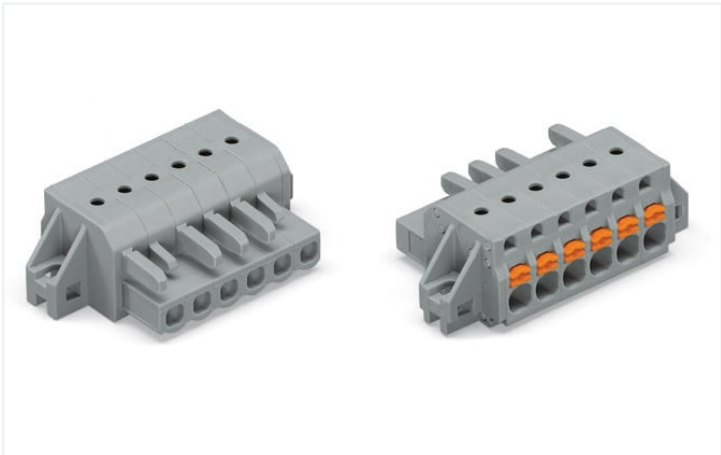


Data Sheet | Item Number: 2231-112/031-000

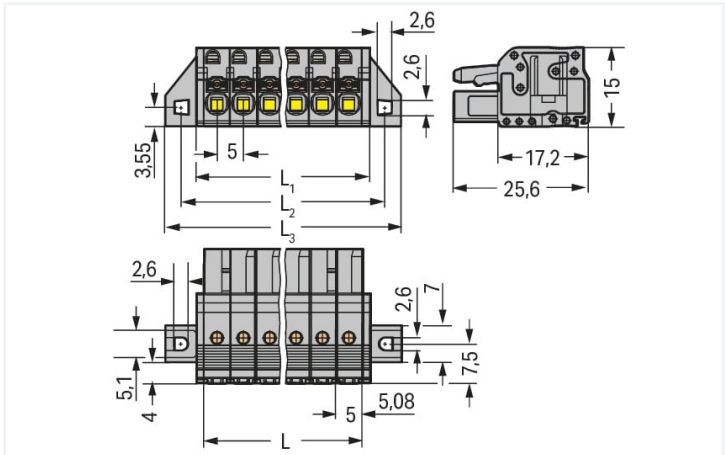
1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; clamping collar; 2,50 mm²; gray

<https://www.wago.com/2231-112/031-000>

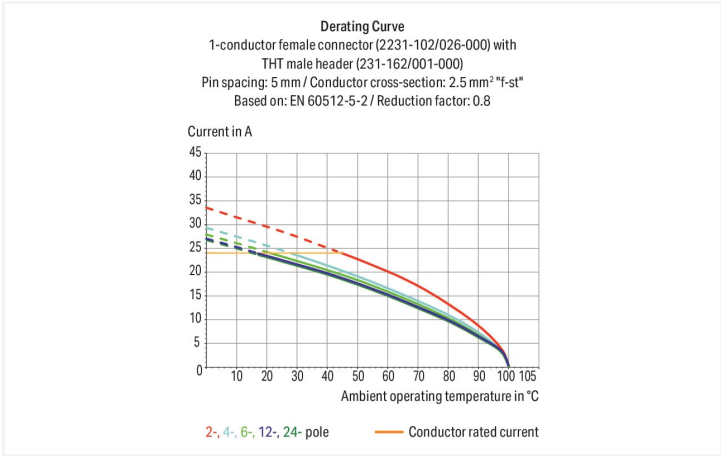


Color: ■ gray

Similar to illustration



Dimensions in mm
L = pole no. x pin spacing
L1 = L + 2.8 mm
L2 = L + 8.8 mm
L3 = L + 14.8 mm
2- to 3-pole female connectors – one latch only



- Universal connection for all conductor types
- Easy-to-use design does not require specialty tools
- Ability to wire while mated
- Push-in termination of solid and ferruled conductors
- Integrated test ports for testing parallel to the conductor entry
- Coding option available

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	150 V	300 V
Rated current	15 A	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	150 V	300 V
Rated current	15 A	15 A	10 A

Connection data

Connection points	12
Total number of potentials	12
Number of connection types	1
Number of levels	1

Connection 1	
Connection technology	Push-in CAGE CLAMP®
Actuation type	Push-button
Actuation direction 1	Operation parallel to conductor entry
Solid conductor	0.2 ... 2.5 mm² / 24 ... 12 AWG
Fine-stranded conductor	0.2 ... 2.5 mm² / 24 ... 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	10 ... 11 mm / 0.39 ... 0.43 inches
Pole number	12
Conductor entry direction to mating direction	0°

Physical data

Pin spacing	5 mm / 0.197 inches
Width	74.8 mm / 2.945 inches
Height	15 mm / 0.591 inches
Depth	25.6 mm / 1.008 inches

Mechanical data

Variable coding	Yes
Mounting type	Mounting flange Feed-through mounting Panel mounting
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)	Information on material specifications can be found here
Color	gray
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	0.524 MJ
Weight	19.7 g

Environmental requirements	
Limit temperature range	-60 ... +100 °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	PL
GTIN	4045454877125
Customs tariff number	85366990990

Environmental Product Compliance	
RoHS Compliance Status	Compliant, No Exemption

Approvals / Certificates

General approvals		General approvals	
   		UR	UL 1977
		Underwriters Laboratories Inc.	E45171
Approval	Standard	Certificate Name	
CB DEKRA Certification B.V.	IEC 61984	NL-39756/A1	
CSA DEKRA Certification B.V.	C22.2 No. 158	2314554	
KEMA/KEUR DEKRA Certification B.V.	EN 61984	71-121453	
UL Underwriters Laboratories Inc.	UL 1059	E45172	



Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance2231-112/031-000

Documentation

Additional Information

Technical Section03.04.2019pdf2010.85 KB

CAD/CAE-Data

CAD data2D/3D Models2231-112/031-000

CAE dataZUKEN Portal2231-112/031-000

1 Compatible Products

1.1 System counterpart

1.1.1 Male connector/plug







Item No.: 231-6121-conductor male connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 2,50 mm²; gray

Item No.: 231-442/001-000THT male header; 1.0 x 1.0 mm solder pin; angled; Pin spacing 5 mm; 12-pole; gray

Item No.: 231-142/001-000THT male header; 1.0 x 1.0 mm solder pin; straight; Pin spacing 5 mm; 12-pole; gray

1.2 Optional Accessories

1.2.1 Ferrule

1.2.1.1 Ferrule









Item No.: 216-301Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow

Item No.: 216-321Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow

Item No.: 216-151Ferrule; Sleeve for 0.25 mm² / AWG 24; uninsulated; electro-tin plated

Item No.: 216-131Ferrule; Sleeve for 0.25 mm² / AWG 24; uninsulated; electro-tin plated; silver-colored









Item No.: 216-302Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise

Item No.: 216-322Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise

Item No.: 216-132Ferrule; Sleeve for 0.34 mm² / AWG 24; uninsulated; electro-tin plated

Item No.: 216-152Ferrule; Sleeve for 0.34 mm² / AWG 24; uninsulated; electro-tin plated









Item No.: 216-241Ferrule; 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.: 216-201Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white

Item No.: 216-221Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white

Item No.: 216-141Ferrule; Sleeve for 0.5 mm² / 20 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92



1.2.1.1 Ferrule

 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; un-insulated; 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; un-insulated; electro-tin plated; silver-colored
 Item No.: 216-122 Ferrule; Sleeve for 0.75 mm² / AWG 20; un-insulated; 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; un-insulated; electro-tin plated	 Item No.: 216-143 Ferrule; Sleeve for 1 mm² / 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 mm² / AWG 18; un-insulated; 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			

1.2.2 Installation

1.2.2.1 Mounting accessories

 Item No.: 231-295 Screw with nut	 Item No.: 231-195 Screw with nut; M2x12; for fixing element	 Item No.: 209-147 Self-tapping screw	 Item No.: 231-194 Self-tapping screw; B 2.2x13, fixing hole 1.8 mm Ø
---	--	--	---



1.2.3 Insulation stop

1.2.3.1 Insulation stop



[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 Marking

1.2.4.1 Marking strip



[Item No.: 210-332/500-202](#)
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.: 210-332/500-205](#)
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.: 210-332/500-204](#)
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.: 210-332/500-206](#)
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

1.2.5 Strain relief

1.2.5.1 Strain relief plate



[Item No.: 734-430](#)
Strain relief plate; for female and male connectors; 1 part; gray

1.2.6 Test and measurement

1.2.6.1 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

1.2.7 Tool

1.2.7.1 Operating tool



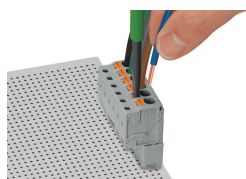
[Item No.: 210-720](#)
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured



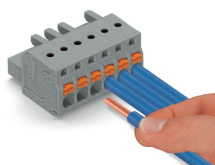
[Item No.: 210-657](#)
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured

Installation Notes

Conductor termination

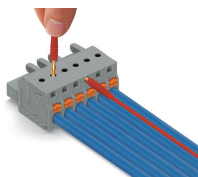


Inserting fine-stranded conductors into Push-in CAGE CLAMP® unit via push-buttons.



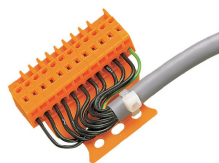
Push-in termination of solid conductors or fine-stranded conductors with ferrule

Testing



Testing parallel to conductor entry via integrated test ports – female connector with push-buttons and Push-in CAGE CLAMP® connection – touch contact perpendicular to conductor entry.

Installation

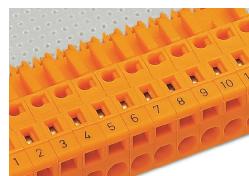


Male connector with strain relief plate



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

Marking



Labeling via direct marking or self-adhesive strips.