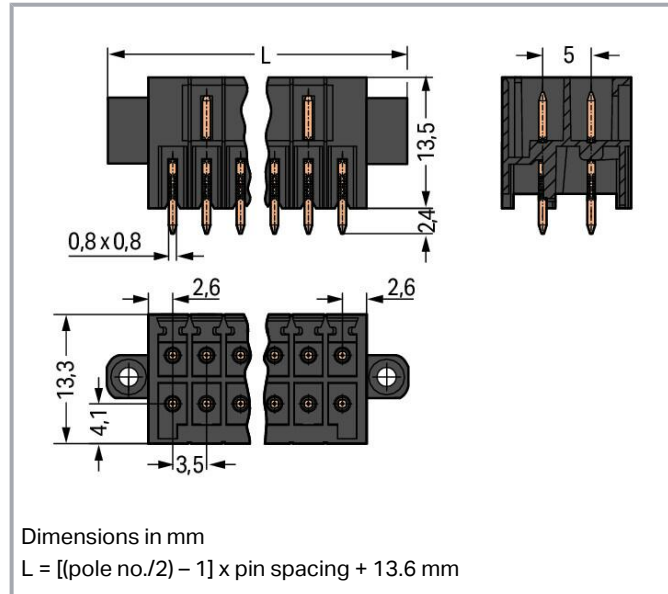
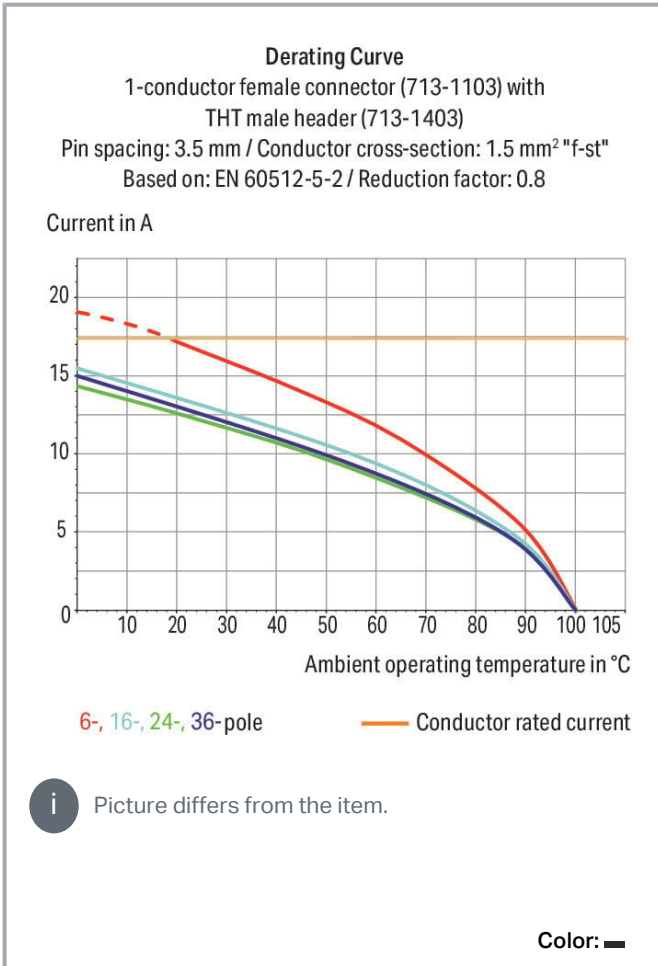


Data sheet | Item number: 713-1410/117-000/997-408



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

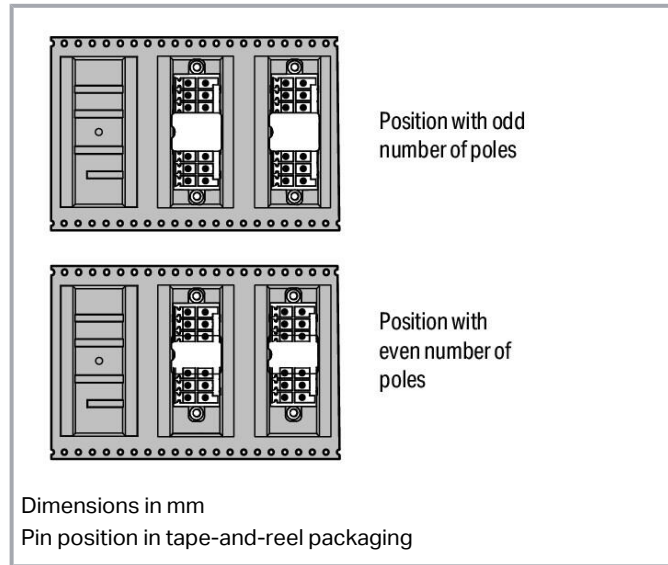
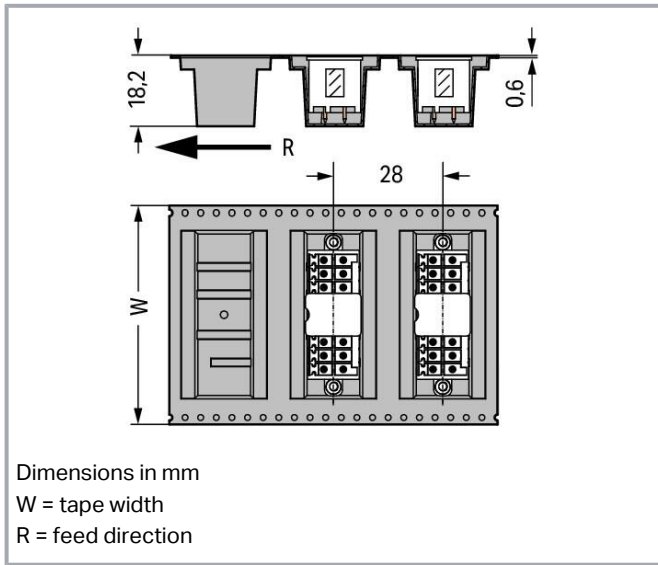
www.wago.com/713-1410/117-000/997-408



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 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/>.

Electrical data

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



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

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	20
Number of connection types	1
Number of levels	2

Connection 1

Pole number	20
-------------	----

Physical data

Pin spacing	3.5 mm / 0.138 inches
Width	45.1 mm / 1.776 inches
Height	15.9 mm / 0.626 inches
Height from the surface	13.5 mm / 0.531 inches

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



Depth	13.3 mm / 0.524 inches
Solder pin length	2.4 mm
Solder pin dimensions	0.8 x 0.8 mm
Plated through-hole diameter (THR)	1.3 ^(+0.1) mm
Reel diameter of tape-and-reel packaging	330 mm
Tape width	72 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	90 °
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

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 _{Cu})
Contact plating	Tin
Weight	5.7 g
MSL per J-STD 020D	1

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

eCl@ss 10.0	27-44-04-02
eCl@ss 9.0	27-44-04-02
ETIM 8.0	EC002637
ETIM 7.0	EC002637
ECCN	NO DATA
PU (SPU)	120 pcs
Packaging type	bag
Country of origin	DE
GTIN	4050821308881
Customs tariff number	85366930000

Environmental Product Compliance

CAS-No.	7439-92-1
REACH Candidate List Substance	Lead
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	6(c)
SCIP notification number (Austria)	cd4d9c73-372a-4d92-be4d-9fe3e37ac887
SCIP notification number (Belgium)	04a88891-77ab-4574-8111-89d406357471
SCIP notification number (Bulgaria)	db4601fe-8457-4290-a06b-ac840741145e
SCIP notification number (Czech Republic)	ff6d3943-a8ed-47ad-8739-65aea8443dfe
SCIP notification number (Denmark)	ad133a8e-80b1-43ba-ad93-b98452add560
SCIP notification number (Finland)	3b2e31c3-bb3d-4081-8000-3c7e4f44184e
SCIP notification number (France)	6e3c73a5-0341-4e84-88de-8cf38b5eb21e
SCIP notification number (Germany)	83e879ca-68ff-44d6-a6dc-e6975557c641
SCIP notification number (Hungary)	acdc4c84-73f3-4170-bb90-6caaa79e4eb3
SCIP notification number (Italy)	68ea038c-2fe3-4841-8668-2d548509ac79
SCIP notification number (Netherlands)	40bd2f10-ab68-44fb-ac70-572c148ba754
SCIP notification number (Poland)	57b7b204-d3c2-47b5-9f87-feff9369d2b3
SCIP notification number (Romania)	67ea4da4-cec6-4dd6-83f3-422f3b4ebb5e
SCIP notification number (Sweden)	5485e55a-9b4a-476b-9df7-31469dbf5121




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Approvals / Certificates

General approvals

Logo	Approval	Additional Approval Text	Certificate name
	CSA CSA Group	C22.2	2315087
	KEMA/KEUR DEKRA Certification B.V.	EN 61984	71- 126089
	UR Underwriters Laboratories Inc.	UL 1059	E45172

Counterpart



Item no. 713-1110/107-000

1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 20-pole; 100% protected against mismatching; Screw flange; 1,50 mm²; black

www.wago.com/713-1110/107-000

Optional accessories

Coding

Coding



Item no.: 714-101
Coding key; orange

www.wago.com/714-101

Downloads

Documentation

Additional Information

Technical Section	2019 Apr 3	pdf	Download
Technical explanations		2.1 MB	
THR Soldering Process		pdf	Download
		548.2 kB	

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CAD/CAE-Data

CAD data

2D/3D Models 713-1410/117-000/997-408	URL	Download
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Asset Administration Shell

Asset Administration Shell 713-1410/117-000/997-408	URL	Download
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PCB Design

Symbol and Footprint via SamacSys 713-1410/117-000/997-408	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:

- 3D (stp)
- Altium
- CADSTAR
- Capture
- CircuitStudio
- CR-5000
- CR-8000
- DEHDL
- DesignSpark PCB
- DesignSpark PCB PRO
- DipTrace
- EAGLE
- Easy-PC
- EasyEDA
- eCADSTAR
- KiCad
- OrCAD_Allegro16
- PADS
- Proteus
- Pulsonix
- Quadcept
- SOLIDWORKS PCB
- TARGET 3001!

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- xDX Designer
- Xpedition

PCB Component Libraries (EDA), PCB CAD Library SamacSys Electronic Component Search Engine

Symbol and Footprint via Ultra Librarian 713-1410/117-000/997-408

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
- Altair
- Altium 6 to current version
- Autodesk Fusion 360
- 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
- Zuken eCADSTAR 2020 and 2021Zuken CR-5000 and CR-8000

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Environmental Product Compliance

Compliance Search

Environmental Product Compliance 713-1410/117-000/997-408

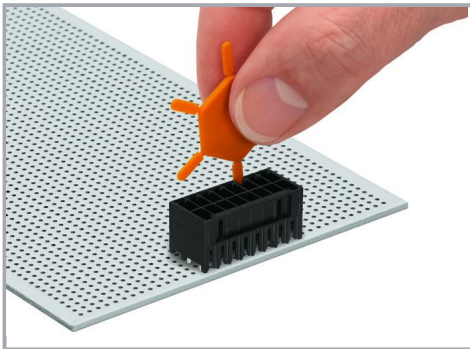
[URL](#)

[Download](#)

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

Installation Notes

Coding



Coding a male header by inserting a coding pin.

Product family

MCS MINI HD

[Show all products from the family](#)

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