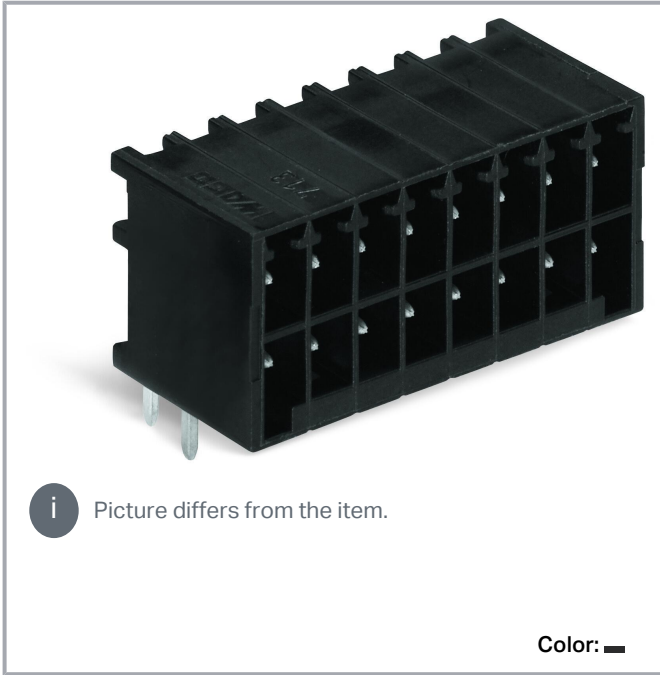


**Data sheet | Item number: 713-1431**

THT male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; Pin spacing 3.5 mm; 22-pole; black

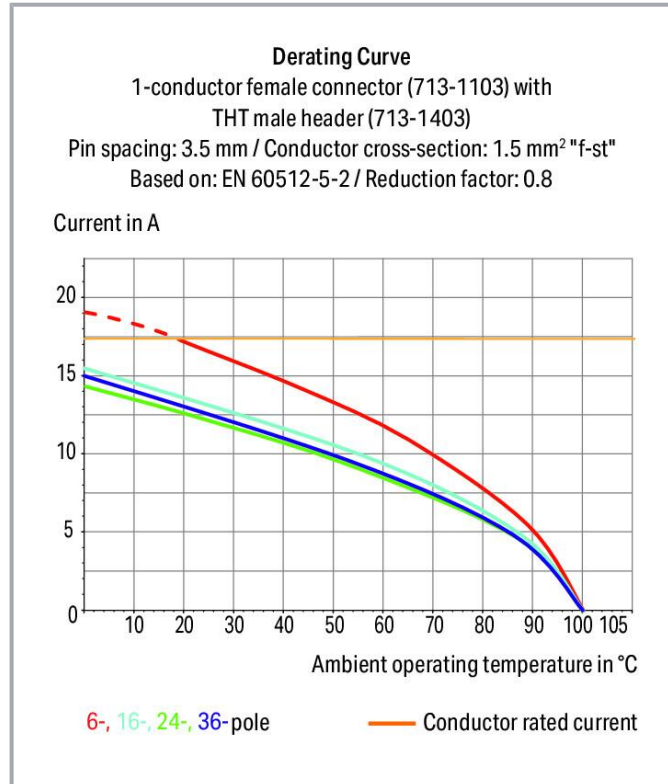


[www.wago.com/713-1431](http://www.wago.com/713-1431)



**i** Picture differs from the item.

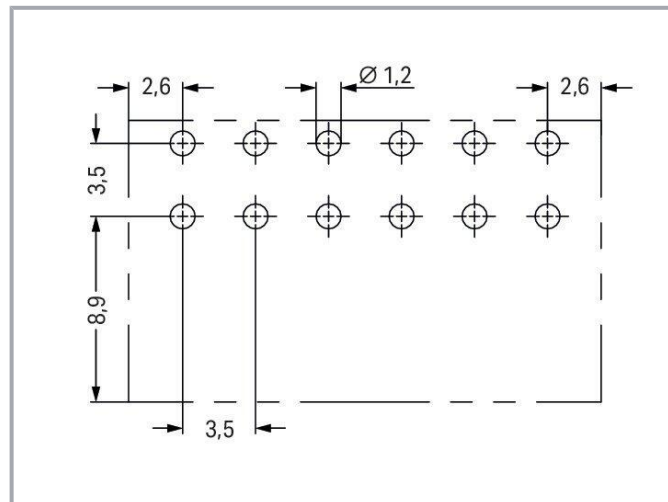
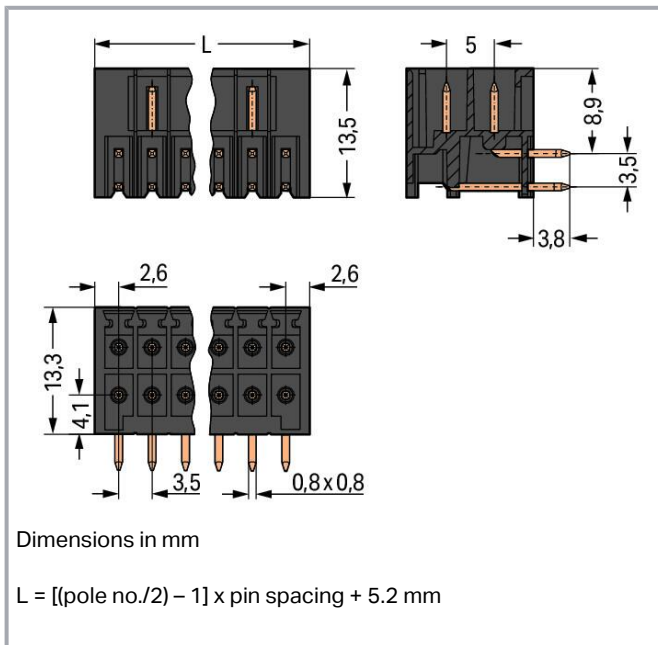
Color:     



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

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Do you have any questions about our products?  
We are always happy to take your call at +49 (571) 887-44222.



## 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

## 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  
 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/>.

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) $\hat{=}$ Overvoltage category III / Pollution degree 2

### Ratings per UL 1059

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
Rated current CSA (Use Group B)	12 A

## Connection data

Total number of potentials	22
Number of connection types	1
Number of levels	2

### Connection 1

Pole number	22
-------------	----

## Physical data

Pin spacing	3.5 mm / 0.138 inches
Width	40 mm / 1.575 inches

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



Height	17.1 mm / 0.673 inches
Height from the surface	13.3 mm / 0.524 inches
Depth	13.5 mm / 0.531 inches
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	Yes
Anti-rotation protection	Yes

### Plug-in connection

Contact type (pluggable connector)	Male connector/plug
Connector (connection type)	for PCB
Mismating protection	Yes
Plugging without loss of pin spacing	No
Mating direction to the PCB	0°
Locking of plug-in connection	none

### PCB contact

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

### Material Data

Note (material data)	Information on material specifications can be found here
Color	black
Material group	I
Insulation material	Polyphthalamide (PPA GF)
Flammability class per UL94	V0
Contact material	Electrolytic copper (E <sub>Cu</sub> )
Contact plating	Tin
Fire load	0.118 MJ
Weight	6 g

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

## 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	27-44-04-02
eCl@ss 9.0	27-44-04-02
ETIM 8.0	EC002637
ETIM 7.0	EC002637
PU (SPU)	25 pcs
Packaging type	box
Country of origin	PL
GTIN	4045454700225
Customs tariff number	85366990990

## Environmental Product Compliance

RoHS Compliance Status	Compliant, No Exemption
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## Approvals / Certificates

### General 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
	UR Underwriters Laboratories Inc.	UL 1059	E45172

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

## Counterpart

	<b>Item no.713-1111</b> 1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm <sup>2</sup> ; Pin spacing 3.5 mm; 22-pole; 100% protected against mismatching; 1,50 mm <sup>2</sup> ; black	<a href="http://www.wago.com/713-1111">www.wago.com/713-1111</a>
	<b>Item no.713-1111/000-047</b> 1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm <sup>2</sup> ; Pin spacing 3.5 mm; 22-pole; 100% protected against mismatching; direct marking; 1,50 mm <sup>2</sup> ; black	<a href="http://www.wago.com/713-1111/000-047">www.wago.com/713-1111/000-047</a>
	<b>Item no.713-1111/000-9037</b> 1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm <sup>2</sup> ; Pin spacing 3.5 mm; 22-pole; 100% protected against mismatching; direct marking; 1,50 mm <sup>2</sup> ; black	<a href="http://www.wago.com/713-1111/000-9037">www.wago.com/713-1111/000-9037</a>
	<b>Item no.713-1111/034-047</b> 1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm <sup>2</sup> ; Pin spacing 3.5 mm; 22-pole; 100% protected against mismatching; Strain relief plate; direct marking; 1,50 mm <sup>2</sup> ; black	<a href="http://www.wago.com/713-1111/034-047">www.wago.com/713-1111/034-047</a>
	<b>Item no.713-1111/034-9037</b> 1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm <sup>2</sup> ; Pin spacing 3.5 mm; 22-pole; 100% protected against mismatching; Strain relief plate; direct marking; 1,50 mm <sup>2</sup> ; black	<a href="http://www.wago.com/713-1111/034-9037">www.wago.com/713-1111/034-9037</a>

## Optional accessories

<b>Coding</b>		
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 Section	2019 Apr 3	pdf 2.0 MB	Download
Technical explanations			

## CAD/CAE-Data

### CAD data

2D/3D Models 713-1431	URL	Download
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## PCB Design

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



[URL](#)

[Download](#)

Symbol and Footprint 713-1431

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

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**CAE data**

ZUKEN Portal 713-1431

[URL](#)

[Download](#)

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**Environmental Product Compliance**

**Compliance Search**

Environmental Product Compliance 713-1431

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THT male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; Pin spacing 3.5 mm; 22-pole; black

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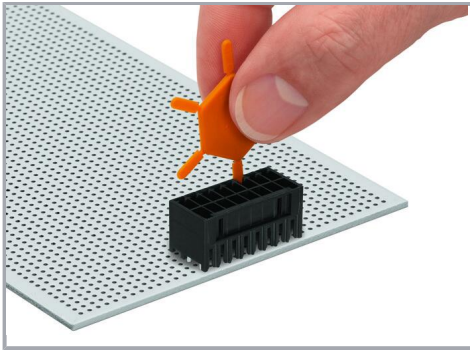
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## Installation Notes

### 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!