

## Data Sheet | Item Number: 733-210

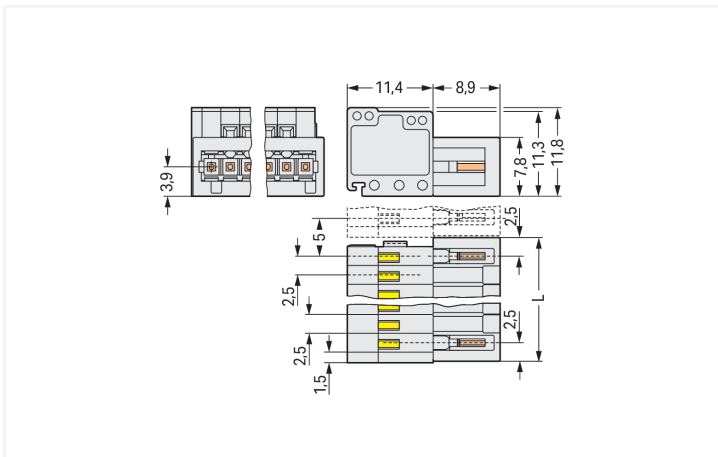
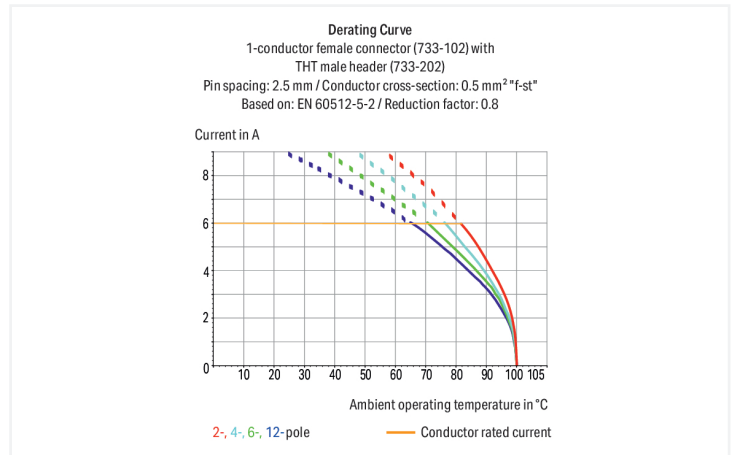
1-conductor male connector; CAGE CLAMP®; 0.5 mm<sup>2</sup>; Pin spacing 2.5 mm; 10-po-  
le; 100% protected against mismatching; light gray

<https://www.wago.com/733-210>



Color: ■ light gray

Similar to illustration



Dimensions in mm

L = (Pole no. + 1) x Pin spacing

### Male connector, 733 Series, light gray

Our male connector (item number 733-210) ensures effortless electrical installations. Strip lengths must be between 5 and 6 mm when connecting conductors to this male connector. This product features one conductor terminal and utilizes CAGE CLAMP®. Our CAGE CLAMP® connection offers a dependable 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 dimensions are (27.5 x 11.8 x 20.3) mm (width x height x depth). Depending on the type of conductor, this male connector is suitable for conductor cross sections ranging from 0.08 mm<sup>2</sup> to 0.5 mm<sup>2</sup>.

Tin is used for coating the contact surfaces.

## 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			Approvals per	UL 1059		
	III	III	II		Use group	B	C
Overvoltage category	III	III	II	Use group	B	C	D
Pollution degree	3	2	2	Rated voltage	150 V	-	-
Nominal voltage	100 V	160 V	320 V	Rated current	4 A	-	-
Rated impulse withstand voltage	2.5 kV	2.5 kV	2.5 kV				
Rated current	6 A	6 A	6 A				

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

## Connection Data

Clamping units	10	<b>Connection 1</b>	
Total number of potentials	10	Connection technology	CAGE CLAMP®
Number of connection types	1	Actuation type	Operating tool
Number of levels	1	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	10
		Conductor entry direction to mating direction	0°

## Physical data

Pin spacing	2.5 mm / 0.098 inches
Width	27.5 mm / 1.083 inches
Height	11.8 mm / 0.465 inches
Depth	20.3 mm / 0.799 inches

### Mechanical data

Variable coding	Yes
Anti-rotation protection	Yes

### Plug-in connection

Contact type (pluggable connector)	Male connector/plug
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	Electrolytic copper (E <sub>Cu</sub> )
Contact Plating	Tin
Fire load	0.097 MJ
Weight	5 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 <sub>1</sub> = 5 Hz to f <sub>2</sub> = 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 <sub>1</sub> = 5 Hz to f <sub>2</sub> = 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)

**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	PL
GTIN	4044918849609
Customs tariff number	85366930000

**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

**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 Ship- ping	-	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 733-210 <a href="#">↓</a>

Documentation

Additional Information
Technical Section 03.04.2019 pdf 2027.26 KB <a href="#">↓</a>

CAD/CAE-Data

CAD data
2D/3D Models 733-210 <a href="#">↓</a>

CAE data
EPLAN Data Portal 733-210 <a href="#">↓</a>
ZUKEN Portal 733-210 <a href="#">↓</a>

1 Compatible Products

1.1 System counterpart

1.1.1 Female connector/socket



**Item No.: 733-110/037-000**  
 1-conductor female connector; CAGE CLAMP®; 0.5 mm<sup>2</sup>; Pin spacing 2.5 mm; 10-pole; 100% protected against mismatching; Lateral locking levers; light gray

**Item No.: 733-110**  
 1-conductor female connector; CAGE CLAMP®; 0.5 mm<sup>2</sup>; Pin spacing 2.5 mm; 10-pole; 100% protected against mismatching; light gray

## 1.2 Optional Accessories

### 1.2.1 Coding

#### 1.2.1.1 Coding



**Item No.: 733-331**

Coding key; snap-on type; black

**Item No.: 733-330**

Coding key; snap-on type; white

### 1.2.2 Ferrule

#### 1.2.2.1 Ferrule



**Item No.: 216-301**

Ferrule; Sleeve for 0.25 mm<sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow

**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

**Item No.: 216-131**

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



**Item No.: 216-302**

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

**Item No.: 216-322**

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

**Item No.: 216-132**

Ferrule; Sleeve for 0.34 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated

**Item No.: 216-152**

Ferrule; Sleeve for 0.34 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated

### 1.2.3 Strain relief

#### 1.2.3.1 Strain relief plate



**Item No.: 734-129**

Strain relief plate; for female and male connectors; 25 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

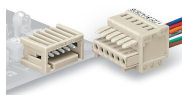


**Item No.: 233-332**

Operating tool; made of insulating material; white

## Installation Notes

### Mismatching protection

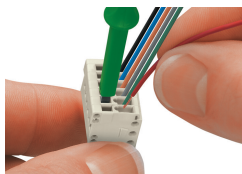


Male headers and female connectors are 100% protected against mismatching. Only mating halves with the same pole number can be connected.

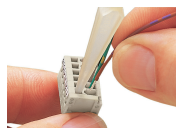
### Conductor termination



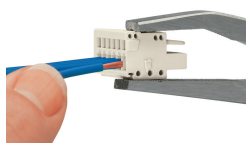
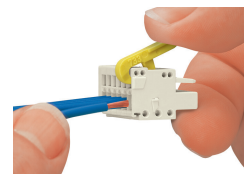
Inserting conductor via (2.5 x 0.4) mm screwdriver – CAGE CLAMP® actuation perpendicular to conductor entry.



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

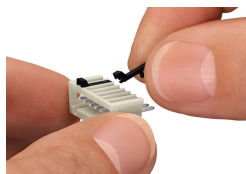


Conductor termination via operating tool (733-191)



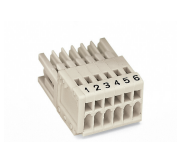
Conductor termination via operating tool (210-251)

### Coding

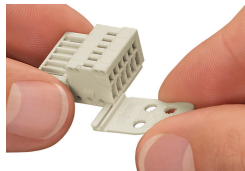


Coding a male header – fitting coding key(s).

## 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.