

**Data sheet | Item number: 713-1409/117-000**

THR male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; Threaded flange; Pin spacing 3.5 mm; 2 x 9-pole; black



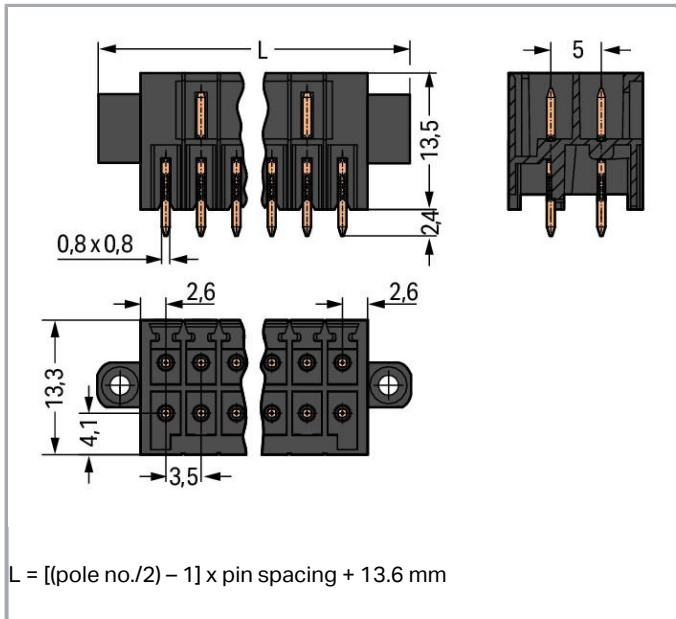
[www.wago.com/713-1409/117-000](http://www.wago.com/713-1409/117-000)



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

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### Item description

- THR male headers for reflow soldering in SMT applications
- Available in tape-and-reel packaging for automated pick-and-place PCB assembly
- Separated pin slots prevent damage and make the headers touch-proof when unplugged
- 100% protected against mismatching
- Coding pins available

### Safety information 1:

The *MULTI CONNECTION SYSTEM (MCS)* is designed without breaking capacity for compliance with DIN EN 61984. When used as intended, MCS 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.

### Data

#### Electrical data

#### Ratings per IEC/EN 60664-1

Ratings per	IEC/EN 60664-1
Rated 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
Rated voltage (II / 2)	250 V

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Rated impulse voltage (II / 2)	2.5 kV
Rated current	10 A
Legend (ratings)	(III / 2) $\triangleq$ Overvoltage category III / Pollution degree 2

### 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
Approvals per	UL 1059

### Approvals per CSA

Rated voltage CSA (Use Group B)	150 V
Rated current CSA (Use Group B)	12 A

### Connection data

No. of poles	18
Total number of potentials	18
Number of connection types	1
Number of levels	2

### Geometrical Data

Pin spacing	3.5 mm / 0.138 inch
Width	41.6 mm / 1.638 inch
Height	15.9 mm / 0.626 inch
Height from the surface	13.5 mm / 0.531 inch
Depth	13.3 mm / 0.524 inch
Solder pin length	2.4 mm
Solder pin dimensions	0.8 x 0.8 mm
Plated through-hole diameter (THR)	1.3 <sup>(+0.1)</sup> mm

### Plug connection

Contact type (pluggable connector)	Male connector/plug
Connector connection type	for PCBs
Mismating protection	Yes
Mating direction to the PCB	90°

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

Locking of plug-in connection

Threaded flange

### PCB contact

PCB contact	THR
Solder pin arrangement	over the entire male connector, in line
Number of solder pins per potential	1

### Material Data

Color	black
Material group	I
Insulating material	Polyphthalamide (PPA GF)
Flammability class per UL94	V0
Contact material	Electrolytic copper (E <sub>Cu</sub> )
Contact plating	tin-plated
Fire load	0.105 MJ
Weight	5.2 g

### Environmental Requirements


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

Product Group	3 (Multi Conn. System)
Packaging type	BOX
Country of origin	PL
GTIN	4050821156468
Customs Tariff No.	85366990990

### Approvals / Certificates

#### UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UL Underwriters Laboratories Inc.	UL 1059	20190122- E45172

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## Counterpart



Item no.713-1109/107-000

1-conductor female plug; 100% protected against mismatching; Screw flange; 1.5 mm<sup>2</sup>; Pin spacing 3.5 mm; 18-pole; 1,50 mm<sup>2</sup>; black

[www.wago.com/713-1109/107-000](http://www.wago.com/713-1109/107-000)

## Compatible products

### Coding

Item no.: 714-101  
Coding key; orange

[www.wago.com/714-101](http://www.wago.com/714-101)

## Downloads

### Documentation

#### Additional Information

Technical explanations	Apr 3, 2019	pdf 3.6 MB	Download
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## CAD/CAE-Data

### CAD data

2D/3D Models 713-1409/117-000	URL	Download
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### PCB Design

Symbol and Footprint 713-1409/117-000	URL	Download
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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

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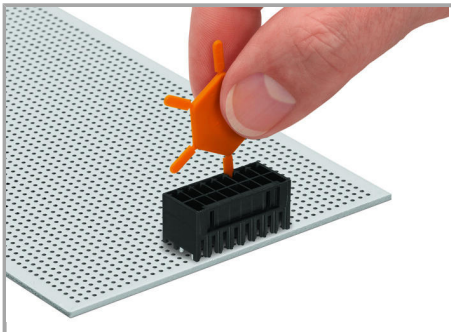
- OrCAD 9.X PCB and Capture
- PADS PowerPCB 3, 3.5, 4.X, and 5.X
- PADS PowerPCB and PowerLogic 3.0
- PCAD 2000, 2001, 2002, 2004, and 2006
- Pulsonix 8.5 or newer
- STL
- 3D STEP
- TARGET 3001!
- View Logic ViewDraw
- Quadcept
- Zuken CadStar 3 and 4
- Zuken CR-5000 and CR-8000

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

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## Installation Notes

### Coding



Coding a male header by inserting a coding pin.

## Product family

*MCS* MINI HD

[Learn more about the product family.](#)

[Show all products from the family](#)

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