

Data Sheet | Item Number: 231-2210/037-000

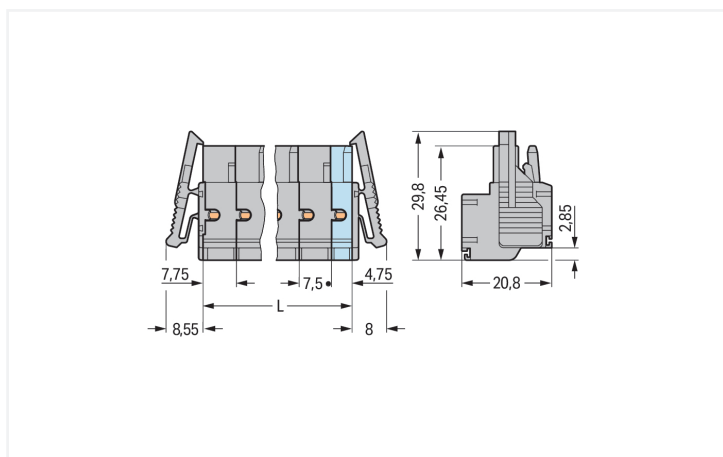
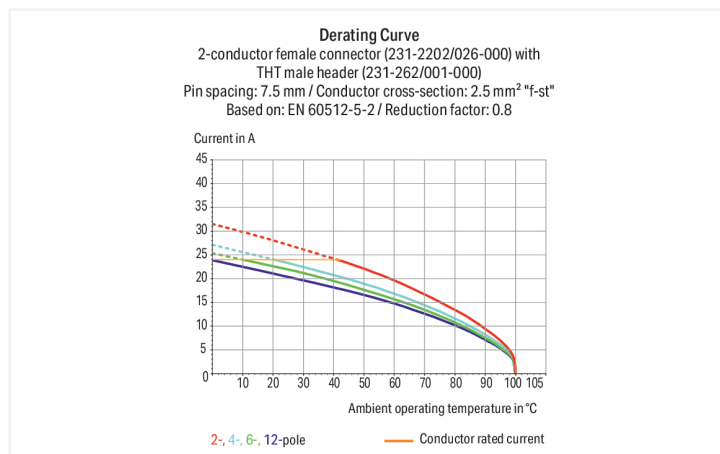
2-conductor female connector; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 7.5 mm; 10-pole; Lateral locking levers; gray

<https://www.wago.com/231-2210/037-000>



Color: ■ gray

Similar to illustration



Dimensions in mm

L = (pole no. – 2) x pin spacing + 12.5 mm 2- to 3-pole female connectors – one latch only

Female connector, 231 Series, operating tool

Convenient electrical installations are guaranteed with this female connector (item number 231-2210/037-000). Strip lengths must be between 9 and 10 mm when connecting conductors to this female connector. This product incorporates one conductor terminal 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. Dimensions: (89.05 x 20.8 x 29.8) mm (width x height x depth). Depending on the type of conductor, 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
Rated current		20 A	-	10 A
Approvals per		UL 1977		
Rated voltage		600 V		
Rated current		20 A		
Approvals per		CSA		
Use group		B	C	D
Rated voltage		300 V	-	300 V
Rated current		15 A	-	10 A

Connection Data		
Clamping units	20	
Total number of potentials	10	
Number of connection types	1	
Number of levels	1	
Connection 1		
Connection technology	Push-in CAGE CLAMP®	
Actuation type	Operating tool	
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	9 ... 10 mm / 0.35 ... 0.39 inches	
Pole number	10	
Conductor entry direction to mating direction	0°	

Physical data	
Pin spacing	7.5 mm / 0.295 inches
Width	89.05 mm / 3.506 inches
Height	20.8 mm / 0.819 inches
Depth	29.8 mm / 1.173 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		Locking lever

Material data		
Note (material data)		Information on material specifications can be found here
Color		gray
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		0.571 MJ
Weight		29.3 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		4044918563918
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



Environmental Product Compliance	
RoHS Compliance Status	Compliant, No Exemption

Approvals / Certificates

General approvals			Approvals for marine applications		
  			 		
Approval	Standard	Certificate Name	Approval	Standard	Certificate Name
CB DEKRA Certification B.V.	IEC 61984	NL-113351	DNV DNV GL SE	-	TAE000016Z
cURus Underwriters Laboratories Inc.	UL 1977	E45171	PRS Polski Rejestr Statków	-	TE/1095/880590/23
KEMA/KEUR DEKRA Certification B.V.	EN 61984	71-130478 REV.1			
UL UL International Germany GmbH	UL 1059	E45172			

Downloads

Environmental Product Compliance	
Compliance Search	
Environmental Product Compliance 231-2210/037-000	

Documentation

Additional Information			
Technical Section	03.04.2019	pdf 2027.26 KB	

CAD/CAE-Data

CAD data		CAE data	
2D/3D Models 231-2210/037-000		EPLAN Data Portal 231-2210/037-000	
		ZUKEN Portal 231-2210/037-000	



1 Compatible Products			
1.1 System counterpart			
1.1.1 Male connector/plug			
			
Item No.: 731-610 1-conductor male connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 7.5 mm; 10-pole; 2,50 mm²; gray	Item No.: 231-840/001-000 THT male header; 1.0 x 1.0 mm solder pin; angled; Pin spacing 7.5 mm; 10-pole; gray	Item No.: 231-240/001-000 THT male header; 1.0 x 1.0 mm solder pin; straight; Pin spacing 7.5 mm; 10-pole; gray	
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; un-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; un-insulated; 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; un-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; un-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; un-insulated; 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; un-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; un-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; un-insulated; 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; un-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; un-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; un-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; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92; silver-colored
			
Item No.: 216-289 Ferrule; Sleeve for 10 mm² / AWG 8; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red	Item No.: 216-209 Ferrule; Sleeve for 10 mm² / AWG 8; un-insulated; electro-tin plated; red	Item No.: 216-109 Ferrule; Sleeve for 10 mm² / AWG 8; un-insulated; electro-tin plated	Item No.: 216-210 Ferrule; Sleeve for 16 mm² / AWG 6; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue
			
Item No.: 216-110 Ferrule; Sleeve for 16 mm² / AWG 6; un-insulated; electro-tin plated; brown metallic	Item No.: 216-246 Ferrule; Sleeve for 2.5 mm² / AWG 14; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue	Item No.: 216-266 Ferrule; Sleeve for 2.5 mm² / AWG 14; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue	Item No.: 216-286 Ferrule; Sleeve for 2.5 mm² / AWG 14; un-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; un-insulated; electro-tin plated; silver-colored	Item No.: 216-267 Ferrule; Sleeve for 4 mm² / AWG 12; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray	Item No.: 216-287 Ferrule; Sleeve for 4 mm² / AWG 12; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray	Item No.: 216-207 Ferrule; Sleeve for 4 mm² / AWG 12; un-insulated; electro-tin plated; gray
			
Item No.: 216-107 Ferrule; Sleeve for 4 mm² / AWG 12; un-insulated; electro-tin plated	Item No.: 216-208 Ferrule; Sleeve for 6 mm² / AWG 10; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; yellow	Item No.: 216-288 Ferrule; Sleeve for 6 mm² / AWG 10; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; yellow	Item No.: 216-108 Ferrule; Sleeve for 6 mm² / AWG 10; un-insulated; electro-tin plated; silver-colored

1.2.2 Insulation stop

1.2.2.1 Insulation stop



Item No.: 231-673
Insulation stop; 0.08-0.2 mm² / 0.2 mm²
"s"; white



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

1.2.3 Marking

1.2.3.1 Marking strip



Item No.: 210-331/750-202
Marking strips; as a DIN A4 sheet; MARKED; 1-16 (100x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive; white



Item No.: 210-332/750-020
Marking strips; as a DIN A4 sheet; MARKED; 1-20 (80x); Height of marker strip: 3 mm; Strip length 182 mm; Horizontal marking; Self-adhesive; white

1.2.4 Strain relief

1.2.4.1 Strain relief plate



Item No.: 734-430
Strain relief plate; for female and male connectors; 1 part; gray

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



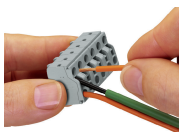
Item No.: 210-720
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured



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

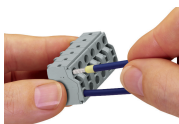
Installation Notes

Conductor termination



Operating Push-in CAGE CLAMP® is easy, fast and identical to that of CAGE CLAMP®. The screwdriver is fully inserted into the operating slot, holding Push-in CAGE CLAMP® open. After the conductor has been inserted into the clamping unit and the screwdriver been withdrawn, the conductor is clamped safely. Solid and fine-stranded conductors $< 0.5 \text{ mm}^2$ (20 AWG) are terminated and removed using a screwdriver.

Conductor termination



Solid conductors $\geq 0.5 \text{ mm}^2$ (20 AWG), as well as ferruled, fine-stranded conductors can be terminated by simply pushing them into unit. Integrated test ports allow touch contact with current bar via test probes in both horizontal and vertical directions.