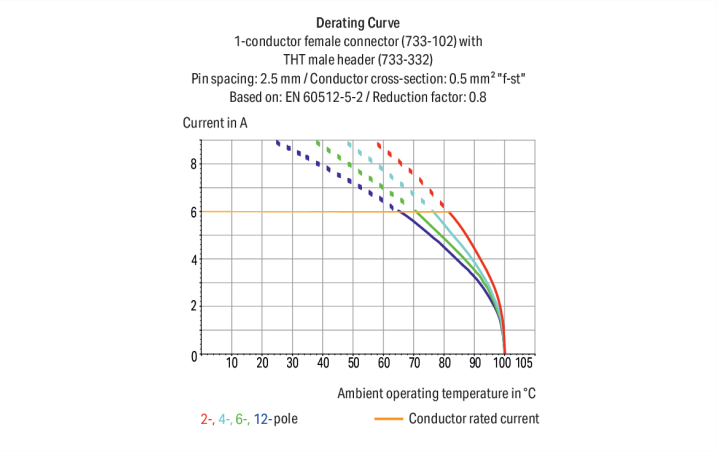
# Data Sheet | Item Number: 733-104/037-000

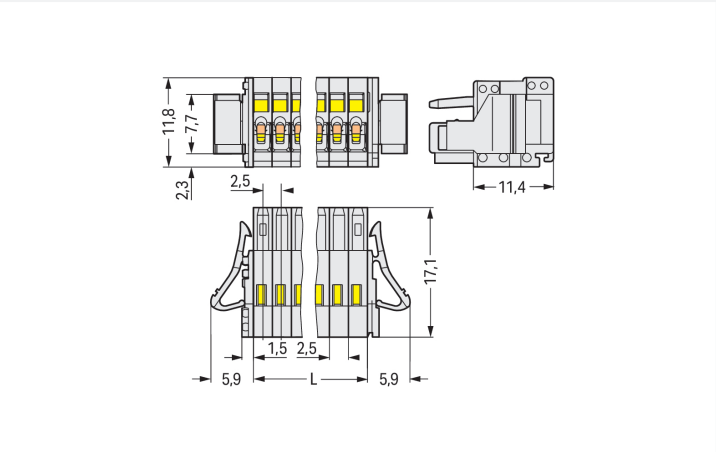
1-conductor female connector; CAGE CLAMP®; 0.5 mm²; Pin spacing 2.5 mm; 4-pole; 100% protected against mismating; Lateral locking levers; light gray

https://www.wago.com/733-104/037-000




Color: light gray

Similar to illustration




Dimensions in mm
L = pole no. x pin spacing

Female connector, 733 Series, light gray

This female connector (item number 733-104/037-000) is designed for seamless electrical installations. Ensure that the strip lengths are between 5 and 6 mm when connecting conductors to this female connector. Featuring one conductor terminal along with CAGE CLAMP®, this connector outperforms the competition. Our highly-rated and maintenance-free CAGE CLAMP® connection makes it easy to connect all types of conductors without having to prepare the conductor. For example, you don't need to crimp ferrules. Dimensions: (21.8 x 11.8 x 17.1) mm (width x height x depth). Depending on the conductor type, this female connector is ideal for conductor cross sections ranging from 0.08 mm² to 0.5 mm².

The contact surface is coated with tin.

## 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>Gold-plated or partially gold-plated contact surfaces<br>Other versions (or variants) can be requested from WAGO Sales or configured at https://configurator.wago.com/. |

## Electrical data

| Ratings per | IEC/EN 60664-1 | | |
|---|---|---|---|
| Overvoltage category | III | III | II |
| Pollution degree | 3 | 2 | 2 |
| Nominal voltage | 100 V | 160 V | 320 V |
| Rated impulse withstand voltage | 2.5 kV | 2.5 kV | 2.5 kV |
| Rated current | 6 A | 6 A | 6 A |

| Approvals per | UL 1059 | | |
|---|---|---|---|
| Use group | B | C | D |
| Rated voltage | 150 V | - | - |
| Rated current | 4 A | - | - |

| Approvals per | CSA | | |
|---|---|---|---|
| Use group | B | C | D |
| Rated voltage | 150 V | - | - |
| Rated current | 4 A | - | - |

## Connection Data

| | |
|---|---|
| Clamping units | 4 |
| Total number of potentials | 4 |
| Number of connection types | 1 |
| Number of levels | 1 |

### Connection 1

| | |
|---|---|
| Connection technology | CAGE CLAMP® |
| Actuation type | Operating tool |
| Actuation direction 1 | Operation parallel to conductor entry |
| Actuation direction 2 | Operation perpendicular to conductor entry |
| Solid conductor | 0.08 … 0.5 mm² / 28 … 20 AWG |
| Fine-stranded conductor | 0.08 … 0.5 mm² / 28 … 20 AWG |
| Fine-stranded conductor; with insulated ferrule | 0.25 … 0.34 mm² |
| Fine-stranded conductor; with uninsulated ferrule | 0.25 … 0.34 mm² |
| Strip length | 5 … 6 mm / 0.2 … 0.24 inches |
| Pole number | 4 |
| Conductor entry direction to mating direction | 0 ° |

## Physical data

| | |
|---|---|
| Pin spacing | 2.5 mm / 0.098 inches |
| Width | 21.8 mm / 0.858 inches |
| Height | 11.8 mm / 0.465 inches |
| Depth | 17.1 mm / 0.673 inches |

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## Mechanical data

| | |
|---|---|
| Variable coding | Yes |
| Anti-rotation protection | Yes |

## Plug-in connection

| | |
|---|---|
| Contact type (pluggable connector) | Female connector/socket |
| Connector (connection type) | for conductor |
| Mismating protection | Yes |
| Locking of plug-in connection | Locking lever |

## Material data

| | |
|---|---|
| Note (material data) | Information on material specifications can be found here |
| Color | light gray |
| Material group | I |
| Insulation material (main housing) | Polyamide (PA66) |
| Flammability class per UL94 | V0 |
| Clamping spring material | Chrome-nickel spring steel (CrNi) |
| Contact material | Copper alloy |
| Contact Plating | Tin |
| Fire load | 0.042 MJ |
| Weight | 2.2 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 | $f_1$ = 5 Hz to $f_2$ = 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 | $f_1$ = 5 Hz to $f_2$ = 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 |
| Acceleration | 5g (highest test level used for all axes) |

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## Environmental Testing

| | |
|---|---|
| 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 | DE |
| GTIN | 4045454215606 |
| Customs tariff number | 85366990990 |

## Product Classification

| | |
|---|---|
| UNSPSC | 39121409 |
| eCl@ss 10.0 | 27-44-03-09 |
| eCl@ss 9.0 | 27-44-03-09 |
| ETIM 9.0 | EC002638 |
| ETIM 10.0 | EC002638 |
| ECCN | NO US CLASSIFICATION |

## Environmental Product Compliance

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

## Approvals / Certificates

### 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 |
|---|---|---|
| BV<br>Bureau Veritas S.A. | IEC 60998 | 11915/E0 BV |

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## Downloads

### Environmental Product Compliance

**Compliance Search**

Environmental Product Compliance
733-104/037-000

### Documentation

**Additional Information**

| | | | |
|---|---|---|---|
| Technical Section | 03.04.2019 | pdf<br>2027.26 KB | |

### CAD/CAE-Data

**CAD data**

2D/3D Models
733-104/037-000

**CAE data**

EPLAN Data Portal
733-104/037-000

ZUKEN Portal
733-104/037-000

## 1 Compatible Products

### 1.1 System counterpart

#### 1.1.1 Male connector/plug

Item No.: 733-204
1-conductor male connector; CAGE CLAMP®; 0.5 mm²; Pin spacing 2.5 mm; 4-pole; 100% protected against mismating; light gray

Item No.: 733-364
THT male header; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismating; Pin spacing 2.5 mm; 4-pole; light gray

Item No.: 733-334
THT male header; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismating; Pin spacing 2.5 mm; 4-pole; light gray

### 1.2 Optional Accessories

#### 1.2.1 Ferrule

##### 1.2.1.1 Ferrule

Item No.: 216-321
Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow

Item No.: 216-151
Ferrule; Sleeve for 0.25 mm² / AWG 24; uninsulated; electro-tin plated; silver-colored



Item No.: 216-322
Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise

Item No.: 216-152
Ferrule; Sleeve for 0.34 mm² / 22 AWG; uninsulated; electro-tin plated; silver-colored


Continued on next page

## 1.2.2 Marking

### 1.2.2.1 Marking strip

**Item No.: 210-331/250-202**
Marking strips; as a DIN A4 sheet; MARKED; 1-16 (400x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive; white

**Item No.: 210-331/250-207**
Marking strips; as a DIN A4 sheet; MARKED; 1-48 (100x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive; white

**Item No.: 210-331/250-204**
Marking strips; as a DIN A4 sheet; MARKED; 17-32 (400x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive; white

**Item No.: 210-331/250-206**
Marking strips; as a DIN A4 sheet; MARKED; 33-48 (400x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive; white

## 1.2.3 Strain relief

### 1.2.3.1 Strain relief plate



**Item No.: 734-127**
Strain relief plate; for female and male connectors; 6 mm wide; 1 part; Pin spacing 3.5 mm; light gray

## 1.2.4 Test and measurement

### 1.2.4.1 Testing accessories

**Item No.: 735-500**
WAGO Test pin; 1 mm Ø; 30 V AC / 60 V DC; CAT0; 1 A; 6 mm uninsulated; Test lead for soldering up to 0,5mm²

## 1.2.5 Tool

### 1.2.5.1 Operating tool

**Item No.: 210-719**
Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft

**Item No.: 210-251**
Operating tool; for MCS MICRO and MINI with CAGE CLAMP® connection; yellow

**Item No.: 233-335**
Operating tool; green

**Item No.: 233-331**
Operating tool; insulated; yellow

**Item No.: 733-130**
Operating tool; made of insulating material; 1-way; loose; white

**Item No.: 733-191**
Operating tool; made of insulating material; 1-way; loose; yellow

**Item No.: 233-332**
Operating tool; made of insulating material; white

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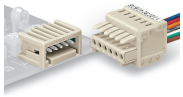
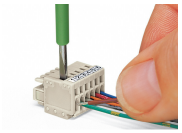
## Installation Notes

### Mismating protection

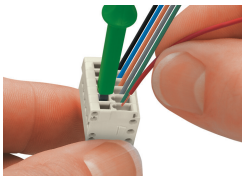


Male headers and female connectors are 100% protected against mismating.
Only mating halves with the same pole number can be connected.

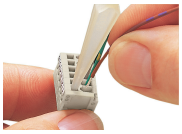
### Conductor termination

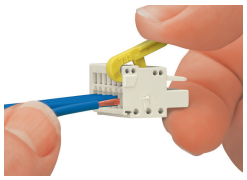


Inserting conductor via (2.5 x 0.4) mm screwdriver – CAGE CLAMP® actuation perpendicular to conductor entry.

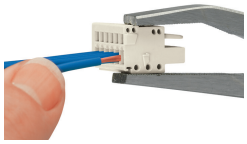


Conductor termination via screwdriver (233-335) – parallel to CAGE CLAMP® actuation





Conductor termination via operating tool (733-191)



Conductor termination via operating tool (210-251)

### Coding

Coding a female connector – removing coding finger(s).

### Marking

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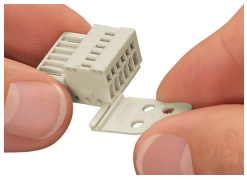
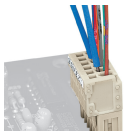
## Strain relief



Strain relief plates for factory or in-the-field assembly

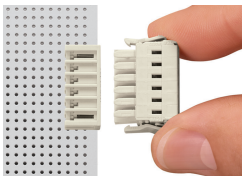
## Testing



Testing via 1 mm Ø test pin (735-500), touch contact.

## Locking system

Locking levers prevent accidental disconnection.



Locking levers prevent accidental disconnection.