

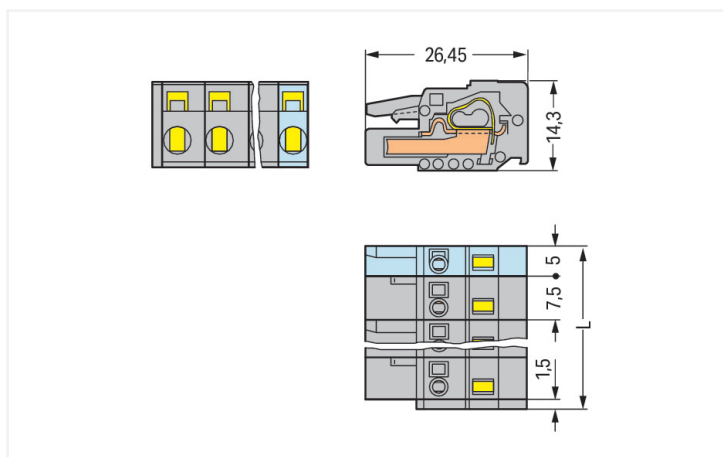
Data Sheet | Item Number: 231-210/026-000

1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 7.5 mm; 10-pole;
gray

<https://www.wago.com/231-210/026-000>

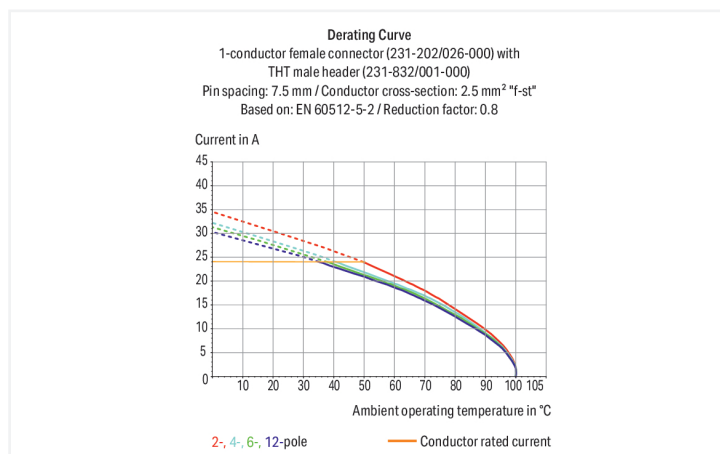


Color: ■ gray



Dimensions in mm

L = (pole no. – 1) x pin spacing + 5 mm + 1.5 mm 2- to 3-pole female connectors – one latch only



Female connector, 231 Series, CAGE CLAMP®

This female connector (item number 231-210/026-000) provides seamless electrical installations. Ensure that the strip lengths are between 8 and 9 mm when connecting conductors to this female connector. Featuring one conductor terminal along with CAGE CLAMP®, this connector delivers reliable performance. Our reliable and maintenance-free CAGE CLAMP® connection makes it easy to connect all types of conductors without having to prepare the conductor. For example, you don't need to crimp ferrules. Dimensions: (74 x 14.3 x 26.45) mm (width x height x depth). Depending on the type of conductor, this female connector is designed for conductor cross sections ranging from 0.08 mm² to 2.5 mm².

The contact surface is coated with tin.

Notes	
Safety Information	The MCS – <i>MULTI CONNECTION SYSTEM</i> 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		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		
Clamping units	10	
Total number of potentials	10	
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	10	
Conductor entry direction to mating direction	0 °	

Physical data	
Pin spacing	7.5 mm / 0.295 inches
Width	74 mm / 2.913 inches
Height	14.3 mm / 0.563 inches
Depth	26.45 mm / 1.041 inches

Contact type (pluggable connector)	Female connector/socket
Connector (connection type)	for conductor
Mismatching protection	No

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	0.303 MJ
Weight	20.8 g

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

Environmental Testing	
Test specification: Railway applications – Rolling stock – Electronic equipment	DIN EN 50155 (VDE 0115-200):2022-06
Test procedure: Railway applications – Rolling stock equipment – Vibration and shock tests	DIN EN 61373 (VDE 0115-0106):2011-04
Spectrum/Mounting location	Service life test, Category 1, Class A/B
Functional test with noise-like oscillations	Test passed according to Section 8 of the standard
Frequency	$f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$
Acceleration	0.101g (highest test level used for all axes)
Test duration per axis	10 min.
Test directions	X, Y and Z axes
Monitoring of contact faults and interruptions	Passed
Voltage drop measurement before and after each axis	Passed
Simulated service life test through increased levels of noise-like oscillations	Test passed according to Section 9 of the standard
Frequency	$f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$
Acceleration	0.572g (highest test level used for all axes)
Test duration per axis	5 h
Test directions	X, Y and Z axes
Extended testing: Monitoring of contact faults and interruptions	Passed
Extended testing: Voltage drop measurement before and after each axis	Passed
Shock test	Test passed according to Section 10 of the standard
Shock pulse form	Half sine
Acceleration	5g (highest test level used for all axes)
Shock duration	30 ms



Environmental Testing	
Number of shocks (per axis)	3 pos. und 3 neg.
Test directions	X, Y and Z axes
Extended testing: Monitoring of contact faults and interruptions	Passed
Extended testing: Voltage drop measurement before and after each axis	Passed
Vibration and shock stress for rolling stock equipment	Passed

Commercial data		
Product Group	3 (Multi Conn. System)	
PU (SPU)	25 pcs	
Packaging type	Box	
Country of origin	DE	
GTIN	4044918344395	
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			Declarations of conformity and manufacturer's declarations		
   					
Approval	Standard	Certificate Name	Approval	Standard	Certificate Name
CB DEKRA Certification B.V.	IEC 61984	NL-113351	Railway WAGO GmbH & Co. KG	-	Railway Ready
CSA DEKRA Certification B.V.	C22.2	1466354			
KEMA/KEUR DEKRA Certification B.V.	EN 61984	71-130478 REV.1			
UR Underwriters Laboratories Inc.	UL 1977	E 45171			
UR Underwriters Laboratories Inc.	UL 1059	E45172			



Approvals for marine applications

			
Approval	Standard	Certificate Name	
ABS American Bureau of Ship- ping	-	24-0095975-PDA	
BV Bureau Veritas S.A.	IEC 60998	11915/E0 BV	
DNV DNV GL SE	-	TAE000016Z	
PRS Polski Rejestr Statków	-	TE/1095/880590/23	

Downloads

Environmental Product Compliance

Compliance Search
Environmental Product Compliance 231-210/026-000



Documentation

Additional Information
Technical Section
03.04.2019
pdf 2027.26 KB



CAD/CAE-Data

CAD data
2D/3D Models 231-210/026-000



CAE data
EPLAN Data Portal 231-210/026-000
ZUKEN Portal 231-210/026-000



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.: 731-610/019-000
1-conductor male connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 7.5 mm; 10-pole; clamping collar; 2,50 mm²; gray



Item No.: 731-610/018-000
1-conductor male connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 7.5 mm; 10-pole; DIN-35 rail/panel mounting; Snap-in mounting feet; 2,50 mm²; gray



Item No.: 731-610/114-000
1-conductor male connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 7.5 mm; 10-pole; Snap-in flange; 2,50 mm²; gray



Item No.: 231-840/001-000/105-604
THR male header; 1.0 x 1.0 mm solder pin; angled; Pin spacing 7.5 mm; 10-pole; black



Item No.: 231-240/001-000/105-604
THR male header; 1.0 x 1.0 mm solder pin; straight; Pin spacing 7.5 mm; 10-pole; black



Item No.: 231-870/001-000/105-604
THR male header; 1.2 x 1.2 mm solder pin; angled; Pin spacing 7.5 mm; 10-pole; black



Item No.: 231-270/001-000/105-604
THR male header; 1.2 x 1.2 mm solder pin; straight; Pin spacing 7.5 mm; 10-pole; black



1.1.1 Male connector/plug

 Item No.: 231-840/040-000 THT male header; 1.0 x 1.0 mm solder pin; angled; clamping collar; Pin spacing 7.5 mm; 10-pole; 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.: 231-240/040-000 THT male header; 1.0 x 1.0 mm solder pin; straight; clamping collar; 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
 Item No.: 231-870/040-000 THT male header; 1.2 x 1.2 mm solder pin; angled; clamping collar; Pin spacing 7.5 mm; 10-pole; gray	 Item No.: 231-870/001-000 THT male header; 1.2 x 1.2 mm solder pin; angled; Pin spacing 7.5 mm; 10-pole; gray	 Item No.: 231-270/040-000 THT male header; 1.2 x 1.2 mm solder pin; straight; clamping collar; Pin spacing 7.5 mm; 10-pole; gray	 Item No.: 231-270/001-000 THT male header; 1.2 x 1.2 mm solder pin; straight; Pin spacing 7.5 mm; 10-pole; gray

1.2 Optional Accessories

1.2.1 Cover

1.2.1.1 Cover



Item No.: 231-668
Lockout caps; for covering unused clamping units; gray

1.2.2 Ferrule

1.2.2.1 Ferrule

 Item No.: 216-301 Ferrule; Sleeve for 0.25 mm ² / AWG 24; insulated; electro-tin plated; yellow	 Item No.: 216-302 Ferrule; Sleeve for 0.34 mm ² / 22 AWG; insulated; electro-tin plated; light turquoise	 Item No.: 216-201 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; insulated; electro-tin plated; electrolytic copper; acc. to DIN 46228, Part 4/09.90; white	 Item No.: 216-101 Ferrule; Sleeve for 0.5 mm ² / AWG 22; uninsulated; electro-tin plated; silver-colored
 Item No.: 216-202 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; gray	 Item No.: 216-102 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; uninsulated; electro-tin plated; silver-colored	 Item No.: 216-203 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; red	 Item No.: 216-103 Ferrule; Sleeve for 1 mm ² / AWG 18; uninsulated; electro-tin plated
 Item No.: 216-204 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; black	 Item No.: 216-104 Ferrule; Sleeve for 1.5 mm ² / AWG 16; uninsulated; electro-tin plated; silver-colored		

1.2.3 Insulation stop

1.2.3.1 Insulation stop

 Item No.: 231-673 Insulation stop; 0.08-0.2 mm ² / 0.2 mm ² "s"; white	 Item No.: 231-674 Insulation stop; 0.25 - 0.5 mm ² ; light gray	 Item No.: 231-675 Insulation stop; 0.75 - 1 mm ² ; dark gray
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1.2.4 Marking

1.2.4.1 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

1.2.5 Strain relief

1.2.5.1 Strain relief housing



Item No.: 232-670
Strain relief housing; for female and male connectors; 2 parts; Pin spacing 7.5 mm; 10-pole; 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.: 231-662
Test plugs for female connectors; for 7.5 mm and 7.62 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; multi-coloured



Item No.: 280-440
Operating tool; made of insulating material; 10-way; white



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; white



Item No.: 280-434
Operating tool; made of insulating material; 4-way; white



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; white



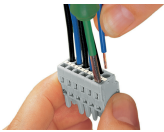
Item No.: 280-437
Operating tool; made of insulating material; 7-way; white



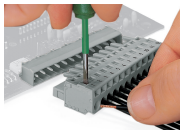
Item No.: 280-438
Operating tool; made of insulating material; 8-way; white

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).



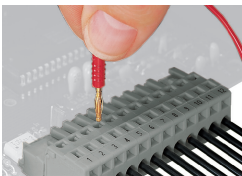
Inserting a conductor via operating tool.

Coding



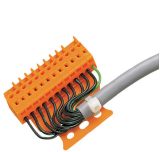
Coding a female connector by removing coding finger(s).

Testing

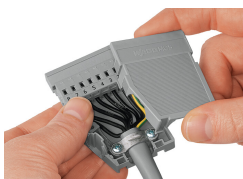


Testing – female connector with CAGE CLAMP®
Integrated test ports for testing perpendicular to conductor entry via 2 or 2.3 mm Ø test plug

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.

Subject to changes. Please also observe the further product documentation!

Current addresses can be found at: www.wago.com