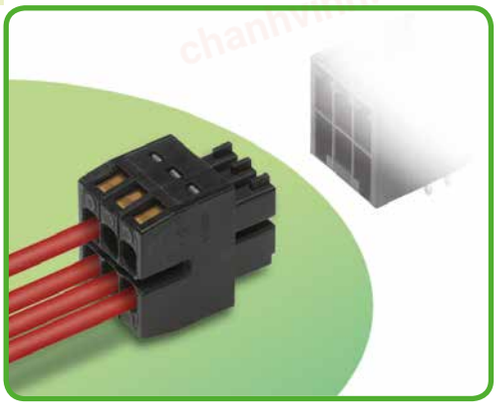
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Female Connectors, Double-Row
Pin Spacing: 3.5 mm
MCS MINI HD



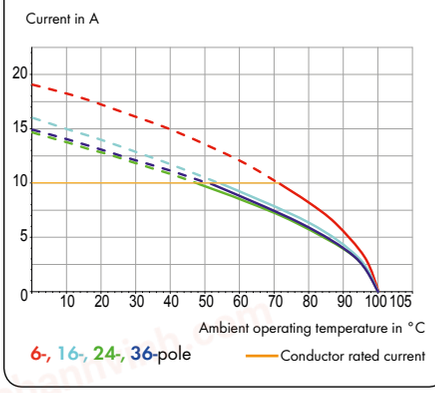
- Universal connection for all conductor types
- Unique, compact, double-row connector system for conductor cross sections up to 1.5 mm²
- High-density, “wire-to-board” connectors for use in very confined spaces
- Centered strain relief plate anchors conductors, while acting as convenient connection and disconnection handle. It also provides easy access to operating slots – even when wired.
- Optional dual-purpose lever doubles as a lock and disconnection aid, while preventing accidental disconnection in closed position
- 100% protected against mismating, available with coding fingers

Technical data:

Pin Spacing	3.5 mm 0.138 in.			
Ratings per	IEC/EN 60664-1			
Overvoltage category	III	III	II	
Pollution degree	3	2	2	
Rated voltage	80 V	160 V	250 V	
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV	
Nominal current	10 A	10 A	10 A	
Approvals per	UL/CSA			
Use group UL 1059	B	C	D	
Rated voltage	150 V	–	–	
Nominal current UL	10 A	–	–	
Nominal current CSA	10 A	–	–	

Derating Curve

713-1103 female connector with 713-1403 male header
Pin spacing: 3.5 mm / Conductor size: 1.5 mm²/f-st
Based on: EN 60512-5-2 / Reduction factor: 0.8



Conductor data:

Connection technology	CAGE CLAMP®	
Conductor size: solid	0.08–1.5 mm²	
Conductor size: fine-stranded	0.08–1.5 mm²	
Conductor size: fine-stranded	0.25–1.0 mm²	(with insulated ferrule)
Conductor size: fine-stranded	0.25–1.0 mm²	(with uninsulated ferrule)
AWG	28–16	
Strip length	6–7 mm / 0.24–0.28 in.	

Material data:

Material group	II
Insulating material	Glass fiber-reinforced polyamide 6.6 (PA 6.6-GF)
Flammability rating per UL 94	V0
Lower/Upper limit temperature	-60 °C / +100 °C
Clamping spring material	Chrome nickel spring steel (CrNi)
Contact material	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 MINI HD accessories: **Pages:**

Marking accessories	570 – 573
Operating tools	296
Direct marking	297
Strain relief plates	296

MCS – MULTI CONNECTION SYSTEM includes connectors without breaking capacity in accordance with DIN EN 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 when unmated.

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Female Connectors, Double-Row
MCS MINI HD

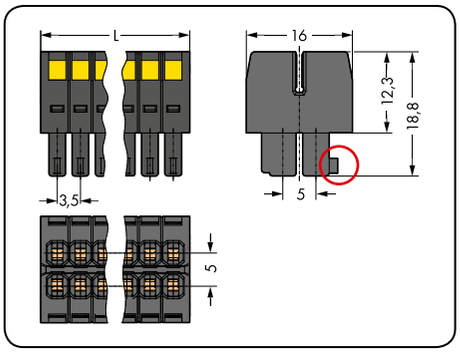
CAGE CLAMP®

Pin spacing: 3.5 mm / 0.138 in.		With levers Pin spacing: 3.5 mm / 0.138 in.		With screw flanges Pin spacing: 3.5 mm / 0.138 in.	
0.08 – 1.5 mm²	28 – 16 AWG	0.08 – 1.5 mm²	28 – 16 AWG	0.08 – 1.5 mm²	28 – 16 AWG
160 V/2.5 kV/2 10 A	150 V/10 A	160 V/2.5 kV/2 10 A	150 V/10 A	160 V/2.5 kV/2 10 A	150 V/10 A

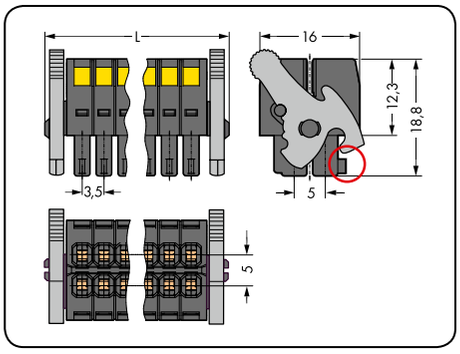




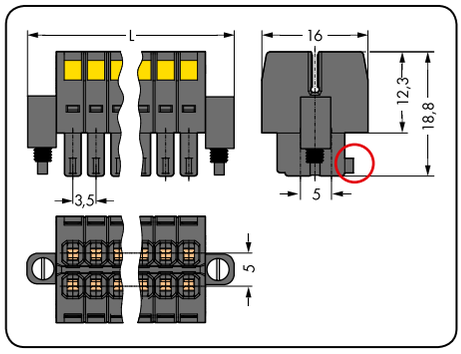




L = [(pole no./2) – 1] x pin spacing + 5.2 mm
Coding finger



L = [(pole no./2) – 1] x pin spacing + 12.2 mm



L = [(pole no./2) – 1] x pin spacing + 13.6 mm

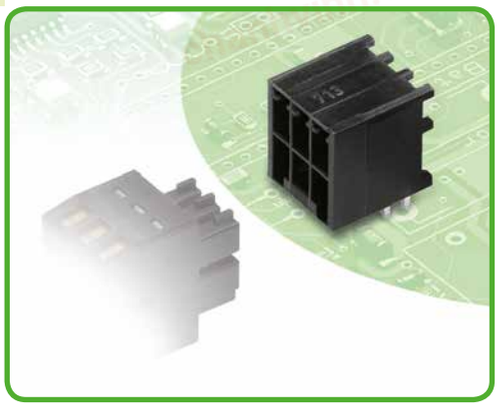
Pole No.	Item No.	Pack. Unit
Female connector, double-row, black		
6 (3x2)	**713-1103**	100
8 (4x2)	**713-1104**	50
10 (5x2)	**713-1105**	50
12 (6x2)	**713-1106**	50
14 (7x2)	**713-1107**	50
16 (8x2)	**713-1108**	25
18 (9x2)	**713-1109**	25
20 (10x2)	**713-1110**	25
22 (11x2)	**713-1111**	25
24 (12x2)	**713-1112**	25
26 (13x2)	**713-1113**	25
28 (14x2)	**713-1114**	20
30 (15x2)	**713-1115**	20
32 (16x2)	**713-1116**	20
34 (17x2)	**713-1117**	20
36 (18x2)	**713-1118**	20

Pole No.	Item No.	Pack. Unit
Female connector with levers, double-row, black		
6 (3x2)	**713-1103/037-000**	50
8 (4x2)	**713-1104/037-000**	50
10 (5x2)	**713-1105/037-000**	50
12 (6x2)	**713-1106/037-000**	25
14 (7x2)	**713-1107/037-000**	25
16 (8x2)	**713-1108/037-000**	25
18 (9x2)	**713-1109/037-000**	25
20 (10x2)	**713-1110/037-000**	20
22 (11x2)	**713-1111/037-000**	20
24 (12x2)	**713-1112/037-000**	20
26 (13x2)	**713-1113/037-000**	20
28 (14x2)	**713-1114/037-000**	20
30 (15x2)	**713-1115/037-000**	20
32 (16x2)	**713-1116/037-000**	20
34 (17x2)	**713-1117/037-000**	10
36 (18x2)	**713-1118/037-000**	10

Pole No.	Item No.	Pack. Unit
Female connector with screw flanges, double-row, black		
6 (3x2)	**713-1103/107-000**	50
8 (4x2)	**713-1104/107-000**	50
10 (5x2)	**713-1105/107-000**	25
12 (6x2)	**713-1106/107-000**	25
14 (7x2)	**713-1107/107-000**	25
16 (8x2)	**713-1108/107-000**	25
18 (9x2)	**713-1109/107-000**	25
20 (10x2)	**713-1110/107-000**	20
22 (11x2)	**713-1111/107-000**	20
24 (12x2)	**713-1112/107-000**	20
26 (13x2)	**713-1113/107-000**	20
28 (14x2)	**713-1114/107-000**	20
30 (15x2)	**713-1115/107-000**	20
32 (16x2)	**713-1116/107-000**	10
34 (17x2)	**713-1117/107-000**	10
36 (18x2)	**713-1118/107-000**	10

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Male Headers with Solder Pins, Double-Row
Pin Spacing: 3.5 mm
MCS MINI HD



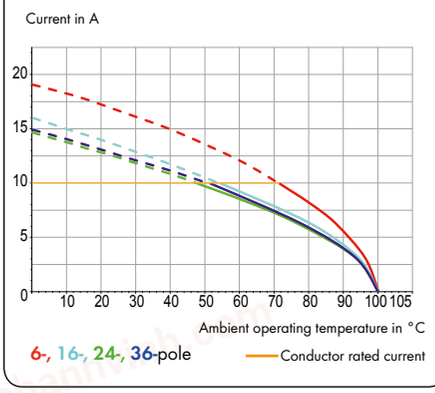
- Male headers may be mounted horizontally or vertically via straight or angled solder pins
- Header housing is molded of THR-compatible insulation material for lead-free reflow soldering
- Separated pin slots prevent damage and make the headers touch-proof when unplugged
- 100% protected against mismating
- Coding pins available

Technical data:

Pin Spacing	3.5 mm 0.138 in.			
Ratings per	IEC/EN 60664-1			
Overvoltage category	III	III	II	
Pollution degree	3	2	2	
Rated voltage	80 V	160 V	250 V	
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV	
Nominal current	10 A	10 A	10 A	
Approvals per	UL/CSA			
Use group UL 1059	B	C	D	
Rated voltage	150 V	–	–	
Nominal current UL	10 A	–	–	
Nominal current CSA	12 A	–	–	

Derating Curve

713-1103 female connector with 713-1403 male header
Pin spacing: 3.5 mm / Conductor size: 1.5 mm²/f-st"
Based on: EN 60512-5-2 / Reduction factor: 0.8



Solder pin data:

Solder pin: length/width	3.8 mm / 0.8 x 0.8 mm
Solder pin: drilled hole diameter	$1.2^{+0.1}$ mm
For other pin lengths, please contact factory.	

Material data:

Material group	I
Insulating material	Glass-fiber-reinforced polyphthalamide (PPA-GF)
Flammability rating per UL 94	V0
Lower/Upper limit temperature	-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 MINI HD accessory:

	Page:
Coding pin carrier	297

MCS – MULTI CONNECTION SYSTEM includes connectors without breaking capacity in accordance with DIN EN 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 when unmated.

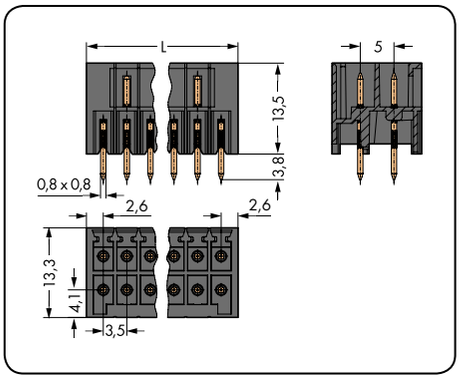
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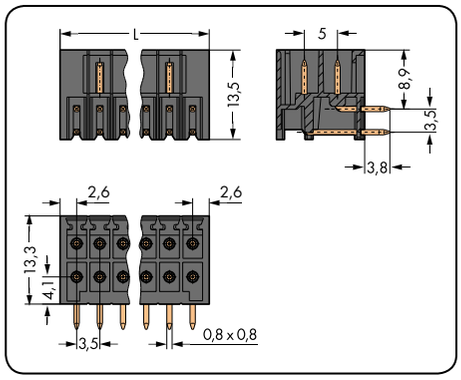
Male Headers with Solder Pins, Double-Row
MCS MINI HD

With straight solder pins Pin spacing: 3.5 mm / 0.138 in.		With angled solder pins Pin spacing: 3.5 mm / 0.138 in.		
160 V/2.5 kV/2 10 A	150 V/10 A	160 V/2.5 kV/2 10 A	150 V/10 A	









L = [(pole no./2) – 1] x pin spacing + 5.2 mm

Pole No.	Item No.	Pack. Unit	Pole No.	Item No.	Pack. Unit
Male header with straight solder pins, double-row, black			**Male header with angled solder pins, double-row,** black		
6 (3x2)	**713-1403**	100	6 (3x2)	**713-1423**	100
8 (4x2)	**713-1404**	50	8 (4x2)	**713-1424**	50
10 (5x2)	**713-1405**	50	10 (5x2)	**713-1425**	50
12 (6x2)	**713-1406**	50	12 (6x2)	**713-1426**	50
14 (7x2)	**713-1407**	50	14 (7x2)	**713-1427**	50
16 (8x2)	**713-1408**	25	16 (8x2)	**713-1428**	25
18 (9x2)	**713-1409**	25	18 (9x2)	**713-1429**	25
20 (10x2)	**713-1410**	25	20 (10x2)	**713-1430**	25
22 (11x2)	**713-1411**	25	22 (11x2)	**713-1431**	25
24 (12x2)	**713-1412**	25	24 (12x2)	**713-1432**	25
26 (13x2)	**713-1413**	25	26 (13x2)	**713-1433**	25
28 (14x2)	**713-1414**	20	28 (14x2)	**713-1434**	20
30 (15x2)	**713-1415**	20	30 (15x2)	**713-1435**	20
32 (16x2)	**713-1416**	20	32 (16x2)	**713-1436**	20
34 (17x2)	**713-1417**	20	34 (17x2)	**713-1437**	20
36 (18x2)	**713-1418**	20	36 (18x2)	**713-1438**	20

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Accessories
Strain Relief Plates and Operating Tool
MCS MINI HD

Strain relief plates for in-the-field assembly	Strain relief plates, factory-assembled	Operating tool
for female connectors with CAGE CLAMP®	for female connectors with CAGE CLAMP®	with partially insulated shaft Type 1







Width	Item No.	Pack. Unit
Strain relief plate, black		
11 mm	**713-126**	100 (4 x 25)
25 mm	**713-127**	100 (4 x 25)
39 mm	**713-128**	100 (4 x 25)
53 mm	**713-129**	100 (4 x 25)

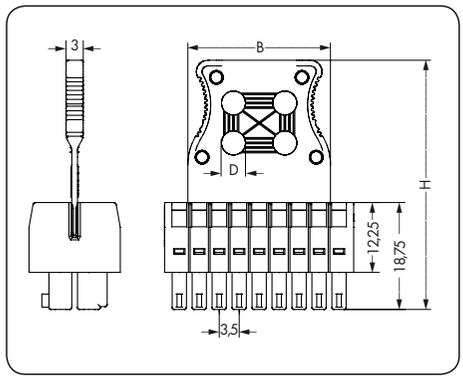
Width	Pole No.	Item No. Suffix:
Strain relief plate, pre-assembled		
11 mm	6–12	**. . . /032-000**
25 mm	14–20	**. . . /033-000**
39 mm	22–28	**. . . /034-000**
53 mm	30–36	**. . . /035-000**

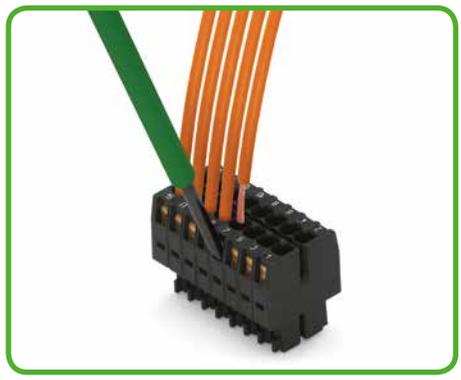
Ordering example:
Female connector, 3.5 mm pin spacing, 20-pole, black with strain relief plate: **713-1110/033-000**

An “item no. suffix”, referring to the width of the strain relief plate, is added to the “basic item no.” and determines the type of female connector.

Color	Item No.	Pack. Unit
Operating tool with partially insulated shaft, type 1, (2.5 x 0.4) mm blade		
	210-719	1







The arrangement of the attachments for cable ties allows single conductors or multi-core cables to be secured in different ways.

The width of the cable tie must correspond to the hole dimensions in the drawing for the strain relief plates.

WAGO does not offer the recommended cable ties and cable binding tools; those are available from suppliers such as Hellermann.

Strain Relief Housing Dimensions

Pole No.	B	H	D
6–12	11	38.7	3
14–20	25	43.7	4.2
22–28	39	48.7	4.2
30–36	53	54.2	4.9

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Accessories
Coding Pin Carrier and Direct Marking
MCS MINI HD

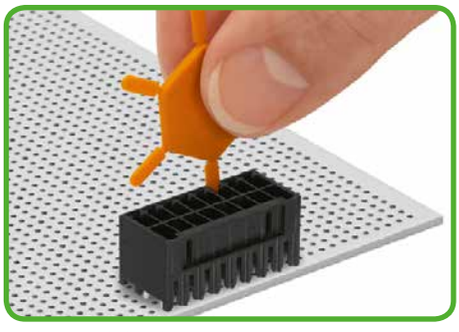
Coding pin carrier	Direct marking *MCS* MINI HD	Direct marking 1 – pole no.
for male headers		of female connectors for conductor termination







Item No.	Pack. Unit	Direct Marking *MCS* MINI HD	Marking Perpendicular to Conductor Entry Item No. Suffix: /. . . - 047
Coding pin carrier with six coding pins		713 Series female connectors can be marked with "1 – pole no." via factory direct printing	**Ordering examples:**
714-101	100 (4 x 25)		**Female connector, double-row,** 3.5 mm pin spacing, 16-pole, black: **713-1108/000-0047**
		Two standard marking orientations are available: 1. Marking perpendicular to conductor entry 2. Marking parallel to conductor entry	**Female connector with screw flanges, double-row,** 3.5 mm pin spacing, 16-pole, black: **713-1108/000-0047**
		Other custom marking options are available upon request.	**Female connector with levers and strain relief plate, double-row,** 3.5 mm pin spacing, 16-pole, black: **713-1108/037-047/033-000**
		WAGO recommends pole marking on the PCB for 713 Series male headers.	
		The marking type is always defined by the second 4-digit block of the item no. suffix for items with standard colors and materials. **Example: 713-1110/. . . - xxxx** xxxx = Item no. suffix for direct pole marking	**Marking parallel with Conductor Connection Additional Item No.: /. . . - 9037**
			Ordering examples:
			Female connector, double-row, 3.5 mm pin spacing, 16-pole, black: **713-1108/000-9037**
			Female connector with levers, double-row, 3.5 mm pin spacing, 16-pole, black: **713-1108/037-9037**
			Female connector with strain relief plate, double-row, 3.5 mm pin spacing , 16-pole, black: **713-1108/033-9037**



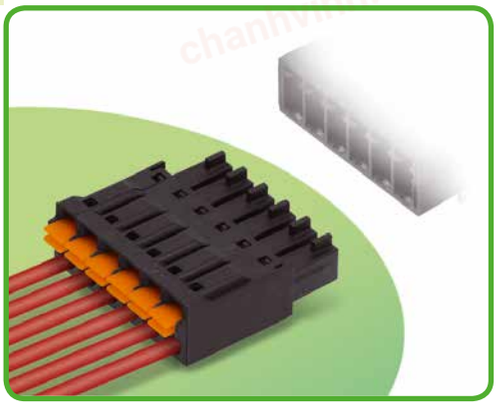
Coding a male header.



Coding a female connector.

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Female Connectors with Push-Buttons
Pin Spacing: 3.5 mm
MCS MINI SL



- Female connectors terminate both solid and ferruled, fine-stranded conductors via simple push-in terminations.
- Integrated push-buttons provide convenient, tool-free operation
- Ultra-low profile at just 7.8 mm, for conductor size up to 1.5 mm²
- Coding and testing options available

Technical data:

Pin Spacing	3.5 mm 0.138 in.				
Rating per	IEC/EN 60664-1				
Overvoltage category	III	III	II		
Pollution degree	3	2	2		
Rated voltage	160 V	160 V	320 V		
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV		
Nominal current	8 A	8 A	8 A		
Approvals per	UL/CSA				
Use group UL 1059	B	C	D		
Rated voltage	150 V	–	–		
Nominal current UL	8 A	–	–		
Nominal current CSA	–	–	–		

Conductor data:

Connection technology	CAGE CLAMP® S	
Conductor size: solid	0.2–1.5 mm²	
Conductor size: fine-stranded	0.2–1.5 mm²	
Conductor size: fine-stranded	0.25–0.75 mm²	(with insulated ferrule)
Conductor size: fine-stranded	0.25–1.5 mm²	(with uninsulated ferrule)
AWG	24–16	
Strip length	9–10 mm / 0.35–0.39 in.	

Material data:

Material group	I
Insulating material	Polyamide 6.6 (PA 6.6)
Temperature stability	-60 °C to +100 °C
Flammability rating per UL 94	0V
Clamping spring material	Chrome nickel spring steel (CrNi)
Contact material	Copper alloy
Contact plating	tin-plated

MCS MINI SL accessories: **Pages:**

Marking accessories	570 – 573
Operating tool	301
Direct marking	301
Test pin	568

MCS – MULTI CONNECTION SYSTEM includes connectors without breaking capacity in accordance with DIN EN 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 when unmated.

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Female Connectors with Push-Buttons
MCS MINI SL

CAGE CLAMP®S

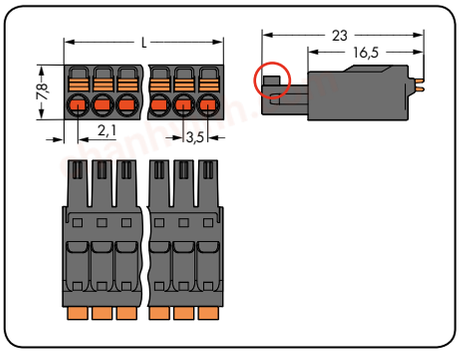
Pin spacing: 3.5 mm / 0.138 in.		Operating tool (screwdriver), with partially insulated shaft,	Direct marking 1 – pole no.
0.2–1.5 mm²	24–16 AWG	for female connectors	of female connectors for conductor termination
160 V/2.5 kV/2 8 A	150 V/8 A		

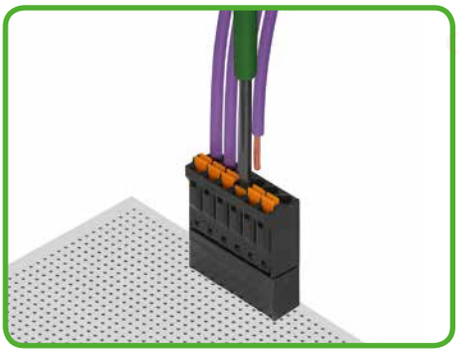






Pole No.	Item No.	Pack. Unit	Color	Item No.	Pack. Unit	Marking Perpendicular to Conductor Entry Item No. Suffix: /. . . - 047
Female connector with push-buttons, black			**Operating tool (screwdriver),** with partially insulated shaft, type 1, (2.5 x 0.4) mm blade			**Ordering example:**
2	**714-102**	200		**210-719**	1	**Female connector with push-buttons,**
3	**714-103**	200				3.5 mm pin spacing, 6-pole,
4	**714-104**	200				black: **714-106/000-047**
5	**714-105**	100				
6	**714-106**	100				
8	**714-108**	100				
10	**714-110**	100				
12	**714-112**	100				
14	**714-114**	50				
15	**714-115**	50				
16	**714-116**	50				



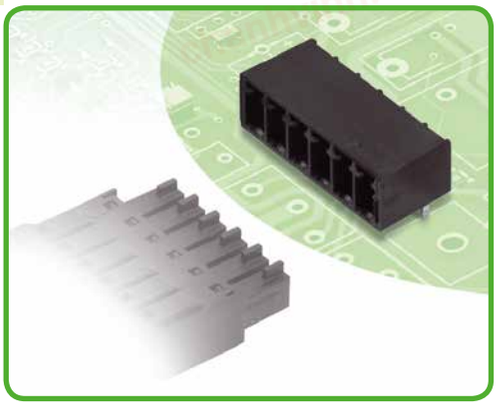


L = (pole no. – 1) x pin spacing + 4.2 mm
○ Coding finger

For other lengths, please contact factory.

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Male Headers with Solder Pins
Pin Spacing: 3.5 mm
MCS MINI SL



- Male headers may be mounted horizontally or vertically via straight or angled solder pins
- Header housing is molded of THR-compatible insulation material for reflow soldering
- Separated pin slots prevent damage and make the headers touch-proof when unplugged
- Coding pins available

Technical data:

Pin Spacing	**3.5 mm 0.138 in.**		
Rating per	**IEC/EN 60664-1**		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Rated voltage	160 V	160 V	320 V
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV
Nominal current	8 A	8 A	8 A
Approvals per	**UL/CSA**		
Use group UL 1059	B	C	D
Rated voltage	150 V	–	–
Nominal current UL	8 A	–	–
Nominal current CSA	–	–	–

Solder pin data:

Solder pin: length/width	3.4 mm / 0.8 x 0.8 mm
Solder pin: drilled hole diameter	$1.2^{+0.1}$ mm

Material data:

Material group	I
Insulating material	Glass-fiber-reinforced polyphthalamide (PPA-GF)
Temperature stability	-60 °C to +115 °C
Flammability rating per UL 94	0V
Contact material	Electrolytic copper (E_{Cu})
Contact plating	tin-plated

MCS MINI SL accessory:

	Page:
Coding pin carrier	303

MCS – MULTI CONNECTION SYSTEM includes connectors without breaking capacity in accordance with DIN EN 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 when unmated.

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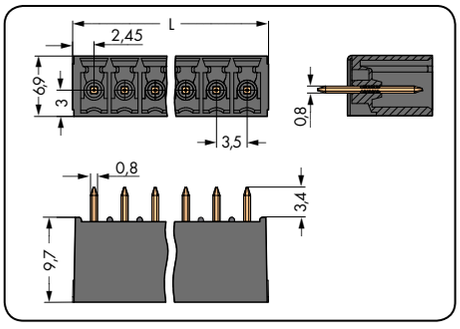
Male Headers with Solder Pins
MCS MINI SL

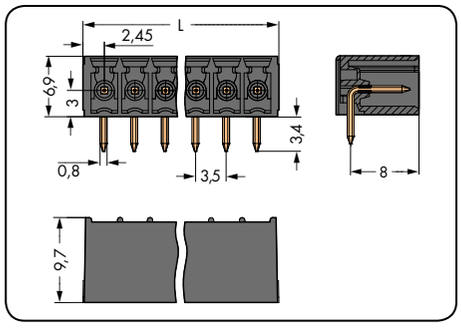
With straight solder pins Pin spacing: 3.5 mm / 0.138 in.		With angled solder pins Pin spacing: 3.5 mm / 0.138 in.		Coding pin carrier
160 V/2.5 kV/2 8 A	150 V/8 A	160 V/2.5 kV/2 8 A	150 V/8 A	for male headers

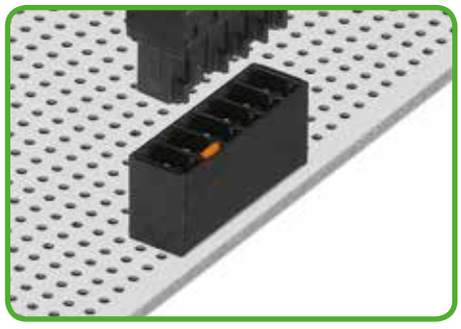












L = (No. of poles -1) x pin spacing + 4.9 mm

Pole No.	Item No.	Pack. Unit
Male header with straight solder pins, black		
2	**714-132**	200
3	**714-133**	200
4	**714-134**	200
5	**714-135**	200
6	**714-136**	200
8	**714-138**	200
10	**714-140**	100
12	**714-142**	100
14	**714-144**	100
15	**714-145**	100
16	**714-146**	100

Pole No.	Item No.	Pack. Unit
Male header with angled solder pins, black		
2	**714-162**	200
3	**714-163**	200
4	**714-164**	200
5	**714-165**	200
6	**714-166**	200
8	**714-168**	200
10	**714-170**	100
12	**714-172**	100
14	**714-174**	100
15	**714-175**	100
16	**714-176**	100

Item No.	Pack. Unit
Coding pin carrier with six coding pins	
714-101	100 (4 x 25)

For other lengths, please contact factory.