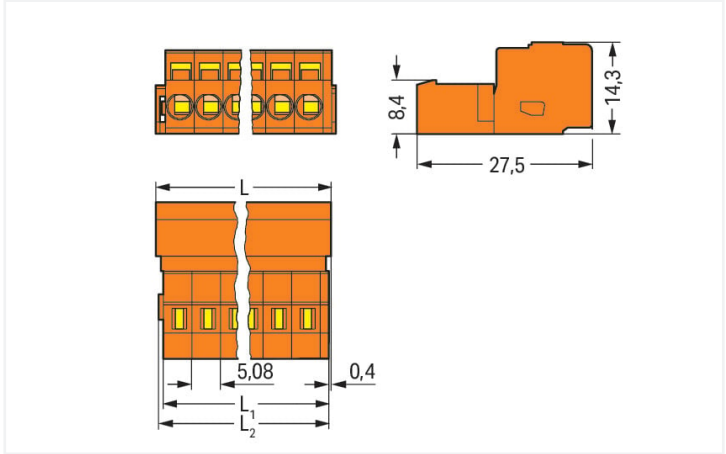
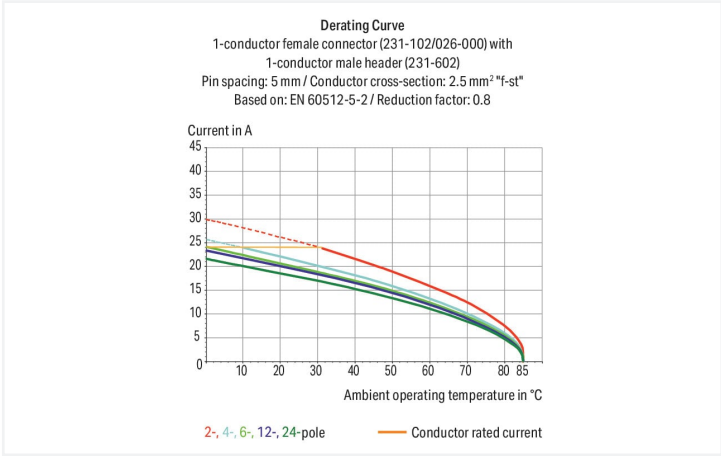




Color: ■ orange



Dimensions in mm
 $L = (\text{pole no.} - 1) \times \text{pin spacing} + 8.2 \text{ mm}$
 $L1 = L - 1.7 \text{ mm}$
 $L2 = L - 1.2 \text{ mm}$



- Universal connection for all conductor types
- Easy cable pre-assembly and on-unit wiring via vertical and horizontal CAGE CLAMP® actuation
- For wire-to-wire and board-to-wire connections
- Versions available with snap-in mounting feet or flanges for panel or through-panel mounting
- With coding fingers

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 surge 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

Connection points	9
Total number of potentials	9
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	9
Conductor entry direction to mating direction	0 °

Physical data

Pin spacing	5.08 mm / 0.2 inches
Width	48.92 mm / 1.926 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		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		0.231 MJ
Weight		13.8 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)		50 pcs
Packaging type		Box
Country of origin		DE
GTIN		4044918260466
Customs tariff number		85366930000

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-39756/A1	Railway WAGO GmbH & Co. KG	-	Railway Ready
CSA DEKRA Certification B.V.	C22.2	1466354			
KEMA/KEUR DEKRA Certification B.V.	EN 61984	71-121453			
UL UL International Germany GmbH	UL 1977	E45171			
UR Underwriters Laboratories Inc.	UL 1059	E45172			



Approvals for marine applications

  		
Approval	Standard	Certificate Name
ABS American Bureau of Ship- ping	-	19-HG1869876-PDA
DNV DNV GL SE	-	TAE000016Z
LR Lloyds Register	IEC 61984	96/20035 (E5)

Downloads

Environmental Product Compliance	
Compliance Search	
Environmental Product Compliance 231-639	

Documentation

Additional Information			
Technical Section	03.04.2019	pdf 2027.26 KB	

CAD/CAE-Data

CAD data	CAE data
2D/3D Models 231-639 	EPLAN Data Portal 231-639 
	ZUKEN Portal 231-639 

1 Compatible Products

1.1 System counterpart

1.1.1 Female connector/socket

 Item No.: 232-309/026-000 1-conductor female connector, angled; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 9-pole; 2,50 mm²; orange	 Item No.: 232-409/026-000 1-conductor female connector, angled; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 9-pole; 2,50 mm²; orange	 Item No.: 231-309/026-000 1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 9-pole; 2,50 mm²; orange	 Item No.: 231-309/027-000 1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 9-pole; clamping collar; 2,50 mm²; orange
 Item No.: 231-309/031-000 1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 9-pole; clamping collar; 2,50 mm²; orange	 Item No.: 231-309/037-000 1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 9-pole; Lateral locking levers; 2,50 mm²; orange	 Item No.: 231-309/008-000 1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 9-pole; Snap-in mounting feet; 2,50 mm²; orange	 Item No.: 231-309/102-000 1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 9-pole; with integrated end plate; 2,50 mm²; orange



1.1.1 Female connector/socket



Item No.: 2231-309/026-000
1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 9-pole; 2,50 mm²; orange



Item No.: 2231-309/031-000
1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 9-pole; clamping collar; 2,50 mm²; orange



Item No.: 2231-309/037-000
1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 9-pole; Lateral locking levers; 2,50 mm²; orange



Item No.: 2231-309/008-000
1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 9-pole; Snap-in mounting feet; 2,50 mm²; orange



Item No.: 2231-309/102-000
1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 9-pole; with integrated end plate; 2,50 mm²; orange



Item No.: 231-2309/037-000
2-conductor female connector; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 9-pole; Lateral locking levers; 2,50 mm²; orange



Item No.: 231-2309/026-000
2-conductor female connector; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 9-pole; with integrated end plate; 2,50 mm²; orange



Item No.: 232-269
THT female header; angled; Pin spacing 5.08 mm; 9-pole; 0.6 x 1.0 mm solder pin; orange



Item No.: 232-269/031-000
THT female header; angled; Pin spacing 5.08 mm; 9-pole; clamping collar; 0.6 x 1.0 mm solder pin; orange



Item No.: 232-269/039-000
THT female header; angled; Pin spacing 5.08 mm; 9-pole; Locking lever; 0.6 x 1.0 mm solder pin; orange



Item No.: 232-269/047-000
THT female header; angled; Pin spacing 5.08 mm; 9-pole; Spacer flange; 0.6 x 1.0 mm solder pin; orange



Item No.: 232-169
THT female header; straight; Pin spacing 5.08 mm; 9-pole; 0.6 x 1.0 mm solder pin; orange



Item No.: 232-169/031-000
THT female header; straight; Pin spacing 5.08 mm; 9-pole; clamping collar; 0.6 x 1.0 mm solder pin; orange



Item No.: 232-169/039-000
THT female header; straight; Pin spacing 5.08 mm; 9-pole; Locking lever; 0.6 x 1.0 mm solder pin; orange



Item No.: 232-169/047-000
THT female header; straight; Pin spacing 5.08 mm; 9-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.: 216-321
Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow



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



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



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



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



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



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



1.2.3.1 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.: 216-201 Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white	 Item No.: 216-221 Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; 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.: 216-101 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			



1.2.4 Insulation stop

1.2.4.1 Insulation stop



[Item No.: 231-670](#)
Insulation stop; 0.08-0.2 mm² / 0.2 mm²
"s"; white



[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

1.2.5 Jumper

1.2.5.1 Jumper



[Item No.: 231-902](#)
Jumper; for conductor entry; 2-way; insulated; gray



[Item No.: 231-903](#)
Jumper; for conductor entry; 3-way; insulated; gray



[Item No.: 231-905](#)
Jumper; for conductor entry; 5-way; insulated; gray



[Item No.: 231-907](#)
Jumper; for conductor entry; 7-way; insulated; gray

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.: 232-639](#)
Strain relief housing; for female and male connectors; 2 parts; Pin spacing 5.08 mm; 9-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



Item No.: 280-433
Operating tool; made of insulating material; 3-way



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



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



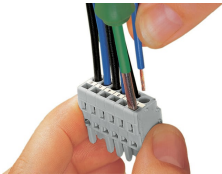
Item No.: 280-437
Operating tool; made of insulating material; 7-way



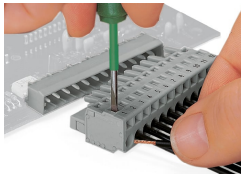
Item No.: 280-438
Operating tool; made of insulating material; 8-way

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.

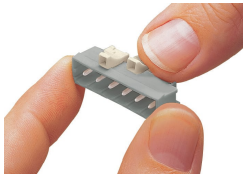


Inserting a conductor into CAGE CLAMP® unit via operating tool (231-291).



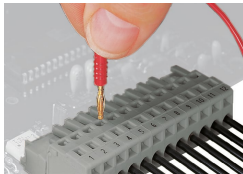
Inserting a conductor via operating tool.

Coding



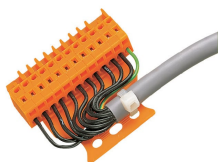
Coding a male header – fitting coding key(s).

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

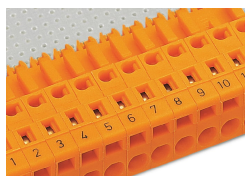


Male connector with strain relief plate



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

Marking



Labeling via direct marking or self-adhesive strips.