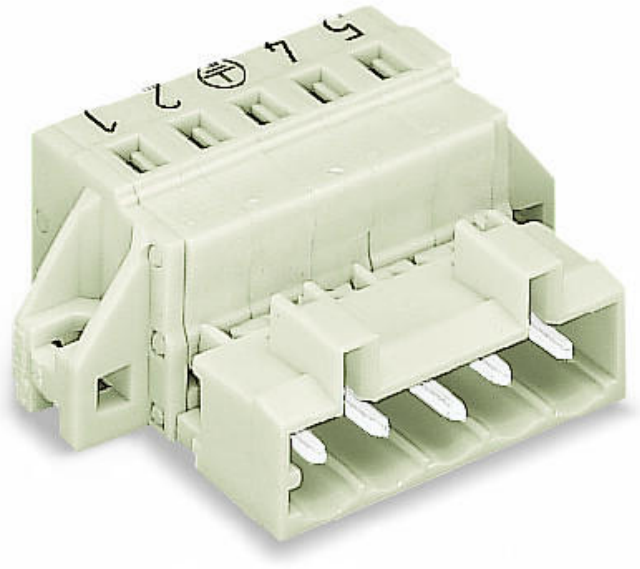
Data sheet | Item number: 721-603/019-042

1-conductor male connector; 100% protected against mismating; Preceding ground contact; clamping collar; direct marking; 2.5 mm²; Pin spacing 5 mm; 3-pole; 2,50 mm²; light gray

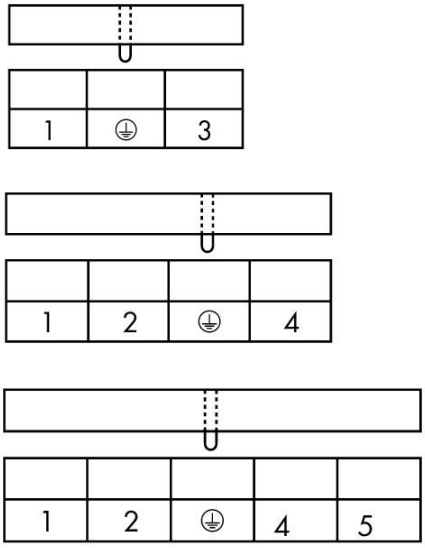
www.wago.com/721-603/019-042



RoHS ✓ Compliant

BOMcheck.net

Color:



Preceding ground contact position

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

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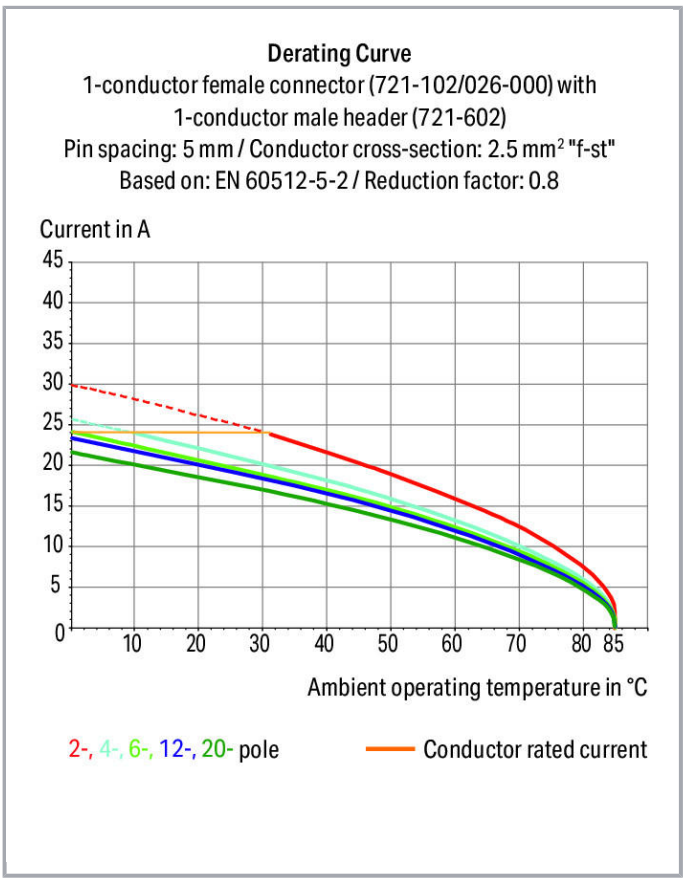

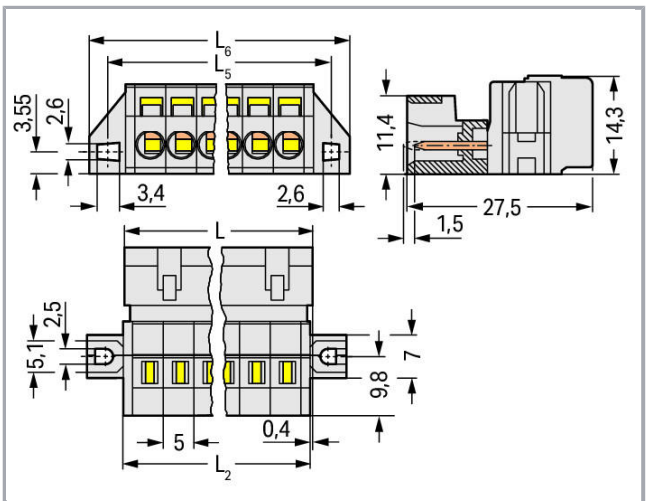

L = (pole no. – 1) x pin spacing + 8.2 mm

L_2 = L – 0.2 mm

L_5 = L_2 + 5.8 mm

L_6 = L_2 + 11.8 mm

Item description

- 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 mismating
- With coding fingers

Safety information 1:
The *MULTI CONNECTION SYSTEM (MCS)* is designed without breaking capacity for compliance with DIN EN 61984. When used as intended, MCS Connectors shall 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.

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

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Data
Electrical data

Ratings per IEC/EN 60664-1

Ratings per	IEC/EN 60664-1
Rated voltage (III / 3)	320 V
Rated impulse voltage (III / 3)	4 kV
Rated voltage (III / 2)	320 V
Rated impulse voltage (III / 2)	4 kV
Rated voltage (II / 2)	630 V
Rated impulse voltage (II / 2)	4 kV
Rated current	12 A
Legend (ratings)	(III / 2) ≙ Overvoltage category III / Pollution degree 2

Approvals per UL 1059

Rated voltage UL (Use Group B)	300 V
Rated current UL (Use Group B)	15 A
Rated voltage UL (Use Group D)	300 V
Rated current UL (Use Group D)	10 A
Approvals per	UL 1059

Approvals per UL 1977

Rated voltage per UL 1977 (factory wiring only)	600 V
Rated current per UL 1977 (factory wiring only)	15 A

Approvals per CSA

Rated voltage CSA (Use Group B)	300 V
Rated current CSA (Use Group B)	15 A
Rated voltage CSA (Use Group D)	300 V
Rated current CSA (Use Group D)	10 A

Connection data

Connection technology	CAGE CLAMP®
Actuation type	Operating tool
Solid conductor	0.08 … 2.5 mm² / 28 … 12 AWG

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Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 12 AWG
Fine-stranded conductor with ferrule with plastic collar	0.25 … 1.5 mm²
Fine-stranded conductor with ferrule without plastic collar	0.25 … 2.5 mm²
Strip length	8 … 9 mm / 0.31 … 0.35 inch
No. of poles	3
Total number of connection points	3
Total number of potentials	3
Number of connection types	1
Number of levels	1
Ground function	with preceding GND contact
Conductor entry direction to mating direction	0 °

Geometrical Data

Pin spacing	5 mm / 0.197 inch
Width	29.8 mm / 1.173 inch
Height	14.3 mm / 0.563 inch
Depth	27.5 mm / 1.083 inch

Mechanical data

Mounting type	Mounting flange
Type of mounting	Feed-through mounting Panel mounting

Plug connection

Contact type (pluggable connector)	Male connector/plug
Connector connection type	for conductors
Mismating protection	Yes

Material Data

Color	light gray
Material group	I
Insulating material	Polyamide 66 (PA 66)
Flammability class per UL94	V0
Clamping spring material	Chrome nickel spring steel (CrNi)
Contact material	Electrolytic copper (E_{Cu})
Contact plating	tin-plated

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Fire load	0.115 MJ
Weight	5.9 g

Environmental Requirements

Limit temperature range	-60 … +100 °C

Commercial data

Product Group	3 (Multi Conn. System)
Packaging type	BOX
Country of origin	DE
GTIN	4044918262194
Customs Tariff No.	85366990990

Approvals / Certificates

Country specific Approvals

Logo	Approval	Additional Approval Text	Certificate name
	CB DEKRA Certification B.V.	IEC 61984	NL-39756
	CSA DEKRA Certification B.V.	C22.2	1466354
	KEMA/KEUR DEKRA Certification B.V.	EN 61984	2190761.01

Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
	ABS American Bureau of Shipping	-	19-HG1869876-PDA
	DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAE000016Z

UL-Approvals

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Logo	Approval	Additional Approval Text	Certificate name
	UL Underwriters Laboratories Inc.	UL 1059	20190731-E45172
	UR UL International Germany GmbH	UL 1977	E45171

Counterpart

	Item no.721-103/026-000 1-conductor female plug; 100% protected against mismating; 2.5 mm²; Pin spacing 5 mm; 3-pole; 2,50 mm²; light gray	www.wago.com/721-103/026-000
	Item no.722-133 THT female header; 0.6 x 1.0 mm solder pin; straight; 100% protected against mismating; Pin spacing 5 mm; 3-pole; light gray	www.wago.com/722-133
	Item no.722-233 THT female header; 0.6 x 1.0 mm solder pin; angled; 100% protected against mismating; Pin spacing 5 mm; 3-pole; light gray	www.wago.com/722-233

Compatible products

Coding		
	Item no.: 231-129 Coding key; snap-on type; light gray	www.wago.com/231-129
Insulation stop		
	Item no.: 231-670 Insulation stop; 0.08-0.2 mm² / 0.2 mm² “s”; white	www.wago.com/231-670

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	Item no.: 231-671 Insulation stop; 0.25 - 0.5 mm²; light gray	www.wago.com/231-671
	Item no.: 231-672 Insulation stop; 0.75 - 1 mm²; dark gray	www.wago.com/231-672
General accessories		
	Item no.: 231-668 Lockout caps; for covering unused clamping units; gray	www.wago.com/231-668
Marking accessories		
	Item no.: 210-833 Marking strips; on reel; 6 mm wide; plain; Self-adhesive; white	www.wago.com/210-833
	Item no.: 210-834 Marking strips; on reel; 5 mm wide; plain; Self-adhesive; white	www.wago.com/210-834
Strain relief plate		
	Item no.: 232-603 Strain relief housing; gray	www.wago.com/232-603
ferrule		
	Item no.: 216-101 Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated	www.wago.com/216-101
	Item no.: 216-102 Ferrule; Sleeve for 0.75 mm² / AWG 20; uninsulated; electro-tin plated	www.wago.com/216-102
	Item no.: 216-103 Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated	www.wago.com/216-103
	Item no.: 216-104 Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated	www.wago.com/216-104
	Item no.: 216-106 Ferrule; Sleeve for 2.5 mm² / AWG 14; uninsulated; electro-tin plated	www.wago.com/216-106
	Item no.: 216-121 Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated	www.wago.com/216-121
	Item no.: 216-122 Ferrule; Sleeve for 0.75 mm² / AWG 20; uninsulated; electro-tin plated	www.wago.com/216-122
	Item no.: 216-123 Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated	www.wago.com/216-123
	Item no.: 216-124 Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated	www.wago.com/216-124
	Item no.: 216-131 Ferrule; Sleeve for 0.25 mm² / AWG 24; uninsulated; electro-tin plated	www.wago.com/216-131

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	Item no.: 216-132 Ferrule; Sleeve for 0.34 mm² / AWG 24; uninsulated; electro-tin plated	www.wago.com/216-132
	Item no.: 216-141 Ferrule; Sleeve for 0.5 mm² / 20 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92	www.wago.com/216-141
	Item no.: 216-142 Ferrule; Sleeve for 0.75 mm² / 18 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92	www.wago.com/216-142
	Item no.: 216-143 Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92	www.wago.com/216-143
	Item no.: 216-144 Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92	www.wago.com/216-144
	Item no.: 216-151 Ferrule; Sleeve for 0.25 mm² / AWG 24; uninsulated; electro-tin plated	www.wago.com/216-151
	Item no.: 216-152 Ferrule; Sleeve for 0.34 mm² / AWG 24; uninsulated; electro-tin plated	www.wago.com/216-152
	Item no.: 216-201 Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white	www.wago.com/216-201
	Item no.: 216-202 Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray	www.wago.com/216-202
	Item no.: 216-203 Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red	www.wago.com/216-203
	Item no.: 216-204 Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black	www.wago.com/216-204
	Item no.: 216-221 Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white	www.wago.com/216-221
	Item no.: 216-222 Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray	www.wago.com/216-222
	Item no.: 216-223 Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red	www.wago.com/216-223
	Item no.: 216-224 Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black	www.wago.com/216-224
	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	www.wago.com/216-241
	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	www.wago.com/216-242
	Item no.: 216-243	

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	Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red	www.wago.com/216-243
	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	www.wago.com/216-244
	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	www.wago.com/216-262
	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	www.wago.com/216-263
	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	www.wago.com/216-264
	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	www.wago.com/216-284
	Item no.: 216-301 Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow	www.wago.com/216-301
	Item no.: 216-302 Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; green	www.wago.com/216-302
	Item no.: 216-321 Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow	www.wago.com/216-321
	Item no.: 216-322 Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; green	www.wago.com/216-322
tools		
	Item no.: 209-130 Operating tool; suitable for 264, 280 and 281 Series; 1-way; of insulating material	www.wago.com/209-130
	Item no.: 210-657 Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short	www.wago.com/210-657
	Item no.: 210-720 Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft	www.wago.com/210-720
	Item no.: 231-131 Push-button; loose	www.wago.com/231-131
	Item no.: 231-159 Operating tool; natural	www.wago.com/231-159
	Item no.: 231-231 Combination operating tool; red	www.wago.com/231-231
	Item no.: 231-291 Operating tool; loose; red	www.wago.com/231-291

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	Item no.: 280-432 Operating tool; made of insulating material; 2-way	www.wago.com/280-432
	Item no.: 280-433 Operating tool; made of insulating material; 3-way	www.wago.com/280-433
	Item no.: 280-434 Operating tool; made of insulating material; 4-way	www.wago.com/280-434
	Item no.: 280-435 Operating tool; made of insulating material; 5-way; gray	www.wago.com/280-435
	Item no.: 280-436 Operating tool; made of insulating material; 6-way	www.wago.com/280-436
	Item no.: 280-437 Operating tool; made of insulating material; 7-way	www.wago.com/280-437
	Item no.: 280-438 Operating tool; made of insulating material; 8-way	www.wago.com/280-438
	Item no.: 280-440 Operating tool; made of insulating material; 10-way	www.wago.com/280-440
Jumper		
	Item no.: 231-902 Comb-style jumper bar; for 5 mm and 5.08 mm pin spacing; reduces conductor size to 1.5 mm; gray	www.wago.com/231-902
	Item no.: 231-903 Comb-style jumper bar; 3-way; suitable for 231 Series female connectors; with 5 mm pin spacing; insulated; gray	www.wago.com/231-903
	Item no.: 231-905 Comb-style jumper bar; 5-way; suitable for 231 Series female connectors; with 5 mm pin spacing; insulated; gray	www.wago.com/231-905
	Item no.: 231-907 Comb-style jumper bar; 7-way; suitable for 231 Series female connectors; with 5 mm pin spacing; insulated; gray	www.wago.com/231-907
	Item no.: 231-910 Comb-style jumper bar; 10-way; suitable for 231 Series female connectors; with 5 mm pin spacing; insulated; gray	www.wago.com/231-910
assembling		
	Item no.: 209-147 Self-tapping screw	www.wago.com/209-147
	Item no.: 231-194 Self-tapping screw; B 2.2x13, fixing hole 1.8 mm Ø	www.wago.com/231-194
	Item no.: 231-195 Screw with nut; M2x12; for fixing element	www.wago.com/231-195
	Item no.: 231-295 Screw with nut	www.wago.com/231-295

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Downloads

Documentation

Additional Information

Technical explanations	Apr 3, 2019	pdf 3.6 MB	Download

CAD/CAE-Data

CAD data

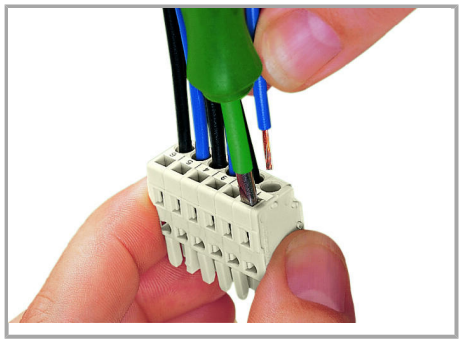
2D/3D Models 721-603/019-042	URL	Download

CAE data

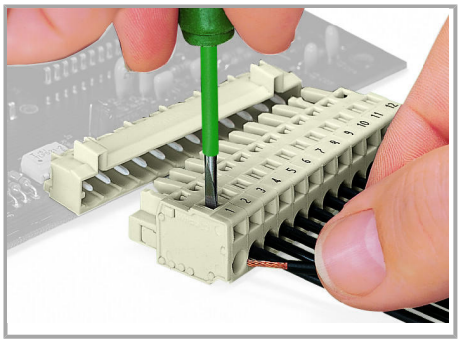
EPLAN Data Portal 721-603/019-042	URL	Download

Installation Notes

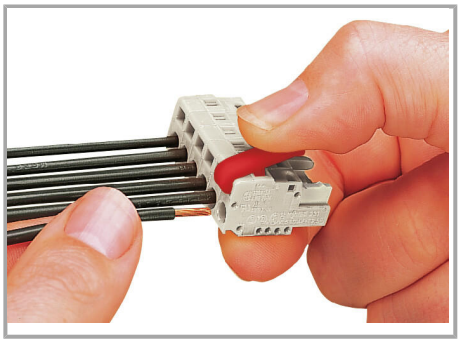
Inserting a conductor



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.



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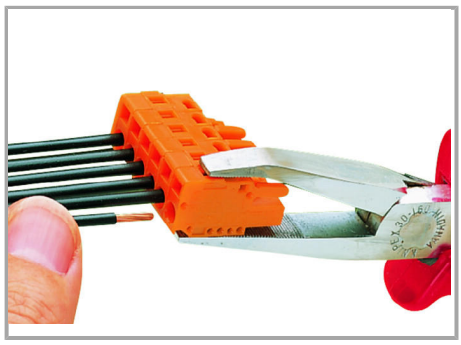
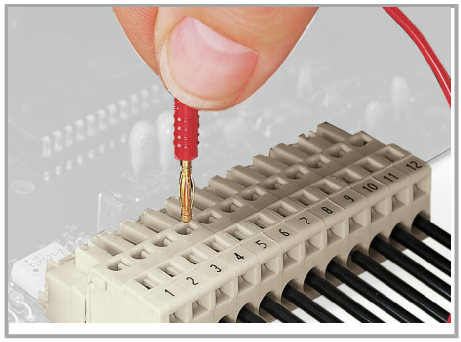


Inserting a conductor via operating tool.

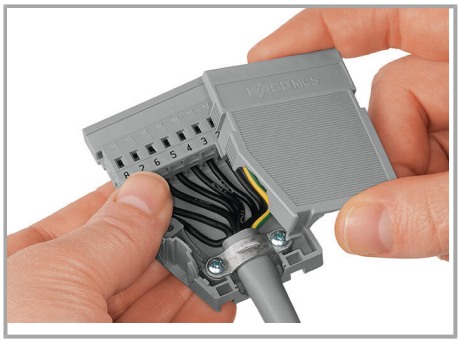
Testing



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

Assembly

Male connector with strain relief plate



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

Coding

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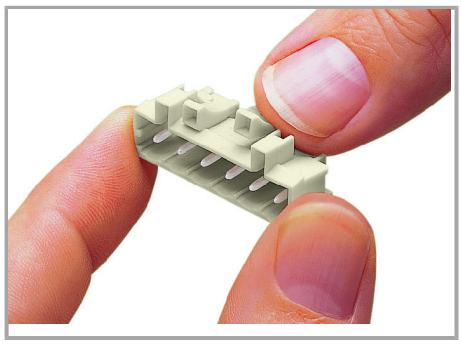

Coding a male header – fitting coding key(s).

Product family

MCS MIDI
Learn more about the product family.

Show all products from the family

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