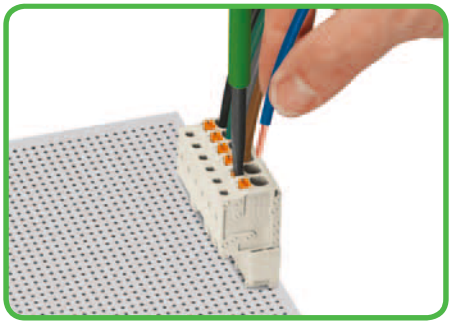
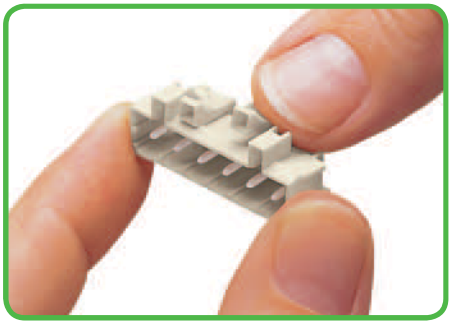
Description and Handling
MCS – MULTI CONNECTION SYSTEM **MIDI 100% Protected Against Mismating**



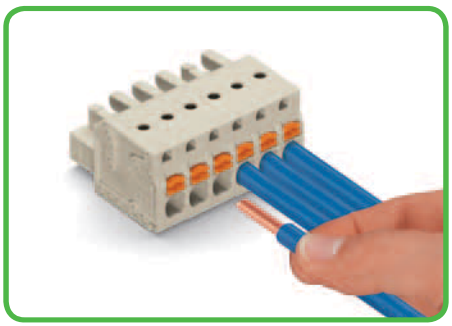
Inserting/removing conductor via 3.5 mm screwdriver – CAGE CLAMP®S actuation in mated condition.



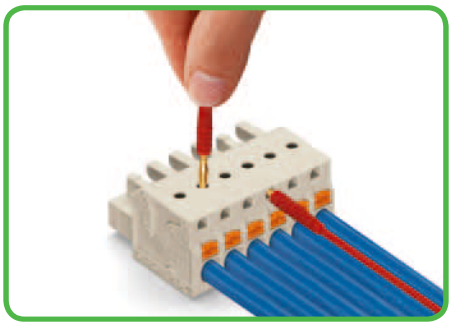
Coding a male header – fitting coding key(s).

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

2721 Series Female Connector with Push-Buttons



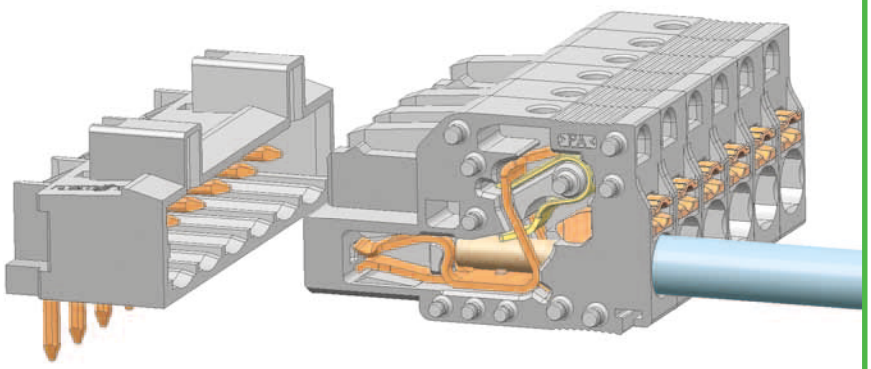
Inserting solid or ferruled conductors via CAGE CLAMP®S push-in terminations.



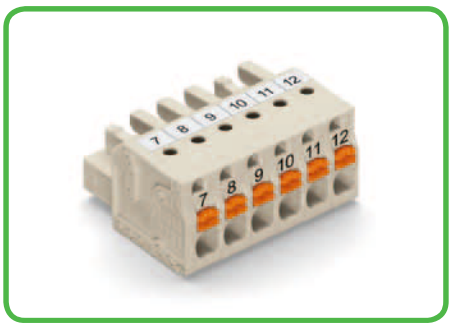
Testing parallel to conductor entry via integrated test ports - female connector with push-button actuated CAGE CLAMP®S. Tip contact with current bar from top of unit.

100% protected against mismating

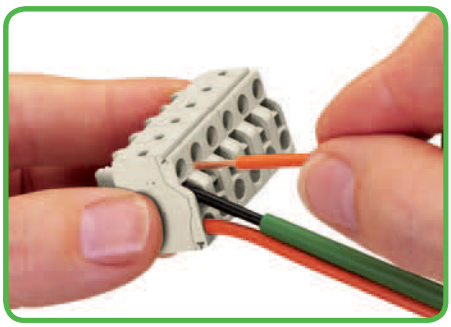
CAGE CLAMP®S



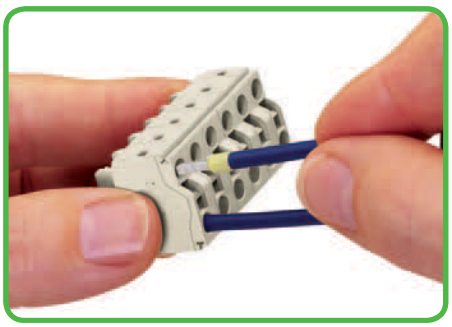
MCS-MIDI Pin spacing 5 mm and 7.5 mm



Marking via self-adhesive marker strips or factory direct printing.



Inserting conductor via 3.5 mm screwdriver into a 2-conductor female connector equipped with CAGE CLAMP®S.



Inserting ferruled, fine-stranded conductors via CAGE CLAMP®S push-in terminations.

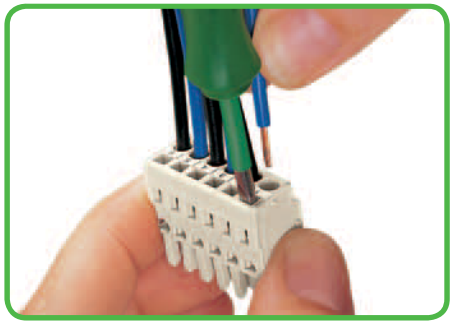
CAGE CLAMP® and CAGE CLAMP®S clamp the following copper conductors:*

solid

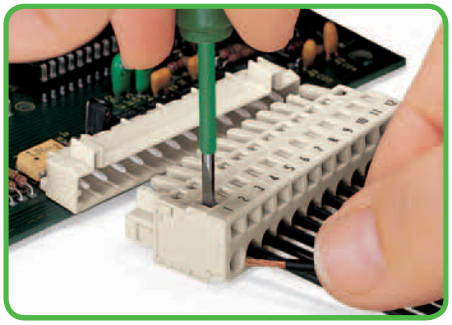
stranded

fine-stranded, also with tinned single strands

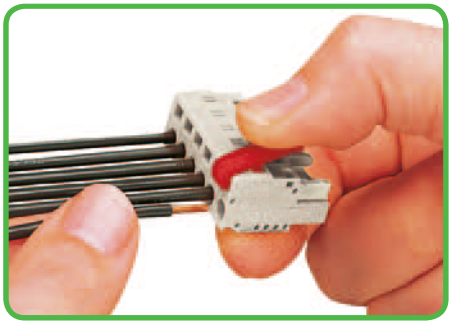
* For aluminum conductors, see notes in Section 11.



Inserting conductor via 3.5 mm screwdriver – horizontal CAGE CLAMP® actuation.



Inserting conductor via 3.5 mm screwdriver – vertical CAGE CLAMP® actuation.

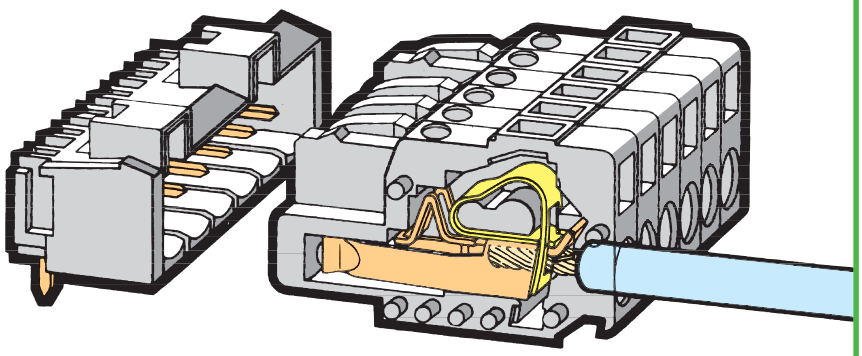


Inserting conductor – CAGE CLAMP® actuation via **231-291** push-buttons.

721, 722 and 723 Series

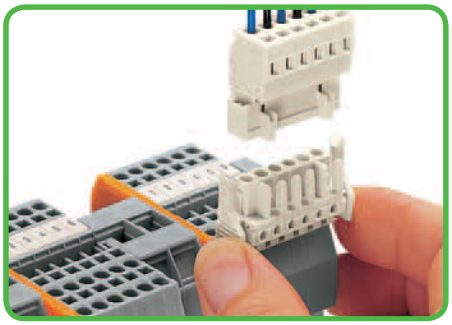
100 % protected against mismating

CAGE CLAMP®

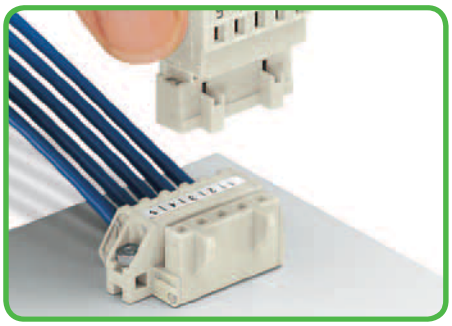


MCS-MIDI

Pin spacing 5 mm and 7.5 mm

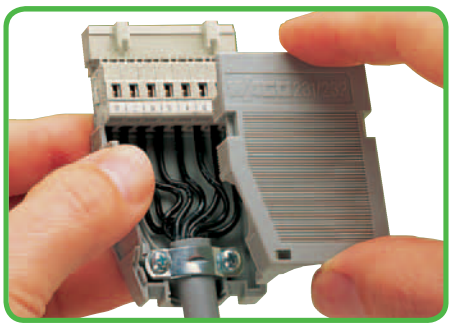


Connectors for 280 Series rail-mounted terminal blocks.

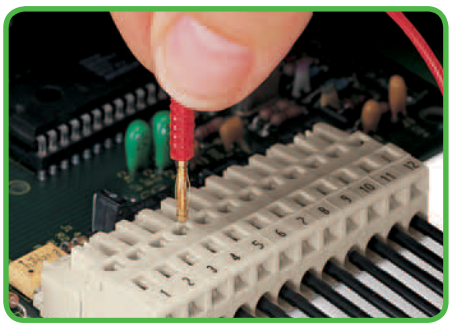


Angled female connector for panel mounting.

Male connector with strain relief plate.



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



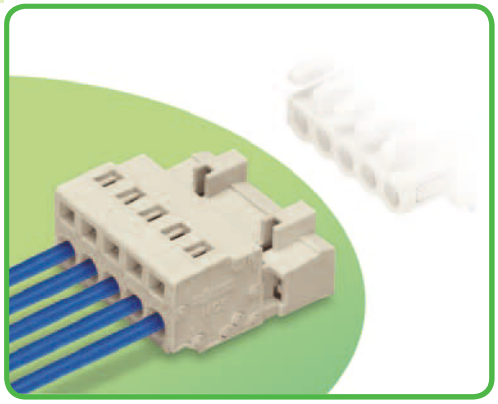
Testing – female connector with CAGE CLAMP®. Vertical insertion of Ø 2 mm and Ø 2.3 mm test plugs.

fine-stranded, tip-bonded

fine-stranded with crimped ferrules (gas-tight)

fine-stranded with crimped pin terminal (gas-tight)

Male Connectors
Pin Spacing 5 mm
MCS-MIDI



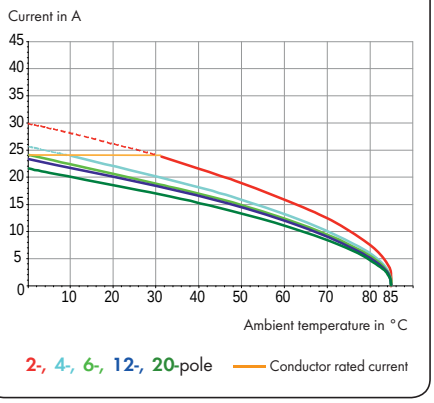
- Universal connection for all conductor types
- Easy cable pre-assembly and on-unit wiring via vertical and horizontal CAGE CLAMP® actuation
- For "wire-to-wire" and "board-to-wire" connections
- Versions available with snap-in mounting feet or fixing flanges for panel or through-panel mounting
- Optional, preceding ground contact available for 3- to 5-pole male connectors
- 100 % protected against mismating
- With coding keys

Technical data:

Pin Spacing	5 mm 0.197 in			
Rating per	IEC/EN 60664-1			
Overvoltage category	III	III	II	
Pollution degree	3	2	2	
Rated voltage	320 V	320 V	630 V	
Rated surge voltage	4 kV	4 kV	4 kV	
Nominal current	12 A	12 A	12 A	
Approvals per	UL/CSA			
Use group UL 1059	B	C	D	
Rated voltage	300 V	–	300 V	
Nominal current UL	15 A	–	10 A	
Nominal current CSA	15 A	–	10 A	
The MCS-MIDI connection system is UL 1977 approved and capable of up to 600 V for factory wiring.				

Derating Curve

721-102/026-000 female connector
with 721-602 male connector
Pin spacing: 5 mm / Conductor size: 2.5 mm² "f-st"
Based on: EN 60512-5-2 / Reduction factor: 0.8



Conductor data:

Connection technology	CAGE CLAMP®	
Conductor size: solid	0.08 – 2.5 mm²	
Conductor size: fine-stranded	0.08 – 2.5 mm²	
Conductor size: fine-stranded	0.25 – 1.5 mm²	(with insulated ferrule)
Conductor size: fine-stranded	0.25 – 2.5 mm²	(with uninsulated ferrule)
AWG	28 – 12	12: THHN, THWN
Strip length	8 – 9 mm / 0.31 – 0.35 in	

Material data:

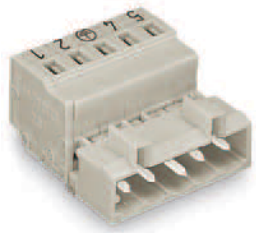
Material group	I
Insulating material	Nylon 6.6 (PA 6.6)
Flammability rating per UL 94	V0
Lower/Upper temperature limit	–60 °C / +100 °C
Clamping spring material	Chrome-nickel spring steel (CrNi)
Contact material	Electrolytic copper (E_{Cu})
Contact plating	tin-plated
MCS connectors are also available upon request with gold-plated or partially gold-plated contact surfaces.	
Depending on the version requested, **"item no. suffix . . . /010-000"** is added to the "basic item no."	

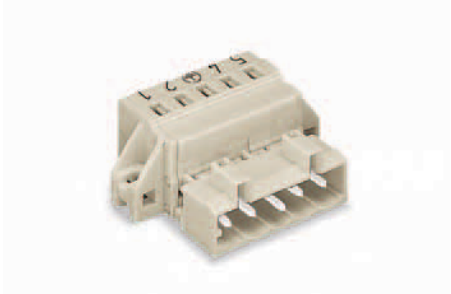
MCS-MIDI accessories:

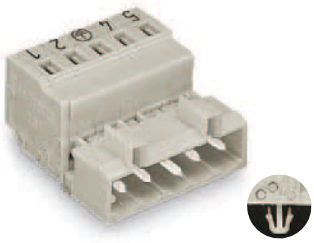
MCS – MULTI CONNECTION SYSTEM includes connectors **without** breaking capacity in accordance with IEC 61984. When used as intended, these connectors shall not be connected/disconnected when live or under load. The circuit design should ensure header pins, which can be touched, are not live in unmated condition.

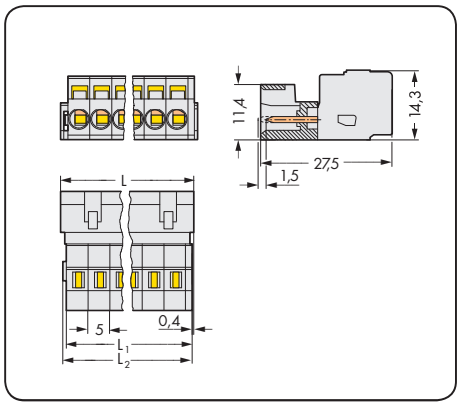
Male Connectors
MCS-MIDI

Pin spacing 5 mm / 0.197 in		With fixing flanges Pin spacing 5 mm / 0.197 in		With snap-in mounting feet Pin spacing 5 mm / 0.197 in	
0.08 – 2.5 mm²	AWG 28 – 12	0.08 – 2.5 mm²	AWG 28 – 12	0.08 – 2.5 mm²	AWG 28 – 12
320 V/4 kV/2 12 A	300 V/15 A	320 V/4 kV/2 12 A	300 V/15 A	320 V/4 kV/2 12 A	300 V/15 A

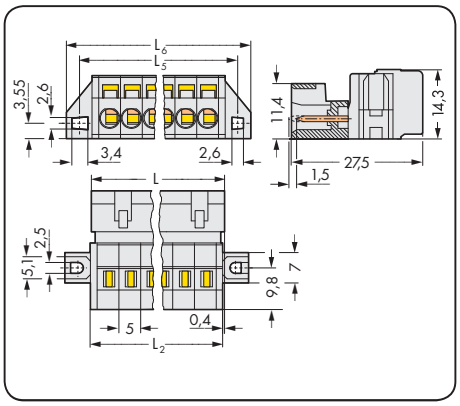




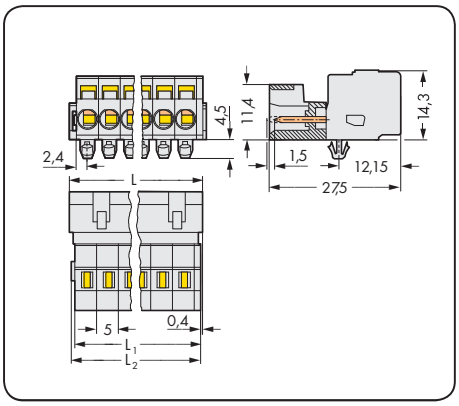




L = (pole no. – 1) x pin spacing + 8.2 mm
L_1 = L – 1.7 mm
L_2 = L – 1.2 mm



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



L = (pole no. – 1) x pin spacing + 8.2 mm
L_1 = L – 1.7 mm
L_2 = L – 1.2 mm

Pole No.	Item No.	Item No.	Pack. Unit
Male connector, light gray			
	without preceding ground contact	with preceding ground contact and printing	
2	**721-602**		100
3	**721-603**	**721-603/000-042**	100
4	**721-604**	**721-604/000-042**	100
5	**721-605**	**721-605/000-042**	50
6	**721-606**		50
7	**721-607**		50
8	**721-608**		50
9	**721-609**		50
10	**721-610**		50
11	**721-611**		25
12	**721-612**		25
13	**721-613**		25
14	**721-614**		25
15	**721-615**		25
16	**721-616**		25
20	**721-620**		10

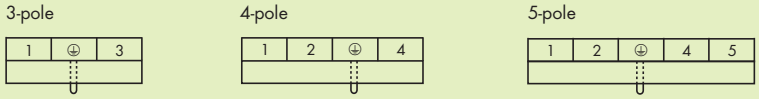
Pole No.	Item No.	Item No.	Pack. Unit
Male connector with fixing flanges, light gray			
	without preceding ground contact	with preceding ground contact and printing	
2	**721-602/019-000**		100
3	**721-603/019-000**	**721-603/019-042**	50
4	**721-604/019-000**	**721-604/019-042**	50
5	**721-605/019-000**	**721-605/019-042**	50
6	**721-606/019-000**		50
7	**721-607/019-000**		50
8	**721-608/019-000**		50
9	**721-609/019-000**		25
10	**721-610/019-000**		25
11	**721-611/019-000**		25
12	**721-612/019-000**		25
13	**721-613/019-000**		25
14	**721-614/019-000**		25
15	**721-615/019-000**		25
16	**721-616/019-000**		10
20	**721-620/019-000**		10

For cutout dimensions, see page 484, table 1.

Pole No.	Item No.	Item No.	Pack. Unit
Male connector with snap-in mounting feet, for 0.6 – 1.2 mm plate thickness , Ø 3.5 mm mounting holes, light gray			
	without preceding ground contact	with preceding ground contact and printing	
2	**721-602/018-000**		100
3	**721-603/018-000**	**721-603/018-042**	100
4	**721-604/018-000**	**721-604/018-042**	100
5	**721-605/018-000**	**721-605/018-042**	50
6	**721-606/018-000**		50
7	**721-607/018-000**		50
8	**721-608/018-000**		50
9	**721-609/018-000**		50
10	**721-610/018-000**		50
11	**721-611/018-000**		25
12	**721-612/018-000**		25
13	**721-613/018-000**		25
14	**721-614/018-000**		25
15	**721-615/018-000**		25
16	**721-616/018-000**		25
20	**721-620/018-000**		10

Product Accessories	Page
Mounting adapter for DIN 35 rail, min. length 3 poles (209-137)	475

Preceding ground contact position and on-unit markings:



For other lengths, please contact factory.