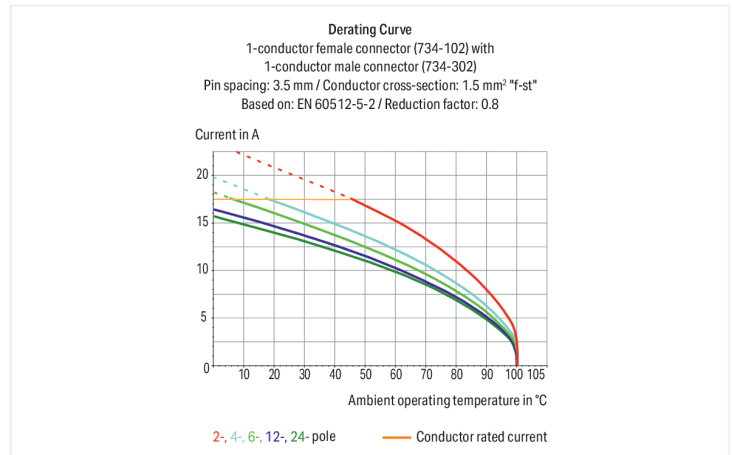


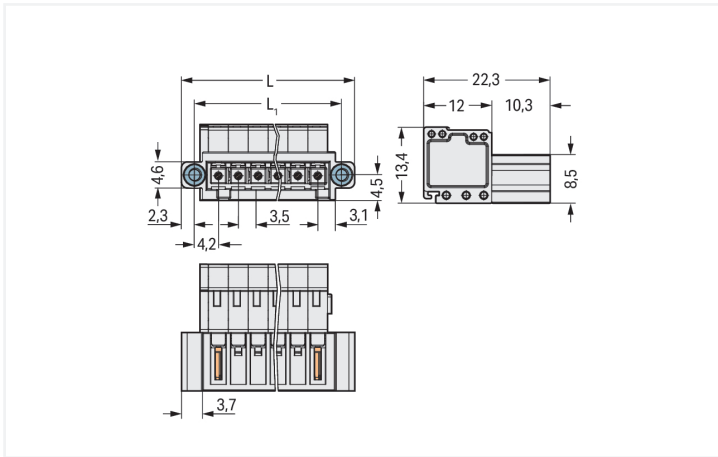
Data Sheet | Item Number: 734-311/109-000

1-conductor male connector; CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 11-pole; 100% protected against mismatching; Threaded flange; light gray

<https://www.wago.com/734-311/109-000>



Color: ■ light gray



Dimensions in mm

$L = (\text{pole no.} \times \text{pin spacing}) + 9.5$ mm
 $L_1 = (\text{pole no.} \times \text{pin spacing}) + 4.9$ mm

Male connector, 734 Series, CAGE CLAMP®

Error-free electrical installations are guaranteed with this male connector (item number 734-311/109-000). Conductors can only be connected to this male connector if their strip length is between 6 and 7 mm. This product incorporates one conductor terminal and utilizes CAGE CLAMP®. Our CAGE CLAMP® connection provides 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. Dimensions: (48 x 13.4 x 22.3) 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 mm² to 1.5 mm².

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		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Nominal voltage	160 V	160 V	320 V
Rated impulse withstand voltage	2.5 kV	2.5 kV	2.5 kV
Rated current	10 A	10 A	10 A

Approvals per	UL 1059		
Use group	B	C	D
Rated voltage	300 V	-	300 V
Rated current	10 A	-	10 A

Approvals per	CSA		
Use group	B	C	D
Rated voltage	300 V	-	300 V
Rated current	10 A	-	10 A

Connection Data

Clamping units	11
Total number of potentials	11
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 ... 1.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 1.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 1.5 mm ²
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 1.5 mm ²
Note (conductor cross-section)	Terminating 1.5 mm ² conductors is possible; however insulation diameter does not allow clamping units to be terminated in a row.
Strip length	6 ... 7 mm / 0.24 ... 0.28 inches
Pole number	11
Conductor entry direction to mating direction	0°

Physical data

Pin spacing	3.5 mm / 0.138 inches
Width	48 mm / 1.89 inches
Height	13.4 mm / 0.528 inches
Depth	22.3 mm / 0.878 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
Locking of plug-in connection	Threaded flange

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	0.165 MJ
Weight	9.7 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

Environmental Testing

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)	50 pcs
Packaging type	Box
Country of origin	PL
GTIN	4055143266468
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,With Exemption
RoHS Exemption	6(c)
SCIP notification number (Austria)	4349cc5f-f023-4579-b1b0-c8faaa9f382d
SCIP notification number (Belgium)	730d13b7-5884-4557-90d7-551778c47ff5
SCIP notification number (Bulgaria)	04542c40-7f20-40ee-b5c5-b7f322d51e05
SCIP notification number (Czech Republic)	aec71a4a-c0ca-4b25-9e9a-6b29cdc6ff72
SCIP notification number (Denmark)	7e911d79-79d5-40bc-811d-c069f0b4eb35
SCIP notification number (Finland)	06fad7b-2baf-4a80-a55b-6044e24c9240
SCIP notification number (France)	da3b298d-6282-487c-915a-e8595165c5c4
SCIP notification number (Germany)	60b4cc40-d092-4436-ae88-aab2a440abf0
SCIP notification number (Hungary)	c3628eb1-22de-4ed0-b9b3-690cf5b32bce
SCIP notification number (Italy)	6f48bde7-063d-4263-bc29-9842cff9c074
SCIP notification number (Netherlands)	80c63a65-adc1-4411-beb6-8b16c2c0ff5b
SCIP notification number (Poland)	825935ba-f341-47a2-9eae-711bac56e9c7
SCIP notification number (Romania)	77af77fe-a434-401c-82bc-014e05c399dc
SCIP notification number (Sweden)	bfd338c9-34bf-4c80-8d6f-905945eab7af

Approvals / Certificates

General approvals



Approval	Standard	Certificate Name
CB DEKRA Certification B.V.	EN 61984	NL-54190
CSA DEKRA Certification B.V.	C22.2	1465035
KEMA/KEUR DEKRA Certification B.V.	EN 61984	71-105522
UL Underwriters Laboratories Inc.	UL 1977	E 45171

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
BV Bureau Veritas S.A.	IEC 60998	11915/E0 BV
DNV DNV GL SE	-	TAE000016Z
PRS Polski Rejestr Statków	-	TE/1095/880590/23

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product
Compliance
734-311/109-000



Documentation

Additional Information

Technical Section	03.04.2019	pdf 2027.26 KB	
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CAD/CAE-Data

CAD data
 2D/3D Models
 734-311/109-000

CAE data
 ZUKEN Portal
 734-311/109-000

1 Compatible Products

1.1 System counterpart

1.1.1 Female connector/socket



Item No.: 734-111/107-000
 1-conductor female connector; CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 11-pole; 100% protected against mismatching; Screw flange; light gray

Item No.: 2734-111/107-000
 1-conductor female connector; push-button; Push-in CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 11-pole; 100% protected against mismatching; Screw flange; light gray

1.2 Optional Accessories

1.2.1 Coding

1.2.1.1 Coding

Item No.: 734-130
 Coding key; to be snapped above top level; white

1.2.2 Cover

1.2.2.1 Cover

Item No.: 734-420
 Cover for male connectors; for 734 Series; IP20 protection; black

1.2.3 Ferrule

1.2.3.1 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.: 216-131
 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.: 216-201
 Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; electrolytic copper; acc. to DIN 46228, Part 4/09.90; white






Item No.: 216-241
 Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white

1.2.3.1 Ferrule

 Item No.: 216-221 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; insulated; electro-tin plated; white	 Item No.: 216-141 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92	 Item No.: 216-101 Ferrule; Sleeve for 0.5 mm ² / AWG 22; un-insulated; electro-tin plated; silver-colored	 Item No.: 216-121 Ferrule; Sleeve for 0.5 mm ² / AWG 22; un-insulated; electro-tin plated; silver-colored
 Item No.: 216-242 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray	 Item No.: 216-262 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray	 Item No.: 216-202 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; gray	 Item No.: 216-222 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; gray
 Item No.: 216-142 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92	 Item No.: 216-102 Ferrule; Sleeve for 0.75 mm ² / AWG 20; un-insulated; electro-tin plated; silver-colored	 Item No.: 216-122 Ferrule; Sleeve for 0.75 mm ² / AWG 20; un-insulated; electro-tin plated; silver-colored	 Item No.: 216-243 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red
 Item No.: 216-263 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red	 Item No.: 216-203 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; red	 Item No.: 216-223 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; red	 Item No.: 216-103 Ferrule; Sleeve for 1 mm ² / AWG 18; un-insulated; electro-tin plated
 Item No.: 216-143 Ferrule; Sleeve for 1 mm ² / AWG 18; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92	 Item No.: 216-123 Ferrule; Sleeve for 1 mm ² / AWG 18; un-insulated; electro-tin plated; silver-colored	 Item No.: 216-204 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; black	 Item No.: 216-224 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; black
 Item No.: 216-244 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black	 Item No.: 216-264 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black	 Item No.: 216-284 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black	 Item No.: 216-124 Ferrule; Sleeve for 1.5 mm ² / AWG 16; un-insulated; electro-tin plated
 Item No.: 216-144 Ferrule; Sleeve for 1.5 mm ² / AWG 16; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92; silver-colored	 Item No.: 216-104 Ferrule; Sleeve for 1.5 mm ² / AWG 16; un-insulated; electro-tin plated; silver-colored		

1.2.4 Marking

1.2.4.1 Marking strip

 Item No.: 210-332/350-202 Marking strips; as a DIN A4 sheet; MARKED; 1-16 (240x); Height of marker strip: 3 mm; Strip length 182 mm; Horizontal marking; Self-adhesive; white	 Item No.: 210-332/350-204 Marking strips; as a DIN A4 sheet; MARKED; 17-32 (240x); Height of marker strip: 3 mm; Strip length 182 mm; Horizontal marking; Self-adhesive; white	 Item No.: 210-332/350-206 Marking strips; as a DIN A4 sheet; MARKED; 33-48 (240x); Height of marker strip: 3 mm; Strip length 182 mm; Horizontal marking; Self-adhesive; white
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1.2.5 Test and measurement

1.2.5.1 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

1.2.6 Tool

1.2.6.1 Operating tool



Item No.: 734-190

Combination operating tool; natural



Item No.: 210-719

Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft



Item No.: 210-647

Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft; multicoloured



Item No.: 210-251

Operating tool; for MCS MICRO and MINI with CAGE CLAMP® connection; yellow



Item No.: 210-250

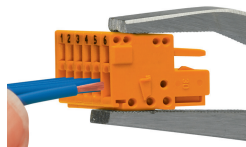
Operating tool; for MCS MINI and MIDI with CAGE CLAMP® connection; red

Item No.: 734-191

Operating tool; made of insulating material; 1-way; loose; black

Installation Notes

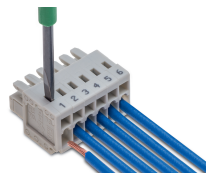
Conductor termination



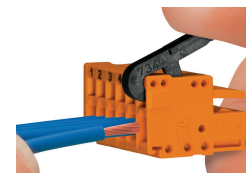
Inserting a conductor into CAGE CLAMP® unit via operating tool (210-251 or 210-250).



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

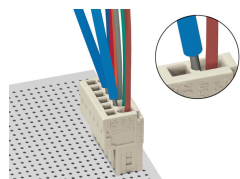


Inserting a conductor via (2.5 x 0.4) mm screwdriver – CAGE CLAMP® actuation perpendicular to conductor entry.



Inserting a conductor into CAGE CLAMP® unit via operating tool (734-191).

Testing



Testing via 1 mm Ø test pin (735-500) – CAGE CLAMP® connection – touch contact.

Marking



Labeling via direct marking or self-adhesive strips.

Installation



Strain relief housing for 734 Series Male and Female Connectors with CAGE CLAMP® connection