

## Data sheet | Item number: 713-1431

THT male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; Pin spacing 3.5 mm; 2 x 11-pole



713-1431



RoHS  
Compliant

BOMcheck.net

Color: ■

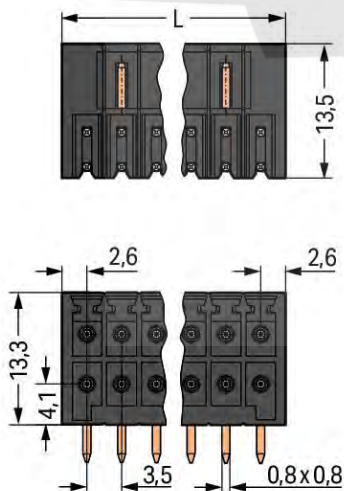
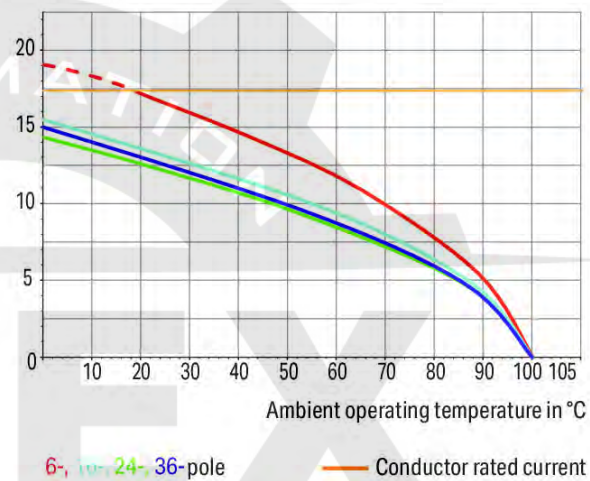
### Derating Curve

1-conductor female connector (713-1103) with  
THT male header (713-1403)

Pin spacing: 3.5 mm / Conductor cross-section: 1.5 mm<sup>2</sup> "f-st"

Based on: EN 60512-5-2 / Reduction factor: 0.8

Current in A



$$L = [(pole\ no./2) - 1] \times pin\ spacing + 5.2\ mm$$

### Item description

- Male headers may be mounted horizontally or vertically via straight or angled solder pins
- Header housing is molded of THT-compatible insulation material for lead-free reflow soldering
- Separated pin slots prevent damage and make the headers touch-proof when unplugged
- 100% protected against mismating
- Coding pins available

**Safety information 1:**

The *MULTI CONNECTION SYSTEM (MCS)* is designed without breaking capacity for compliance with DIN EN 61984. When used as intended, MCS Connectors shall 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.

**Data****Electrical data****Ratings per IEC/EN 60664-1**

|                                 |        |
|---------------------------------|--------|
| Rated voltage (III / 3)         | 80 V   |
| Rated impulse voltage (III / 3) | 2.5 kV |
| Rated voltage (III / 2)         | 160 V  |
| Rated impulse voltage (III / 2) | 2.5 kV |
| Rated voltage (II / 2)          | 250 V  |
| Rated impulse voltage (II / 2)  | 2.5 kV |
| Rated current                   | 10 A   |

**Approvals per UL 1059**

|                                |       |
|--------------------------------|-------|
| Rated voltage UL (Use Group B) | 150 V |
| Rated current UL (Use Group B) | 10 A  |
| Rated voltage UL (Use Group C) | 50 V  |
| Rated current UL (Use Group C) | 10 A  |

**Approvals per CSA**

|                                 |       |
|---------------------------------|-------|
| Rated voltage CSA (Use Group B) | 150 V |
| Rated current CSA (Use Group B) | 12 A  |

**Connection data**

|                            |    |
|----------------------------|----|
| No. of poles               | 22 |
| Total number of potentials | 22 |
| Number of connection types | 1  |
| Number of levels           | 2  |

## Geometrical Data

|                                   |                                |
|-----------------------------------|--------------------------------|
| Pin spacing                       | 3.5 mm / 0.138 inch            |
| Width                             | 40 mm / 1.575 inch             |
| Height                            | 17.1 mm / 0.673 inch           |
| Height from the surface           | 13.3 mm / 0.524 inch           |
| Depth                             | 13.5 mm / 0.531 inch           |
| Solder pin length                 | 3.8 mm                         |
| Solder pin dimensions             | 0.8 x 0.8 mm                   |
| Drilled hole diameter (tolerance) | 1.2 <sup>(- ... +0.1)</sup> mm |

## Plug connection

|                                    |                     |
|------------------------------------|---------------------|
| Contact type (pluggable connector) | Male connector/plug |
| Connector connection type          | for PCBs            |
| 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

|                             |                                        |
|-----------------------------|----------------------------------------|
| Color                       | black                                  |
| Material group              | I                                      |
| Insulating material         | Polyphthalamide (PPA GF)               |
| Flammability class per UL94 | V0                                     |
| Contact material            | Electrolytic copper (E <sub>Cu</sub> ) |
| Contact plating             | tin-plated                             |
| Fire load                   | 0.117 MJ                               |
| Weight                      | 6 g                                    |

## Environmental Requirements

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

## Commercial data

|                   |                        |
|-------------------|------------------------|
| Product Group     | 3 (Multi Conn. System) |
| Country of origin | PL                     |
| GTIN              | 4045454700225          |

|                    |             |
|--------------------|-------------|
| Customs Tariff No. | 85366990990 |
|--------------------|-------------|

## Approvals / Certificates

### Country specific Approvals

| Logo                                                                             | Approval                        | Additional Approval Text | Certificate name |
|----------------------------------------------------------------------------------|---------------------------------|--------------------------|------------------|
|  | CCA<br>DEKRA Certification B.V. | EN 61984                 | 2169947.01       |
|                                                                                  | CCA<br>DEKRA Certification B.V. | IEC 61984                | NL-30980         |
|  | CSA<br>DEKRA Certification B.V. | C22.2 No. 158            | 2315087          |

### UL-Approvals

| Logo                                                                              | Approval                             | Additional Approval Text | Certificate name |
|-----------------------------------------------------------------------------------|--------------------------------------|--------------------------|------------------|
|  | UR<br>Underwriters Laboratories Inc. | UL 1059                  | 20190122-E45172  |

## Compatible products

### Coding

|                                                                                    |                                 |         |
|------------------------------------------------------------------------------------|---------------------------------|---------|
|  | Item no.: 714-101<br>Coding key | 714-101 |
|------------------------------------------------------------------------------------|---------------------------------|---------|

## Downloads

### CAD/CAE - Smart Data

#### CAD data

|                      |     |          |
|----------------------|-----|----------|
| 3D Download 713-1431 | URL | Download |
|----------------------|-----|----------|

### PCB libraries

|                                                                                                                                              |                    |               |          |
|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------|----------|
| 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 |
| 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>Oct 6, 2014 | zip<br>6.2 MB | Download |



TARGET Library for WAGO Pluggable PCB Connectors (Multi-Connection System)  
Compatible with TARGET PCB Design Software Version 17.x

1.1.0  
Oct 6, 2014

zip  
7.4 MB

[Download](#)



Subject to changes.