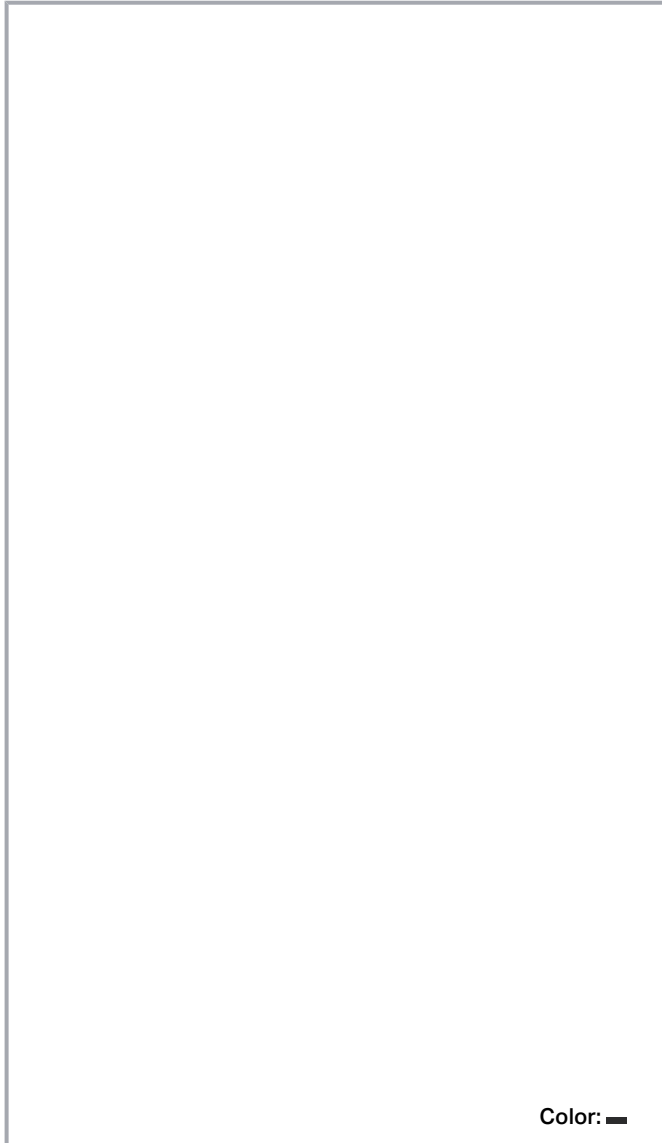


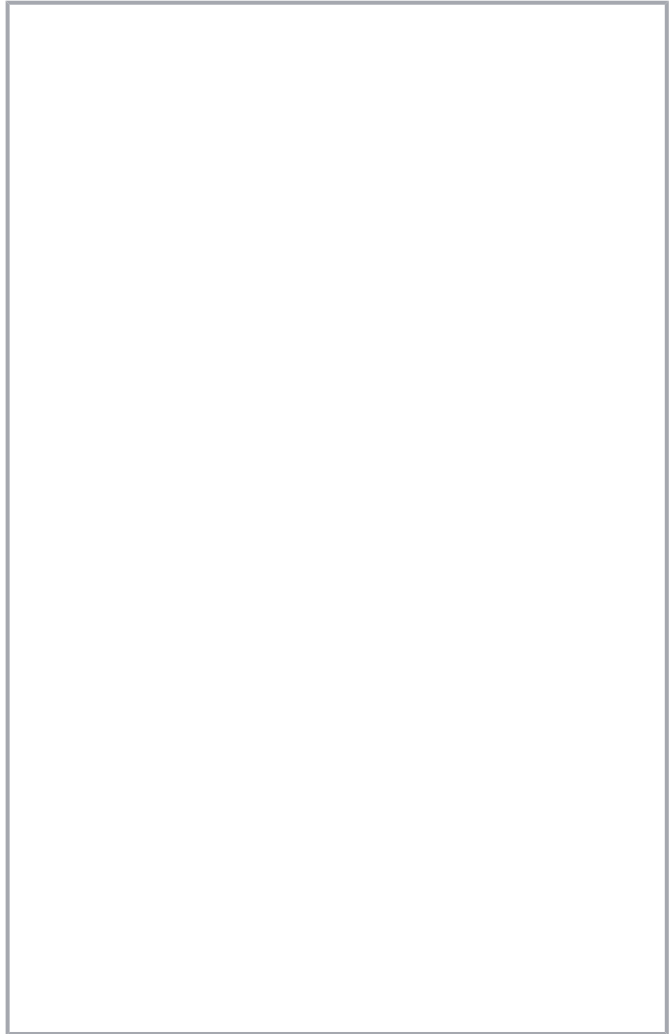
**Data sheet | Item number: 713-1428**

THT male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; Pin spacing 3.5 mm; 16-pole; black

[www.wago.com/713-1428](http://www.wago.com/713-1428)



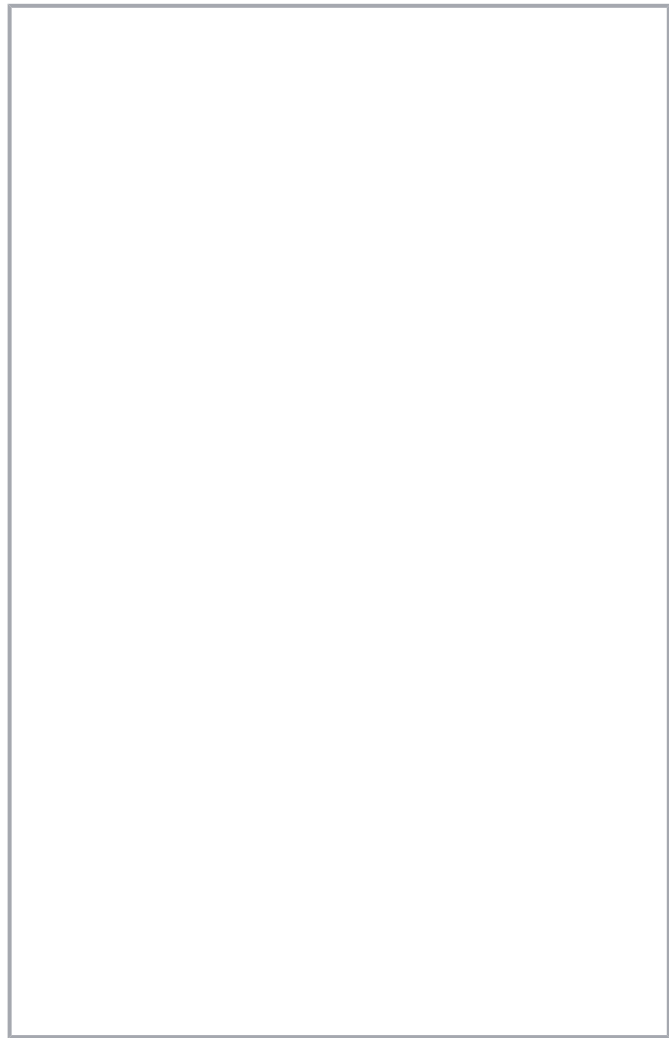
Color: 



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

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Dimensions in mm

$$L = [(pole\ no./2) - 1] \times pin\ spacing + 5.2\ mm$$

### Item description

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

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## Data Notes

### Safety information 1

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. The circuit design should ensure header pins, which can be touched, are not live when unmated.

### Variants:

Other pole numbers  
Other solder pin lengths  
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/>

## Electrical data

### Ratings per IEC/EN

Ratings per	IEC/EN 60664-1
Nominal voltage (III/3)	80 V
Rated surge voltage (III/3)	2.5 kV
Rated voltage (III/2)	160 V
Rated surge 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)	150 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)	150 V

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Rated current CSA (Use Group B)	12 A
---------------------------------	------

### Connection data

Total number of potentials	16
Number of connection types	1
Number of levels	2

### Connection 1

Pole No.	16
----------	----

### Physical data

Pin spacing	3.5 mm / 0.138 inch
Width	29.5 mm / 1.161 inch
Height	17.1 mm / 0.673 inch
Height from the surface	13.3 mm / 0.524 inch
Depth	13.5 mm / 0.531 inch
Solder pin length	3.8 mm
Solder pin dimensions	0.8 x 0.8 mm
Drilled hole diameter with tolerance	1.2 <sup>(+0.1)</sup> mm

### Mechanical data

Variable coding	Ja
-----------------	----

### Plug-in connection

Contact type (pluggable connector)	Male connector/plug
Connector (connection type)	for PCB
Mismating protection	Yes
Mating direction to the PCB	0°
Locking of plug-in connection	Without

### PCB contact

PCB Contact	THT
Solder pin arrangement	over the entire male connector (in-line)
Number of solder pins per potential	1

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

## Material data

Note on material data	Information on material data can be found here
Color	black
Material group	I
Insulation material	Polyphthalamide (PPA GF)
Flammability class per UL94	V0
Contact material	Electrolytic copper ( $E_{Cu}$ )
Contact plating	tin-plated
Fire load	0.088 MJ
Weight	4.5 g

## Environmental requirements



Limit temperature range	-60 ... +100 °C
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## Commercial data

Product Group	3 (Multi Conn. System)
PU (SPU)	25 Stück
Packaging type	box
Country of origin	PL
GTIN	4045454700195
Customs tariff number	85366990990

## Approvals / Certificates

### Country specific Approvals


Logo	Approval	Additional Approval Text	Certificate name
	CCA DEKRA Certification B.V.	EN 61984	2169947.01
	CCA DEKRA Certification B.V.	IEC 61984	NL-30980
	CSA DEKRA Certification B.V.	C22.2	2315087

### UL-Approvals






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Logo	Approval	Additional Approval Text	Certificate name
	UR Underwriters Laboratories Inc.	UL 1059	E45172

## Counterpart

	<b>Item no.713-1108</b> 1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm <sup>2</sup> ; Pin spacing 3.5 mm; 16-pole; 100% protected against mismatching; 1,50 mm <sup>2</sup> ; black	<a href="http://www.wago.com/713-1108">www.wago.com/713-1108</a>
	<b>Item no.713-1108/000-047</b> 1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm <sup>2</sup> ; Pin spacing 3.5 mm; 16-pole; 100% protected against mismatching; direct marking; 1,50 mm <sup>2</sup> ; black	<a href="http://www.wago.com/713-1108/000-047">www.wago.com/713-1108/000-047</a>
	<b>Item no.713-1108/033-047</b> 1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm <sup>2</sup> ; Pin spacing 3.5 mm; 16-pole; 100% protected against mismatching; Strain relief plate; direct marking; 1,50 mm <sup>2</sup> ; black	<a href="http://www.wago.com/713-1108/033-047">www.wago.com/713-1108/033-047</a>
	<b>Item no.713-1108/033-9037</b> 1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm <sup>2</sup> ; Pin spacing 3.5 mm; 16-pole; 100% protected against mismatching; Strain relief plate; direct marking; 1,50 mm <sup>2</sup> ; black	<a href="http://www.wago.com/713-1108/033-9037">www.wago.com/713-1108/033-9037</a>
	<b>Item no.713-1108/000-9037</b> 1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm <sup>2</sup> ; Pin spacing 3.5 mm; 16-pole; 100% protected against mismatching; direct marking; 1,50 mm <sup>2</sup> ; black	<a href="http://www.wago.com/713-1108/000-9037">www.wago.com/713-1108/000-9037</a>

## Optional accessories

### Coding

Coding	
<b>Item no.: 714-101</b> Coding key; orange	<a href="http://www.wago.com/714-101">www.wago.com/714-101</a>

## Downloads

### Documentation

#### Additional Information

Technical explanations	03-Apr-2019	pdf 2.0 MB	Download
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Subject to changes. Please also observe the further product documentation!



## CAD/CAE-Data

### PCB Design

Symbol and Footprint 713-1428

[URL](#)

[Download](#)

CAX data for your PCB design, consisting of "schematic symbols and PCB footprints", allow easy integration of the WAGO component into your development environment.

### Supported formats:

- Accel EDA 14 & 15
- Altium 6 to current version
- Cadence Allegro
- DesignSpark
- Eagle Libraries
- KiCad
- Mentor Graphics BoardStation
- Mentor Graphics Design Architect
- Mentor Graphics Design Expedition 99 and 2000
- OrCAD 9.X PCB and Capture
- PADS PowerPCB 3, 3.5, 4.X, and 5.X
- PADS PowerPCB and PowerLogic 3.0
- PCAD 2000, 2001, 2002, 2004, and 2006
- Pulsonix 8.5 or newer
- STL
- 3D STEP
- TARGET 3001!
- View Logic ViewDraw
- Quadcept
- Zuken CadStar 3 and 4
- Zuken CR-5000 and CR-8000

PCB Component Libraries (EDA), PCB CAD Library Ultra Librarian

### CAE data

ZUKEN Portal 713-1428

[URL](#)

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### CAD data

2D/3D Models 713-1428

[URL](#)

[Download](#)

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## Environmental Product Compliance

### Compliance Search

Environmental Product Compliance 713-1428

URL

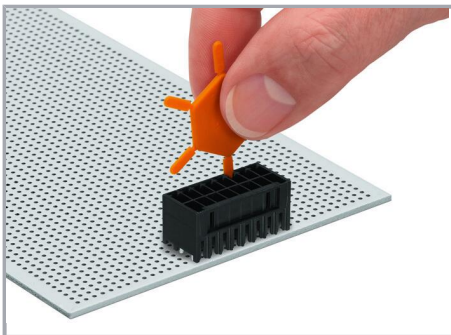
Download

THT male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; Pin spacing 3.5 mm; 16-pole; black

---

## Installation Notes

### Coding



Coding a male header by inserting a coding pin.

## Product family

**MCS MINI HD**

[Show all products from the family](#)

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