

Data Sheet | Item Number: 733-102

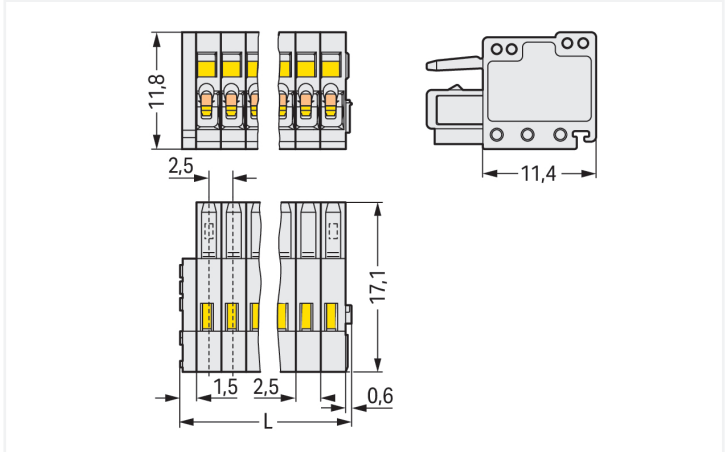
1-conductor female connector; CAGE CLAMP®; 0.5 mm²; Pin spacing 2.5 mm; 2-po-
le; 100% protected against mismatching; 0,50 mm²; light gray

<https://www.wago.com/733-102>



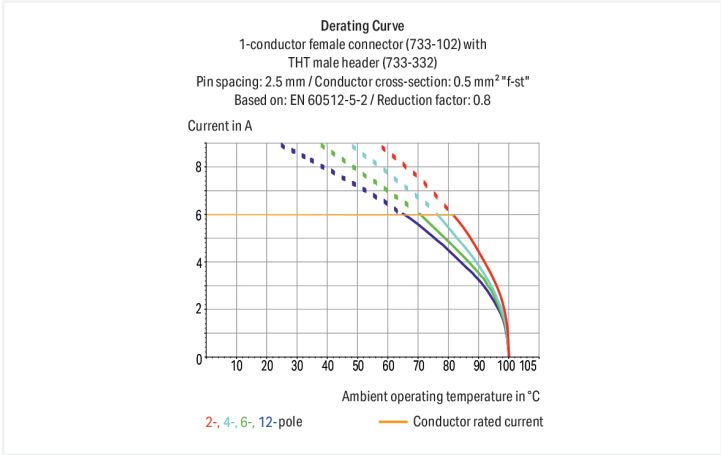
Color: ■ light gray

Similar to illustration



Dimensions in mm

L = (pole no. x pin spacing) + 2.1 mm



Federleiste/Buchse Serie 733, lichtgrau

Bei dieser Federleiste/Buchse mit der Artikelnummer 733-102 ist eine saubere Elektroinstallation der Fokus. Unsere Leiterplatten-Steckverbinder gewähren Ihnen die größtmögliche Flexibilität bei verschiedenen Montagearten. Für den Leiteranschluss werden bei dieser Federleiste/Buchse Abisolierlängen von 5 bis 6 mm benötigt. Bei diesem Produkt kommt die CAGE CLAMP®-Technologie zum Einsatz. Der zuverlässige und wartungsfreie CAGE CLAMP® Universalanschluss bietet die Möglichkeit, alle Arten von Leitern mit einer Käfigzugfeder anzuschließen, ohne, dass eine Vorbehandlung der Leiter erforderlich ist. Das Aufcrimpen von Aderendhülsen kann somit entfallen. Die Maße betragen in Breite x Höhe x Tiefe (7,1 x 11,8 x 17,1) mm. In Abhängigkeit von der Leiterart eignet sich die Federleiste/Buchse für Leiterquerschnitte von 0,08 mm² bis 0,5 mm². Die Kontaktoberfläche ist aus Zinn. Für diese Federleiste/Buchse erfolgt die Betätigung per Betätigungswerkzeug. Das MCS – "Multi Connection System" von WAGO umfasst insgesamt 7 Familien in den Rastermaßen 2,5 mm bis 10,16 mm und bietet mit dem Leiterquerschnittsbereich von 0,08 bis 25 mm² ein großes Portfolio an Einsatzmöglichkeiten.

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		
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 surge 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	2	Connection 1		
Total number of potentials	2	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 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	2	
		Conductor entry direction to mating direction	0°	

Physical data

Pin spacing	2.5 mm / 0.098 inches
Width	7.1 mm / 0.28 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)		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		0.018 MJ
Weight		1 g

Environmental requirements		
Limit temperature range	-60 ... +100 °C	Environmental Testing
Processing temperature	-35 ... +60 °C	
		Test specification: DIN EN 50155 (VDE 0115-200):2022-06 Railway applications – Rolling stock – Electronic equipment
		Test procedure: DIN EN 61373 (VDE 0115-0106):2011-04 Railway applications – Rolling stock equipment – Vibration and shock tests
		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
		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)	200 pcs	
Packaging type	Box	
Country of origin	DE	
GTIN	4044918293938	
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 8.0	EC002638	
ECCN	NO US CLASSIFICATION	

Environmental Product Compliance		
RoHS Compliance Status	Compliant, No Exemption	

Approvals / Certificates

General approvals			Declarations of conformity and manufacturer's declarations		
   					
Approval	Standard	Certificate Name	Approval	Standard	Certificate Name
CCA DEKRA Certification B.V.	EN 61984	2169534.01	Railway WAGO GmbH & Co. KG	-	Railway Ready
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	E45172			

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)



Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 733-102

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Documentation

Additional Information

Technical Section

03.04.2019

pdf

2027.26 KB

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CAD/CAE-Data

CAD data

2D/3D Models 733-102

↓

CAE data

EPLAN Data Portal 733-102

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ZUKEN Portal 733-102

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1 Compatible Products

1.1 System counterpart

1.1.1 Male connector/plug



Item No.: 733-202
1-conductor male connector; CAGE CLAMP®; 0.5 mm²; Pin spacing 2.5 mm; 2-pole; 100% protected against mismatching; 0,50 mm²; light gray



Item No.: 733-202/032-000
1-conductor male connector; CAGE CLAMP®; 0.5 mm²; Pin spacing 2.5 mm; 2-pole; 100% protected against mismatching; Strain relief plate; 0,50 mm²; light gray



Item No.: 733-362/105-604/997-406
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; 2-pole; black



Item No.: 733-362/105-604
THR male header; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; Pin spacing 2.5 mm; 2-pole; black



Item No.: 733-332/105-604/997-446
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; 2-pole; black



Item No.: 733-332/105-604
THR male header; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; Pin spacing 2.5 mm; 2-pole; black



Item No.: 733-362
THT male header; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; Pin spacing 2.5 mm; 2-pole; light gray



Item No.: 733-332
THT male header; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; Pin spacing 2.5 mm; 2-pole; light gray



1.2 Optional Accessories

1.2.1 Ferrule

1.2.1.1 Ferrule



Item No.: 216-301
Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow



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



Item No.: 216-131
Ferrule; Sleeve for 0.25 mm² / AWG 24; uninsulated; electro-tin plated; silver-colored



Item No.: 216-302
Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise



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



Item No.: 216-132
Ferrule; Sleeve for 0.34 mm² / AWG 24; uninsulated; electro-tin plated



Item No.: 216-152
Ferrule; Sleeve for 0.34 mm² / AWG 24; uninsulated; electro-tin plated

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



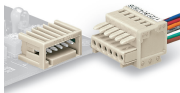
Item No.: 733-191
Operating tool; made of insulating material; 1-way; loose; yellow



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

Installation Notes

Mismating protection

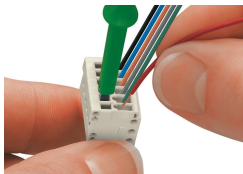


Male headers and female connectors are 100% protected against mismating. Only mating halves with the same pole number can be connected.

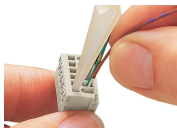
Conductor termination



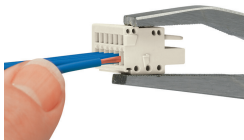
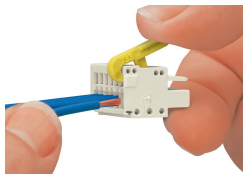
Inserting conductor via (2.5 x 0.4) mm screwdriver – CAGE CLAMP® actuation perpendicular to conductor entry.



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



Conductor termination via operating tool (733-191)



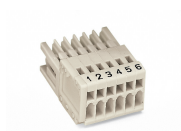
Conductor termination via operating tool (210-251)

Coding

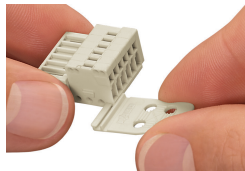


Coding a female connector – removing coding finger(s).

Marking



Strain relief



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

Testing



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