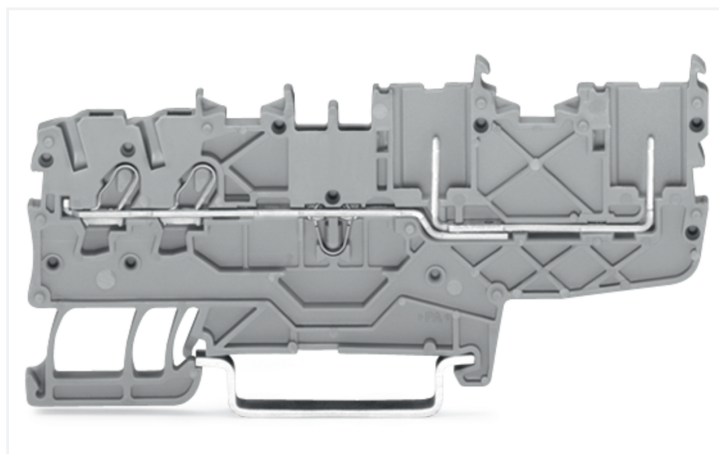
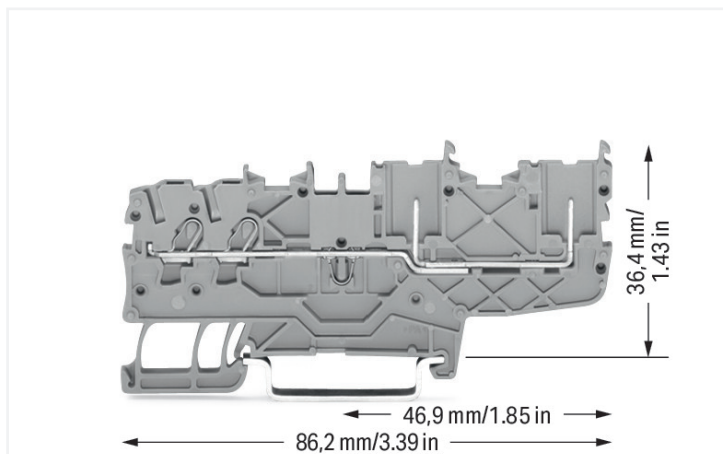


## Data Sheet | Item Number: 2020-1401

2-conductor/2-pin carrier terminal block; 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/2020-1401>



Color: ■ gray

### 2-conductor/2-pin carrier terminal block, 2020 Series, operating tool

2-conductor/2-pin carrier terminal block (item number 2020-1401) provides fault-free electrical installations. Conductors can only be connected to 2-conductor/2-pin carrier terminal block if their strip length is between 9 and 11 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. This product incorporates conductor terminals and utilizes Push-in CAGE CLAMP®. Push-in CAGE CLAMP® technology provides a universal connection solution for any type of conductor. It allows both solid and fine-stranded conductors with ferrules to be inserted directly into the clamping point without the need for tools. Depending on the type of conductor, 2-conductor/2-pin carrier terminal block is ideal for conductor cross sections ranging from 0.14 mm<sup>2</sup> to 1.5 mm<sup>2</sup>.

An operating tool is used to operate this pluggable rail-mount terminal block.

### 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	300 V
Rated current	10 A	10 A	10 A

Power Loss	
Power loss, per pole (potential)	0.4338 W
Rated current I <sub>N</sub> for power loss specification	13.5 A
Resistance value for specified, current-dependent power loss	0.00238 Ω

### General information

Wiring direction	Front-entry wiring
------------------	--------------------

### Connection Data

Clamping units	2
Female plug slots	2
Total number of potentials	1
Number of levels	1

### 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	86.2 mm / 3.394 inches
Depth from upper-edge of DIN-rail	36.4 mm / 1.433 inches

### Mechanical data

Design	horizontal type
Mounting type	DIN-35 rail
Marking level	Center/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	0.118 MJ
Weight	6.4 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

### Environmental Testing

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	CN
GTIN	4050821145301
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	-	-
Railway WAGO GmbH & Co. KG	-	Z00004390.000
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 2020-1401 <span style="float: right;">↓</span>

**Documentation**

Bid Text			
2020-1401	07.08.2018	docx 15.19 KB	↓
2020-1401	19.02.2019	xml 4.14 KB	↓

**CAD/CAE-Data**

**CAD data**

2D/3D Models  
2020-1401

**CAE data**

EPLAN Data Portal  
2020-1401

WSCAD Universe  
2020-1401

ZUKEN Portal 2020-1401

**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.: 2020-1491**  
End and intermediate plate; 1 mm thick; gray

**Item No.: 2020-1492**  
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



**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

1.3.4.1 Jumper



**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.: 210-103**  
Wire comming chain; 0.5 mm<sup>2</sup>; insulated; black



**Item No.: 210-123**  
Wire comming 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.: 2000-560**

Modular TOPJOB<sup>®</sup>S connector; modular; for jumper contact slot; 10-pole; gray



**Item No.: 2000-552**

Modular TOPJOB<sup>®</sup>S connector; modular; for jumper contact slot; 2-pole; gray



**Item No.: 2000-553**

Modular TOPJOB<sup>®</sup>S connector; modular; for jumper contact slot; 3-pole; gray



**Item No.: 2000-554**

Modular TOPJOB<sup>®</sup>S connector; modular; for jumper contact slot; 4-pole; gray



**Item No.: 2000-555**

Modular TOPJOB<sup>®</sup>S connector; modular; for jumper contact slot; 5-pole; gray



**Item No.: 2000-556**

Modular TOPJOB<sup>®</sup>S connector; modular; for jumper contact slot; 6-pole; gray



**Item No.: 2000-557**

Modular TOPJOB<sup>®</sup>S connector; modular; for jumper contact slot; 7-pole; gray



**Item No.: 2000-558**

Modular TOPJOB<sup>®</sup>S connector; modular; for jumper contact slot; 8-pole; gray



**Item No.: 2000-559**

Modular TOPJOB<sup>®</sup>S connector; modular; for jumper contact slot; 9-pole; gray



**Item No.: 2000-549**

Spacer module; modular; e.g., for bridging commoned terminal blocks; gray



**Item No.: 2009-174**

Test plug adapter; for 4 mm Ø test plugs; for testing TOPJOB<sup>®</sup>S rail-mounted terminal blocks; gray



**Item No.: 2009-182**

Testing tap; for max. 2.5 mm<sup>2</sup>; tool-free connection for individual test wires 0.08 - 2.5 mm; gray



**Item No.: 2000-511**

TOPJOB<sup>®</sup>S L-type test plug module; modular; for jumper contact slot; 1-pole; gray



**Item No.: 2000-510**

TOPJOB<sup>®</sup>S L-type test plug module; modular; for jumper contact slot; 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 0,5mm<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

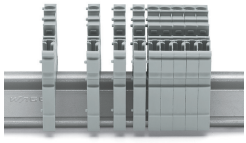


**Item No.: 210-647**

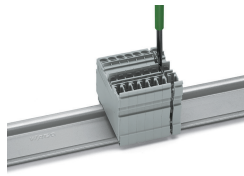
Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft; multicoloured

## Installation Notes

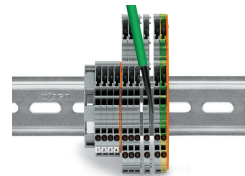
### Installation



Snap individual carrier terminal blocks onto the DIN-rail and slide together.

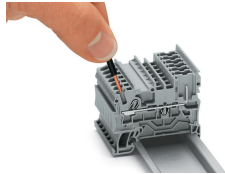


Open the assembly by laterally sliding a block via operating tool (3.5 x 0.5 mm blade).



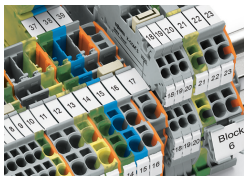
Separate terminal block assembly and slide individual terminal blocks laterally using an operating tool.

### Conductor termination

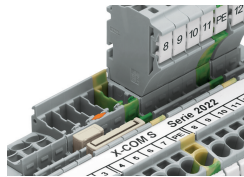


Push-in CAGE CLAMP® enables solid conductors to be connected by simply pushing them into the unit.

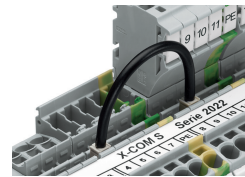
### Commoning



Commoning X-COM®S-SYSTEM Terminal Blocks using jumpers for TOPJOB® S Terminal Blocks. An end plate provides connection to TOPJOB® S Terminal Blocks. 2020 and 2022 Series Terminal Blocks are combinable. Jumper slots are on the same level for both series.

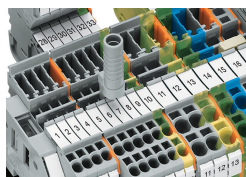


Pairing push-in comb style jumpers.



Commoning with push-in type wire jumper.

### Testing



Test plug adapter (Item No. 2009-174) for 4 mm test plugs or banana plugs – also suitable for X-COM®S-SYSTEM-MINI Terminal Blocks.

