

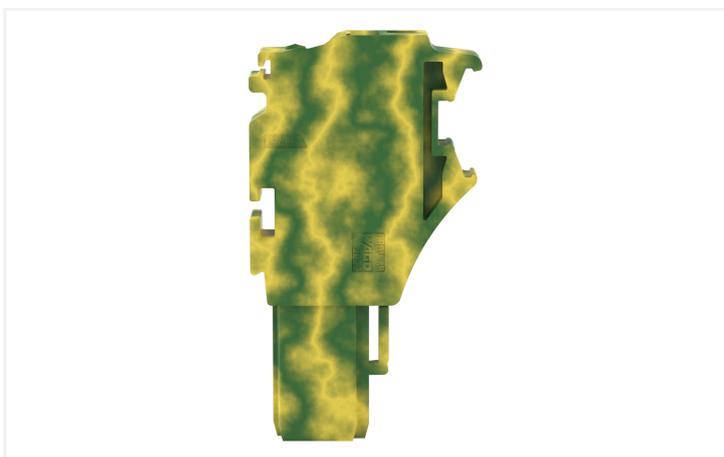
## Data Sheet | Item Number: 2022-187

End module for 1-conductor female connector; Push-in CAGE CLAMP®; 4 mm<sup>2</sup>; Pin spacing 5.2 mm; 1-pole; 4,00 mm<sup>2</sup>; green-yellow

<https://www.wago.com/2022-187>



Color: ■ green-yellow



### Female connector, 2022 Series, operating tool

Error-free electrical installations are guaranteed with this female connector (item number 2022-187). Ensure that the strip lengths are between 10 and 12 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. This product features 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. The dimensions are (5.2 x 40.5 x 22.4) mm (width x height x depth). This female connector is suitable for conductor cross sections ranging from 0.25 mm<sup>2</sup> to 4 mm<sup>2</sup>.

An operating tool is used to operate this female connector/socket.

## Notes

## Safety Information

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

## Electrical data

Ratings per	IEC/EN 61984		
	III	III	II
Overvoltage category	III	III	II
Pollution degree	3	2	2
Nominal voltage	-	-	-
Rated impulse withstand voltage	-	-	-
Rated current	-	-	-

## General information

Wiring direction Front-entry wiring

## Connection Data

Clamping units	1
Total number of potentials	1

## Connection 1

Connection technology	Push-in CAGE CLAMP®
Actuation type	Operating tool
Connectable conductor materials	Copper
Nominal cross-section	2.5 mm <sup>2</sup>
Solid conductor	0.25 ... 4 mm <sup>2</sup> / 22 ... 12 AWG
Solid conductor; push-in termination	0.75 ... 4 mm <sup>2</sup> / 18 ... 12 AWG
Fine-stranded conductor	0.25 ... 4 mm <sup>2</sup> / 22 ... 12 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 2.5 mm <sup>2</sup> / 22 ... 14 AWG
Fine-stranded conductor; with ferrule; push-in termination	1 ... 2.5 mm <sup>2</sup> / 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
Pole number	1
Wiring direction	Front-entry wiring

## Physical data

Width	5.2 mm / 0.205 inches
Height	40.5 mm / 1.594 inches
Depth	22.4 mm / 0.882 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
Plugging without loss of pin spacing	Yes

### Material data

Note (material data)	<a href="#">Information on material specifications can be found here</a>
Color	green-yellow
Material group	I
Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.066 MJ
Weight	3.6 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

**Environmental Testing**

Vibration and shock stress for rolling stock equipment Passed

**Commercial data**

Product Group	18 (X-COM-System)
PU (SPU)	250 pcs
Packaging type	Bag
Country of origin	CN
GTIN	4066966660135
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
CSA CSA Group	C22.2 No. 158	2437422
KEMA/KEUR DEKRA Certification B.V.	EN 61984	71-101560
UL Underwriters Laboratories Inc.	UL 1059	E45172

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



Approval	Standard	Certificate Name
EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-
Railway WAGO GmbH & Co. KG	-	Z00004392.000
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 2022-187	↓

**Documentation**

Bid Text			
2022-187	19.02.2019	xml 4.26 KB	↓
2022-187	14.05.2019	docx 16.13 KB	↓

**CAD/CAE-Data**

CAD data	
2D/3D Models 2022-187	↓

CAE data	
EPLAN Data Portal 2022-187	↓
WSCAD Universe 2022-187	↓
ZUKEN Portal 2022-187	↓

**1 Compatible Products**

**1.1 Optional Accessories**

**1.1.1 Ferrule**

**1.1.1.1 Ferrule**

<p><b>Item No.: 216-241</b> 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</p>	<p><b>Item No.: 216-242</b> 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</p>	<p><b>Item No.: 216-262</b> 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</p>	<p><b>Item No.: 216-243</b> 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</p>
<p><b>Item No.: 216-263</b> 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</p>	<p><b>Item No.: 216-244</b> Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black</p>	<p><b>Item No.: 216-264</b> Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black</p>	<p><b>Item No.: 216-284</b> Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black</p>
<p><b>Item No.: 216-246</b> Ferrule; Sleeve for 2.5 mm<sup>2</sup> / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue</p>	<p><b>Item No.: 216-266</b> Ferrule; Sleeve for 2.5 mm<sup>2</sup> / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue</p>	<p><b>Item No.: 216-286</b> Ferrule; Sleeve for 2.5 mm<sup>2</sup> / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue</p>	

### 1.1.2 Insulation stop

#### 1.1.2.1 Insulation stop



**Item No.: 2002-171**

Insulation stop; 0.25 - 0.5 mm<sup>2</sup>; 5 pieces/strip; light gray



**Item No.: 2002-172**

Insulation stop; 0.75 - 1 mm<sup>2</sup>; 5 pieces/strip; dark gray

### 1.1.3 Locking system

#### 1.1.3.1 Locking system



**Item No.: 2022-141**

Locking lever; gray



**Item No.: 2022-151**

Locking lever; gray



**Item No.: 2022-142**

Locking lever; orange



**Item No.: 2022-152**

Locking lever; orange

### 1.1.4 Marking

#### 1.1.4.1 Marker



**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

#### 1.1.4.2 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

### 1.1.5 Protective warning marker

#### 1.1.5.1 Cover



**Item No.: 2002-115**

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

## 1.1.6 Screwless end stop

### 1.1.6.1 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

## 1.1.7 Strain relief

### 1.1.7.1 Strain relief plate



**Item No.: 734-430**

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



**Item No.: 734-328**

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



**Item No.: 734-329**

Strain relief plate; for female and male connectors; 25 mm wide; 1 part; gray



**Item No.: 734-326**

Strain relief plate; for female and male connectors; 35 mm wide; 1 part; gray



**Item No.: 734-327**

Strain relief plate; for female and male connectors; 6 mm wide; 1 part; gray



**Item No.: 734-431**

Strain relief plate; for female and male connectors; 75 mm wide; 1 part; gray

## 1.1.8 Tool

### 1.1.8.1 Operating tool

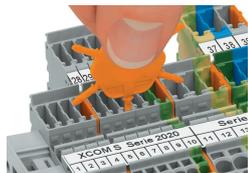


**Item No.: 210-720**

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

## Installation Notes

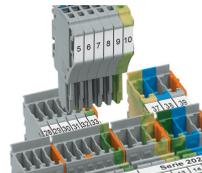
### Coding



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

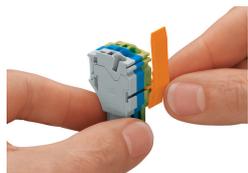


Coding a female plug: remove coding finger using a suitable tool.



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

## Locking system



Slide the locking lever into position.



Female plugs can be individually locked.

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

Current addresses can be found at: [www.wago.com](http://www.wago.com)