

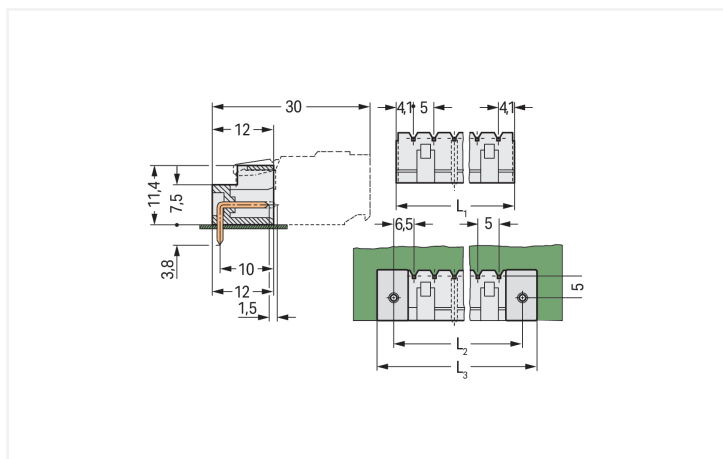
## Data Sheet | Item Number: 721-442/001-000

THT male header; 1.0 x 1.0 mm solder pin; angled; 100% protected against mismatching; Pin spacing 5 mm; 12-pole; light gray

<https://www.wago.com/721-442/001-000>



Color: ■ light gray



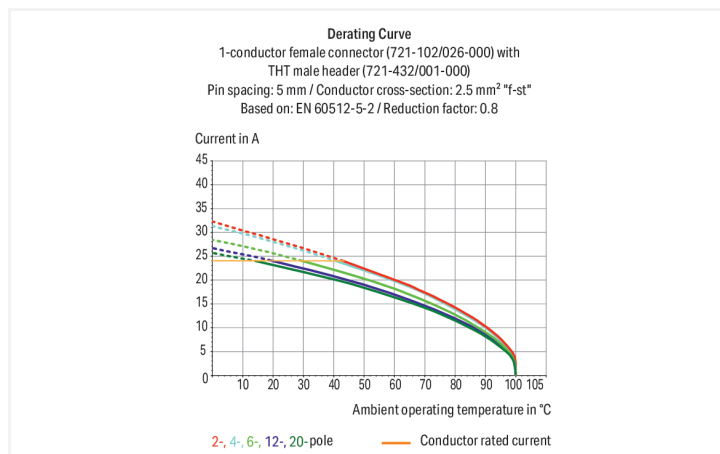
Dimensions in mm

$L1 = (\text{pole no.} - 1) \times \text{pin spacing} + 8.2 \text{ mm}$   
 $L2 = L1 + 5 \text{ mm}$   
 $L3 = L2 + 7.4 \text{ mm}$

Male connector, 721 Series, with 5 mm pin spacing

This male connector (item number 721-442/001-000) simplifies electrical installations. Dimensions: (63.2 x 15.2 x 12) mm (width x height x depth).

Tin is used for coating the contact surfaces. THT is used to solder the pcb connector.





| 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<br>3.8 mm pin projection for male headers with straight solder pins<br>Gold-plated or partially gold-plated contact surfaces<br>Other versions (or variants) can be requested from WAGO Sales or configured at <a href="https://configurator.wago.com/">https://configurator.wago.com/</a> .                                                                                                         |

| Electrical data                 |  |                |       |       |
|---------------------------------|--|----------------|-------|-------|
| Ratings per                     |  | IEC/EN 60664-1 |       |       |
| Overvoltage category            |  | III            | III   | II    |
| Pollution degree                |  | 3              | 2     | 2     |
| Nominal voltage                 |  | 320 V          | 320 V | 630 V |
| Rated impulse withstand voltage |  | 4 kV           | 4 kV  | 4 kV  |
| Rated current                   |  | 12 A           | 12 A  | 12 A  |
| Approvals per                   |  | UL 1059        |       |       |
| Use group                       |  | B              | C     | D     |
| Rated voltage                   |  | 300 V          | -     | 300 V |
| Rated current                   |  | 10 A           | -     | 10 A  |
| Approvals per                   |  | UL 1977        |       |       |
| Rated voltage                   |  | 600 V          |       |       |
| Rated current                   |  | 10 A           |       |       |
| Approvals per                   |  | CSA            |       |       |
| Use group                       |  | B              | C     | D     |
| Rated voltage                   |  | 300 V          | -     | 300 V |
| Rated current                   |  | 10 A           | -     | 10 A  |

| Connection Data            |    |  |
|----------------------------|----|--|
| Total number of potentials | 12 |  |
| Number of connection types | 1  |  |
| Number of levels           | 1  |  |
| Connection 1               |    |  |
| Pole number                | 12 |  |

| Physical data           |                        |
|-------------------------|------------------------|
| Pin spacing             | 5 mm / 0.197 inches    |
| Width                   | 63.2 mm / 2.488 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               |
| !                       | 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                 |
| Mating direction to the PCB        | 0°                  |

| 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)               | <a href="#">Information on material specifications can be found here</a> |
| Color                              | light gray                                                               |
| Material group                     | I                                                                        |
| Insulation material (main housing) | Polyamide (PA66)                                                         |
| Flammability class per UL94        | V0                                                                       |
| Contact material                   | Electrolytic copper (E <sub>Cu</sub> )                                   |
| Contact Plating                    | Tin                                                                      |
| Fire load                          | 0.071 MJ                                                                 |
| Weight                             | 3.9 g                                                                    |

| Environmental requirements |                 |
|----------------------------|-----------------|
| Limit temperature range    | -60 ... +100 °C |
| Processing temperature     | -35 ... +60 °C  |

| Environmental Testing                                                                               |                                                     |
|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| Test specification:<br>Railway applications –<br>Rolling stock –<br>Electronic equipment            | DIN EN 50155 (VDE 0115-200):2022-06                 |
| Test procedure:<br>Railway applications –<br>Rolling stock equipment –<br>Vibration and shock tests | DIN EN 61373 (VDE 0115-0106):2011-04                |
| Spectrum/Mounting location                                                                          | Service life test, Category 1, Class A/B            |
| Functional test with noise-like oscillations                                                        | Test passed according to Section 8 of the standard  |
| Frequency                                                                                           | f <sub>1</sub> = 5 Hz to f <sub>2</sub> = 150 Hz    |
| Acceleration                                                                                        | 0.101g (highest test level used for all axes)       |
| Test duration per axis                                                                              | 10 min.                                             |
| Test directions                                                                                     | X, Y and Z axes                                     |
| Monitoring of contact faults and interruptions                                                      | Passed                                              |
| Voltage drop measurement before and after each axis                                                 | Passed                                              |
| Simulated service life test through increased levels of noise-like oscillations                     | Test passed according to Section 9 of the standard  |
| Frequency                                                                                           | f <sub>1</sub> = 5 Hz to f <sub>2</sub> = 150 Hz    |
| Acceleration                                                                                        | 0.572g (highest test level used for all axes)       |
| Test duration per axis                                                                              | 5 h                                                 |
| Test directions                                                                                     | X, Y and Z axes                                     |
| Extended testing: Monitoring of contact faults and interruptions                                    | Passed                                              |
| Extended testing: Voltage drop measurement before and after each axis                               | Passed                                              |
| Shock test                                                                                          | Test passed according to Section 10 of the standard |
| Shock pulse form                                                                                    | Half sine                                           |



| Environmental Testing                                                 |                                           |
|-----------------------------------------------------------------------|-------------------------------------------|
| Acceleration                                                          | 5g (highest test level used for all axes) |
| Shock duration                                                        | 30 ms                                     |
| Number of shocks (per axis)                                           | 3 pos. und 3 neg.                         |
| Test directions                                                       | X, Y and Z axes                           |
| Extended testing: Monitoring of contact faults and interruptions      | Passed                                    |
| Extended testing: Voltage drop measurement before and after each axis | Passed                                    |
| Vibration and shock stress for rolling stock equipment                | Passed                                    |

| Commercial data       |                        |
|-----------------------|------------------------|
| Product Group         | 3 (Multi Conn. System) |
| PU (SPU)              | 100 pcs                |
| Packaging type        | Box                    |
| Country of origin     | PL                     |
| GTIN                  | 4044918869768          |
| Customs tariff number | 85366930000            |

| Product Classification |                      |
|------------------------|----------------------|
| UNSPSC                 | 39121409             |
| eCl@ss 10.0            | 27-44-04-02          |
| eCl@ss 9.0             | 27-44-04-02          |
| ETIM 9.0               | EC002637             |
| ETIM 10.0              | EC002637             |
| ECCN                   | NO US CLASSIFICATION |

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

Approvals / Certificates

General approvals



| Approval                              | Standard  | Certificate Name |
|---------------------------------------|-----------|------------------|
| CB<br>DEKRA Certification B.V.        | IEC 61984 | NL-113351        |
| CSA<br>DEKRA Certification B.V.       | C22.2     | 1466354          |
| KEMA/KEUR<br>DEKRA Certification B.V. | EN 61984  | 71-130478 REV.1  |
| UL<br>Underwriters Laboratories Inc.  | UL 1977   | E45171           |
| UL<br>Underwriters Laboratories Inc.  | UL 1059   | E45172           |

Declarations of conformity and manufacturer's declarations



| Approval                      | Standard | Certificate Name |
|-------------------------------|----------|------------------|
| Railway<br>WAGO GmbH & Co. KG | -        | Railway Ready    |



Approvals for marine applications



| Approval                                | Standard | Certificate Name  |
|-----------------------------------------|----------|-------------------|
| ABS<br>American Bureau of Ship-<br>ping | -        | 24-0095975-PDA    |
| DNV<br>DNV GL SE                        | -        | TAE000016Z        |
| PRS<br>Polski Rejestr Statków           | -        | TE/1095/880590/23 |

Downloads

Environmental Product Compliance

| Compliance Search                                      |                   |
|--------------------------------------------------------|-------------------|
| Environmental Product<br>Compliance<br>721-442/001-000 | <a href="#">↓</a> |

Documentation

| Additional Information |            |                   |                   |
|------------------------|------------|-------------------|-------------------|
| Technical Section      | 03.04.2019 | pdf<br>2027.26 KB | <a href="#">↓</a> |

CAD/CAE-Data

| CAD data                        |
|---------------------------------|
| 2D/3D Models<br>721-442/001-000 |

| CAE data                             |
|--------------------------------------|
| EPLAN Data Portal<br>721-442/001-000 |
| ZUKEN Portal<br>721-442/001-000      |

| PCB Design                                                     |
|----------------------------------------------------------------|
| Symbol and Footprint<br>via SamacSys<br>721-442/001-000        |
| Symbol and Footprint<br>via Ultra Librarian<br>721-442/001-000 |



1 Compatible Products

1.1 System counterpart

1.1.1 Female connector/socket



**Item No.: 722-112/026-000**  
1-conductor female connector, angled; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; 2,50 mm²; light gray



**Item No.: 722-212/026-000**  
1-conductor female connector, angled; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; 2,50 mm²; light gray



**Item No.: 721-112/026-000**  
1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; 2,50 mm²; light gray



**Item No.: 721-112/027-000**  
1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; clamping collar; 2,50 mm²; light gray



**Item No.: 721-112/031-000**  
1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; clamping collar; 2,50 mm²; light gray



**Item No.: 721-112/037-000**  
1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; Lateral locking levers; 2,50 mm²; light gray



**Item No.: 2721-1112/037-000**  
1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching, coding finger; Lateral locking levers; 2,50 mm²; light gray



**Item No.: 2721-1112/037-000/336-000**  
1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching, coding finger; Lateral locking levers; Strain relief plate; light gray



**Item No.: 2721-1112/326-000/336-000**  
1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching, coding finger; Strain relief plate; light gray



**Item No.: 2721-1112/326-000**  
1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 13-pole; 100% protected against mismatching, coding finger; 2,50 mm²; light gray



**Item No.: 2721-1112/326-047**  
1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 13-pole; 100% protected against mismatching, coding finger; direct marking; light gray



**Item No.: 2721-1112/326-9037**  
1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 13-pole; 100% protected against mismatching, coding finger; direct marking; light gray



**Item No.: 2721-112/026-000**  
1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; 2,50 mm²; light gray



**Item No.: 2721-112/031-000**  
1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; clamping collar; 2,50 mm²; light gray



**Item No.: 2721-112/037-000**  
1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; Lateral locking levers; 2,50 mm²; light gray



**Item No.: 721-2112/037-000**  
2-conductor female connector; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; Lateral locking levers; 2,50 mm²; light gray



**Item No.: 721-2112/026-000**  
2-conductor female connector; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 100% protected against mismatching; with integrated end plate; 2,50 mm²; light gray

1.2 Optional Accessories

1.2.1 Coding

1.2.1.1 Coding



**Item No.: 231-129**  
Coding key; snap-on type; light gray

1.2.2 Marking

1.2.2.1 Marking strip



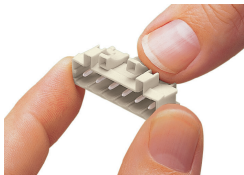
**Item No.: 210-833**  
Marking strips; 25 m on roll; 6 mm wide; plain; Self-adhesive; white



**Item No.: 210-834**  
Marking strips; on reel; 5 mm wide; plain; Self-adhesive; white

Installation Notes

Coding



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