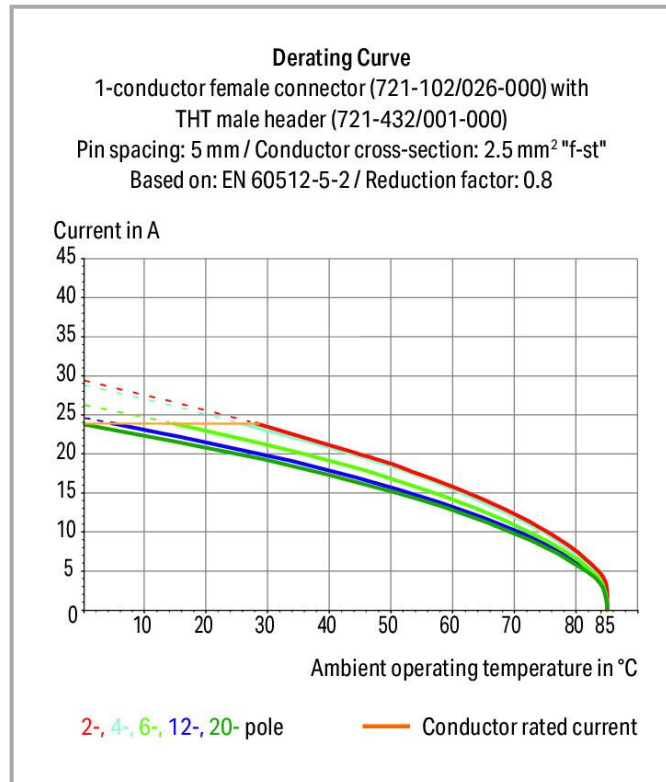
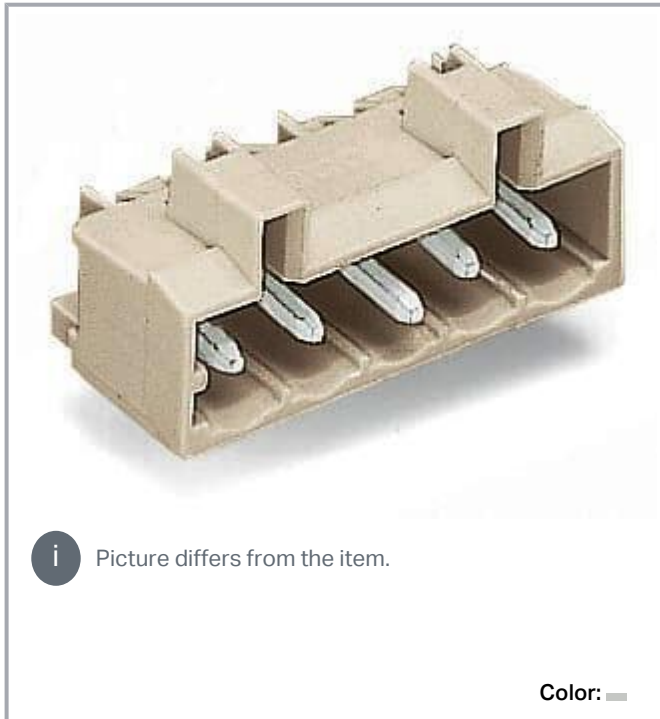


Data sheet | Item number: 721-450/001-000

THT male header; 1.0 x 1.0 mm solder pin; angled; 100% protected against mismatching; Pin spacing 5 mm; 20-pole; light gray

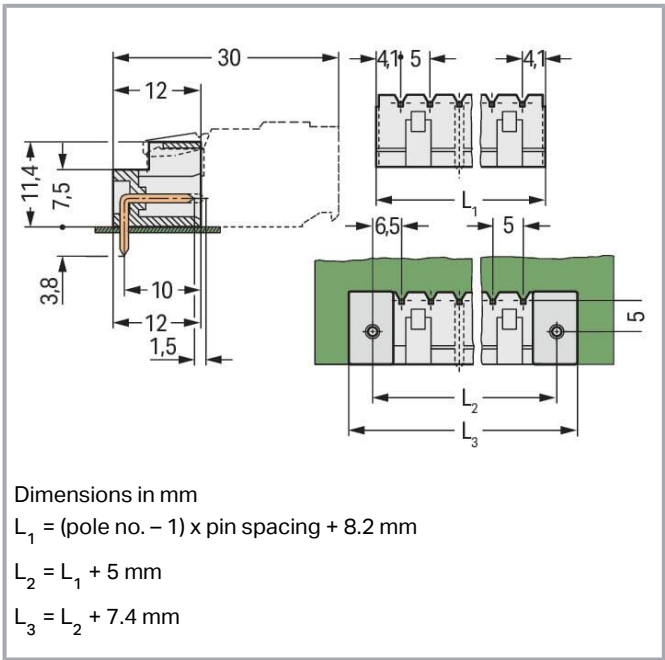
www.wago.com/721-450/001-000



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

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Item description

- Horizontal or vertical PCB mounting via straight or angled solder pins
- Pin cross-section: 1 x 1 mm
- 100 % protected against mismatching
- With coding fingers

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
3.8 mm pin projection for male headers with straight solder pins
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!

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Ratings per IEC/EN

Ratings per	IEC/EN 60664-1
Nominal voltage (III/3)	320 V
Rated impulse voltage (III/3)	4 kV
Rated voltage (III/2)	320 V
Rated impulse voltage (III/2)	4 kV
Nominal voltage (II/2)	630 V
Rated surge voltage (II/2)	4 kV
Rated current	12 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

Ratings per UL 1977

Rated voltage (UL 1977)	600 V
Rated current UL 1977	10 A

Ratings per CSA

Approvals per	CSA
Rated voltage CSA (Use Group B)	300 V
Rated current CSA (Use Group B)	10 A
Rated voltage CSA (Use Group D)	300 V
Rated current CSA (Use Group D)	10 A

Connection data

Total number of potentials	20
Number of connection types	1
Number of levels	1

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



Connection 1

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

Physical data

Pin spacing	5 mm / 0.197 inches
Width	103.2 mm / 4.063 inches
Height	15.2 mm / 0.598 inches
Height from the surface	11.4 mm / 0.449 inches
Depth	12 mm / 0.472 inches
Solder pin length	3.8 mm
Solder pin dimensions	1 x 1 mm
Drilled hole diameter with tolerance	1.4 ^(+0.1) 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	light gray

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



Material group	I
Insulation material	Polyamide (PA66)
Flammability class per UL94	V0
Contact material	Electrolytic copper (E _{Cu})
Contact plating	Tin
Fire load	0.116 MJ
Weight	6.4 g

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)	50 pcs
Packaging type	box
Country of origin	PL
GTIN	4044918869843
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-39756 /A1
	CSA DEKRA Certification B.V.	C22.2	1466354

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KEMA/KEUR
DEKRA Certification B.V.

EN 61984

71-
121453



UL
Underwriters Laboratories Inc.

UL 1059

E45172



UL
Underwriters Laboratories Inc.

UL 1977

E45171

Declarations of conformity and manufacturer's declarations

Logo	Approval	Additional Approval Text	Certificate name
	Railway WAGO GmbH & Co. KG	-	Railway Ready

Approvals for marine applications

Logo	Approval	Additional Approval Text	Certificate name
	ABS American Bureau of Shipping	-	19- HG1869876- PDA
	DNV DNV GL SE	-	TAE000016Z

Counterpart



Item no. 2721-120/026-000

1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 20-pole; 100% protected against mismatching; 2,50 mm²; light gray

www.wago.com/2721-120/026-000



Item no. 721-120/026-000

1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 20-pole; 100% protected against mismatching; 2,50 mm²; light gray

www.wago.com/721-120/026-000



Item no. 2721-120/037-000

www.wago.com

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1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 20-pole; /2721-120/037-000
100% protected against mismatching; Lateral locking levers; 2,50 mm²; light gray

**Item no.721-120/037-000**

1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 20-pole; 100% protected against mismatching; Lateral locking levers; 2,50 mm²; light gray

www.wago.com/721-120/037-000

**Item no.722-220/026-000**

1-conductor female connector, angled; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 20-pole; 100% protected against mismatching; 2,50 mm²; light gray

www.wago.com/722-220/026-000

**Item no.2721-120/031-000**

1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 20-pole; 100% protected against mismatching; clamping collar; 2,50 mm²; light gray

www.wago.com/2721-120/031-000

**Item no.721-120/027-000**

1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 20-pole; 100% protected against mismatching; clamping collar; 2,50 mm²; light gray

www.wago.com/721-120/027-000

**Item no.721-120/031-000**

1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 20-pole; 100% protected against mismatching; clamping collar; 2,50 mm²; light gray

www.wago.com/721-120/031-000

**Item no.722-120/026-000**

1-conductor female connector, angled; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 20-pole; 100% protected against mismatching; 2,50 mm²; light gray

www.wago.com/722-120/026-000

Optional accessories

Coding

Coding

**Item no.: 231-129**

Coding key; snap-on type; light gray

www.wago.com/231-129

Marking accessories

Marking strip

**Item no.: 210-833**

Marking strips; 25 m on roll; 6 mm wide; plain; Self-adhesive; white

www.wago.com/210-833

**Item no.: 210-834**

Marking strips; on reel; 5 mm wide; plain; Self-adhesive; white

www.wago.com/210-834

Downloads

Documentation

Additional Information

2019 Apr 3

pdf
2.1 MB

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CAD/CAE-Data

CAE data

EPLAN Data Portal 721-450/001-000	URL	Download
ZUKEN Portal 721-450/001-000	URL	Download
EPLAN Data Portal 721-450/001-000	URL	Download

PCB Design

Symbol and Footprint via Ultra Librarian 721-450/001-000 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
- 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!

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



- 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

Symbol and Footprint via SamacSys 721-450/001-000

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:

- 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!
- xDX Designer
- Xpedition

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

CAD data

2D/3D Models 721-450/001-000	URL	Download
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Asset Administration Shell

Asset Administration Shell 721-450/001-000	URL	Download
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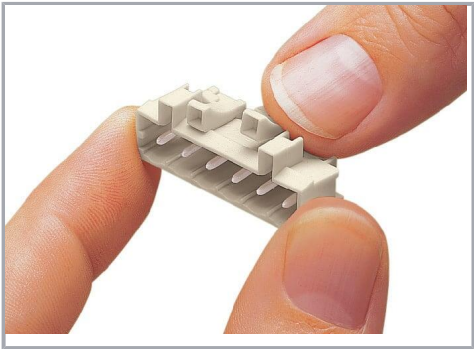
Environmental Product Compliance

Compliance Search

Environmental Product Compliance 721-450/001-000	URL	Download
THT male header; 1.0 x 1.0 mm solder pin; angled; 100% protected against mismatching; Pin spacing 5 mm; 20-pole; light gray		

Installation Notes

Coding



Coding a male header – fitting coding key(s).

Product family

MCS MIDI
[Show all products from the family](#)

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