

## Data Sheet | Item Number: 733-105

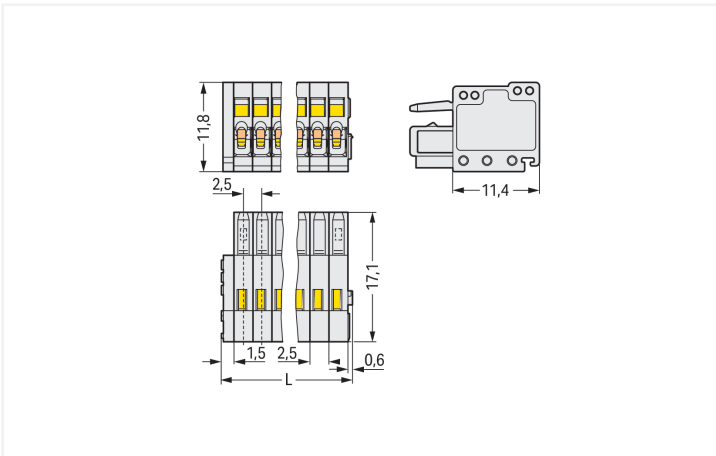
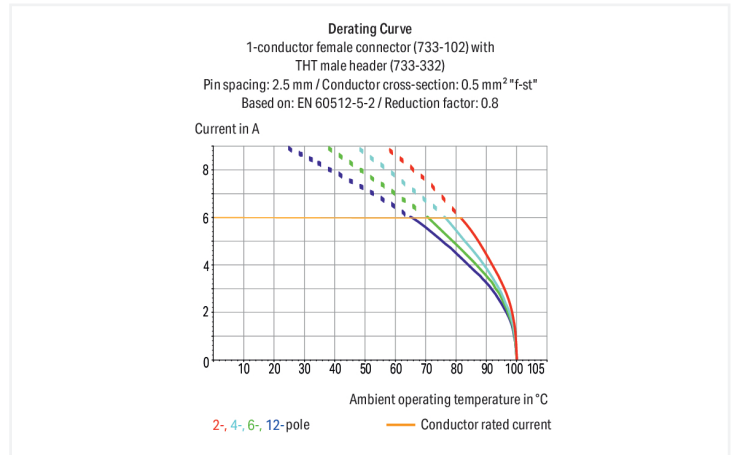
1-conductor female connector; CAGE CLAMP®; 0.5 mm<sup>2</sup>; Pin spacing 2.5 mm; 5-pole;  
100% protected against mismatching; light gray

<https://www.wago.com/733-105>



Color: ■ light gray

Similar to illustration



Dimensions in mm

$L = (\text{pole no.} \times \text{pin spacing}) + 2.1 \text{ mm}$

Female connector, 733 Series, CAGE CLAMP®

Our female connector (item number 733-105) is designed for seamless electrical installations. Conductors can only be connected to this female connector if their strip length is between 5 and 6 mm. This product features one conductor terminal and utilizes CAGE CLAMP®. Our CAGE CLAMP® connection provides a secure and maintenance-free way to connect all types of conductors. You do not need to prepare the conductor in any way, such as crimping ferrules. The item's dimensions are (14.6 x 11.8 x 17.1) mm (width x height x depth). This female connector is suitable for conductor cross sections ranging from 0.08 mm<sup>2</sup> to 0.5 mm<sup>2</sup>.

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  
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

Ratings per	IEC/EN 60664-1		
Oversoltage 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	5
Total number of potentials	5
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 mm <sup>2</sup> / 28 ... 20 AWG
Fine-stranded conductor	0.08 ... 0.5 mm <sup>2</sup> / 28 ... 20 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 0.34 mm <sup>2</sup>
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 0.34 mm <sup>2</sup>
Strip length	5 ... 6 mm / 0.2 ... 0.24 inches
Pole number	5
Conductor entry direction to mating direction	0°

## Physical data

Pin spacing	2.5 mm / 0.098 inches
Width	14.6 mm / 0.574 inches
Height	11.8 mm / 0.465 inches
Depth	17.1 mm / 0.673 inches

### 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

### 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
Clamping spring material	Chrome-nickel spring steel (CrNi)
Contact material	Copper alloy
Contact Plating	Tin
Fire load	0.036 MJ
Weight	2.3 g

### Environmental requirements

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

### Environmental Testing

Test specification: Railway applications – Rolling stock – Electronic equipment	DIN EN 50155 (VDE 0115-200):2022-06
Test procedure: Railway applications – Rolling stock equipment – 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	$f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$
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	$f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$
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)
Shock duration	30 ms

### Environmental Testing

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	4044918294034
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
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### Approvals / Certificates

#### General approvals



Approval	Standard	Certificate Name
CCA DEKRA Certification B.V.	EN 61984	2169534.01
CCA DEKRA Certification B.V.	IEC 61984	NL-31141
CSA DEKRA Certification B.V.	C22.2	1465035
UL UL International Germany GmbH	UL 1977	E45171
UL Underwriters Laboratories Inc.	UL 1059	UL-US-L45172-6187124-1

#### Declarations of conformity and manufacturer's declarations



Approval	Standard	Certificate Name
Railway WAGO GmbH & Co. KG	-	Railway Ready

Approvals for marine applications



Approval	Standard	Certificate Name
ABS American Bureau of Shipping	-	24-0095975-PDA
DNV DNV GL SE	-	TAE000016Z
LR Lloyds Register	IEC 61984	96/20035 (E5)
PRS Polski Rejestr Statków	-	TE/1095/880590/23

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 733-105



Documentation

Additional Information

Technical Section

03.04.2019

pdf

2027.26 KB



CAD/CAE-Data

CAD data

2D/3D Models 733-105



CAE data

EPLAN Data Portal 733-105



ZUKEN Portal 733-105



1 Compatible Products

1.1 System counterpart

1.1.1 Male connector/plug



**Item No.: 733-205**

1-conductor male connector; CAGE CLAMP®; 0.5 mm²; Pin spacing 2.5 mm; 5-pole; 100% protected against mismatching; light gray



**Item No.: 733-205/033-000**

1-conductor male connector; CAGE CLAMP®; 0.5 mm²; Pin spacing 2.5 mm; 5-pole; 100% protected against mismatching; Strain relief plate; 0,50 mm²; light gray



**Item No.: 733-365/105-604/997-406**

THR male header; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; in tape-and-reel packaging; Pin spacing 2.5 mm; 5-pole; black



**Item No.: 733-365/105-604**

THR male header; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; Pin spacing 2.5 mm; 5-pole; black



**Item No.: 733-335/105-604/997-446**

THR male header; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; in tape-and-reel packaging; Pin spacing 2.5 mm; 5-pole; black



**Item No.: 733-335/105-604**

THR male header; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; Pin spacing 2.5 mm; 5-pole; black



**Item No.: 733-365**

THT male header; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; Pin spacing 2.5 mm; 5-pole; light gray



**Item No.: 733-335**

THT male header; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; Pin spacing 2.5 mm; 5-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 mm<sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow



**Item No.: 216-151**

Ferrule; Sleeve for 0.25 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated; silver-colored



**Item No.: 216-322**

Ferrule; Sleeve for 0.34 mm<sup>2</sup> / 22 AWG; insulated; electro-tin plated; light turquoise



**Item No.: 216-152**

Ferrule; Sleeve for 0.34 mm<sup>2</sup> / 22 AWG; uninsulated; electro-tin plated; silver-colored

### 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.: 734-128**

Strain relief plate; for female and male connectors; 12.5 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 0,5mm<sup>2</sup>

### 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

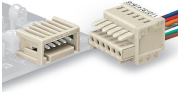


**Item No.: 233-332**

Operating tool; made of insulating material; 1-way; white

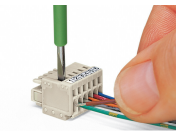
## Installation Notes

### Mismatching protection

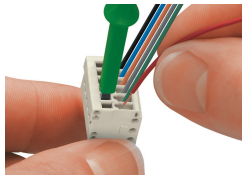


Male headers and female connectors are 100% protected against mismatching. Only mating halves with the same pole number can be connected.

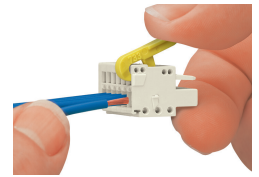
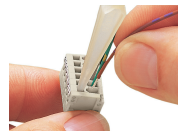
### Conductor termination



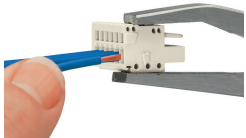
Inserting conductor via (2.5 x 0.4) mm screwdriver – CAGE CLAMP® actuation perpendicular to conductor entry.



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

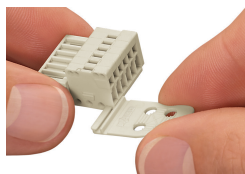


Coding a female connector – removing coding finger(s).

### Marking



## Strain relief



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

## Testing



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