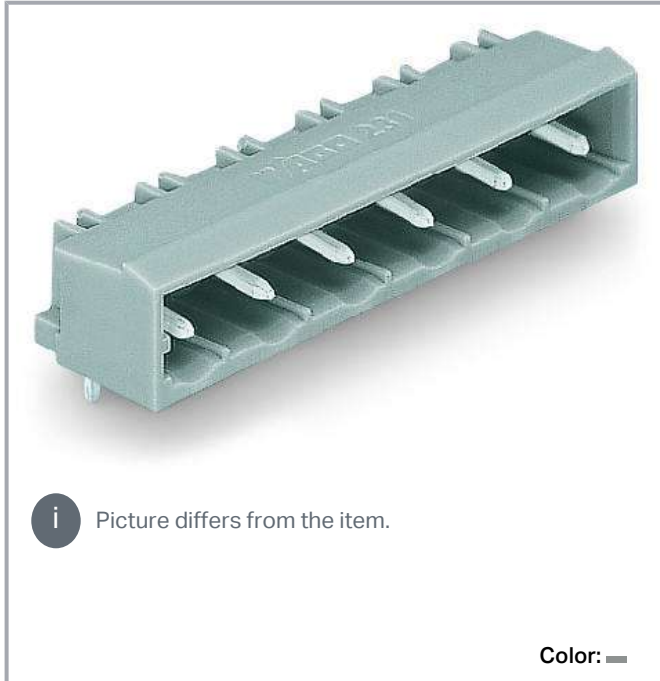


**Data sheet | Item number: 231-843/001-000**

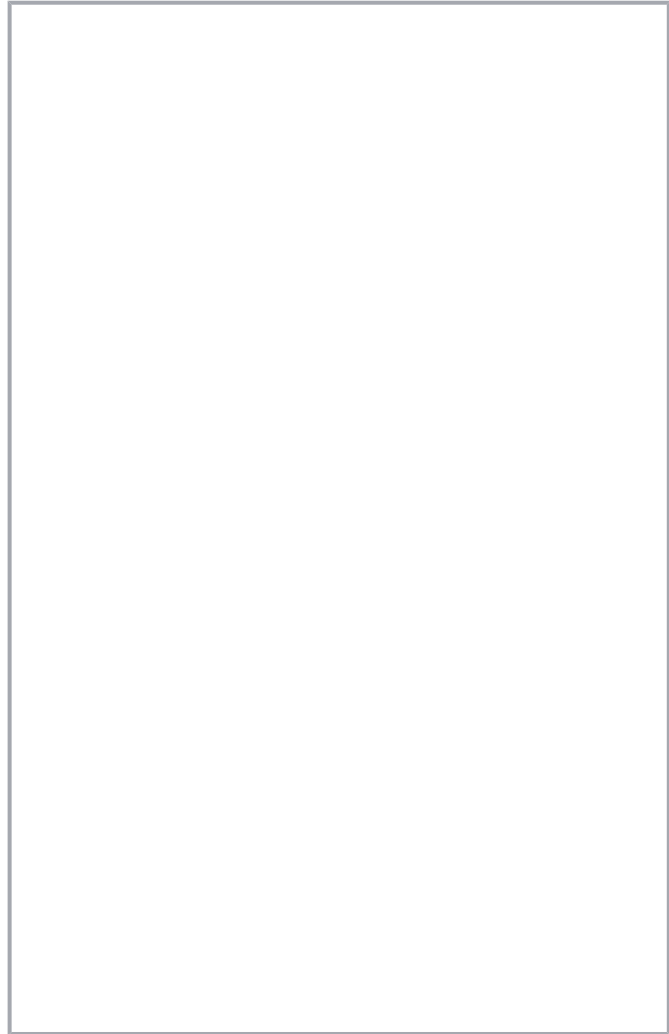
THT male header; 1.0 x 1.0 mm solder pin; angled; Pin spacing 7.5 mm; 13-pole; gray

[www.wago.com/231-843\\_001-000](http://www.wago.com/231-843_001-000)



**i** Picture differs from the item.

Color: —



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

WAGO Corporation  
Germantown, WI 53022  
Phone: 1-800-DIN-RAIL (346-7245) | Fax: (262) 255-6222  
Email: [info.us@wago.com](mailto:info.us@wago.com) | Web: [www.wago.us](http://www.wago.us)

Do you have any questions about our products?  
We are always happy to take your call at +49 (571) 887-44222.



Dimensions in mm

$$L = (\text{pole no.} - 1) \times \text{pin spacing} + 8.2 \text{ mm}$$

$$L_1 = L + 5 \text{ mm}$$

$$L_2 = L_1 + 7.4 \text{ mm}$$

### Item description

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

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



## Data

### Notes

#### Safety information 1

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. 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

### IEC Approvals

| Ratings per                 | IEC/EN 60664-1   |
|-----------------------------|--|
| Rated voltage (III / 3)     | 500 V  |
| Rated surge voltage (III/3) | 6 kV   |
| Rated voltage (III/2)       | 630 V  |
| Rated surge voltage (III/2) | 6 kV   |
| Nominal voltage (II/2)      | 1000 V   |
| Rated surge voltage (II/2)  | 6 kV   |
| Rated current               | 12 A   |
| Legend (ratings)            | (III / 2) $\triangleq$ Overvoltage category III / Pollution degree 2 |

### UL Approvals

| 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    |

### Ratings per UL

|                       |       |
|-----------------------|-------|
| Rated voltage UL 1977 | 600 V |
| Rated current UL 1977 | 10 A  |

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## CSA Approvals

| 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

|                            |    |
|----------------------------|----|
| Total number of potentials | 13 |
| Number of connection types | 1  |
| Number of levels           | 1  |

## Connection 1

|                 |    |
|-----------------|----|
| Number of poles | 13 |
|-----------------|----|

## Physical data

|                                      |                          |
|--------------------------------------|--------------------------|
| Pin spacing                          | 7.5 mm / 0.295 inch      |
| Width                                | 98.2 mm / 3.866 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 with tolerance | 1.4 <sup>(+0.1)</sup> mm |

## Plug-in connection

|                                    |                     |
|------------------------------------|---------------------|
| Contact type (pluggable connector) | Male connector/plug |
| Connector (connection type)        | for PCB             |
| Mismating protection               | No                  |
| Mating direction to the PCB        | 0°                  |
| Locking of plug-in connection      | Without             |

## PCB contact

|                        |  |
|------------------------|--|
| PCB Contact            | THT                                      |
| Solder pin arrangement | over the entire male connector (in-line) |

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

|                                     |   |
|-------------------------------------|---|
| Number of solder pins per potential | 1 |
|-------------------------------------|---|

### Material data

|                             |  |
|-----------------------------|--|
| Color                       | gray                                   |
| Material group              | I                                      |
| Insulation material         | Polyamide (PA66)                       |
| Flammability class per UL94 | V0                                     |
| Contact material            | Electrolytic copper (E <sub>Cu</sub> ) |
| Contact plating             | tin-plated                             |
| Fire load                   | 0.107 MJ                               |
| Weight                      | 5.2 g                                  |

### Environmental requirements



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

### Commercial data

|                       |                        |
|-----------------------|------------------------|
| Product Group         | 3 (Multi Conn. System) |
| PU (SPU)              | 50 Stück               |
| Packaging type        | box                    |
| Country of origin     | DE                     |
| GTIN                  | 4044918868341          |
| Customs tariff number | 8536694040             |



### Approvals / Certificates

#### Country specific Approvals



| Logo   | Approval                              | Additional Approval Text | Certificate name |
|--|---------------------------------------|--------------------------|------------------|
|  | CB<br>DEKRA Certification B.V.        | IEC 61984                | NL-39756         |
|  | CSA<br>DEKRA Certification B.V.       | C22.2                    | 1466354          |
|  | KEMA/KEUR<br>DEKRA Certification B.V. | EN 61984                 | 2190761.01       |

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






### Ship Approvals

| Logo  | Approval                                  | Additional Approval Text | Certificate name         |
|---|---|--------------------------|--------------------------|
|   | <b>ABS</b><br>American Bureau of Shipping | -                        | 19-<br>HG1869876-<br>PDA |
|  | <b>BV</b><br>Bureau Veritas S.A.          | IEC 60998                | 11915/DO<br>BV           |

### UL-Approvals

| Logo  | Approval                                    | Additional Approval Text | Certificate name |
|---|---|--------------------------|------------------|
|   | <b>UR</b><br>Underwriters Laboratories Inc. | UL 1059                  | E45172           |
|  | <b>UR</b><br>Underwriters Laboratories Inc. | UL 1977                  | E 45171          |

### Counterpart

|  |  |  |
|--|--|--|
|  | <b>Item no.231-213/026-000</b><br>Female plug; 13-pole; 12 AWG max; pin spacing 7.5 mm; 1 conductor per pole; gray   | <a href="http://www.wago.com/231-213/026-000">www.wago.com/231-213/026-000</a>   |
|  | <b>Item no.2231-213/026-000</b><br>Female plug; 13-pole; push-button; 12 AWG max; pin spacing 7.5 mm; 1-conductor per pole; gray                           | <a href="http://www.wago.com/2231-213/026-000">www.wago.com/2231-213/026-000</a> |
|  | <b>Item no.2231-213/031-000</b><br>Female plug; 13-pole; push-button; mounting flange; 12 AWG max; pin spacing 7.5 mm; 1-conductor per pole; gray          | <a href="http://www.wago.com/2231-213/031-000">www.wago.com/2231-213/031-000</a> |
|  | <b>Item no.2231-213/037-000</b><br>Female plug; 13-pole; push-button; locking lever; 12 AWG max; pin spacing 7.5 mm; 1-conductor per pole; gray            | <a href="http://www.wago.com/2231-213/037-000">www.wago.com/2231-213/037-000</a> |
|  | <b>Item no.231-213/027-000</b><br>Female plug; 13-pole; mounting flange with reinforcing strip; 12 AWG max; pin spacing 7.5 mm; 1 conductor per pole; gray | <a href="http://www.wago.com/231-213/027-000">www.wago.com/231-213/027-000</a>   |

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



Item no.231-213/031-000

Female plug; 13-pole; mounting flange; 12 AWG max; pin spacing 7.5 mm; 1 conductor per pole; gray

[www.wago.com/231-213/031-000](http://www.wago.com/231-213/031-000)



Item no.231-213/037-000

Female plug; 13-pole; locking lever; 12 AWG max; pin spacing 7.5 mm; 1 conductor per pole; gray

[www.wago.com/231-213/037-000](http://www.wago.com/231-213/037-000)

## Optional accessories

### Coding

Intermediate plate



Item no.: 231-500

Spacer; for formation of groups; light gray

[www.wago.com/231-500](http://www.wago.com/231-500)

Coding



Item no.: 231-130

Coding key; snap-on type; light gray

[www.wago.com/231-130](http://www.wago.com/231-130)

## Downloads

### Documentation

#### Additional Information

|                        |            |               |          |
|------------------------|------------|---------------|----------|
| Technical explanations | 2019 Apr 3 | pdf<br>2.0 MB | Download |
|------------------------|------------|---------------|----------|

### CAD files

#### CAD data

|                              |     |          |
|------------------------------|-----|----------|
| 2D/3D Models 231-843/001-000 | URL | Download |
|------------------------------|-----|----------|

#### CAE data

|                                   |     |          |
|-----------------------------------|-----|----------|
| EPLAN Data Portal 231-843/001-000 | URL | Download |
|-----------------------------------|-----|----------|

|                                   |     |          |
|-----------------------------------|-----|----------|
| EPLAN Data Portal 231-843/001-000 | URL | Download |
|-----------------------------------|-----|----------|

|                              |     |          |
|------------------------------|-----|----------|
| ZUKEN Portal 231-843/001-000 | URL | Download |
|------------------------------|-----|----------|

#### PCB Design

|                                      |     |          |
|--------------------------------------|-----|----------|
| Symbol and Footprint 231-843/001-000 | 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.

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



#### Supported formats:

- Accel EDA 14 & 15
- 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

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## Environmental Product Compliance

### Compliance Search

|   |     |          |
|---|-----|----------|
| Environmental Product Compliance 231-843/001-000                                    | URL | Download |
| THT male header; 1.0 x 1.0 mm solder pin; angled; Pin spacing 7.5 mm; 13-pole; gray |     |          |

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## Installation Notes

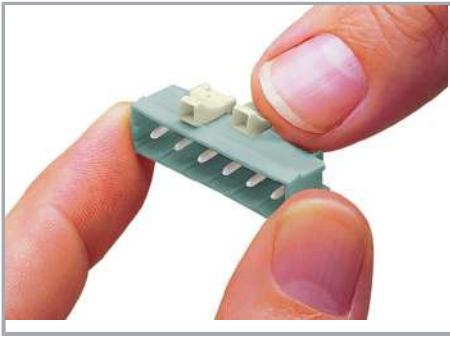
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Coding a male header – fitting coding key(s).

## Product family

**MCS MIDI Classic**

[Show all products from the family](#)

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