

# Data sheet | Item number: 231-304/107-000

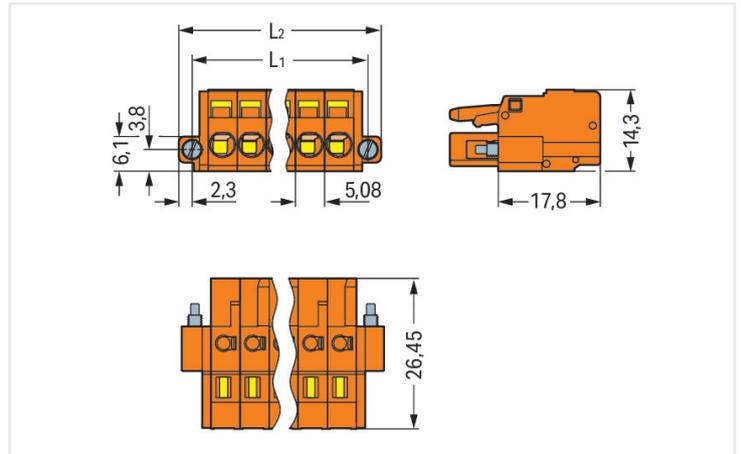
1-conductor female connector; CAGE CLAMP®; 2.5 mm<sup>2</sup>; Pin spacing 5.08 mm; 4-pole; Screw flange; 2,50 mm<sup>2</sup>; orange

<https://www.wago.com/231-304/107-000>



Color: ■ orange

Similar to illustration

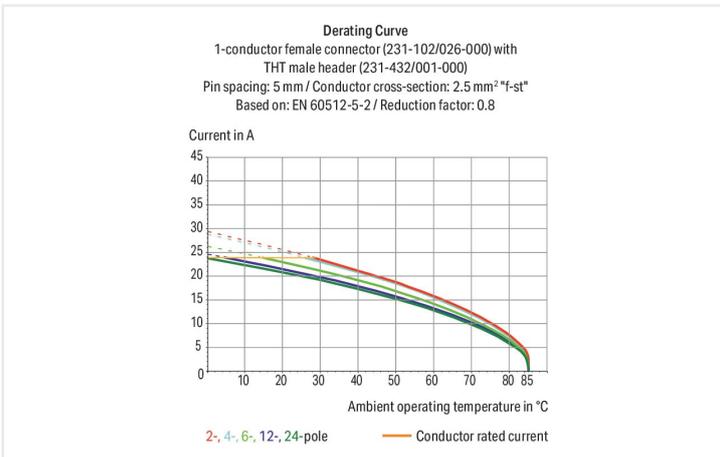


Dimensions in mm

$L1 = (\text{pole no.} \times \text{pin spacing}) + 5.4 \text{ mm}$

$L2 = (\text{pole no.} \times \text{pin spacing}) + 10 \text{ mm}$

2- to 3-pole female connectors – one latch only



- Universal connection for all conductor types
- Easy cable pre-assembly and on-unit wiring via vertical and horizontal CAGE CLAMP® actuation
- Integrated test ports
- With coding fingers

## Notes

### Safety information 1

The MCS – MULTI CONNECTION SYSTEM includes connectors without breaking capacity in accordance with DIN EN 61984. When used as intended, these connectors must not be connected/disconnected when live or under load. When used as intended, these connectors must not be connected/disconnected when live or under load. The circuit design should ensure header pins, which can be touched, are not live when unmated.

### Variants:

Gold-plated or partially gold-plated contact surfaces  
Other versions (or variants) can be requested from WAGO Sales or configured at <https://configurator.wago.com/>.

## Electrical data

### Ratings per IEC/EN

Ratings per	IEC/EN 60664-1
Nominal voltage (III/3)	320 V
Rated impulse voltage (III/3)	4 kV
Rated voltage (III/2)	320 V
Rated impulse voltage (III/2)	4 kV
Nominal voltage (II/2)	630 V
Rated surge voltage (II/2)	4 kV
Rated current	16 A
Legend (ratings)	(III / 2) ≙ Overvoltage category III / Pollution degree 2

### Ratings per UL

Approvals per	UL 1059
Rated voltage UL (Use Group B)	300 V
Rated current UL (Use Group B)	15 A
Rated voltage UL (Use Group D)	300 V
Rated current UL (Use Group D)	10 A

### Ratings per UL

Rated voltage (UL 1977)	600 V
Rated current UL 1977	15 A

### Ratings per CSA

Approvals per	CSA
Rated voltage CSA (Use Group B)	300 V
Rated current CSA (Use Group B)	15 A
Rated voltage CSA (Use Group D)	300 V
Rated current CSA (Use Group D)	10 A

## Connection data

Connection points	4
Total number of potentials	4
Number of connection types	1
Number of levels	1

### Connection 1

Connection technology	CAGE CLAMP®
Actuation type	Operating tool
Solid conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 1.5 mm <sup>2</sup>
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 2.5 mm <sup>2</sup>
Strip length	8 ... 9 mm / 0.31 ... 0.35 inches
Pole number	4
Conductor entry direction to mating direction	0°

### Physical data

Pin spacing	5.08 mm / 0.2 inches
Width	30.22 mm / 1.19 inches
Height	14.3 mm / 0.563 inches
Depth	26.45 mm / 1.041 inches

### Mechanical Data

Variable coding	Yes
Anti-rotation protection	Yes

### Plug-in connection

Contact type (pluggable connector)	Female connector/socket
Connector (connection type)	for conductor
Mismating protection	No
Locking of plug-in connection	Screw flange

### Material Data

Note (material data)	<a href="#">Information on material specifications can be found here</a>
Color	orange
Material group	I
Insulation material	Polyamide (PA66)
Flammability class per UL94	V0
Clamping spring material	Chrome-nickel spring steel (CrNi)
Contact material	Copper alloy
Contact plating	Tin
Fire load	0.124 MJ
Weight	8.4 g

### Environmental requirements

Limit temperature range	-60 ... +85 °C
Processing temperature	-35 ... +60 °C

### Commercial data

Product Group	3 (Multi Conn. System)
eCl@ss 10.0	27-44-03-09
eCl@ss 9.0	27-44-03-09
ETIM 8.0	EC002638
ETIM 7.0	EC002638
PU (SPU)	50 pcs
Packaging type	Box
Country of origin	DE
GTIN	4044918370271
Customs tariff number	85366990990

Approvals and certificates

General approvals



Approval	Standard	Certificate name
CB DEKRA Certification B.V.	IEC 61984	NL-39756/A1
CSA DEKRA Certification B.V.	C22.2	1466354
KEMA/KEUR DEKRA Certification B.V.	EN 61984	71-121453
UL UL International Germany GmbH	UL 1977	E45171
UR Underwriters Laboratories Inc.	UL 1059	E45172

Declarations of conformity and manufacturer's declarations

Approval	Standard	Certificate name
Railway WAGO GmbH & Co. KG	-	Railway Ready

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 231-304/107-000	↓
---	---

Documentation

Additional Information

Technical Section	03.04.2019	pdf 1949.09 KB	↓
-------------------	------------	-------------------	---

CAD/CAE-Data

CAD data	CAE data
2D/3D Models 231-304/107-000	EPLAN Data Portal 231-304/107-000
↓	↓
	ZUKEN Portal 231-304/107-000
	↓

1 Compatible products

1.1 System counterpart

1.1.1 Male connector/plug



**Item no.: 231-634/129-000**

1-conductor male connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 4-pole; Snap-in flange; 2,50 mm²; orange

**Item no.: 231-634/109-000**

1-conductor male connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 4-pole; Threaded flange; 2,50 mm²; orange

**Item no.: 231-534/108-000**

THT male header; 1.0 x 1.0 mm solder pin; angled; Threaded flange; Pin spacing 5.08 mm; 4-pole; orange

**Item no.: 231-334/108-000**

THT male header; 1.0 x 1.0 mm solder pin; straight; Threaded flange; Pin spacing 5.08 mm; 4-pole; orange



**Item no.: 231-564/108-000**

THT male header; 1.2 x 1.2 mm solder pin; angled; Threaded flange; Pin spacing 5.08 mm; 4-pole; orange

**Item no.: 231-364/108-000**

THT male header; 1.2 x 1.2 mm solder pin; straight; Threaded flange; Pin spacing 5.08 mm; 4-pole; orange

1.2 Optional accessories

1.2.1 Cover

1.2.1.1 Cover



**Item no.: 231-669**

Lockout caps; for covering unused clamping units; orange

1.2.2 Ferrule

1.2.2.1 Ferrule



**Item no.: 216-301**

Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow

**Item no.: 216-321**

Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow

**Item no.: 216-151**

Ferrule; Sleeve for 0.25 mm² / AWG 24; uninsulated; electro-tin plated

**Item no.: 216-131**

Ferrule; Sleeve for 0.25 mm² / AWG 24; uninsulated; electro-tin plated; silver-colored



**Item no.: 216-302**

Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise

**Item no.: 216-322**

Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise

**Item no.: 216-132**

Ferrule; Sleeve for 0.34 mm² / AWG 24; uninsulated; electro-tin plated

**Item no.: 216-152**

Ferrule; Sleeve for 0.34 mm² / AWG 24; uninsulated; electro-tin plated



**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.: 216-201**

Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white

**Item no.: 216-221**

Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white

**Item no.: 216-141**

Ferrule; Sleeve for 0.5 mm² / 20 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92



**Item no.: 216-101**

Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated; silver-colored

**Item no.: 216-121**

Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated; silver-colored

**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.: 216-262**

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.: 216-202**

Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray

**Item no.: 216-222**

Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray

**Item no.: 216-142**

Ferrule; Sleeve for 0.75 mm² / 18 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92

**Item no.: 216-102**

Ferrule; Sleeve for 0.75 mm² / AWG 20; uninsulated; electro-tin plated; silver-colored

1.2.2.1 Ferrule



**Item no.: 216-122**  
 Ferrule; Sleeve for 0.75 mm<sup>2</sup> / AWG 20; un-insulated; electro-tin plated; silver-colored



**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



**Item no.: 216-263**  
 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



**Item no.: 216-203**  
 Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; red



**Item no.: 216-223**  
 Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; red



**Item no.: 216-103**  
 Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; un-insulated; electro-tin plated



**Item no.: 216-143**  
 Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92



**Item no.: 216-123**  
 Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; un-insulated; electro-tin plated; silver-colored



**Item no.: 216-204**  
 Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; insulated; electro-tin plated; black



**Item no.: 216-224**  
 Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; insulated; electro-tin plated; black



**Item no.: 216-244**  
 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



**Item no.: 216-264**  
 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



**Item no.: 216-284**  
 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



**Item no.: 216-124**  
 Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; un-insulated; electro-tin plated



**Item no.: 216-144**  
 Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92; silver-colored



**Item no.: 216-104**  
 Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; un-insulated; electro-tin plated; silver-colored



**Item no.: 216-106**  
 Ferrule; Sleeve for 2.5 mm<sup>2</sup> / AWG 14; un-insulated; electro-tin plated; silver-colored

1.2.3 Insulation stop

1.2.3.1 Insulation stop



**Item no.: 231-670**  
 Insulation stop; 0.08-0.2 mm<sup>2</sup> / 0.2 mm<sup>2</sup> "s"; white



**Item no.: 231-671**  
 Insulation stop; 0.25 - 0.5 mm<sup>2</sup>; light gray



**Item no.: 231-672**  
 Insulation stop; 0.75 - 1 mm<sup>2</sup>; dark gray

1.2.4 Jumper

1.2.4.1 Jumper



**Item no.: 231-910**  
 Jumper; for conductor entry; 10-way; insulated; gray



**Item no.: 231-902**  
 Jumper; for conductor entry; 2-way; insulated; gray



**Item no.: 231-903**  
 Jumper; for conductor entry; 3-way; insulated; gray



**Item no.: 231-905**  
 Jumper; for conductor entry; 5-way; insulated; gray



**Item no.: 231-907**  
 Jumper; for conductor entry; 7-way; insulated; gray

## 1.2.5 Marking

### 1.2.5.1 Marking strip



**Item no.: 210-331/508-103**

Marking strips; as a DIN A4 sheet; MARKED; 1-12 (200x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive; white



**Item no.: 210-332/508-202**

Marking strips; as a DIN A4 sheet; MARKED; 1-16 (160x); Height of marker strip: 3 mm; Strip length 182 mm; Horizontal marking; Self-adhesive; white



**Item no.: 210-332/508-205**

Marking strips; as a DIN A4 sheet; MARKED; 1-32 (80x); Height of marker strip: 3 mm; Strip length 182 mm; Horizontal marking; Self-adhesive; white



**Item no.: 210-331/508-104**

Marking strips; as a DIN A4 sheet; MARKED; 13-24 (200x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive; white



**Item no.: 210-332/508-204**

Marking strips; as a DIN A4 sheet; MARKED; 17-32 (160x); Height of marker strip: 3 mm; Strip length 182 mm; Horizontal marking; Self-adhesive; white



**Item no.: 210-332/508-206**

Marking strips; as a DIN A4 sheet; MARKED; 33-48 (160x); Height of marker strip: 3 mm; Strip length 182 mm; Horizontal marking; Self-adhesive; white

## 1.2.6 Strain relief

### 1.2.6.1 Strain relief housing



**Item no.: 232-634**

Strain relief housing; orange

## 1.2.7 Test and measurement

### 1.2.7.1 Testing accessories



**Item no.: 210-136**

Test plug; 2 mm Ø; with 500 mm cable; red



**Item no.: 231-661**

Test plugs for female connectors; for 5 mm and 5.08 mm pin spacing; 2,50 mm<sup>2</sup>; light gray

## 1.2.8 Tool

### 1.2.8.1 Operating tool



**Item no.: 231-231**

Combination operating tool; red



**Item no.: 209-132**

Operating tool; for connecting comb-style jumper bar; made of insulating material; 2-way; natural



**Item no.: 280-440**

Operating tool; made of insulating material; 10-way



**Item no.: 209-130**

Operating tool; made of insulating material; 1-way; for 264 Series (1-/2-way), 280, 281 Series (up to 3-way); natural



**Item no.: 231-291**

Operating tool; made of insulating material; 1-way; loose; red



**Item no.: 231-131**

Operating tool; made of insulating material; 1-way; loose; white



**Item no.: 280-432**

Operating tool; made of insulating material; 2-way; white



**Item no.: 280-433**

Operating tool; made of insulating material; 3-way



**Item no.: 280-434**

Operating tool; made of insulating material; 4-way



**Item no.: 280-435**

Operating tool; made of insulating material; 5-way; gray



**Item no.: 280-436**

Operating tool; made of insulating material; 6-way



**Item no.: 280-437**

Operating tool; made of insulating material; 7-way



**Item no.: 280-438**

Operating tool; made of insulating material; 8-way



**Item no.: 231-159**

Operating tool; natural

## Installation notes

### Conductor termination

Inserting a conductor via 3.5 mm screwdriver – CAGE CLAMP® actuation parallel to conductor entry.

Inserting a conductor via 3.5 mm screwdriver – CAGE CLAMP® actuation perpendicular to conductor entry.

Inserting a conductor into CAGE CLAMP® unit via operating tool (231-291).

Inserting a conductor via operating tool.

## Coding

Coding a female connector by removing coding finger(s).

## Testing

Testing – female connector with CAGE CLAMP®  
Integrated test ports for testing perpendicular to conductor entry via 2 or 2.3 mm Ø test plug

## Installation

Male connector with strain relief plate

Strain relief housing shown with a male connector equipped with CAGE CLAMP®

## Marking

Labeling via direct marking or self-adhesive strips.