

Data Sheet | Item Number: 733-104

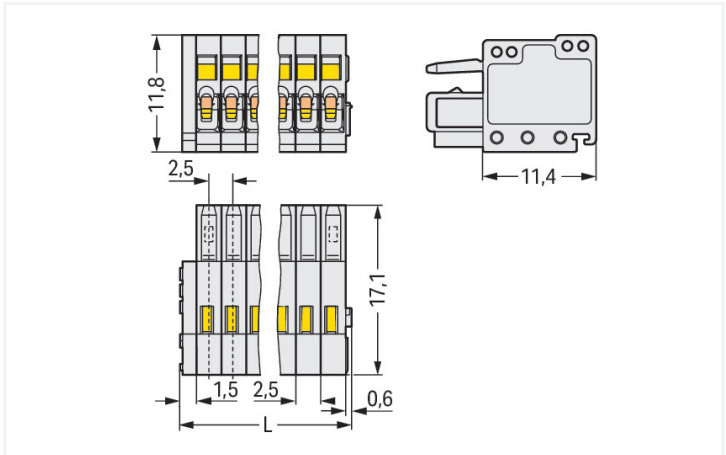
1-conductor female connector; CAGE CLAMP®; 0.5 mm²; Pin spacing 2.5 mm; 4-po-
le; 100% protected against mismatching; 0,50 mm²; light gray

<https://www.wago.com/733-104>



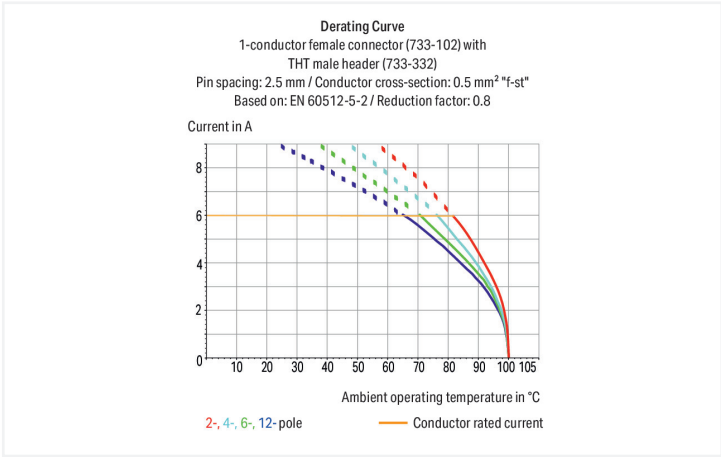
Color: light gray

Similar to illustration



Dimensions in mm

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



- Universal connection for all conductor types
- Easy cable pre-assembly and on-unit wiring via vertical and horizontal CAGE CLAMP® actuation
- Strain relief plates for factory and field assembly
- 100% protected against mismatching
- Coding option available

Notes	
Safety information 1	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	
Ratings per	IEC/EN 60664-1
Nominal voltage (III/3)	100 V
Rated impulse voltage (III/3)	2.5 kV
Rated voltage (III/2)	160 V
Rated impulse voltage (III/2)	2.5 kV
Nominal voltage (II/2)	320 V
Rated surge voltage (II/2)	2.5 kV
Rated current	6 A
Legend (ratings)	(III / 2) ≙ Overvoltage category III / Pollution degree 2

Ratings per UL 1059	
Approvals per	UL 1059
Rated voltage UL (Use Group B)	150 V
Rated current UL (Use Group B)	4 A

Ratings per CSA	
Approvals per	CSA
Rated voltage CSA (Use Group B)	150 V
Rated current CSA (Use Group B)	4 A

Connection data			
Connection points	4	Connection 1	
Total number of potentials	4	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	4
		Conductor entry direction to mating direction	0 °

Physical data	
Pin spacing	2.5 mm / 0.098 inches
Width	12.1 mm / 0.476 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	Polyamide (PA66)
Flammability class per UL94	V0
Clamping spring material	Chrome-nickel spring steel (CrNi)
Contact material	Copper alloy
Contact plating	Tin
Fire load	0.034 MJ
Weight	1.8 g

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

Commercial data	
Product Group	3 (Multi Conn. System)
eCl@ss 10.0	27-44-03-09
eCl@ss 9.0	27-44-03-09
ETIM 8.0	EC002638
ETIM 7.0	EC002638
PU (SPU)	200 pcs
Packaging type	Box
Country of origin	DE
GTIN	4044918294003
Customs tariff number	85366990990

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			
UR Underwriters Laboratories Inc.	UL 1059	E45172			



Approvals for marine applications



Approval	Standard	Certificate Name
ABS American Bureau of Ship- ping	-	19-HG1869876-PDA
DNV GL Det Norske Veritas, Ger- manischer Lloyd	-	TAE000016Z
LR Lloyds Register	IEC 61984	96/20035 (E5)

Downloads

Environmental Product Compliance

Compliance Search
Environmental Product Compliance 733-104

Documentation

Additional Information
Technical Section
03.04.2019
pdf
1949.09 KB

CAD/CAE-Data

CAD data
2D/3D Models 733-104

CAE data
EPLAN Data Portal 733-104
ZUKEN Portal 733-104

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;
0,50 mm²; light gray



[Item No.: 733-204/032-000](#)
1-conductor male connector; CAGE
CLAMP®; 0.5 mm²; Pin spacing 2.5 mm; 4-
pole; 100% protected against mismating;
Strain relief plate; 0,50 mm²; light gray



[Item No.: 733-364/105-604/997-406](#)
THR male header; 0.8 x 0.8 mm solder pin;
angled; 100% protected against mismat-
ting; in tape-and-reel packaging; Pin spa-
cing 2.5 mm; 4-pole; black



[Item No.: 733-364/105-604](#)
THR male header; 0.8 x 0.8 mm solder pin;
angled; 100% protected against mismat-
ting; Pin spacing 2.5 mm; 4-pole; black



[Item No.: 733-334/105-604/997-446](#)
THR male header; 0.8 x 0.8 mm solder pin;
straight; 100% protected against mismat-
ting; in tape-and-reel packaging; Pin spa-
cing 2.5 mm; 4-pole; black



[Item No.: 733-334/105-604](#)
THR male header; 0.8 x 0.8 mm solder pin;
straight; 100% protected against mismat-
ting; Pin spacing 2.5 mm; 4-pole; black



[Item No.: 733-364](#)
THT male header; 0.8 x 0.8 mm solder pin;
angled; 100% protected against mismat-
ting; 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 mismat-
ting; Pin spacing 2.5 mm; 4-pole; light gray



1.2 Optional Accessories

1.2.1 Ferrule

1.2.1.1 Ferrule



Item No.: 216-301
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



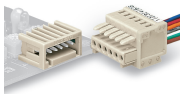
Item No.: 733-191
Operating tool; made of insulating material; 1-way; loose; yellow



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

Installation Notes

Mismating protection

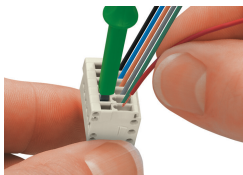


Male headers and female connectors are 100% protected against mismating. Only mating halves with the same pole number can be connected.

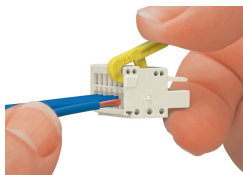
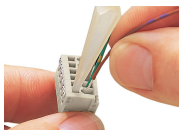
Conductor termination



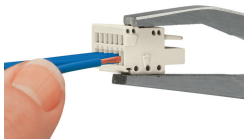
Inserting conductor via (2.5 x 0.4) mm screwdriver – CAGE CLAMP® actuation perpendicular to conductor entry.



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



Conductor termination via operating tool (733-191)



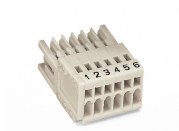
Conductor termination via operating tool (210-251)

Coding

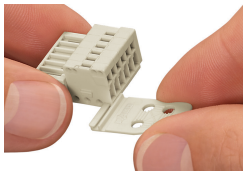


Coding a female connector – removing coding finger(s).

Marking



Installation



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

Testing



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