

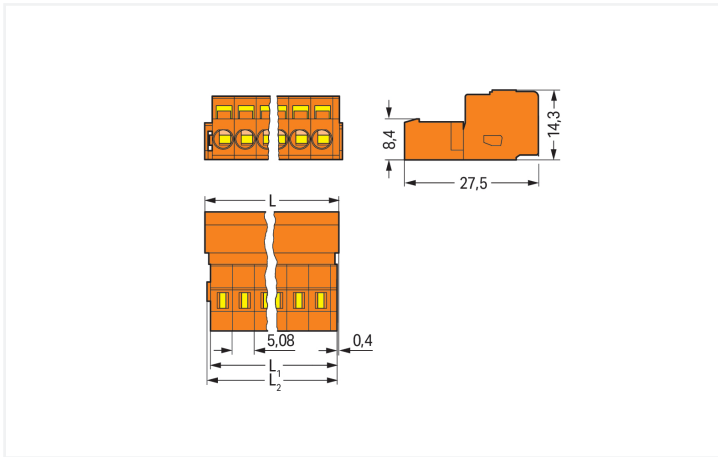
Data Sheet | Item Number: 231-632

1-conductor male connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 2-pole; orange

<https://www.wago.com/231-632>



Color: ■ orange



Dimensions in mm

$L = (\text{pole no.} - 1) \times \text{pin spacing} + 8.2 \text{ mm}$
 $L_1 = L - 1.7 \text{ mm}$
 $L_2 = L - 1.2 \text{ mm}$

Male connector, 231 Series, with 5.08 mm pin spacing

Enjoy fault-free electrical installations with this male connector (item number 231-632). Conductors can only be connected to this male connector if their strip length is between 8 and 9 mm. This product features one conductor terminal and utilizes CAGE CLAMP®. Our CAGE CLAMP® connection provides a proven and maintenance-free way to connect all types of conductors. You do not need to prepare the conductor in any way, such as crimping ferrules. The item's dimensions are (13.36 x 14.3 x 27.5) mm (width x height x depth). Depending on the conductor type, this male 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 – 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:

Other pole numbers
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			Approvals per		UL 1059		
Overvoltage category		III	III	II	Use group	B	C	D	
Pollution degree		3	2	2	Rated voltage	300 V	-	300 V	
Nominal voltage		320 V	320 V	630 V	Rated current	15 A	-	10 A	
Rated impulse withstand voltage		4 kV	4 kV	4 kV					
Rated current		12 A	12 A	12 A					

Approvals per		UL 1977			Approvals per		CSA		
Rated voltage		600 V			Use group	B	C	D	
Rated current		15 A			Rated voltage	300 V	-	300 V	
					Rated current	15 A	-	10 A	

Connection Data

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

Physical data

Pin spacing	5.08 mm / 0.2 inches
Width	13.36 mm / 0.526 inches
Height	14.3 mm / 0.563 inches
Depth	27.5 mm / 1.083 inches

Mechanical data

Variable coding	Yes
Anti-rotation protection	Yes

Plug-in connection

Contact type (pluggable connector)	Male connector/plug
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	Electrolytic copper (E _{Cu})
Contact Plating	Tin
Fire load	0.061 MJ
Weight	3.5 g

Environmental requirements

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 Hz to f ₂ = 150 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 Hz to f ₂ = 150 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)

Environmental Testing	
Shock duration	30 ms
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)	100 pcs
Packaging type	Box
Country of origin	DE
GTIN	4044918259484
Customs tariff number	85366930000

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



Approval	Standard	Certificate Name
CB DEKRA Certification B.V.	IEC 61984	NL-113351
CSA DEKRA Certification B.V.	C22.2	1466354
KEMA/KEUR DEKRA Certification B.V.	EN 61984	71-130478 REV.1
UL UL International Germany GmbH	UL 1977	E45171
UR Underwriters Laboratories Inc.	UL 1059	E45172

Declarations of conformity and manufacturer's declarations



Approval	Standard	Certificate Name
Railway WAGO GmbH & Co. KG	-	Railway Ready

Approvals for marine applications



Approval	Standard	Certificate Name
ABS American Bureau of Ship- ping	-	24-0095975-PDA
DNV DNV GL SE	-	TAE000016Z
LR Lloyds Register	IEC 61984	96/20035 (E5)
PRS Polski Rejestr Statków	-	TE/1095/880590/23

Downloads

Environmental Product Compliance

Compliance Search
Environmental Product Compliance 231-632

Documentation

Additional Information
Technical Section 03.04.2019 pdf 2027.26 KB

CAD/CAE-Data









CAD data
2D/3D Models 231-632

CAE data
EPLAN Data Portal 231-632
ZUKEN Portal 231-632

1 Compatible Products

1.1 System counterpart

1.1.1 Female connector/socket

 <p>Item No.: 232-302/026-000 1-conductor female connector, angled; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 2-pole; 2,50 mm²; orange</p>	 <p>Item No.: 232-402/026-000 1-conductor female connector, angled; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 2-pole; 2,50 mm²; orange</p>	 <p>Item No.: 231-302/031-000 1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 2-pole; clamping collar; orange</p>	 <p>Item No.: 231-302/037-000 1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 2-pole; Lateral locking levers; orange</p>
 <p>Item No.: 231-302/026-000 1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 2-pole; orange</p>	 <p>Item No.: 231-302/008-000 1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 2-pole; Snap-in mounting feet; orange</p>	 <p>Item No.: 231-302/102-000 1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 2-pole; with integrated end plate; orange</p>	 <p>Item No.: 2231-302/026-000 1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 2-pole; 2,50 mm²; orange</p>

1.1.1 Female connector/socket



Item No.: 2231-302/031-000

1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 2-pole; clamping collar; 2,50 mm²; orange



Item No.: 2231-302/037-000

1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 2-pole; Lateral locking levers; 2,50 mm²; orange



Item No.: 2231-302/008-000

1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 2-pole; Snap-in mounting feet; 2,50 mm²; orange



Item No.: 2231-302/102-000

1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 2-pole; with integrated end plate; 2,50 mm²; orange



Item No.: 231-2302/037-000

2-conductor female connector; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 2-pole; Lateral locking levers; orange



Item No.: 231-2302/026-000

2-conductor female connector; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 2-pole; with integrated end plate; orange



Item No.: 232-262

THT female header; angled; Pin spacing 5.08 mm; 2-pole; 0.6 x 1.0 mm solder pin; orange



Item No.: 232-262/031-000

THT female header; angled; Pin spacing 5.08 mm; 2-pole; clamping collar; 0.6 x 1.0 mm solder pin; orange



Item No.: 232-262/039-000

THT female header; angled; Pin spacing 5.08 mm; 2-pole; Locking lever; 0.6 x 1.0 mm solder pin; orange



Item No.: 232-262/047-000

THT female header; angled; Pin spacing 5.08 mm; 2-pole; Spacer flange; 0.6 x 1.0 mm solder pin; orange



Item No.: 232-162

THT female header; straight; Pin spacing 5.08 mm; 2-pole; 0.6 x 1.0 mm solder pin; orange



Item No.: 232-162/031-000

THT female header; straight; Pin spacing 5.08 mm; 2-pole; clamping collar; 0.6 x 1.0 mm solder pin; orange



Item No.: 232-162/039-000

THT female header; straight; Pin spacing 5.08 mm; 2-pole; Locking lever; 0.6 x 1.0 mm solder pin; orange



Item No.: 232-162/047-000

THT female header; straight; Pin spacing 5.08 mm; 2-pole; Spacer flange; 0.6 x 1.0 mm solder pin; orange

1.2 Optional Accessories

1.2.1 Coding

1.2.1.1 Coding



Item No.: 231-129

Coding key; snap-on type; light gray

1.2.2 Cover

1.2.2.1 Cover



Item No.: 231-669

Lockout caps; for covering unused clamping units; orange

1.2.3 Ferrule

1.2.3.1 Ferrule



Item No.: 216-301

Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow



Item No.: 216-302

Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise



Item No.: 216-201

Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; electrolytic copper; acc. to DIN 46228, Part 4/09.90; white



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

1.2.3.1 Ferrule

 <p>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</p>	 <p>Item No.: 216-101 Ferrule; Sleeve for 0.5 mm² / AWG 22; un-insulated; electro-tin plated; silver-colored</p>	 <p>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</p>	 <p>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</p>
 <p>Item No.: 216-202 Ferrule; Sleeve for 0.75 mm² / 18 AWG; un-insulated; electro-tin plated; gray</p>	 <p>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</p>	 <p>Item No.: 216-102 Ferrule; Sleeve for 0.75 mm² / AWG 20; un-insulated; electro-tin plated; silver-colored</p>	 <p>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</p>
 <p>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</p>	 <p>Item No.: 216-203 Ferrule; Sleeve for 1 mm² / AWG 18; un-insulated; electro-tin plated; red</p>	 <p>Item No.: 216-103 Ferrule; Sleeve for 1 mm² / AWG 18; un-insulated; electro-tin plated</p>	 <p>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</p>
 <p>Item No.: 216-204 Ferrule; Sleeve for 1.5 mm² / AWG 16; un-insulated; electro-tin plated; black</p>	 <p>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</p>	 <p>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</p>	 <p>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</p>
 <p>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</p>	 <p>Item No.: 216-104 Ferrule; Sleeve for 1.5 mm² / AWG 16; un-insulated; electro-tin plated; silver-colored</p>	 <p>Item No.: 216-106 Ferrule; Sleeve for 2.5 mm² / AWG 14; un-insulated; electro-tin plated; silver-colored</p>	


1.2.4 Insulation stop

1.2.4.1 Insulation stop

 <p>Item No.: 231-670 Insulation stop; 0.08-0.2 mm² / 0.2 mm² "s"; white</p>	 <p>Item No.: 231-671 Insulation stop; 0.25 - 0.5 mm²; light gray</p>	 <p>Item No.: 231-672 Insulation stop; 0.75 - 1 mm²; dark gray</p>
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1.2.5 Jumper

1.2.5.1 Jumper

 <p>Item No.: 231-902 Jumper; for conductor entry; 2-way; un-insulated; gray</p>
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1.2.6 Marking

1.2.6.1 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

1.2.7 Strain relief

1.2.7.1 Strain relief housing



Item No.: [232-632](#)

Strain relief housing; for female and male connectors; 2 parts; Pin spacing 5.08 mm; 2-pole; orange

1.2.8 Tool

1.2.8.1 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



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

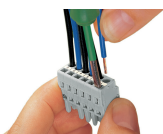


Item No.: [280-432](#)

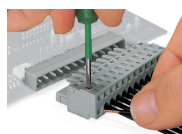
Operating tool; made of insulating material; 2-way; white

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.

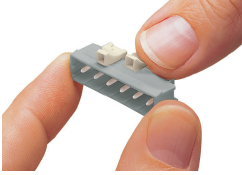


Inserting a conductor into CAGE CLAMP® unit via operating tool (231-291).



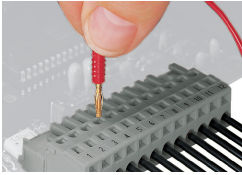
Inserting a conductor via operating tool.

Coding



Coding a male header – fitting coding key (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

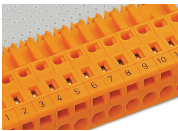


Male connector with strain relief plate



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

Marking



Labeling via direct marking or self-adhesive strips.