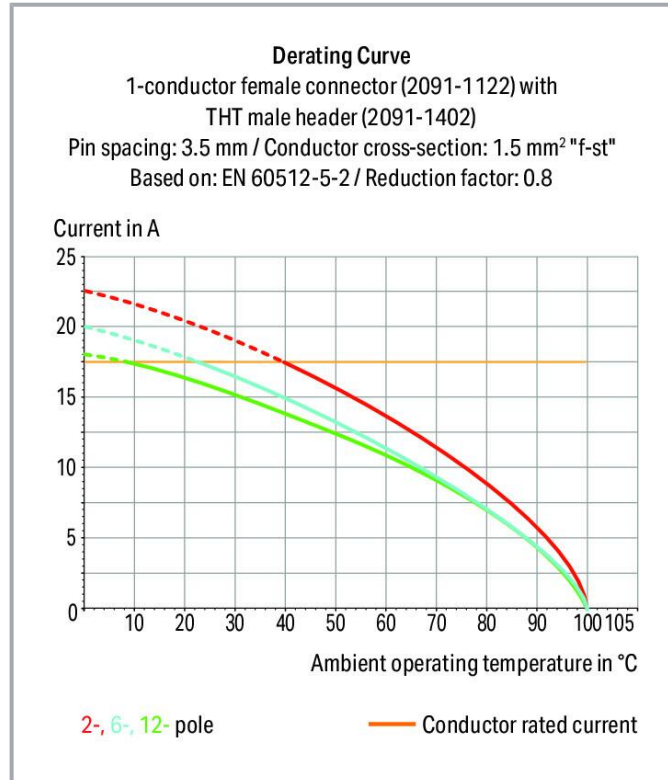
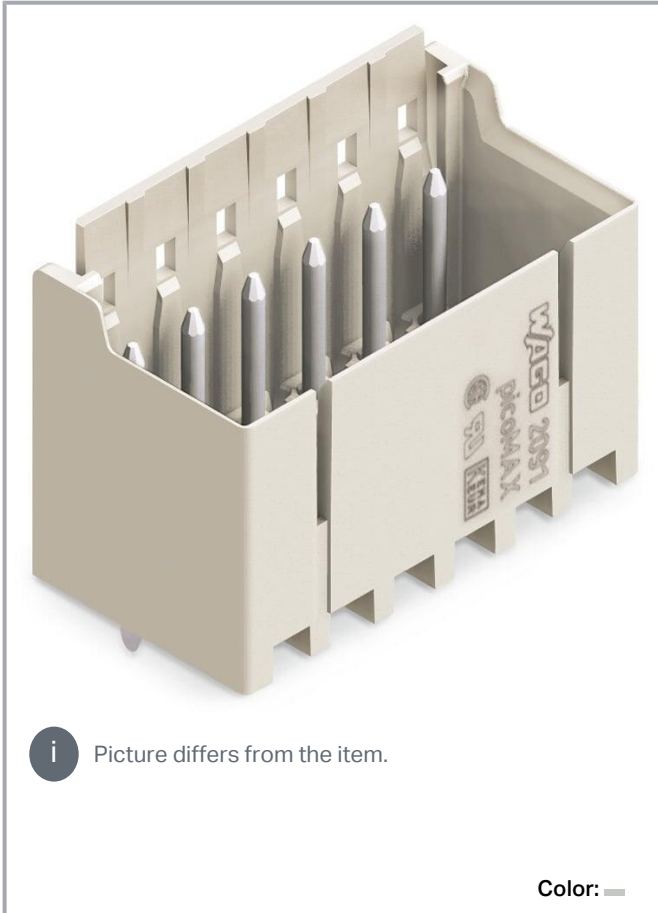


Data sheet | Item number: 2091-1412/200-000

THR male header; 1.0 mm Ø solder pin; straight; Pin spacing 3.5 mm; 12-pole; light gray



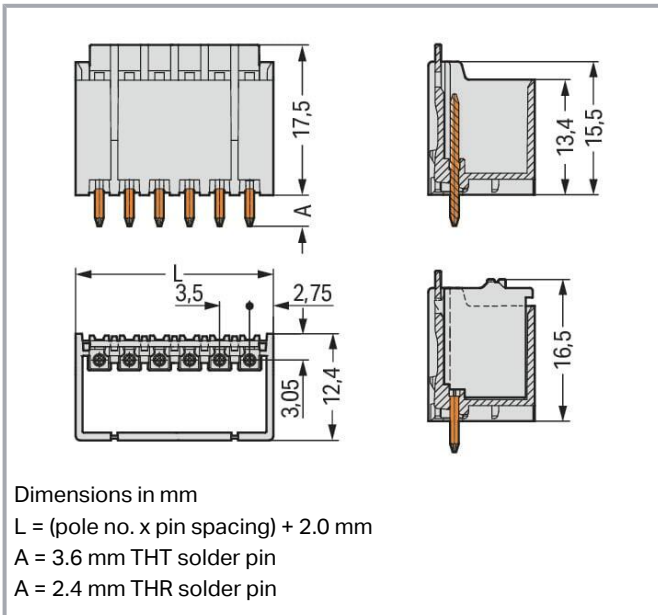
www.wago.com/2091-1412/200-000



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

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Item description

- Assembly of female connectors without loss of poles, allowing different functions to be divided within one male header (≥ 4 poles)
- Coding pins inserted into the header interface prevent mismatching, allowing subsequent coding in panel feedthrough applications
- The female connector is fully shrouded by the male header's housing, providing vibration resistance up to 20 g

Data

Notes

Safety information

The **picoMAX® Pluggable 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:

Direct marking

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

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

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Nominal voltage (III/3)	160 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)	320 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 D)	300 V
Rated current UL (Use Group D)	10 A

Connection data

Total number of potentials	12
Number of connection types	1
Number of levels	1

Connection 1

Pole number	12
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Physical data

Pin spacing	3.5 mm / 0.138 inches
Width	44 mm / 1.732 inches
Height	19.9 mm / 0.783 inches
Height from the surface	17.5 mm / 0.689 inches
Depth	12.4 mm / 0.488 inches
Solder pin length	2.4 mm
Solder pin diameter	1 mm
Plated through-hole diameter (THR)	1.2 ^(+0.1) mm

Mechanical Data

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



Anti-rotation protection	Yes
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Plug-in connection

Contact type (pluggable connector)	Male connector/plug
Connector (connection type)	for PCB
Mismating protection	No
Plugging without loss of pin spacing	Yes
Mating direction to the PCB	90 °
Locking of plug-in connection	Locking latch

PCB contact

PCB contact	THR
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Material data

Note (material data)	Information on material specifications can be found here
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Color	light gray
Material group	I
Insulation material	Polyphthalamide (PPA GF)
Flammability class per UL94	V0
Contact material	Electrolytic copper (E _{Cu})
Contact plating	Tin
Fire load	0.082 MJ
Weight	3.8 g
MSL per J-STD 020D	1

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

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ECCN	NO DATA
PU (SPU)	100 pcs
Packaging type	box
Country of origin	DE
GTIN	4050821396161
Customs tariff number	85366930000

Environmental Product Compliance


RoHS Compliance Status	Compliant, No Exemption
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Approvals / Certificates

General approvals

Logo	Approval	Additional Approval Text	Certificate name
	CB DEKRA Certification B.V.	IEC 61984	NL-49736 /A1
	CSA DEKRA Certification B.V.	C22.2	2362521
	KEMA/KEUR DEKRA Certification B.V.	EN 61984	71- 102260 REV.1
	UL Underwriters Laboratories Inc.	UL 1977	E45171
	UR Underwriters Laboratories Inc.	UL 1059	E45172

Counterpart

	Item no.2091-1132 1-conductor female connector; push-button; Push-in CAGE CLAMP®; 1.5 mm ² ; Pin spacing 3.5 mm; 12-pole; 1,50 mm ² ; light gray	www.wago.com/2091-1132
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Subject to changes. Please also observe the further product documentation!



Optional accessories

Coding

Coding

	Item no.: 2091-1610 Coding key carrier; suitable for 3.5 mm pin spacing; orange	www.wago.com/2091-1610
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Downloads

Documentation

Additional Information

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

CAD/CAE-Data

CAD data

2D/3D Models 2091-1412/200-000	URL	Download
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CAE data

ZUKEN Portal 2091-1412/200-000	URL	Download
--------------------------------	-----	----------

Asset Administration Shell

Asset Administration Shell 2091-1412/200-000	URL	Download
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PCB Design

Symbol and Footprint via SamacSys 2091-1412/200-000	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:

- 3D (stp)
- Altium
- CADSTAR
- Capture

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



- 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!
- xDX Designer
- Xpedition

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

Symbol and Footprint via Ultra Librarian 2091-1412/200-000

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

—
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- 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

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

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 2091-1412/200-000	URL	Download
THR male header; 1.0 mm Ø solder pin; straight; Pin spacing 3.5 mm; 12-pole; light gray		

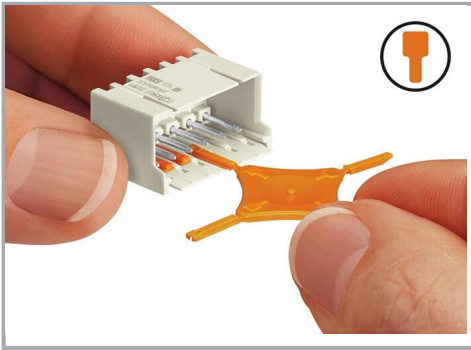
Installation Notes

Coding

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

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Coding a male header (via coding key carrier and two keys for male header, see symbol).

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