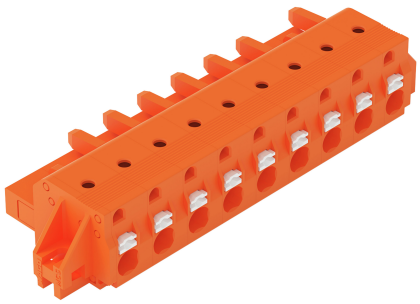
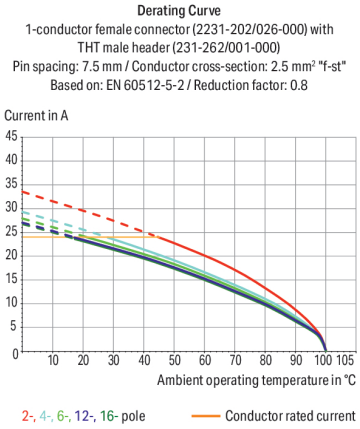
Data Sheet | Item Number: 2231-709/031-000

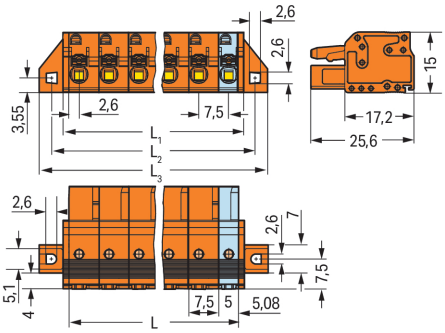
1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 7.62 mm; 9-pole; clamping collar; 2,50 mm²; orange

https://www.wago.com/2231-709/031-000





Color: orange



Dimensions in mm
L = (pole no. – 1) x pin spacing + 5.08 mmL1 = L + 2.8 mmL2 = L + 8.8 mmL3 = L + 14.8 mm2- to 3-pole female connectors – one latch only

Female connector, 2231 Series, 0 ° conductor exit to connection direction

This female connector (item number 2231-709/031-000) is designed for seamless electrical installations. Conductors should only be connected to this female connector if their strip length is between 10 and 11 mm . Featuring one conductor terminal along with Push-in CAGE CLAMP®, this product delivers reliable performance. Push-in CAGE CLAMP® connection technology is ideal for connecting all conductor types. It allows direct insertion of both solid and fine-stranded conductors with ferrules without needing to use any tools—all thanks to its pluggable design. The item's dimensions are (80.76 x 15 x 25.6) mm (width x height x depth). Depending on the conductor type, this female connector is designed for conductor cross sections ranging from 0.2 mm² to 2.5 mm².

Tin is used for coating the contact surfaces.

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	500 V	630 V	1000 V
Rated impulse withstand voltage	6 kV	6 kV	6 kV
Rated current	16 A	16 A	16 A

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

Connection Data

Clamping units	9
Total number of potentials	9
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	9
Conductor entry direction to mating direction	0 °

Physical data

Pin spacing	7.62 mm / 0.3 inches
Width	80.76 mm / 3.18 inches
Height	15 mm / 0.591 inches
Depth	25.6 mm / 1.008 inches

Continued on next page

Mechanical data

Variable coding	Yes
Mounting type	Mounting flange
Mounting type	Feed-through mounting Panel mounting
Anti-rotation protection	Yes
Suitable for through-panel applications	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	orange
Material group	I
Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	V0
Clamping spring material	Chrome-nickel spring steel (CrNi)
Contact material	Copper alloy
Contact Plating	Tin
Fire load	0.403 MJ
Weight	18 g

Environmental requirements

Limit temperature range	-60 … +100 °C
Processing temperature	-35 … +60 °C

Commercial data

Product Group	3 (Multi Conn. System)
PU (SPU)	25 pcs
Packaging type	Box
Country of origin	PL
GTIN	4045454812331
Customs tariff number	85366990990

Product Classification

UNSPSC	39121409
eCl@ss 10.0	27-44-03-09
eCl@ss 9.0	27-44-03-09
ETIM 9.0	EC002638
ETIM 10.0	EC002638
ECCN	NO US CLASSIFICATION

 Continued on next page

Environmental Product Compliance

RoHS Compliance Status	Compliant,No Exemption

Approvals / Certificates

General approvals

Approval	Standard	Certificate Name
CB DEKRA Certification B.V.	IEC 61984	NL-113351
KEMA/KEUR DEKRA Certification B.V.	EN 61984	71-130478 REV.1
UR Underwriters Laboratories Inc.	UL 1977	E45171
UR Underwriters Laboratories Inc.	UL 1059	E45172

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance
2231-709/031-000

Documentation

Additional Information

Technical Section	03.04.2019	pdf 2027.26 KB

1 Compatible Products

1.1 System counterpart

1.1.1 Male connector/plug

Item No.: 731-639
1-conductor male connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 7.62 mm; 9-pole; 2,50 mm²; orange

Item No.: 231-939/001-000
THT male header; 1.0 x 1.0 mm solder pin; angled; Pin spacing 7.62 mm; 9-pole; orange

Item No.: 231-739/001-000
THT male header; 1.0 x 1.0 mm solder pin; straight; Pin spacing 7.62 mm; 9-pole; orange

1.2 Optional Accessories

1.2.1 Ferrule

1.2.1.1 Ferrule

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.: 216-141
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.: 216-242
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.: 216-142
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.: 216-243
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.: 216-143
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.: 216-244
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.: 216-144
Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92; silver-colored

Item No.: 216-246
Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue

Item No.: 216-106
Ferrule; Sleeve for 2.5 mm² / AWG 14; uninsulated; electro-tin plated; silver-colored

1.2.2 Installation

1.2.2.1 Mounting accessories

Item No.: 209-137
Mounting adapter; can be used as end stop; 6.5 mm wide; gray

1.2.3 Insulation stop

1.2.3.1 Insulation stop

Item No.: 231-674
Insulation stop; 0.25 - 0.5 mm²; light gray

Item No.: 231-675
Insulation stop; 0.75 - 1 mm²; dark gray

1.2.4 Strain relief

1.2.4.1 Strain relief plate

Item No.: 734-226
Strain relief plate; for female and male connectors; 35 mm wide; 1 part; Pin spacing 3.81 mm; orange

1.2.5 Test and measurement

1.2.5.1 Testing accessories

Item No.: 210-136
Test plug; 2 mm Ø; with 500 mm cable; red

Item No.: 231-662
Test plugs for female connectors; for 7.5 mm and 7.62 mm pin spacing; 2,50 mm²; light gray

1.2.6 Tool

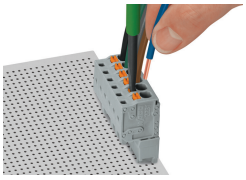
1.2.6.1 Operating tool

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

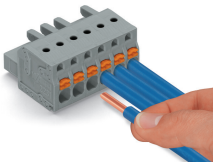
Item No.: 210-657
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured

Installation Notes

Conductor termination

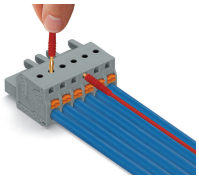


Inserting fine-stranded conductors into Push-in CAGE CLAMP® unit via push-buttons.



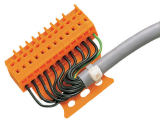
Push-in termination of solid conductors or fine-stranded conductors with ferrule

Testing

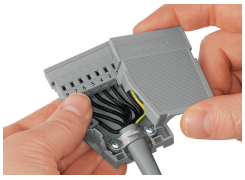


Testing parallel to conductor entry via integrated test ports – female connector with push-buttons and Push-in CAGE CLAMP® connection – touch contact perpendicular to conductor entry.

Installation

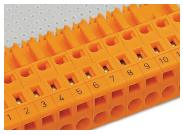


Male connector with strain relief plate



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

Marking



Labeling via direct marking or self-adhesive strips.