

## Data sheet | Item number: 231-453/001-000

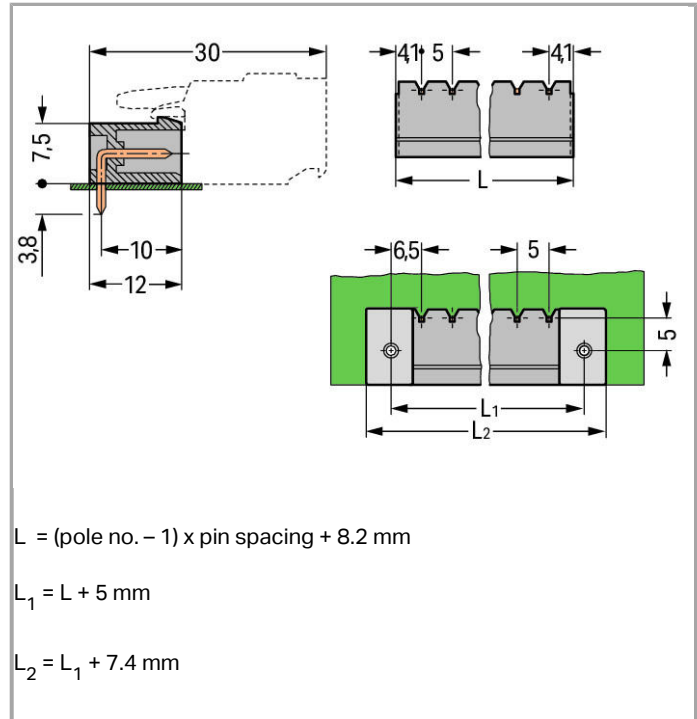
THT male header; 1.0 x 1.0 mm solder pin; angled; Pin spacing 5 mm; 23-pole

[www.wago.com/231-453/001-000](http://www.wago.com/231-453/001-000)



RoHS   
 Compliant

Color:



### Item description

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

Other variants can be requested via the WAGO sales department or, if necessary, configured at <https://configurator.wago.com/>: 3.8 mm pin projection for male headers with straight solder pins, Gold-plated or partially gold-plated contact surfaces, Other pole numbers

### Data

#### Electrical data

#### Ratings per IEC/EN 60664-1

|                                 |       |
|---------------------------------|-------|
| Rated 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  |
| Rated voltage (II / 2)          | 630 V |
| Rated impulse voltage (II / 2)  | 4 kV  |



|                  |   |
|------------------|---|
| Rated current    | 12 A  |
| Legend (ratings) | (III / 2) $\hat{=}$ Overvoltage category III / Pollution degree 2 |

### 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  |

### 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

|                            |    |
|----------------------------|----|
| No. of poles               | 23 |
| Total number of potentials | 23 |
| Number of levels           | 1  |

### Geometrical Data

|                                   |                          |
|-----------------------------------|--------------------------|
| Pin spacing                       | 5 mm (0.197 inch)        |
| Width                             | 118.2 mm / 4.654 inch    |
| Height                            | 12.2 mm / 0.48 inch      |
| Height from the surface           | 8.4 mm / 0.331 inch      |
| Depth                             | 12 mm / 0.472 inch       |
| Solder pin length                 | 3.8 mm                   |
| Solder pin dimensions             | 1 x 1 mm                 |
| Drilled hole diameter (tolerance) | 1.4 <sup>(+0.1)</sup> mm |

### Plug connection

|                                    |                     |
|------------------------------------|---------------------|
| Contact type (pluggable connector) | Male connector/plug |
| Connector connection type          | for PCBs            |
| Mismating protection               | No                  |
| 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

|                             |                           |
|-----------------------------|---------------------------|
| Color                       | gray                      |
| Material group              | I                         |
| Insulating material         | Polyamide 66 (PA 66)      |
| Flammability class per UL94 | V0                        |
| Contact material            | Electrolytic copper (Ecu) |
| Contact plating             | tin-plated                |
| Fire load                   | 0.125 MJ                  |
| Weight                      | 7.097 g                   |

### Environmental Requirements



|                         |                 |
|-------------------------|-----------------|
| Limit temperature range | -60 ... +100 °C |
|-------------------------|-----------------|

### Commercial data


|                    |                        |
|--------------------|------------------------|
| Country of origin  | DE                     |
| GTIN               | 4044918866729          |
| Customs Tariff No. | 85366990990            |
| Product Group      | 3 (Multi Conn. System) |

### Approvals / Certificates

#### Country specific Approvals

| Logo   | Approval                               | Certificate name |
|--|--|------------------|
|  | <b>CB</b><br>DEKRA Certification B.V.  | NL-39756         |
|  | <b>CSA</b><br>DEKRA Certification B.V. | 1466354          |
|  | <b>CSA</b><br>DEKRA Certification B.V. | 1466354          |

#### Ship Approvals

| Logo   | Approval  | Certificate name |
|--|---|------------------|
|  | <b>ABS</b><br>American Bureau of Shipping               | 14-HG1241537-PDA |
|  | <b>DNV GL</b><br>Det Norske Veritas, Germanischer Lloyd | TAE000016Z       |



### UL-Approvals

| Logo   | Approval                            | Certificate name |
|--|-------------------------------------|------------------|
|  | UL<br>UL International Germany GmbH | E45172           |
|  | UR<br>UL International Germany GmbH | E45171           |
|  | UR<br>UL International Germany GmbH | E45171           |

### Compatible products

#### Marking accessories

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

#### Coding

|  |   |  |
|--|---|--|
|  | <b>Item no.: 231-129</b><br>Coding key; snap-on type        | <a href="http://www.wago.com/231-129">www.wago.com/231-129</a> |
|  | <b>Item no.: 231-500</b><br>Spacer; for formation of groups | <a href="http://www.wago.com/231-500">www.wago.com/231-500</a> |

### Downloads

#### smartDATA

#### PCB libraries

|  |                     |               |          |
|--|---------------------|---------------|----------|
| EAGLE Library for WAGO Pluggable PCB Connectors (MULTI CONNECTION SYSTEM)<br>Compatible with EAGLE PCB Design Software Version 6.x or higher | 2.1<br>Nov 17, 2017 | ZIP<br>6.2 MB | Download |
| DesignSpark Library for WAGO Pluggable PCB Connectors (MULTI CONNECTION SYSTEM)<br>Compatible with DesignSpark PCB Version 4.x or higher     | 2.1<br>Oct 6, 2014  | ZIP<br>6.1 MB | Download |



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|   |                      |               |          |
|---|----------------------|---------------|----------|
| TARGET Library for WAGO Pluggable PCB Connectors (Multi-Connection System)<br>Compatible with TARGET PCB Design Software Version 17.x | 1.1.0<br>Oct 6, 2014 | ZIP<br>7.4 MB | Download |
|---|----------------------|---------------|----------|

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**CAD data**

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|                             |     |          |
|-----------------------------|-----|----------|
| 3D Download 231-453/001-000 | URL | Download |
|-----------------------------|-----|----------|

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Subject to changes.