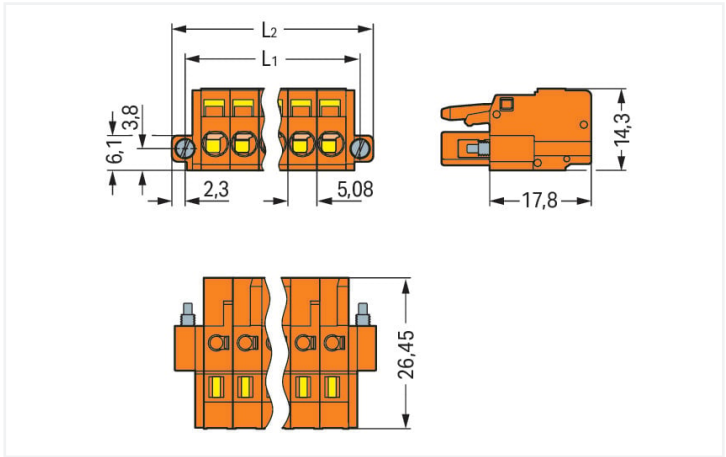


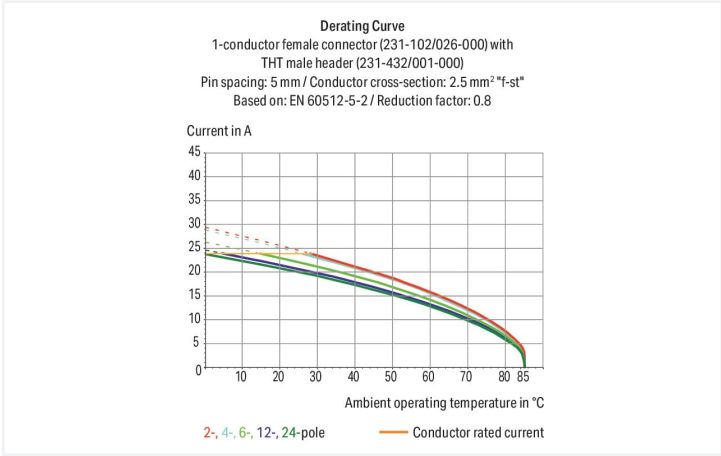
Data Sheet | Item Number: 231-309/107-000
1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 9-pole; Screw flange; 2,50 mm²; orange
<https://www.wago.com/231-309/107-000>



Color: ■ orange



Dimensions in mm
L1 = (pole no. x pin spacing) + 5.4 mm
L2 = (pole no. x pin spacing) + 10 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	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 60664-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Nominal voltage	320 V	320 V	630 V
Rated surge voltage	4 kV	4 kV	4 kV
Rated current	16 A	16 A	16 A

Approvals per	UL 1059		
Use group	B	C	D
Rated voltage	300 V	-	300 V
Rated current	15 A	-	10 A

Approvals per	UL 1977
Rated voltage	600 V
Rated current	15 A

Approvals per	CSA		
Use group	B	C	D
Rated voltage	300 V	-	300 V
Rated current	15 A	-	10 A

Connection data

Connection points	9
Total number of potentials	9
Number of connection types	1
Number of levels	1

Connection 1	
Connection technology	CAGE CLAMP®
Actuation type	Operating tool
Actuation direction 1	Operation parallel to conductor entry
Actuation direction 2	Operation perpendicular to conductor entry
Solid conductor	0.08 ... 2.5 mm² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm² / 28 ... 12 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 1.5 mm²
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 2.5 mm²
Strip length	8 ... 9 mm / 0.31 ... 0.35 inches
Pole number	9
Conductor entry direction to mating direction	0°

Physical data

Pin spacing	5.08 mm / 0.2 inches
Width	55.62 mm / 2.19 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)	Information on material specifications can be found here
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	0.249 MJ
Weight	17.7 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)	25 pcs
Packaging type	Box
Country of origin	DE
GTIN	4044918840583
Customs tariff number	85366990990

Environmental Product Compliance	
RoHS Compliance Status	Compliant, No Exemption

Approvals / Certificates

General approvals			Declarations of conformity and manufacturer's declarations		
					
Approval	Standard	Certificate Name	Approval	Standard	Certificate Name
CB DEKRA Certification B.V.	IEC 61984	NL-39756/A1	Railway WAGO GmbH & Co. KG	-	Railway Ready
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			



Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance
231-309/107-000

↓

Documentation

Additional Information

Technical Section

03.04.2019

pdf
2010.85 KB

↓

CAD/CAE-Data

CAD data

2D/3D Models
231-309/107-000

↓

CAE data

EPLAN Data Portal
231-309/107-000

↓

ZUKEN Portal
231-309/107-000

↓

1 Compatible Products

1.1 System counterpart

1.1.1 Male connector/plug



[Item No.: 231-639/129-000](#)
1-conductor male connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 9-pole; Snap-in flange; 2,50 mm²; orange



[Item No.: 231-639/109-000](#)
1-conductor male connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 9-pole; Threaded flange; 2,50 mm²; orange



[Item No.: 231-539/108-000](#)
THT male header; 1.0 x 1.0 mm solder pin; angled; Threaded flange; Pin spacing 5.08 mm; 9-pole; orange



[Item No.: 231-339/108-000](#)
THT male header; 1.0 x 1.0 mm solder pin; straight; Threaded flange; Pin spacing 5.08 mm; 9-pole; orange



[Item No.: 231-569/108-000](#)
THT male header; 1.2 x 1.2 mm solder pin; angled; Threaded flange; Pin spacing 5.08 mm; 9-pole; orange



[Item No.: 231-369/108-000](#)
THT male header; 1.2 x 1.2 mm solder pin; straight; Threaded flange; Pin spacing 5.08 mm; 9-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; insulated; 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; un-insulated; electro-tin plated; silver-colored

**Item No.: 216-121**

Ferrule; Sleeve for 0.5 mm² / AWG 22; un-insulated; 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

**Item No.: 216-122**

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

**Item No.: 216-243**

Ferrule; Sleeve for 1 mm² / 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 mm² / 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 mm² / AWG 18; insulated; electro-tin plated; red

**Item No.: 216-223**

Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red

**Item No.: 216-103**

Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated

**Item No.: 216-143**

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

**Item No.: 216-123**

Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated; silver-colored

**Item No.: 216-204**

Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black

**Item No.: 216-224**

Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black

**Item No.: 216-244**

Ferrule; Sleeve for 1.5 mm² / 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 mm² / 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 mm² / 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 mm² / AWG 16; un-insulated; electro-tin plated

**Item No.: 216-144**

Ferrule; Sleeve for 1.5 mm² / 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 mm² / AWG 16; un-insulated; electro-tin plated; silver-colored

**Item No.: 216-106**

Ferrule; Sleeve for 2.5 mm² / 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 mm² / 0.2 mm²
"s"; white



Item No.: 231-671
Insulation stop; 0.25 - 0.5 mm²; light gray



Item No.: 231-672
Insulation stop; 0.75 - 1 mm²; dark gray

1.2.4 Jumper

1.2.4.1 Jumper



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.: 232-639
Strain relief housing; for female and male connectors; 2 parts; Pin spacing 5.08 mm; 9-pole; 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 mm²; 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.: 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



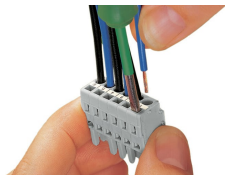
Item No.: 280-438
Operating tool; made of insulating material; 8-way



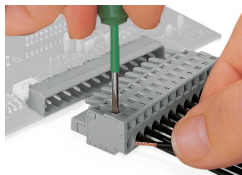
Item No.: 231-159
Operating tool; natural

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).



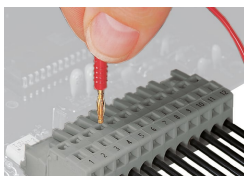
Inserting a conductor via operating tool.

Coding



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

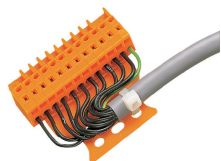
Testing



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

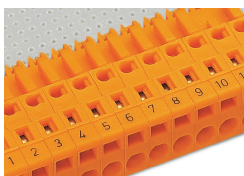


Male connector with strain relief plate



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

Marking



Labeling via direct marking or self-adhesive strips.