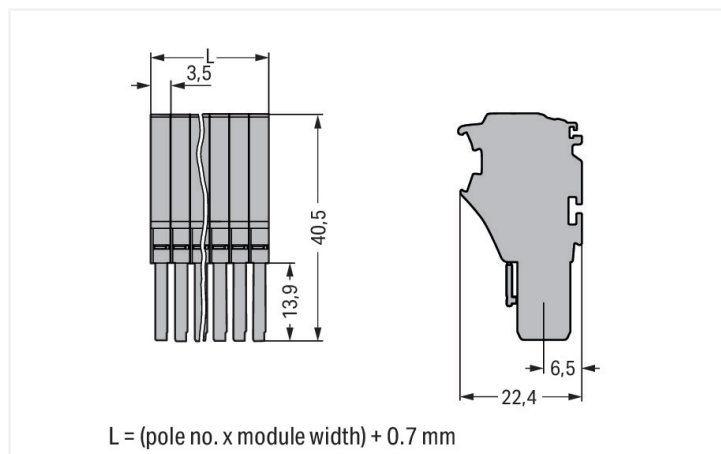
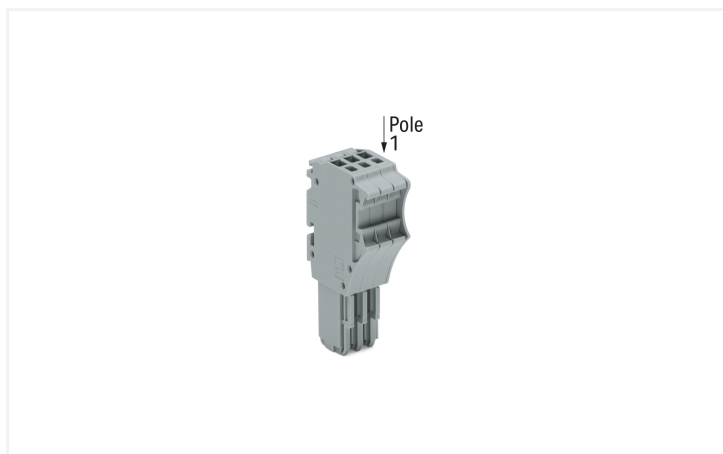


## Data Sheet | Item Number: 2020-104

1-conductor female connector; Push-in CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 4-pole; 1,50 mm²; gray

<https://www.wago.com/2020-104>



Color: ■ gray

Similar to illustration

Dimensions in mm

Female connector, 2020 Series, operating tool

Our female connector (item number 2020-104) is designed for seamless electrical installations. Strip lengths must be between 9 and 11 mm when connecting conductors to this female connector. Pluggable rail-mount terminal blocks are mainly used in switchgear units and control systems (e.g., in railroad technology). They are essentially a combination of rail-mount terminal blocks and pluggable connectors. You can also pre-assemble installations thanks to the variable wiring system. This saves both time and money during manufacture, installation, operation, and maintenance. Featuring conductor terminals along with Push-in CAGE CLAMP®, this product is highly versatile. 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. Dimensions: (14.7 x 40.5 x 22.4) mm (width x height x depth). This female connector is suitable for conductor cross sections ranging from 0.14 mm² to 1.5 mm².

This female connector/socket is operated with an operating tool.

### Notes

Safety Information

According to EN 61984, pluggable connectors without current interrupting capacity must not be mated or unmated when live or under load.

Safety information 2

Notice: An appropriate end plate must be applied to the carrier terminal blocks after each female plug.

### Electrical data

Ratings per	IEC/EN 61984		
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

General information	
Wiring direction	Front-entry wiring

## Connection Data

Clamping units	4
Total number of potentials	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
Pole number	4
Wiring direction	Front-entry wiring

## Physical data

Width	14.7 mm / 0.579 inches
Height	40.5 mm / 1.594 inches
Depth	22.4 mm / 0.882 inches
Module width	3.5 mm / 0.138 inches

## Mechanical data

Variable coding	Yes
Marking level	Side marking
Anti-rotation protection	Yes

## Plug-in connection

Contact type (pluggable connector)	Female connector/socket
Connector (connection type)	for conductor
Mismating protection	No

## 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	0.153 MJ
Weight	9.4 g

### Environmental requirements

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

### Commercial data

PU (SPU)	50 pcs
Packaging type	Box
Country of origin	CN
GTIN	4050821245056
Customs tariff number	85366990990

### Product Classification

UNSPSC	39121409
eCl@ss 10.0	27-14-11-06
eCl@ss 9.0	27-14-11-06
ETIM 9.0	EC001284
ETIM 10.0	EC001284
ECCN	NO US CLASSIFICATION

### Environmental Product Compliance

RoHS Compliance Status	Compliant, No Exemption
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### 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
UL UL International Germany GmbH	UL 1059	E 45172

#### Declarations of conformity and manufacturer's declarations

Approval	Standard	Certificate Name
EU-Declaration of Confor- mity WAGO GmbH & Co. KG	-	-
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 2020-104			↓

## Documentation

Bid Text			
2020-104	19.02.2019	xml 3.90 KB	↓
2020-104	06.08.2018	docx 14.98 KB	↓

## CAD/CAE-Data

CAD data	
2D/3D Models 2020-104	↓

CAE data	
EPLAN Data Portal 2020-104	↓
WSCAD Universe 2020-104	↓
ZUKEN Portal 2020-104	↓

## 1 Compatible Products

### 1.1 Optional Accessories

#### 1.1.1 Ferrule

##### 1.1.1.1 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

#### 1.1.2 Locking system

##### 1.1.2.1 Locking system



**Item No.: 2022-151**  
 Locking lever; gray



**Item No.: 2022-152**  
 Locking lever; orange

### 1.1.3 Marking

#### 1.1.3.1 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

#### 1.1.3.2 Marking strip



**Item No.: 210-833**

Marking strips; 25 m on roll; 6 mm wide; plain; Self-adhesive; white



**Item No.: 2009-110**

Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white



**Item No.: 210-831**

Marking strips; on reel; 2.3 mm wide; plain; Self-adhesive; white



**Item No.: 210-832**

Marking strips; on reel; 3 mm wide; plain; Self-adhesive; white



**Item No.: 210-834**

Marking strips; on reel; 5 mm wide; plain; Self-adhesive; white

### 1.1.4 Protective warning marker

#### 1.1.4.1 Cover



**Item No.: 2000-115**

Protective warning marker; for 5 terminal blocks; with high-voltage symbol, black; yellow

### 1.1.5 Strain relief

#### 1.1.5.1 Strain relief plate



**Item No.: 734-328**

Strain relief plate; for female and male connectors; 12.5 mm wide; 1 part; gray

### 1.1.6 Tool

#### 1.1.6.1 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

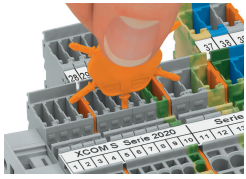


**Item No.: 210-647**

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

## Installation Notes

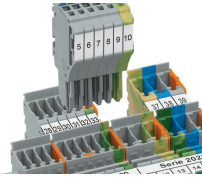
### Coding



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

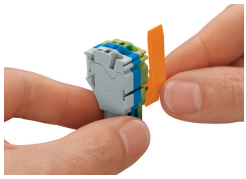


Coding a female plug: remove coding finger using a suitable tool.

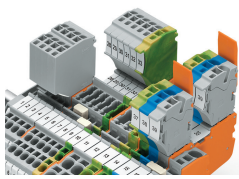


Insert coded female plug into X-COM®S-SYSTEM terminal block assembly.

### Locking system



Slide the locking lever into position.



Female plugs can be individually locked.