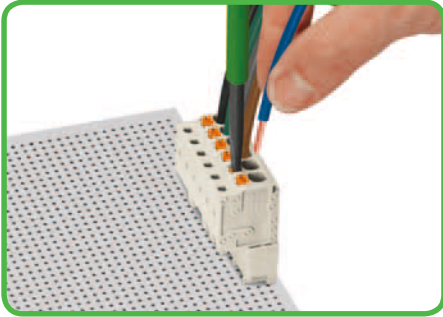
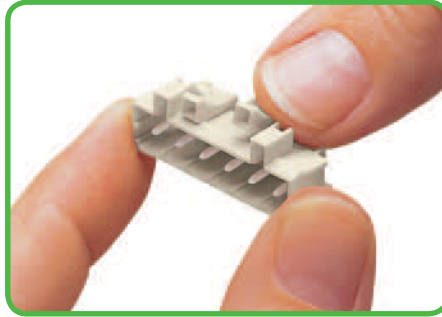


Description and Handling

MCS - MULTI CONNECTION SYSTEM MIDI 100% Protected Against Mismatching



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

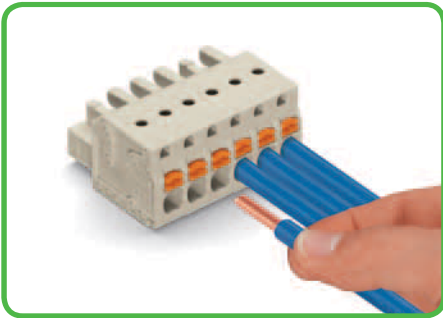


Coding a male header - fitting coding key(s).

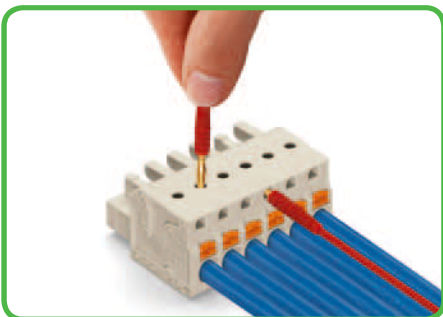


Coding a female connector - removing coding finger(s).

2721 Series Female Connector with Push-Buttons

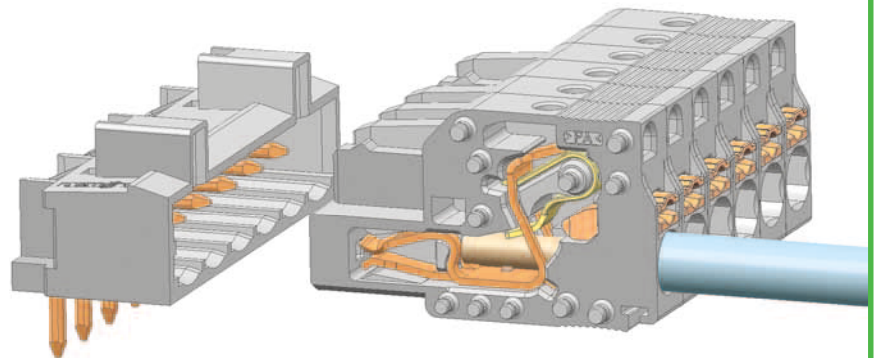


Inserting solid or ferruled conductors via CAGE CLAMP[®]S push-in terminations.



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 mismatching

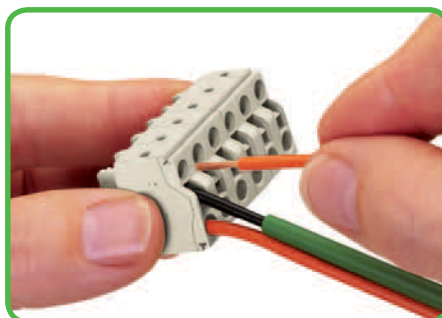


MCS-MIDI

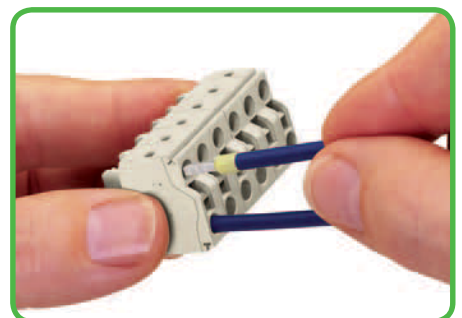
Pin spacing 5 mm and 7.5 mm



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.



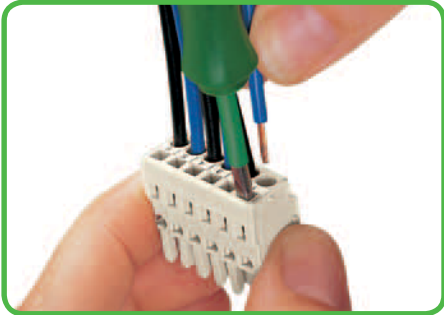
Inserting ferruled, fine-stranded conductors via CAGE CLAMP[®]S push-in terminations.

CAGE CLAMP[®] and CAGE CLAMP[®]S clamp the following copper conductors:^{*}
solid

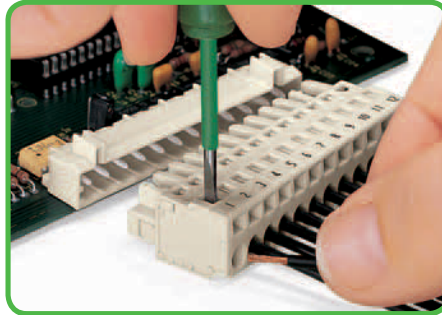
stranded

fine-stranded, also with tinned single strands

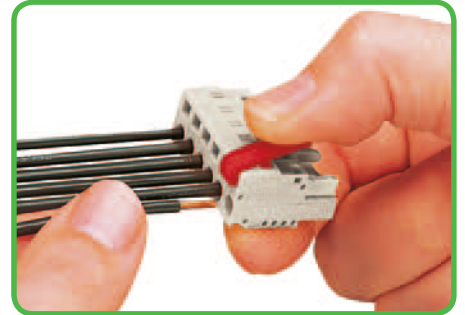
* For aluminum conductors, see notes in Section 11.



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



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

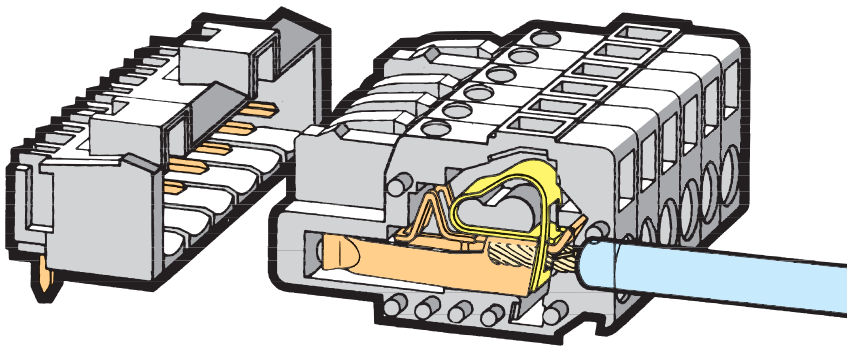


Inserting conductor - CAGE CLAMP® actuation via 231-291 push-buttons.

721, 722 and 723 Series

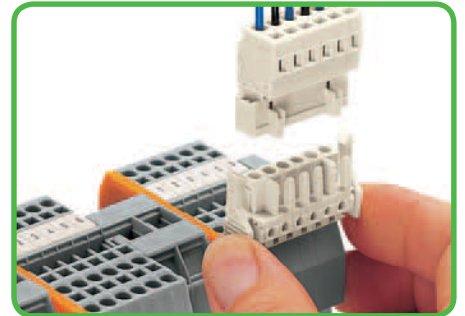
100% protected against mismatching

CAGE CLAMP®

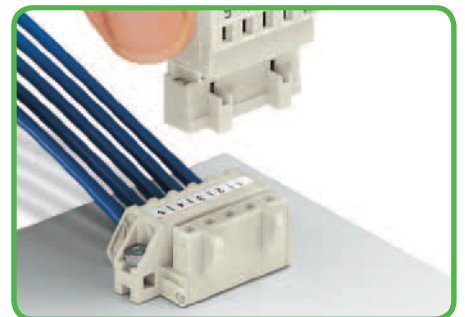


MCS-MIDI

Pin spacing 5 mm and 7.5 mm



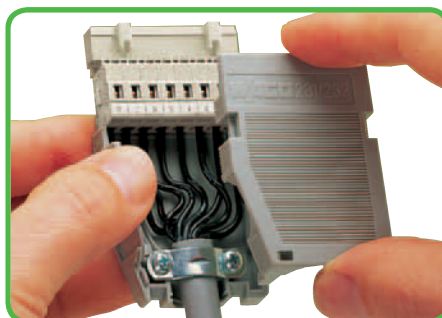
Connectors for 280 Series rail-mounted terminal blocks.



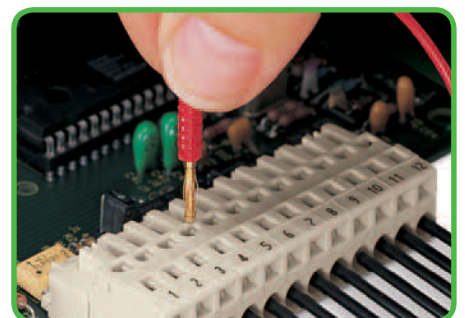
Angled female connector for panel mounting.



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)

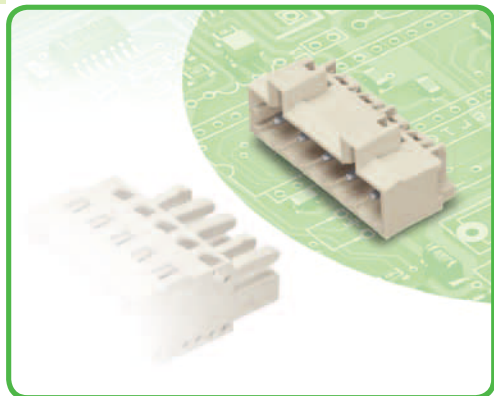


fine-stranded with
crimped pin terminal
(gas-tight)

Male Headers with Solder Pins and Press-In Pins

Pin Spacing 5 mm

MCS-MIDI



- Horizontal or vertical PCB mounting via straight or angled solder pins
- 1.2 x 1.2 mm solder pins allow nominal current up to 16 A, enhancing stability of shorter headers
- Version with press-in pins provides solder-free connection to PCB
- 100% protected against mismatching
- With coding keys

Technical data:

Pin Spacing	5 mm/0.197 in 1 x 1 mm Solder Pins			5 mm/0.197 in 1.2 x 1.2 mm Solder Pins			5 mm/0.197 in Press-In Technology		
	IEC/EN 60664-1			IEC/EN 60664-1			IEC/EN 60664-1		
Rating per									
Overtoltage category	III	III	II	III	III	II	III	III	II
Pollution degree	3	2	2	3	2	2	3	2	2
Rated voltage	320 V	320 V	630 V	250 V	320 V	630 V	320 V	320 V	630 V
Rated surge voltage	4 kV	4 kV	4 kV	4 kV	4 kV	4 kV	4 kV	4 kV	4 kV
Nominal current	12 A	12 A	12 A	16 A	16 A	16 A	8 A	8 A	8 A
Approvals per	UL/CSA			UL/CSA			UL/CSA		
Use group UL 1059	B	C	D	B	C	D	B	C	D
Rated voltage	300 V	-	300 V	300 V	-	300 V	300 V	-	300 V
Nominal current UL	10 A	-	10 A	15 A	-	10 A	15 A	-	10 A
Nominal current CSA	10 A	-	10 A	15 A	-	10 A	10 A	-	10 A

The MCS-MIDI connection system is UL 1977 approved and capable of up to 600 V for factory wiring.

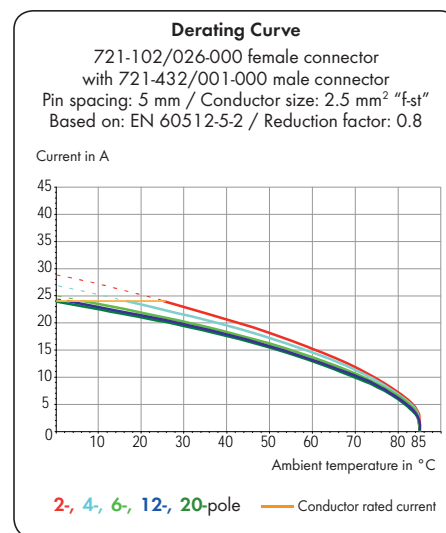
Solder and press-in pin data:

Solder pin: length/width	5 mm / 1 x 1 mm (straight)
Solder pin: length/width	3.8 mm / 1 x 1 mm (angled)
Solder pin: drilled hole diameter	1.4 ^{+0.1} mm
Solder pin: length/width	5 mm / 1.2 x 1.2 mm (straight)
Solder pin: length/width	3.8 mm / 1.2 x 1.2 mm (angled)
Solder pin: drilled hole diameter	1.7 ^{+0.1} mm
Press-in pin: length/width	3.2 mm/0.8 x 1.6 mm
Press-in pin: drilled hole diameter	1.6 ^{+0.025} mm
Press-in pin: metal-plated hole diameter	1,45 ^{+0.09} _{-0.06} mm (HAL Sn)
Press-in pin: metal-plated hole diameter	1,45 ^{+0.09} _{-0.06} mm (Chem. Sn)

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 / Press-in pin: -40°C / +85°C
Contact material	Electrolytic copper (E _{cu}) / Press-in pin: copper alloy
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 - 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.



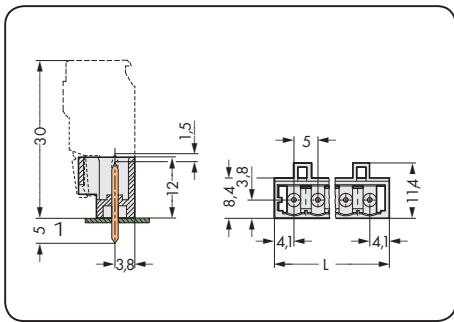
MCS-MIDI accessories:

Page:

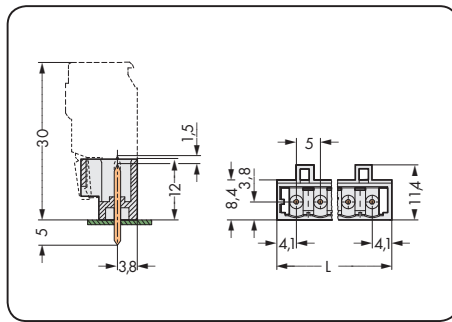
Fixing elements	469
Coding keys	468
Screws	546

Male Headers with Solder Pins and Press-In Pins MCS-MIDI

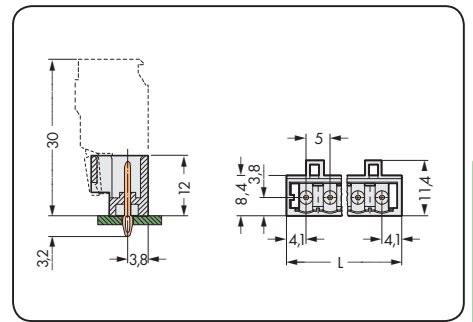
With 1 x 1 mm straight solder pins Pin spacing 5 mm / 0.197 in		With 1.2 x 1.2 mm straight solder pins Pin spacing 5 mm / 0.197 in		With press-in pins Pin spacing 5 mm / 0.197 in	
320 V/4 kV/2 12 A	300 V/10 A	320 V/4 kV/2 16 A	300 V/15 A	320 V/4 kV/2 8 A	300 V/15 A



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



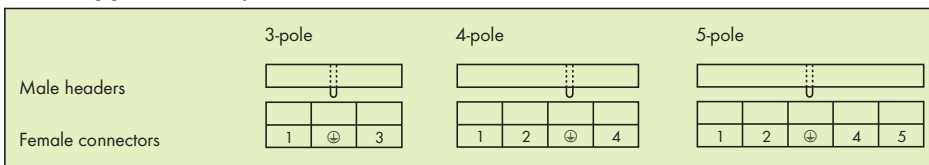
L = (pole no. - 1) x pin spacing + 8.2 mm



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

Pole No.	Item No.	Item No.	Pack. Unit	Pole No.	Item No.	Item No.	Pack. Unit	Pole No.	Item No.	Pack. Unit	
Male header with 1 x 1 mm straight solder pins, light gray				Male header with 1.2 x 1.2 mm straight solder pins, light gray				Male header for press-in technology*, 0.8 x 1.6 mm press-in pin, light gray			
	without preceding ground contact	with preceding ground contact			without preceding ground contact	with preceding ground contact					
2	721-132/001-000		200	2	721-162/001-000		200	2	721-162/100-000	200	
3	721-133/001-000	721-133/001-040	200	3	721-163/001-000	721-163/001-040	200	3	721-163/100-000	200	
4	721-134/001-000	721-134/001-040	200	4	721-164/001-000	721-164/001-040	200	4	721-164/100-000	200	
5	721-135/001-000	721-135/001-040	200	5	721-165/001-000	721-165/001-040	200	5	721-165/100-000	200	
6	721-136/001-000		100	6	721-166/001-000		100	6	721-166/100-000	100	
7	721-137/001-000		100	7	721-167/001-000		100	7	721-167/100-000	100	
8	721-138/001-000		100	8	721-168/001-000		100	8	721-168/100-000	100	
9	721-139/001-000		100	9	721-169/001-000		100	9	721-169/100-000	100	
10	721-140/001-000		100	10	721-170/001-000		100	10	721-170/100-000	100	
11	721-141/001-000		100	11	721-171/001-000		100	11	721-171/100-000	100	
12	721-142/001-000		100	12	721-172/001-000		100	12	721-172/100-000	100	
13	721-143/001-000		50	13	721-173/001-000		50				
14	721-144/001-000		50	14	721-174/001-000		50				
15	721-145/001-000		50	15	721-175/001-000		50				
16	721-146/001-000		50	16	721-176/001-000		50				
20	721-150/001-000		50	20	721-180/001-000		50				
								* For press-in technology, see page 300			

Preceding ground contact position:



1 MCS-MIDI male headers with straight solder pins are also available with 3.8 mm pin projection. Replace item no. suffix .../001-000 with .../046-000.