

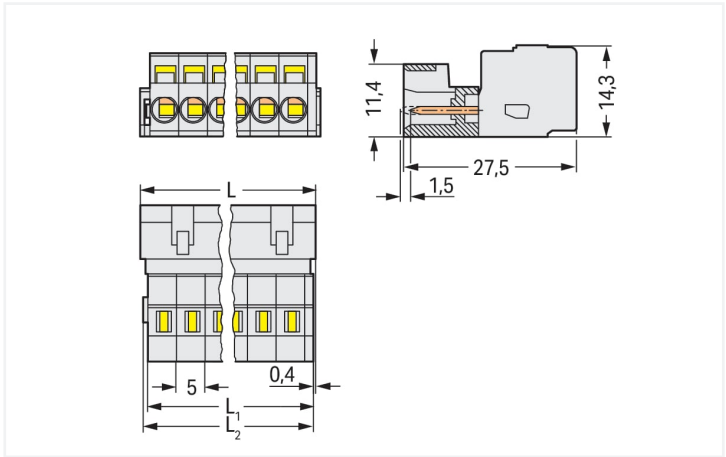
Data Sheet | Item Number: 721-612

1-conductor male connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole;
100% protected against mismatching; 2,50 mm²; light gray

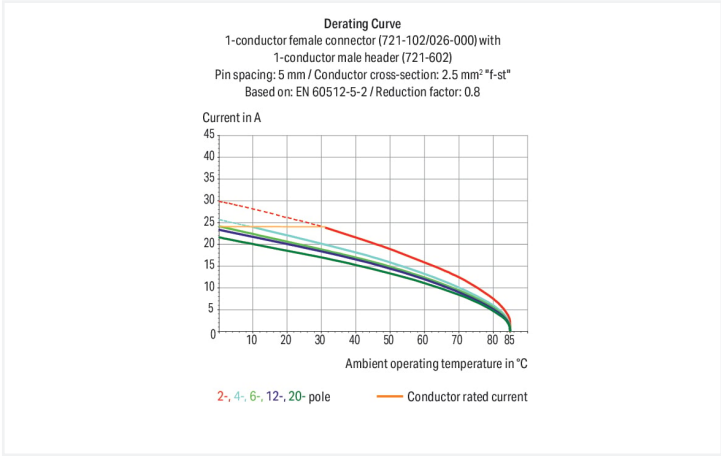
<https://www.wago.com/721-612>



Color: ■ light gray



Dimensions in mm
 $L = (\text{pole no.} - 1) \times \text{pin spacing} + 8.2 \text{ mm}$
 $L2 = L - 1.7 \text{ mm}$
 $L3 = L - 1.2 \text{ mm}$



- 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
- 3- to 5-pole male connectors are also available with preceding ground contact
- 100 % protected against mismatching
- 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		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Nominal voltage	320 V	320 V	630 V
Rated surge voltage	4 kV	4 kV	4 kV
Rated current	12 A	12 A	12 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	12
Total number of potentials	12
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	12
Conductor entry direction to mating direction	0°

Physical data

Pin spacing	5 mm / 0.197 inches
Width	63.2 mm / 2.488 inches
Height	14.3 mm / 0.563 inches
Depth	27.5 mm / 1.083 inches

Mechanical data

Variable coding	Yes
Direct ground contact to DIN-rail/drilled hole/housing	No
Anti-rotation protection	Yes



Plug-in connection	
Contact type (pluggable connector)	Male connector/plug
Connector (connection type)	for conductor
Mismating protection	Yes

Material data	
Note (material data)	Information on material specifications can be found here
Color	light 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	Electrolytic copper (E _{Cu})
Contact Plating	Tin
Fire load	0.331 MJ
Weight	18.4 g

Environmental requirements	
Limit temperature range	-60 ... +100 °C
Processing temperature	-35 ... +60 °C
Environmental Testing (Environmental Conditions)	
Test specification Railway applications – Rolling stock – Electronic equipment	DIN EN 50155 (VDE 0115-200):2022-06
Test procedure Railway applications – Rolling stock equipment – Shock and vibration tests	DIN EN 61373 (VDE 0115-0106):2011-04
Spectrum/Installation location	Service life test, Category 1, Class A/B
Function test with noise-like vibration	Test passed according to Section 8 of the standard
Frequency	f ₁ = 5 Hz to f ₂ = 150 Hz f ₁ = 5 Hz to f ₂ = 150 Hz
Acceleration	0.101g (highest test level used for all axes) 0.572g (highest test level used for all axes) 5g (highest test level used for all axes)
Test duration per axis	10 min. 5 h
Test directions	X, Y and Z axes X, Y and Z axes X, Y and Z axes
Monitoring for contact faults/interruptions	Passed
Voltage drop measurement before and after each axis	Passed
Simulated service life test through increased levels of noise-like vibration	Test passed according to Section 9 of the standard
Extended test scope: Monitoring for contact faults/interruptions	Passed Passed
Extended test scope: Voltage drop measurement before and after each axis	Passed Passed
Shock test	Test passed according to Section 10 of the standard
Shock form	Half sine
Shock duration	30 ms
Number of shocks per axis	3 pos. und 3 neg.
Vibration and shock stress for rolling stock equipment	Passed



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 9.0	EC002638	
ETIM 8.0	EC002638	
PU (SPU)	25 pcs	
Packaging type	Box	
Country of origin	DE	
GTIN	4044918264303	
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
CB DEKRA Certification B.V.	IEC 61984	NL-39756/A1
CSA DEKRA Certification B.V.	C22.2	1466354
KEMA/KEUR DEKRA Certification B.V.	EN 61984	71-121453
UL Underwriters Laboratories Inc.	UL 1977	E45171
UL Underwriters Laboratories Inc.	UL 1059	E45172



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

Approvals for marine applications		
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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 721-612			

Documentation

Additional Information			
Technical Section	03.04.2019	pdf 2027.26 KB	

CAD/CAE-Data

CAD data	
2D/3D Models 721-612	

CAE data	
EPLAN Data Portal 721-612	
ZUKEN Portal 721-612	

1 Compatible Products

1.1 System counterpart

1.1.1 Female connector/socket

 Item No.: 722-112/026-000 1-conductor female connector, angled; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; 2,50 mm²; light gray	 Item No.: 722-212/026-000 1-conductor female connector, angled; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; 2,50 mm²; light gray	 Item No.: 721-312/031-000 1-conductor female connector, angled; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; clamping collar; 2,50 mm²; light gray	 Item No.: 721-312/008-000 1-conductor female connector, angled; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; Snap-in mounting feet; 2,50 mm²; light gray
 Item No.: 721-112/026-000 1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; 2,50 mm²; light gray	 Item No.: 721-112/027-000 1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; clamping collar; 2,50 mm²; light gray	 Item No.: 721-112/031-000 1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; clamping collar; 2,50 mm²; light gray	 Item No.: 721-112/037-000 1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; Lateral locking levers; 2,50 mm²; light gray
 Item No.: 721-112/008-000/037-000 1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; Lateral locking levers; Snap-in mounting feet; 2,50 mm²; light gray	 Item No.: 721-112/008-000 1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; Snap-in mounting feet; 2,50 mm²; light gray	 Item No.: 2721-1112/037-000 1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching, coding finger; Lateral locking levers; 2,50 mm²; light gray	 Item No.: 2721-1112/326-000 1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 13-pole; 100% protected against mismatching, coding finger; 2,50 mm²; light gray
 Item No.: 2721-1112/326-000/336-000 1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 13-pole; 100% protected against mismatching, coding finger; 2,50 mm²; light gray	 Item No.: 2721-112/026-000 1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; 2,50 mm²; light gray	 Item No.: 2721-112/031-000 1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; clamping collar; 2,50 mm²; light gray	 Item No.: 2721-112/037-000 1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; Lateral locking levers; 2,50 mm²; light gray



1.1.1 Female connector/socket



Item No.: 2721-112/008-000
1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; Snap-in mounting feet; 2,50 mm²; light gray



Item No.: 721-2112/037-000
2-conductor female connector; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; Lateral locking levers; 2,50 mm²; light gray



Item No.: 721-2112/026-000
2-conductor female connector; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; with integrated end plate; 2,50 mm²; light gray



Item No.: 722-242/005-000/039-000
Female connector for rail-mount terminal blocks; 0.6 x 1 mm pins; angled; 100% protected against mismatching; Locking lever; Pin spacing 5 mm; 12-pole; light gray



Item No.: 722-242/005-000
Female connector for rail-mount terminal blocks; 0.6 x 1 mm pins; angled; 100% protected against mismatching; Pin spacing 5 mm; 12-pole; light gray



Item No.: 722-142/005-000/039-000
Female connector for rail-mount terminal blocks; 0.6 x 1 mm pins; straight; 100% protected against mismatching; Locking lever; Pin spacing 5 mm; 12-pole; light gray



Item No.: 722-142/005-000
Female connector for rail-mount terminal blocks; 0.6 x 1 mm pins; straight; 100% protected against mismatching; Pin spacing 5 mm; 12-pole; light gray



Item No.: 722-242
THT female header; angled; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; 0.6 x 1.0 mm solder pin; light gray



Item No.: 722-242/031-000
THT female header; angled; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; clamping collar; 0.6 x 1.0 mm solder pin; light gray



Item No.: 722-242/039-000
THT female header; angled; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; Locking lever; 0.6 x 1.0 mm solder pin; light gray



Item No.: 722-242/047-000
THT female header; angled; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; Spacer flange; 0.6 x 1.0 mm solder pin; light gray



Item No.: 722-142
THT female header; straight; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; 0.6 x 1.0 mm solder pin; light gray



Item No.: 722-142/031-000
THT female header; straight; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; clamping collar; 0.6 x 1.0 mm solder pin; light gray



Item No.: 722-142/039-000
THT female header; straight; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; Locking lever; 0.6 x 1.0 mm solder pin; light gray



Item No.: 722-142/047-000
THT female header; straight; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; Spacer flange; 0.6 x 1.0 mm solder pin; light gray

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.: 231-668
Lockout caps; for covering unused clamping units; gray

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.: 216-241 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.: 216-141 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.: 216-242 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.: 216-142 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.: 216-243 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.: 216-103 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.: 216-204 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.: 216-144 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
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1.2.5 Jumper

1.2.5.1 Jumper



Item No.: 231-910
Jumper; for conductor entry; 10-way; insulated; gray



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.: 210-331/500-103
Marking strips; as a DIN A4 sheet; MARKED; 1-12 (300x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive; white



Item No.: 210-332/500-202
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.: 210-332/500-205
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.: 210-331/500-104
Marking strips; as a DIN A4 sheet; MARKED; 13-24 (300x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive; white



Item No.: 210-332/500-204
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.: 210-332/500-206
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.: 232-612
Strain relief housing; for female and male connectors; 2 parts; Pin spacing 5 mm; 12-pole; gray

1.2.8 Tool

1.2.8.1 Operating tool



Item No.: 231-231
Combination operating tool; red



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.: 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 (1-1/2-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

1.2.8.1 Operating tool



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



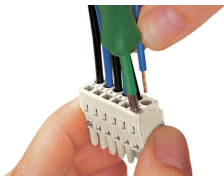
Item No.: 280-438
Operating tool; made of insulating material; 8-way; white



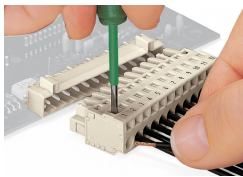
Item No.: 231-159
Operating tool; natural

Installation Notes

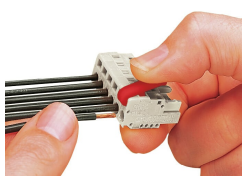
Conductor termination



Inserting a conductor via 3.5 mm screwdriver – CAGE CLAMP® actuation parallel to conductor entry.

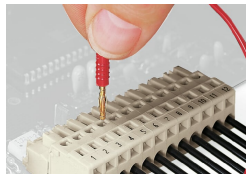


Inserting a conductor via 3.5 mm screwdriver – CAGE CLAMP® actuation perpendicular to conductor entry.



Inserting a conductor via operating tool.

Testing



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

Installation

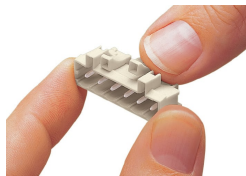


Male connector with strain relief plate



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

Coding



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

