

Data Sheet | Item Number: 733-204

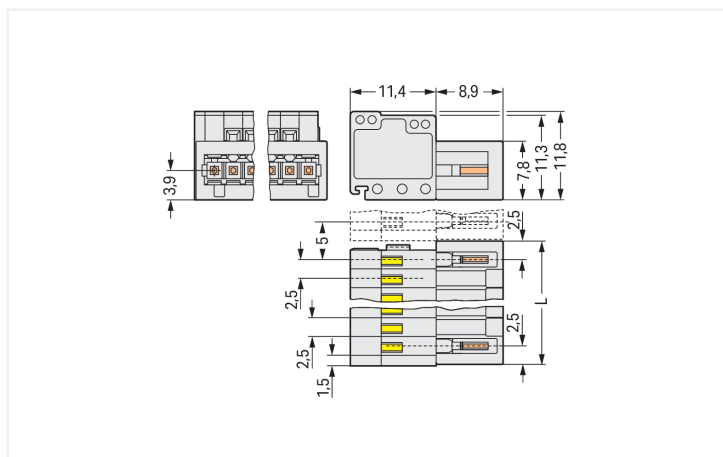
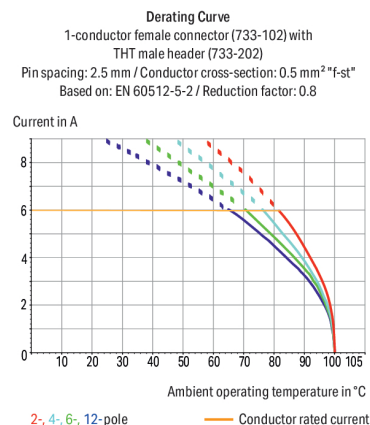
1-conductor male connector; CAGE CLAMP®; 0.5 mm²; Pin spacing 2.5 mm; 4-pole; 100% protected against mismatching; light gray

<https://www.wago.com/733-204>



Color: ■ light gray

Similar to illustration



Dimensions in mm

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

Male connector, 733 Series, 0° conductor exit to connection direction

This male connector (item number 733-204) is designed for hassle-free electrical installations. Conductors can only be connected to this male connector if their strip length is between 5 and 6 mm. This product features one conductor terminal and utilizes CAGE CLAMP®. Our trusted universal connection known as CAGE CLAMP® leads the way when it comes to connection technology and electrical interconnections. Dimensions: (12.5 x 11.8 x 20.3) mm (width x height x depth). This male connector is suitable for conductor cross sections ranging from 0.08 mm² to 0.5 mm².

The contact surface is coated with tin.

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	-	-

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 °

Pin spacing	2.5 mm / 0.098 inches
Width	12.5 mm / 0.492 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)	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	Electrolytic copper (E _{Cu})
Contact Plating	Tin
Fire load	0.041 MJ
Weight	2.1 g

Environmental requirements																																														
Limit temperature range	-60 ... +100 °C	<table><tr><th colspan="2">Environmental Testing</th></tr><tr><td>Test specification: Railway applications – Rolling stock – Electronic equipment</td><td>DIN EN 50155 (VDE 0115-200):2022-06</td></tr><tr><td>Test procedure: Railway applications – Rolling stock equipment – Vibration and shock tests</td><td>DIN EN 61373 (VDE 0115-0106):2011-04</td></tr><tr><td>Spectrum/Mounting location</td><td>Service life test, Category 1, Class A/B</td></tr><tr><td>Functional test with noise-like oscillations</td><td>Test passed according to Section 8 of the standard</td></tr><tr><td>Frequency</td><td>f₁ = 5 Hz to f₂ = 150 Hz</td></tr><tr><td>Acceleration</td><td>0.101g (highest test level used for all axes)</td></tr><tr><td>Test duration per axis</td><td>10 min.</td></tr><tr><td>Test directions</td><td>X, Y and Z axes</td></tr><tr><td>Monitoring of contact faults and interruptions</td><td>Passed</td></tr><tr><td>Voltage drop measurement before and after each axis</td><td>Passed</td></tr><tr><td>Simulated service life test through increased levels of noise-like oscillations</td><td>Test passed according to Section 9 of the standard</td></tr><tr><td>Frequency</td><td>f₁ = 5 Hz to f₂ = 150 Hz</td></tr><tr><td>Acceleration</td><td>0.572g (highest test level used for all axes)</td></tr><tr><td>Test duration per axis</td><td>5 h</td></tr><tr><td>Test directions</td><td>X, Y and Z axes</td></tr><tr><td>Extended testing: Monitoring of contact faults and interruptions</td><td>Passed</td></tr><tr><td>Extended testing: Voltage drop measurement before and after each axis</td><td>Passed</td></tr><tr><td>Shock test</td><td>Test passed according to Section 10 of the standard</td></tr><tr><td>Shock pulse form</td><td>Half sine</td></tr><tr><td>Acceleration</td><td>5g (highest test level used for all axes)</td></tr><tr><td>Shock duration</td><td>30 ms</td></tr></table>	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 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)	Shock duration	30 ms
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Processing temperature	-35 ... +60 °C																																													



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)	200 pcs	
Packaging type	Box	
Country of origin	PL	
GTIN	4044918849548	
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	

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	UL-US-L45172-6187124-1			



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 733-204



Documentation

Additional Information
Technical Section
03.04.2019
pdf 2027.26 KB



CAD/CAE-Data

CAD data
2D/3D Models 733-204



CAE data
EPLAN Data Portal 733-204
ZUKEN Portal 733-204



1 Compatible Products

1.1 System counterpart

1.1.1 Female connector/socket



Item No.: 733-104/037-000
1-conductor female connector; CAGE
CLAMP®; 0.5 mm²; Pin spacing 2.5 mm; 4-
pole; 100% protected against mismatching;
Lateral locking levers; light gray



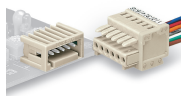
Item No.: 733-104
1-conductor female connector; CAGE
CLAMP®; 0.5 mm²; Pin spacing 2.5 mm; 4-
pole; 100% protected against mismatching;
light gray



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.: 216-321 Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow		Item No.: 216-322 Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise	
Item No.: 216-151 Ferrule; Sleeve for 0.25 mm² / AWG 24; uninsulated; electro-tin plated; silver-colored		Item No.: 216-152 Ferrule; Sleeve for 0.34 mm² / 22 AWG; uninsulated; electro-tin plated; silver-colored	
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.: 733-130 Operating tool; made of insulating material; 1-way; loose; white		Item No.: 233-335 Operating tool; green	
			
Item No.: 733-191 Operating tool; made of insulating material; 1-way; loose; yellow		Item No.: 233-331 Operating tool; insulated; yellow	
			
Item No.: 233-332 Operating tool; made of insulating material; white			

Installation Notes

Mismatching protection

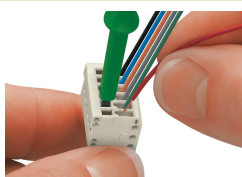


Male headers and female connectors are 100% protected against mismatching. Only mating halves with the same pole number can be connected.

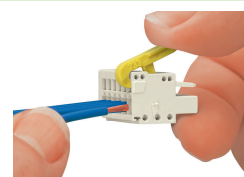
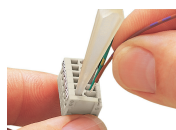
Conductor termination



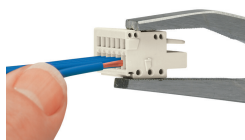
Inserting conductor via (2.5 x 0.4) mm screwdriver – CAGE CLAMP® actuation perpendicular to conductor entry.



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

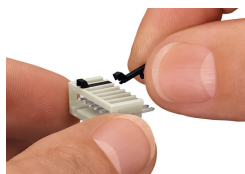


Conductor termination via operating tool (733-191)



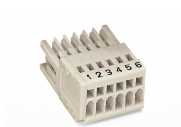
Conductor termination via operating tool (210-251)

Coding

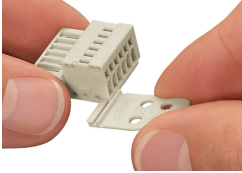


Coding a male header – fitting coding key(s).

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.