

## Data sheet | Item number: 722-240/031-000

THT female header; angled; Pin spacing 5 mm; 10-pole; 100% protected against mismatching; clamping collar; 0.6 x 1.0 mm solder pin; light gray

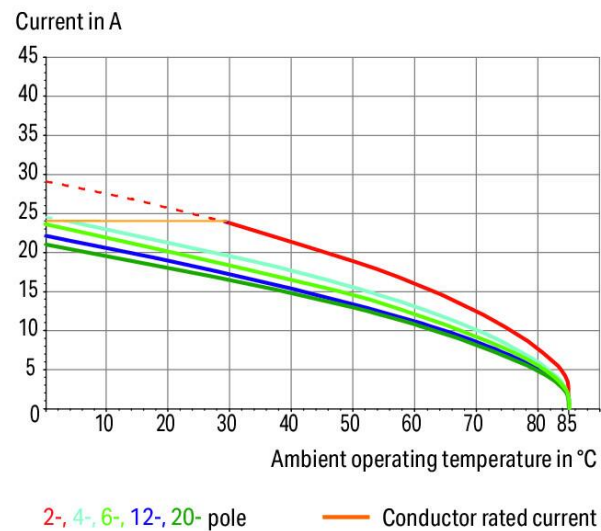
[www.wago.com/722-240/031-000](http://www.wago.com/722-240/031-000)



 Picture differs from the item.

Color: 

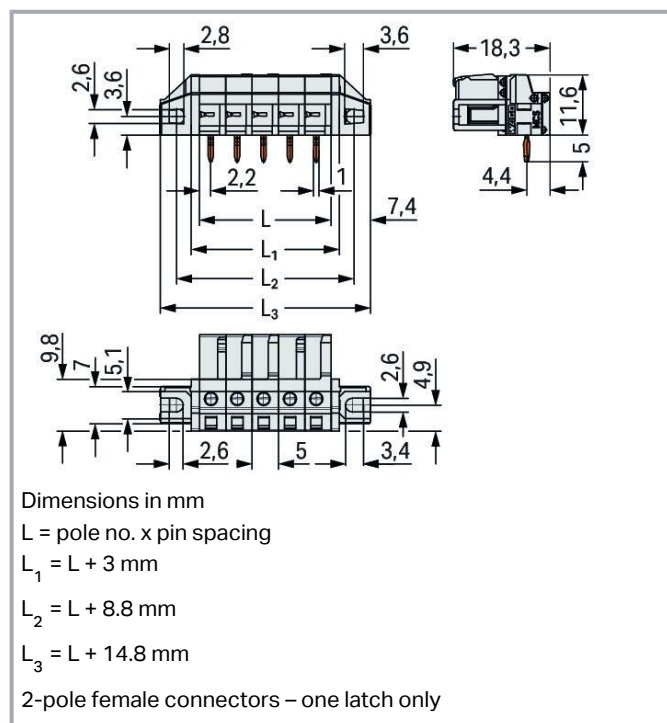
**Derating Curve**  
THT female header (722-232) with  
1-conductor male connector (721-602)  
Pin spacing: 5 mm / Conductor cross-section: 2.5 mm<sup>2</sup> "f-st"  
Based on: EN 60512-5-2 / Reduction factor: 0.8



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
- For board-to-board and board-to-wire connections
- Touch-proof PCB outputs
- Easy-to-identify PCB inputs and outputs
- 100 % protected against mismating
- 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

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

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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                                                    |
|-------------------------------|-------------------------------------------------------------------|
| 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) $\hat{=}$ 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) | 15 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   | 15 A  |

### Ratings per CSA

| Approvals per                   | CSA   |
|---------------------------------|-------|
| Rated voltage CSA (Use Group B) | 300 V |
| Rated current CSA (Use Group B) | 15 A  |
| Rated voltage CSA (Use Group D) | 300 V |
| Rated current CSA (Use Group D) | 10 A  |

## Connection data

|                            |    |
|----------------------------|----|
| Total number of potentials | 10 |
|----------------------------|----|

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



|                            |   |
|----------------------------|---|
| Number of connection types | 1 |
| Number of levels           | 1 |

### Connection 1

|             |    |
|-------------|----|
| Pole number | 10 |
|-------------|----|

### Physical data

|                                      |                          |
|--------------------------------------|--------------------------|
| Pin spacing                          | 5 mm / 0.197 inches      |
| Width                                | 64.8 mm / 2.551 inches   |
| Height                               | 16.6 mm / 0.654 inches   |
| Height from the surface              | 11.6 mm / 0.457 inches   |
| Depth                                | 18.25 mm / 0.719 inches  |
| Solder pin length                    | 5 mm                     |
| Solder pin dimensions                | 0.6 x 1 mm               |
| Drilled hole diameter with tolerance | 1.3 <sup>(+0.1)</sup> mm |

### Mechanical data

|                          |                                         |
|--------------------------|-----------------------------------------|
| Variable coding          | Yes                                     |
| Mounting type            | Mounting flange                         |
| Mounting type            | Feed-through mounting<br>Panel mounting |
| Anti-rotation protection | Yes                                     |

### Plug-in connection

|                                      |                         |
|--------------------------------------|-------------------------|
| Contact type (pluggable connector)   | Female connector/socket |
| 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 female connector (in-line) |
| Number of solder pins per potential | 1                                          |

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



## Material data

Note (material data)

Information on material specifications can be found here

|                             |                  |
|-----------------------------|------------------|
| Color                       | light gray       |
| Material group              | I                |
| Insulation material         | Polyamide (PA66) |
| Flammability class per UL94 | V0               |
| Contact material            | Copper alloy     |
| Contact plating             | Tin              |
| Fire load                   | 0.172 MJ         |
| Weight                      | 9.9 g            |

## Environmental requirements

|                         |                |
|-------------------------|----------------|
| Limit temperature range | -60 ... +85 °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               |
| ECCN                  | NO DATA                |
| PU (SPU)              | 25 pcs                 |
| Packaging type        | box                    |
| Country of origin     | DE                     |
| GTIN                  | 4050821047681          |
| Customs tariff number | 85366990990            |

## Environmental Product Compliance

|                        |                         |
|------------------------|-------------------------|
| RoHS Compliance Status | Compliant, No Exemption |
|------------------------|-------------------------|

## Approvals / Certificates

### General approvals

| Logo | Approval | Additional Approval Text | Certificate name |
|------|----------|--------------------------|------------------|
|------|----------|--------------------------|------------------|

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CSA  
DEKRA Certification B.V.

C22.2

1466354



UR  
Underwriters Laboratories Inc.

UL 1977

E45171

## Declarations of conformity and manufacturer's declarations

| Logo                                                                             | Approval                             | Additional Approval Text | Certificate name |
|----------------------------------------------------------------------------------|--------------------------------------|--------------------------|------------------|
|  | <b>Railway</b><br>WAGO GmbH & Co. KG | -                        | Railway Ready    |

## Counterpart

**Item no. 721-610**

1-conductor male connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 10-pole; 100% protected against mismatching; 2,50 mm²; light gray

[www.wago.com/721-610](http://www.wago.com/721-610)

## Optional accessories

## Mounting

## Mounting accessories



**Item no.: 209-147**  
Self-tapping screw

[www.wago.com/209-147](http://www.wago.com/209-147)



**Item no.: 231-194**  
Self-tapping screw; B 2.2x13, fixing hole 1.8 mm Ø

[www.wago.com/231-194](http://www.wago.com/231-194)



**Item no.: 231-195**  
Screw with nut; M2x12; for fixing element

[www.wago.com/231-195](http://www.wago.com/231-195)



**Item no.: 231-295**  
Screw with nut

[www.wago.com/231-295](http://www.wago.com/231-295)

## Testing and measuring

## Testing accessories



**Item no.: 210-136**  
Test plug; 2 mm Ø; with 500 mm cable; red

[www.wago.com/210-136](http://www.wago.com/210-136)

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Item no.: 231-661  
Test plugs for female connectors; for 5 mm and 5.08 mm pin spacing; 2,50 mm<sup>2</sup>; light gray

[www.wago.com/231-661](http://www.wago.com/231-661)

Downloads

Documentation

Additional Information

|                        |            |        |          |
|------------------------|------------|--------|----------|
| Technical Section      | 2019 年4月3日 | pdf    | Download |
| Technical explanations |            | 2.1 MB |          |

CAD/CAE-Data

CAD data

|                              |     |          |
|------------------------------|-----|----------|
| 2D/3D Models 722-240/031-000 | URL | Download |
|------------------------------|-----|----------|

PCB Design

|                                                                                                                                                                     |     |          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----------|
| Symbol and Footprint via Ultra Librarian 722-240/031-000                                                                                                            | 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

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



- 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

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Symbol and Footprint via SamacSys 722-240/031-000

[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

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



- Quadcept
- SOLIDWORKS PCB
- TARGET 3001!
- xDX Designer
- Xpedition

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

CAE data

|                              |     |          |
|------------------------------|-----|----------|
| ZUKEN Portal 722-240/031-000 | URL | Download |
|------------------------------|-----|----------|

Asset Administration Shell

|                                            |     |          |
|--------------------------------------------|-----|----------|
| Asset Administration Shell 722-240/031-000 | URL | Download |
|--------------------------------------------|-----|----------|

Environmental Product Compliance

Compliance Search

|                                                                                                                                                |     |          |
|------------------------------------------------------------------------------------------------------------------------------------------------|-----|----------|
| Environmental Product Compliance 722-240/031-000                                                                                               | URL | Download |
| THT female header; angled; Pin spacing 5 mm; 10-pole; 100% protected against mismatching; clamping collar; 0.6 x 1.0 mm solder pin; light gray |     |          |

Installation Notes

Product family

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

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