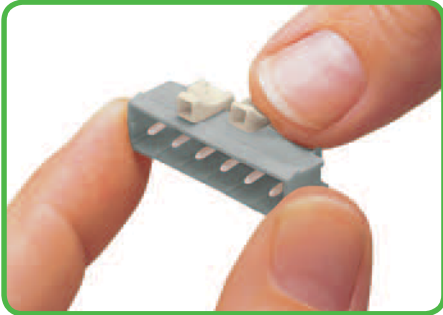


Description and Handling

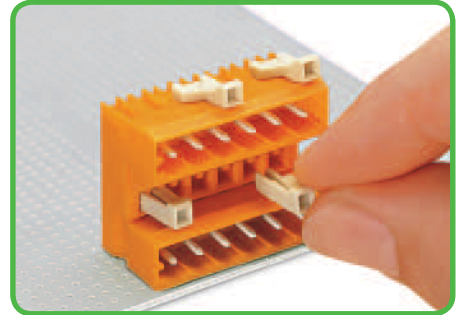
MCS - MULTISTECKERSYSTEM MIDI Classic



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

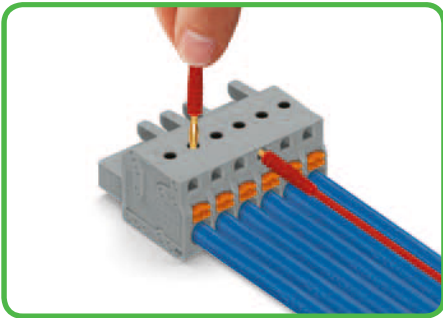


Coding a female connector - removing coding finger(s).

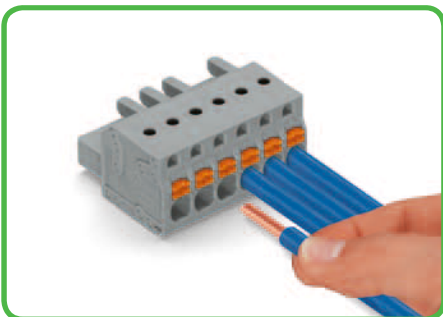


Coding a lower male header - inserting coding key(s).

2231 Series Female Connectors with Push-Buttons



Testing parallel to conductor entry via Ø 2 mm test plugs - female connector with CAGE CLAMP®S. Tip contact with current bar perpendicular to conductor entry.

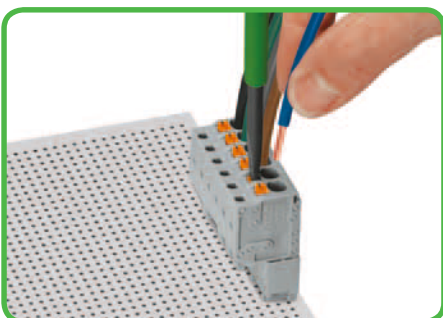


Inserting solid and ferruled, fine-stranded conductors via CAGE CLAMP®S push-in termination.

CAGE CLAMP®S

MCS-MIDI Classic

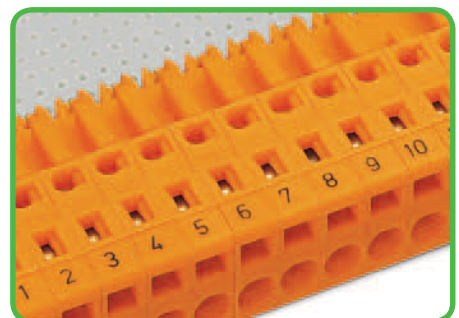
Pin spacing 5 mm and 7.5 mm
Pin spacing 5.08 mm and 7.62 mm



Inserting fine-stranded conductor into CAGE CLAMP®S unit via push-button.



THR male headers in tape-and-reel packaging for SMT applications.



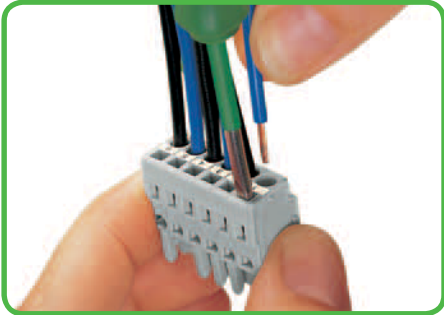
Marking via self-adhesive marker strips or factory direct printing.

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

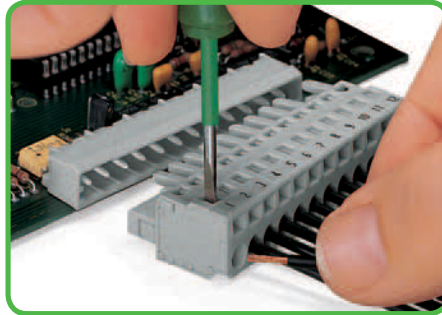
stranded

fine-stranded, also with tinned single strands

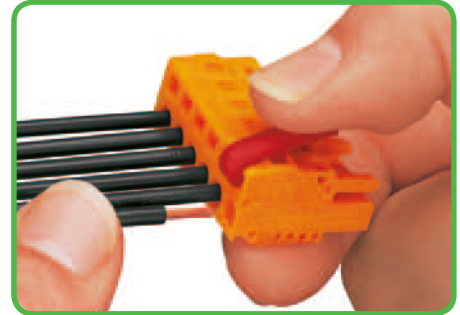
* For aluminum conductors, see notes in Section 11.



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



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



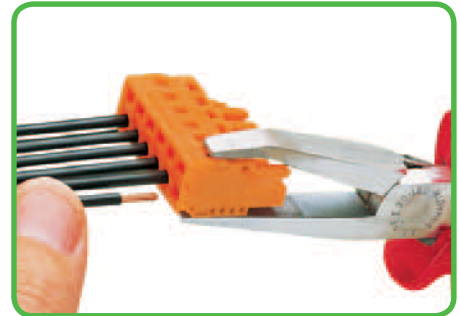
Inserting conductor into CAGE CLAMP® unit via 231-291 operating lever.

231, 232, 731 and 732 Series

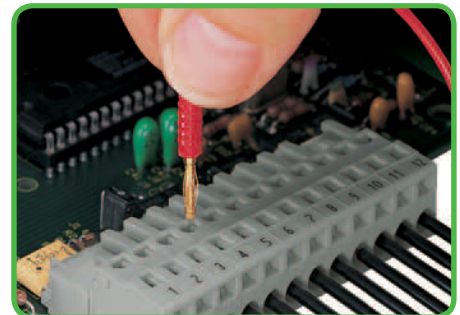
CAGE CLAMP®

MCS-MIDI Classic

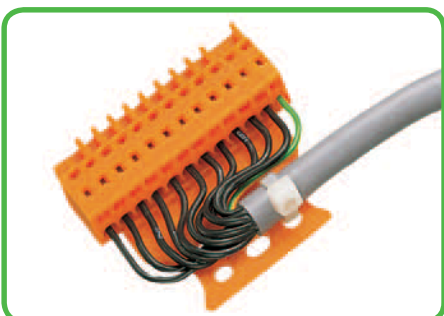
Pin spacing 5 mm and 7.5 mm
Pin spacing 5.08 mm and 7.62 mm



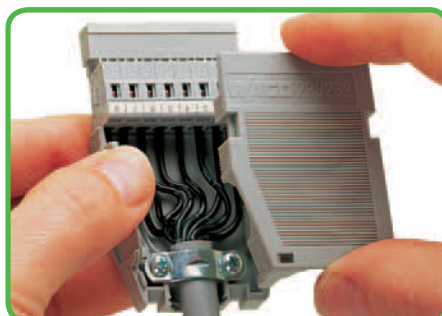
Inserting conductor into CAGE CLAMP® unit via 210-250 operating tool.



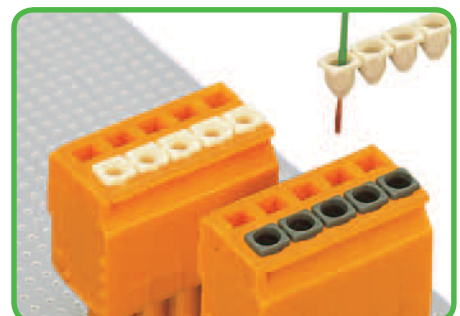
Testing perpendicular to conductor entry via Ø 2 mm or Ø 2.3 mm test plugs – female connector with CAGE CLAMP®.



Female connector with strain relief plate.



Strain relief housing for male and female connectors equipped with CAGE CLAMP®.



Insulation stop – prevents conductor insulation from being inserted into the clamping unit for CAGE CLAMP® and CAGE CLAMP®S.



fine-stranded, tip-bonded



fine-stranded with crimped ferrules (gas-tight)

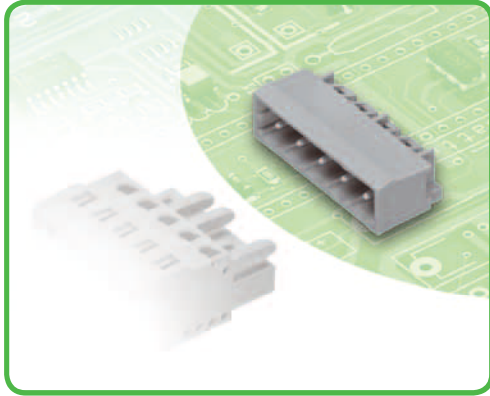


fine-stranded with crimped pin terminal (gas-tight)

Male Headers with Solder Pins

Pin Spacing 5 mm, 5.08 mm

MCS-MIDI Classic



- 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
- Enclosed on each side, the pin housing design prevents mismatching
- With coding keys

Technical data:

1 x 1 mm solder pin:

1.2 x 1.2 mm solder pin:

Pin Spacing	5 mm / 5.08 mm 0.197 in / 0.2 in			5 mm / 5.08 mm 0.197 in / 0.2 in		
	IEC/EN 60664-1			IEC/EN 60664-1		
Rating per	IEC/EN 60664-1			IEC/EN 60664-1		
Overtoltage category	III	III	II	III	III	II
Pollution degree	3	2	2	3	2	2
Rated voltage	320 V	320 V	630 V	250 V	320 V	630 V
Rated surge voltage	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
Approvals per	UL/CSA			UL/CSA		
Use group UL 1059	B	C	D	B	C	D
Rated voltage	300 V	-	300 V	300 V	-	300 V
Nominal current UL	10 A	-	10 A	15 A	-	10 A
Nominal current CSA	10 A	-	10 A	15 A	-	10 A

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

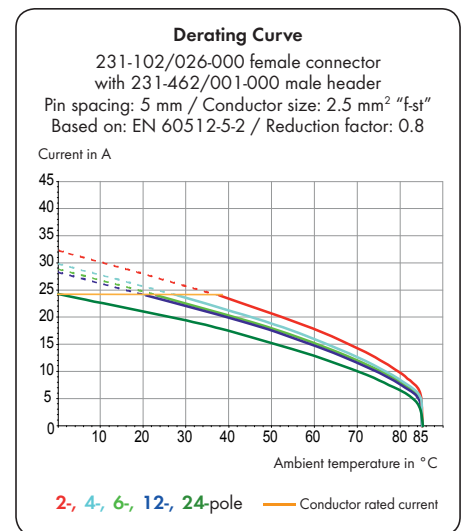
Solder pin data:

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

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
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 - 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.



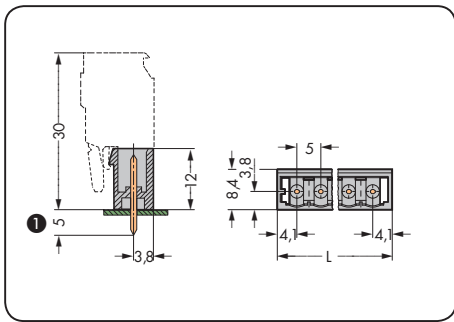
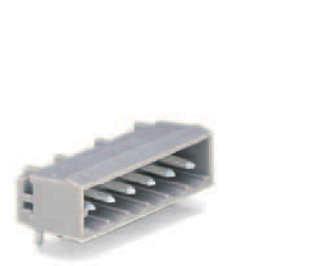
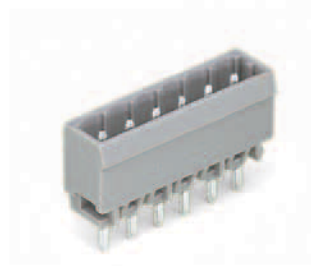
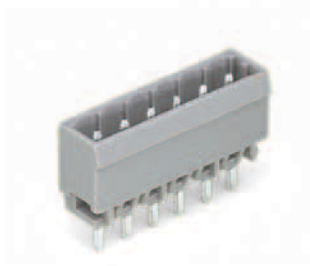
MCS-MIDI accessories:

Page:

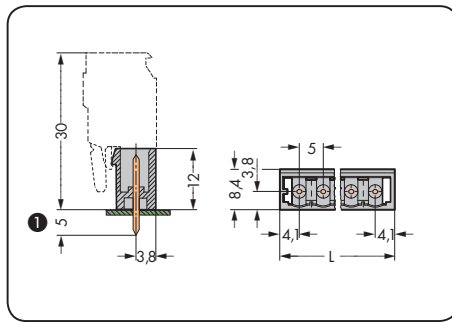
Fixing elements	469
Separators	468
Coding keys	468
Screws	546

Male Headers with Solder Pins MCS-MIDI Classic

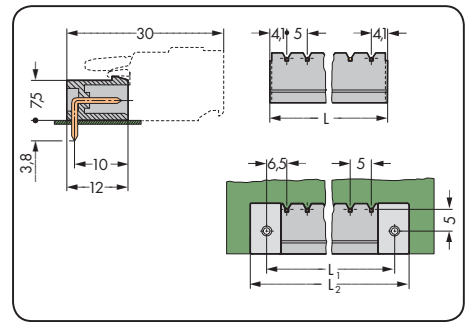
With 1 x 1 mm straight solder pins Pin spacing 5 mm / 0.197 in		With 1.2 x 1.2 mm straight solder pins Pin spacing 5 mm / 0.197 in		With 1 x 1 mm angled solder pins Pin spacing 5 mm / 0.197 in	
320 V/4 kV/2 12 A	300 V/10 A	320 V/4 kV/2 16 A	300 V/15 A	320 V/4 kV/2 12 A	300 V/10 A



$L = (\text{pole no.} - 1) \times \text{pin spacing} + 8.2 \text{ mm}$



$L = (\text{pole no.} - 1) \times \text{pin spacing} + 8.2 \text{ mm}$



$L = (\text{pole no.} - 1) \times \text{pin spacing} + 8.2 \text{ mm}$
 $L_1 = L + 5 \text{ mm}$
 $L_2 = L_1 + 7.4 \text{ mm}$

Pole No.	Item No.	Pack. Unit	Pole No.	Item No.	Pack. Unit	Pole No.	Item No.	Pack. Unit
Male header with 1 x 1 mm straight solder pins, gray			Male header with 1.2 x 1.2 mm straight solder pins, gray			Male header with 1 x 1 mm angled solder pins, gray		
2	231-132/001-000	200	2	231-162/001-000	200	2	231-432/001-000	200
3	231-133/001-000	200	3	231-163/001-000	200	3	231-433/001-000	200
4	231-134/001-000	200	4	231-164/001-000	200	4	231-434/001-000	200
5	231-135/001-000	200	5	231-165/001-000	200	5	231-435/001-000	200
6	231-136/001-000	100	6	231-166/001-000	100	6	231-436/001-000	100
7	231-137/001-000	100	7	231-167/001-000	100	7	231-437/001-000	100
8	231-138/001-000	100	8	231-168/001-000	100	8	231-438/001-000	100
9	231-139/001-000	100	9	231-169/001-000	100	9	231-439/001-000	100
10	231-140/001-000	100	10	231-170/001-000	100	10	231-440/001-000	100
11	231-141/001-000	100	11	231-171/001-000	100	11	231-441/001-000	100
12	231-142/001-000	100	12	231-172/001-000	100	12	231-442/001-000	100
13	231-143/001-000	50	13	231-173/001-000	50	13	231-443/001-000	50
14	231-144/001-000	50	14	231-174/001-000	50	14	231-444/001-000	50
15	231-145/001-000	50	15	231-175/001-000	50	15	231-445/001-000	50
16	231-146/001-000	50	16	231-176/001-000	50	16	231-446/001-000	50
17	231-147/001-000	50	17	231-177/001-000	50	17	231-447/001-000	50
18	231-148/001-000	50	18	231-178/001-000	50	18	231-448/001-000	50
19	231-149/001-000	50	19	231-179/001-000	50	19	231-449/001-000	50
20	231-150/001-000	50	20	231-180/001-000	50	20	231-450/001-000	50
21	231-151/001-000	50	21	231-181/001-000	50	21	231-451/001-000	50
22	231-152/001-000	50	22	231-182/001-000	50	22	231-452/001-000	50
23	231-153/001-000	50	23	231-183/001-000	50	23	231-453/001-000	50
24	231-154/001-000	50	24	231-184/001-000	50	24	231-454/001-000	50

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.