



Picture differs from the item.

Color:



#### Derating Curve

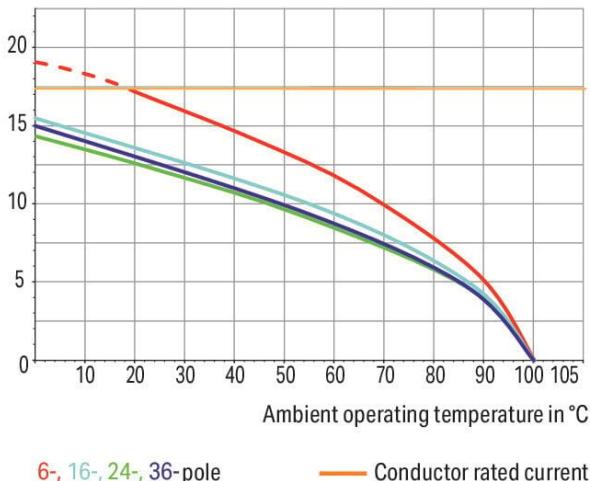
1-conductor female connector (713-1103) with

THT male header (713-1403)

Pin spacing: 3.5 mm / Conductor cross-section: 1.5 mm<sup>2</sup> "f-st"

Based on: EN 60512-5-2 / Reduction factor: 0.8

Current in A



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

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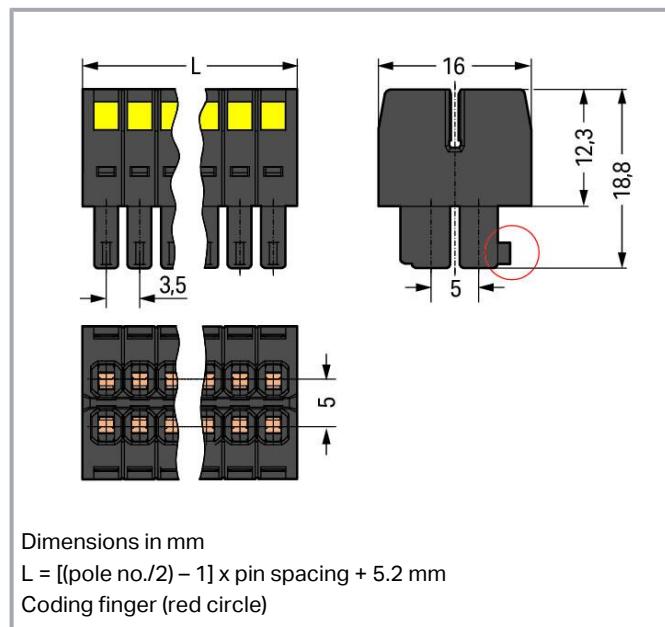
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## Item description

- Universal connection for all conductor types
- Unique, compact, double-row connector system for conductor cross-sections up to 1.5 mm<sup>2</sup>
- High-density, wire-to-board connections 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.
- Coding fingers provide 100% protection against misingating

## Data Notes

### Safety information

The *MCS – MULTI CONNECTION SYSTEM* includes connectors without breaking capacity in accordance with DIN EN 61984. When used as intended, these connectors must not be connected/disconnected when live or under load. When used as intended, these connectors must 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.

### Variants:

Other pole numbers  
 Gold-plated or partially gold-plated contact surfaces  
 Other versions (or variants) can be requested from WAGO Sales or configured at <https://configurator.wago.com/>.

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

## Electrical data

### Ratings per IEC/EN

Ratings per	IEC/EN 60664-1
Nominal voltage (III/3)	80 V
Rated impulse voltage (III/3)	2.5 kV
Rated voltage (III/2)	160 V
Rated impulse voltage (III/2)	2.5 kV
Nominal voltage (II/2)	250 V
Rated surge voltage (II/2)	2.5 kV
Rated current	10 A
Legend (ratings)	(III / 2) $\triangleq$ Overvoltage category III / Pollution degree 2

### Ratings per UL

Approvals per	UL 1059
Rated voltage UL (Use Group B)	300 V
Rated current UL (Use Group B)	10 A
Rated voltage UL (Use Group C)	50 V
Rated current UL (Use Group C)	10 A

### Ratings per CSA

Approvals per	CSA
Rated voltage CSA (Use Group B)	300 V
Rated current CSA (Use Group B)	10 A

## Connection data

Connection points	20
Total number of potentials	20
Number of connection types	1
Number of levels	2

## Connection 1

Connection technology	CAGE CLAMP®
Actuation type	Operating tool
Actuation direction 1	Operation perpendicular to conductor entry
Solid conductor	0.08 ... 1.5 mm² / 28 ... 16 AWG

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

Fine-stranded conductor	0.08 ... 1.5 mm <sup>2</sup> / 28 ... 16 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 1 mm <sup>2</sup>
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 1 mm <sup>2</sup>
Strip length	6 ... 7 mm / 0.24 ... 0.28 inches
Pole number	20
Conductor entry direction to mating direction	0 °

## Physical data

Pin spacing	3.5 mm / 0.138 inches
Width	36.5 mm / 1.437 inches
Height	18.8 mm / 0.74 inches
Depth	16 mm / 0.63 inches

## Mechanical Data

Variable coding	Yes
Anti-rotation protection	Yes

## Plug-in connection

Contact type (pluggable connector)	Female connector/socket
Connector (connection type)	for conductor
Mismating protection	Yes
Plugging without loss of pin spacing	No
Locking of plug-in connection	none

## Material data

### Note (material data)

Information on material specifications can be found here

Color	black
Material group	II
Insulation material	Glass fiber-reinforced polyamide (PA66 GF)
Flammability class per UL94	V0
Clamping spring material	Chrome-nickel spring steel (CrNi)
Contact material	Copper alloy
Contact plating	Tin
Fire load	0.151 MJ
Weight	10.2 g

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

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## Environmental requirements

Limit temperature range	-60 ... +100 °C
Processing temperature	-35 ... +60 °C

## Commercial data

Product Group	3 (Multi Conn. System)
eCl@ss 10.0	27-14-11-06
eCl@ss 9.0	27-14-11-06
ETIM 8.0	EC001284
ETIM 7.0	EC001284
PU (SPU)	25 pcs
Packaging type	box
Country of origin	PL
GTIN	4045454667375
Customs tariff number	85366990990

## Environmental Product Compliance

RoHS Compliance Status	Compliant, No Exemption
------------------------	-------------------------

## Approvals / Certificates

### General approvals

Logo	Approval	Additional Approval Text	Certificate name
	CSA CSA Group	C22.2	2315087
	UR Underwriters Laboratories Inc.	UL 1059	E45172

## Counterpart



Item no. 713-1410

THT male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; Pin spacing 3.5 mm; 20-pole; black

www.wago.com/713-1410

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

	<b>Item no. 713-1410/105-000/997-407</b> THR male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; in tape-and-reel packaging; Pin spacing 3.5 mm; 20-pole; black	<a href="http://www.wago.com/713-1410/105-000/997-407">www.wago.com/713-1410/105-000/997-407</a>
	<b>Item no. 713-1430</b> THT male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; Pin spacing 3.5 mm; 20-pole; black	<a href="http://www.wago.com/713-1430">www.wago.com/713-1430</a>
	<b>Item no. 713-1410/105-000</b> THR male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; Pin spacing 3.5 mm; 20-pole; black	<a href="http://www.wago.com/713-1410/105-000">www.wago.com/713-1410/105-000</a>
	<b>Item no. 713-1430/105-000</b> THR male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; Pin spacing 3.5 mm; 20-pole; black	<a href="http://www.wago.com/713-1430/105-000">www.wago.com/713-1430/105-000</a>
	<b>Item no. 713-1430/105-000/997-407</b> THR male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; in tape-and-reel packaging; Pin spacing 3.5 mm; 20-pole; black	<a href="http://www.wago.com/713-1430/105-000/997-407">www.wago.com/713-1430/105-000/997-407</a>
	<b>Item no. 713-1470</b> THT male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; with orientation nose; Pin spacing 3.5 mm; 20-pole; black	<a href="http://www.wago.com/713-1470">www.wago.com/713-1470</a>

## Optional accessories

### Tool

#### Operating tool

	<b>Item no.: 210-647</b> Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft; multicoloured	<a href="http://www.wago.com/210-647">www.wago.com/210-647</a>
	<b>Item no.: 210-719</b> Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft	<a href="http://www.wago.com/210-719">www.wago.com/210-719</a>

### Ferrule

#### Ferrule

	<b>Item no.: 216-101</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / AWG 22; uninsulated; electro-tin plated; silver-colored	<a href="http://www.wago.com/216-101">www.wago.com/216-101</a>
	<b>Item no.: 216-102</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / AWG 20; uninsulated; electro-tin plated; silver-colored	<a href="http://www.wago.com/216-102">www.wago.com/216-102</a>
	<b>Item no.: 216-103</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; uninsulated; electro-tin plated	<a href="http://www.wago.com/216-103">www.wago.com/216-103</a>
	<b>Item no.: 216-123</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; uninsulated; electro-tin plated; silver-colored	<a href="http://www.wago.com/216-123">www.wago.com/216-123</a>
	<b>Item no.: 216-122</b>	

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

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / AWG 20; uninsulated; electro-tin plated; silver-colored [www.wago.com/216-122](http://www.wago.com/216-122)

**Item no.: 216-142**

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92 [www.wago.com/216-142](http://www.wago.com/216-142)

**Item no.: 216-132**

Ferrule; Sleeve for 0.34 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated [www.wago.com/216-132](http://www.wago.com/216-132)

**Item no.: 216-121**

Ferrule; Sleeve for 0.5 mm<sup>2</sup> / AWG 22; uninsulated; electro-tin plated; silver-colored [www.wago.com/216-121](http://www.wago.com/216-121)

**Item no.: 216-143**

Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92 [www.wago.com/216-143](http://www.wago.com/216-143)

**Item no.: 216-131**

Ferrule; Sleeve for 0.25 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated; silver-colored [www.wago.com/216-131](http://www.wago.com/216-131)

**Item no.: 216-141**

Ferrule; Sleeve for 0.5 mm<sup>2</sup> / 20 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92 [www.wago.com/216-141](http://www.wago.com/216-141)

**Item no.: 216-152**

Ferrule; Sleeve for 0.34 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated [www.wago.com/216-152](http://www.wago.com/216-152)

**Item no.: 216-203**

Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; red [www.wago.com/216-203](http://www.wago.com/216-203)

**Item no.: 216-202**

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray [www.wago.com/216-202](http://www.wago.com/216-202)

**Item no.: 216-151**

Ferrule; Sleeve for 0.25 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated [www.wago.com/216-151](http://www.wago.com/216-151)

**Item no.: 216-201**

Ferrule; Sleeve for 0.5 mm<sup>2</sup> / 20 AWG; insulated; electro-tin plated; white [www.wago.com/216-201](http://www.wago.com/216-201)

**Item no.: 216-223**

Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; red [www.wago.com/216-223](http://www.wago.com/216-223)

**Item no.: 216-241**

Ferrule; Sleeve for 0.5 mm<sup>2</sup> / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white [www.wago.com/216-241](http://www.wago.com/216-241)

**Item no.: 216-242**

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray [www.wago.com/216-242](http://www.wago.com/216-242)

**Item no.: 216-222**

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray [www.wago.com/216-222](http://www.wago.com/216-222)

**Item no.: 216-221**

Ferrule; Sleeve for 0.5 mm<sup>2</sup> / 20 AWG; insulated; electro-tin plated; white [www.wago.com/216-221](http://www.wago.com/216-221)

**Item no.: 216-243**

Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; [www.wago.com/216-243](http://www.wago.com/216-243)

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

acc. to DIN 46228, Part 4/09.90; red

**Item no.: 216-263**

Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; [www.wago.com/216-263](http://www.wago.com/216-263)  
acc. to DIN 46228, Part 4/09.90; red

**Item no.: 216-262**

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; [www.wago.com/216-262](http://www.wago.com/216-262)  
acc. to DIN 46228, Part 4/09.90; gray

**Item no.: 216-301**

Ferrule; Sleeve for 0.25 mm<sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow

[www.wago.com/216-301](http://www.wago.com/216-301)

**Item no.: 216-321**

Ferrule; Sleeve for 0.25 mm<sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow

[www.wago.com/216-321](http://www.wago.com/216-321)

**Item no.: 216-322**

Ferrule; Sleeve for 0.34 mm<sup>2</sup> / 22 AWG; insulated; electro-tin plated; light turquoise

[www.wago.com/216-322](http://www.wago.com/216-322)

**Item no.: 216-302**

Ferrule; Sleeve for 0.34 mm<sup>2</sup> / 22 AWG; insulated; electro-tin plated; light turquoise

[www.wago.com/216-302](http://www.wago.com/216-302)

**Strain relief**

Strain relief plate



**Item no.: 713-127**

Strain relief plate; for female connectors; 25 mm wide; 1 part; Pin spacing 3.5 mm; black

[www.wago.com/713-127](http://www.wago.com/713-127)

**Downloads**

**Documentation**

**Additional Information**

2019 Apr 3

pdf  
2.1 MB

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**CAD/CAE-Data**

**CAD data**

2D/3D Models 713-1110

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**CAE data**

ZUKEN Portal 713-1110

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**Asset Administration Shell**

Asset Administration Shell 713-1110

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## Environmental Product Compliance

### Compliance Search

Environmental Product Compliance 713-1110

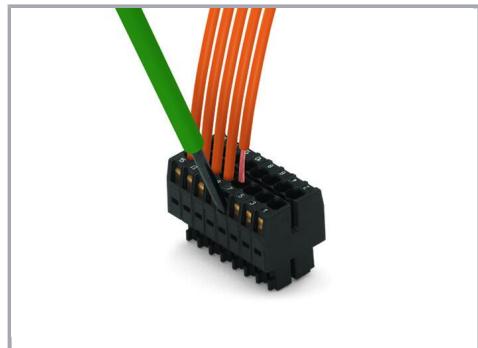
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1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm<sup>2</sup>; Pin spacing 3.5 mm;  
20-pole; 100% protected against mismatching; 1,50 mm<sup>2</sup>; black

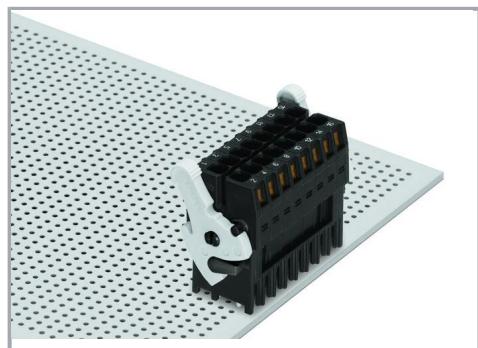
## Installation Notes

### Conductor termination

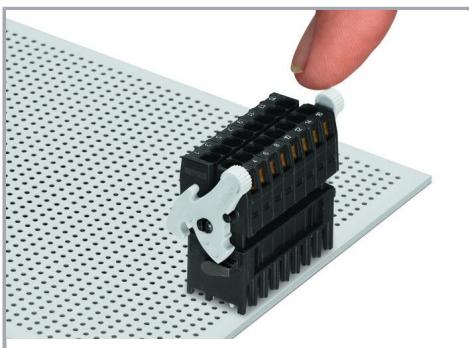


Inserting a conductor via (2.5 x 0.4) mm screwdriver.

### Locking system



Lever as a lock – when closed, female connector is locked.



Lever as a disconnection aid – when opened, female connector is disconnected. Rotating the lever lifts the female connector out of the male header.

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

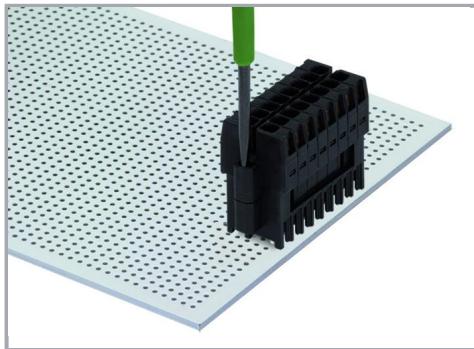
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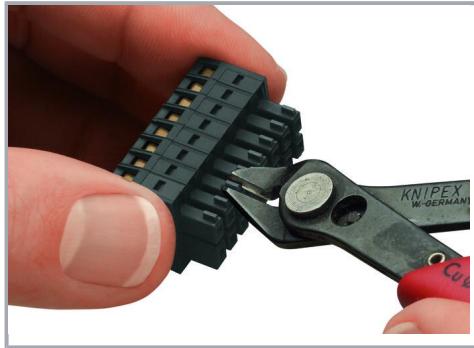
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Screw interlock can only be disconnected using a tool.

#### Coding

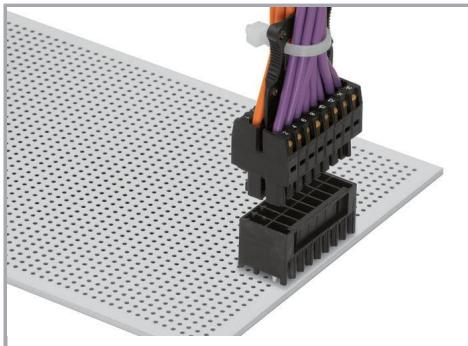


Coding a female connector by removing coding finger(s).

#### Strain relief



Strain relief plate for field assembly



Centered strain relief plate anchors conductors for easy disconnection.

#### Product family

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

**MCS MINI HD**

[Show all products from the family](#)

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

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