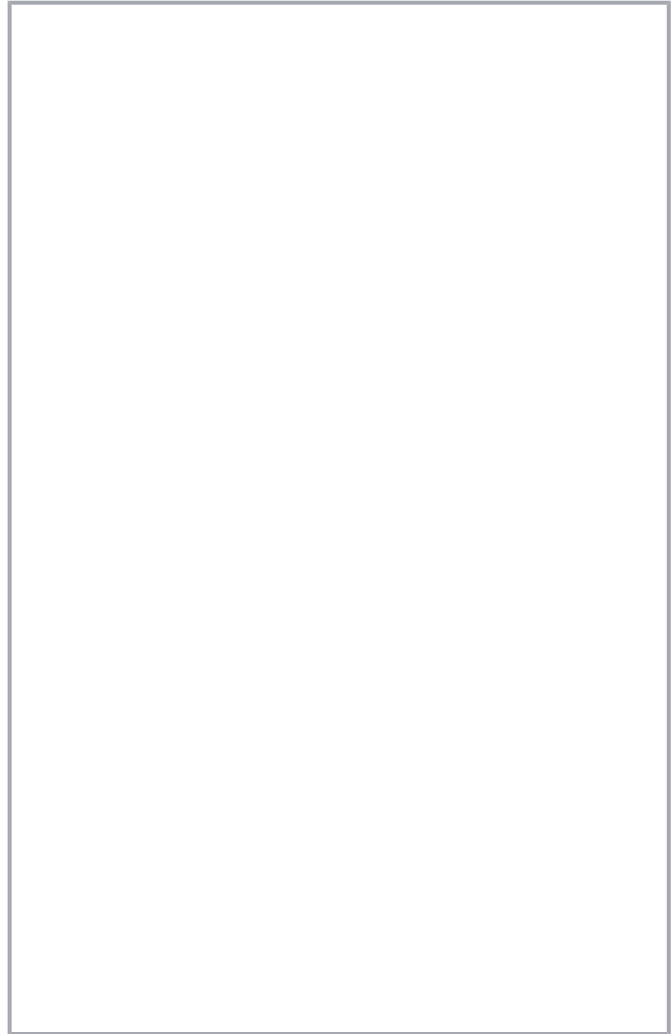
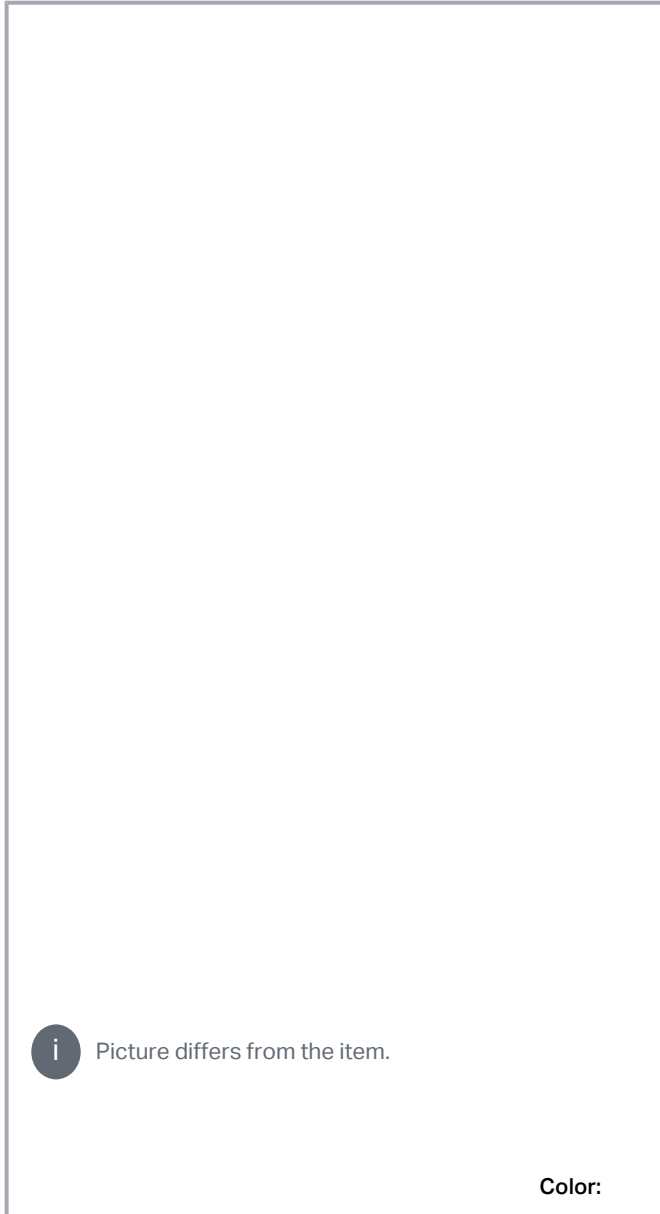


**Data sheet | Item number: 722-239**

THT female header; angled; Pin spacing 5 mm; 9-pole; 100% protected against mismatching; 0.6 x 1.0 mm solder pin; light gray

[www.wago.com/722-239](http://www.wago.com/722-239)



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

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Dimensions in mm

$L = (\text{pole no.} \times \text{pin spacing}) + 1.5 \text{ mm}$

2-pole female connectors – one latch only

### 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

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

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**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****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) | 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  |

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## 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 | 9 |
| Number of connection types | 1 |
| Number of levels           | 1 |

## Connection 1

|             |   |
|-------------|---|
| Pole number | 9 |
|-------------|---|

## Physical data

|                                      |                          |
|--------------------------------------|--------------------------|
| Pin spacing                          | 5 mm / 0.197 inches      |
| Width                                | 46.5 mm / 1.831 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 |
| 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                      |

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



|                               |      |
|-------------------------------|------|
| 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                                          |

### 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                   | 0.14 MJ                                                  |
| Weight                      | 8.4 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               |
| PU (SPU)              | 50 pcs                 |
| Packaging type        | box                    |
| Country of origin     | DE                     |
| GTIN                  | 4044918580748          |
| Customs tariff number | 85366990990            |

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



## Environmental Product Compliance

RoHS Compliance Status

Compliant, No Exemption

## Approvals / Certificates

### General approvals

| Logo | Approval                                     | Additional Approval Text | Certificate name |
|------|----------------------------------------------|--------------------------|------------------|
|      | <b>CB</b><br>DEKRA Certification B.V.        | IEC 61984                | NL-39756 /A1     |
|      | <b>KEMA/KEUR</b><br>DEKRA Certification B.V. | EN 61984                 | 71-121453        |
|      | <b>UR</b><br>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    |

### Approvals for marine applications

| Logo | Approval                                                | Additional Approval Text | Certificate name |
|------|---------------------------------------------------------|--------------------------|------------------|
|      | <b>ABS</b><br>American Bureau of Shipping               | -                        | 19-HG1869876-PDA |
|      | <b>DNV GL</b><br>Det Norske Veritas, Germanischer Lloyd | -                        | TAE000016Z       |
|      | <b>LR</b><br>Lloyds Register                            | IEC 61984                | 96/20035 (E5)    |

## Counterpart

### Item no.721-609

1-conductor male connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 9-pole; 100% protected against mismatching; 2,50 mm²; light gray

[www.wago.com/721-609](http://www.wago.com/721-609)

### Item no.721-609/000-034

1-conductor male connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 9-pole; 100% protected against mismatching; direct marking; 2,50 mm²; light gray

[www.wago.com/721-609/000-034](http://www.wago.com/721-609/000-034)

### Item no.721-609/000-044

1-conductor male connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 9-pole; 100% protected against mismatching; direct marking; 2,50 mm²; light gray

[www.wago.com/721-609/000-044](http://www.wago.com/721-609/000-044)

### Item no.721-609/019-000

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1-conductor male connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 9-pole; 100% protected against mismatching; clamping collar; 2,50 mm²; light gray

[www.wago.com/721-609/019-000](http://www.wago.com/721-609/019-000)

## Optional accessories

### Testing and measuring

| Testing accessories                                                                      |  |                                                                |
|------------------------------------------------------------------------------------------|--|----------------------------------------------------------------|
| <b>Item no.: 210-136</b>                                                                 |  |                                                                |
| Test plug; 2 mm Ø; with 500 mm cable; red                                                |  | <a href="http://www.wago.com/210-136">www.wago.com/210-136</a> |
| <b>Item no.: 231-661</b>                                                                 |  |                                                                |
| Test plugs for female connectors; for 5 mm and 5.08 mm pin spacing; 2,50 mm²; light gray |  | <a href="http://www.wago.com/231-661">www.wago.com/231-661</a> |

### Marking accessories

| Marking strip                                                        |  |                                                                |
|----------------------------------------------------------------------|--|----------------------------------------------------------------|
| <b>Item no.: 210-833</b>                                             |  |                                                                |
| Marking strips; 25 m on roll; 6 mm wide; plain; Self-adhesive; white |  | <a href="http://www.wago.com/210-833">www.wago.com/210-833</a> |
| <b>Item no.: 210-834</b>                                             |  |                                                                |
| Marking strips; on reel; 5 mm wide; plain; Self-adhesive; white      |  | <a href="http://www.wago.com/210-834">www.wago.com/210-834</a> |

## Downloads

### Documentation

#### Additional Information

2019 年4月3日 pdf 2.0 MB Download

## CAD/CAE-Data

### CAE data

|                           |     |          |
|---------------------------|-----|----------|
| EPLAN Data Portal 722-239 | URL | Download |
| ZUKEN Portal 722-239      | URL | Download |

### PCB Design

Symbol and Footprint 722-239 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

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- 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
- 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

#### CAD data

|                      |     |          |
|----------------------|-----|----------|
| 2D/3D Models 722-239 | URL | Download |
|----------------------|-----|----------|

#### Environmental Product Compliance

##### Compliance Search

|                                                                                                                              |     |          |
|------------------------------------------------------------------------------------------------------------------------------|-----|----------|
| Environmental Product Compliance 722-239                                                                                     | URL | Download |
| THT female header; angled; Pin spacing 5 mm; 9-pole; 100% protected against mismatching; 0.6 x 1.0 mm solder pin; light gray |     |          |

#### Installation Notes

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## Product family

### MCS MIDI

[Show all products from the family](#)

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