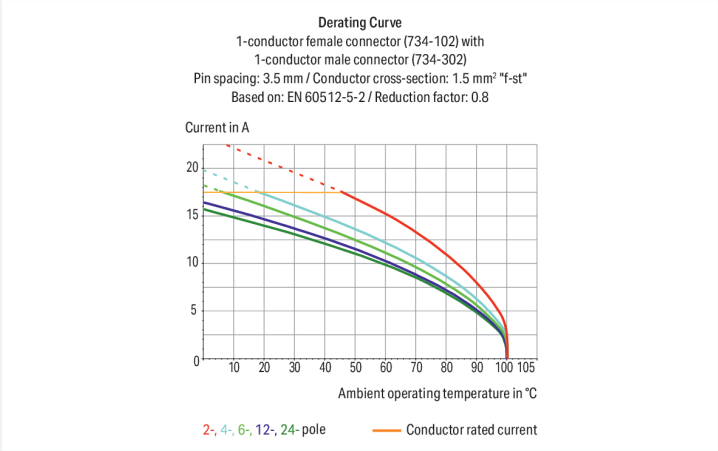
Data Sheet | Item Number: 734-320/109-000

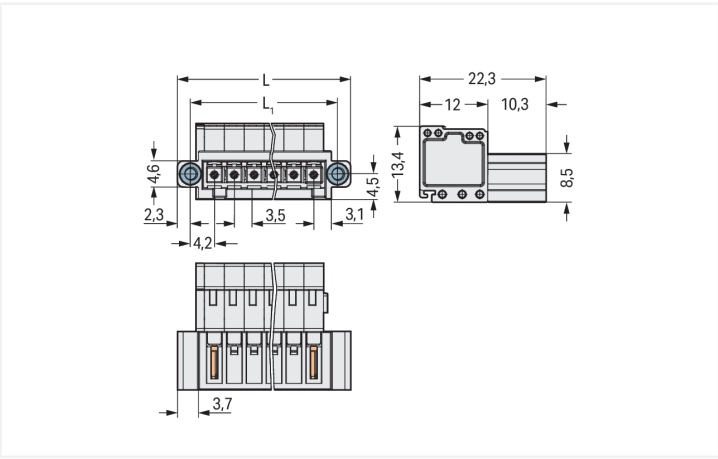
1-conductor male connector; CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 20-pole; 100% protected against mismating; Threaded flange; light gray

https://www.wago.com/734-320/109-000





Color: light gray



Dimensions in mm
L = (pole no. x pin spacing) + 9.5 mmL1 = (pole no. x pin spacing) + 4.9 mm

Male connector, 734 Series, CAGE CLAMP®

Our male connector (item number 734-320/109-000) ensures effortless electrical installations. 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 highly-rated and maintenance-free CAGE CLAMP® connection makes it easy to connect all types of conductors without having to prepare the conductor. For example, you don't need to crimp ferrules. Dimensions: (79.5 x 13.4 x 22.3) mm (width x height x depth). 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/.

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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	20
Total number of potentials	20
Number of connection types	1
Number of levels	1

Connection 1

Connection technology	CAGE CLAMP®
Actuation Method	Operating tool
Actuation direction 1	Operation parallel to conductor entry
Actuation direction 2	Operation perpendicular to conductor entry
Solid conductor	0.08 … 1.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 1.5 mm² / 28 … 14 AWG
Fine-stranded conductor; with insulated ferrule	0.25 … 1.5 mm²
Fine-stranded conductor; with uninsulated ferrule	0.25 … 1.5 mm²
Note (conductor cross-section)	Terminating 1.5 mm² 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
Number of poles	20
Conductor entry direction to mating direction	0 °

Physical data

Pin spacing	3.5 mm / 0.138 inches
Width	79.5 mm / 3.13 inches
Height	13.4 mm / 0.528 inches
Depth	22.3 mm / 0.878 inches

Mechanical data

Variable coding	Yes
Anti-rotation protection	Yes

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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	0.258 MJ
Weight	16.8 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 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
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

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Environmental Testing

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)	25 pcs
Packaging type	Box
Country of origin	PL
GTIN	4055143266512
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)	778d44e1-9f4f-4045-a4dc-a33b834b5595
SCIP notification number (Belgium)	95aabd43-6d1c-44e6-bbc3-3899c1dee8e7
SCIP notification number (Bulgaria)	ccf0aa32-1ebc-4793-8cd2-bfdf4bf071ef
SCIP notification number (Czech Republic)	b6e53fec-e1f1-44f6-87dc-7ba1ff9a0ae0
SCIP notification number (Denmark)	21093f76-deb3-4b16-aa51-d27bfd64fc48
SCIP notification number (Finland)	ca85d895-507c-4d7a-bbd9-5c8d0194717e
SCIP notification number (France)	52d6b654-7783-48b4-83a5-3d6732567bb6
SCIP notification number (Germany)	d6468e23-381a-4523-a7dc-4cd39207d0bd
SCIP notification number (Hungary)	35c1ee78-28d9-480b-b23f-7da34f44e51c
SCIP notification number (Italy)	a4c37e71-adec-40c4-8534-4d8935a33556
SCIP notification number (Netherlands)	4822a2ec-58c2-43a9-adaa-7b0a89d69003
SCIP notification number (Poland)	646918cb-a9a3-4de3-b8de-447da8992f1d
SCIP notification number (Romania)	87243bc2-adc3-439e-99e2-ab41f26aab3c
SCIP notification number (Sweden)	85c8d1c0-2b15-4f5f-a11d-749301b206d8

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

General approvals

UL Underwriters Laboratories Inc.	UL 1977	E 45171
UL Underwriters Laboratories Inc.	UL 1059	UL-US-L45172-6187124-1

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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
734-320/109-000

Documentation

Additional Information

Technical Section — 03.04.2019 — pdf 2027.26 KB

CAD/CAE-Data

CAD data

2D/3D Models
734-320/109-000

CAE data

ZUKEN Portal
734-320/109-000

1 Compatible Products

1.1 System counterpart

1.1.1 Female connector/socket



Item No.: 734-120/107-000
1-conductor female connector; CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 20-pole; 100% protected against mismating; Screw flange; light gray



Item No.: 2734-120/107-000
1-conductor female connector; push-button; Push-in CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 20-pole; 100% protected against mismating; Screw flange; light gray

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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.: 216-321
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.: 216-322
Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise

Item No.: 216-132
Ferrule; Sleeve for 0.34 mm² / 22 AWG; uninsulated; electro-tin plated

Item No.: 216-221
Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white



Item No.: 216-121
Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated; silver-colored

Item No.: 216-222
Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray



Item No.: 216-122
Ferrule; Sleeve for 0.75 mm² / 18 AWG; uninsulated; electro-tin plated; silver-colored

Item No.: 216-223
Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red



Item No.: 216-123
Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated; silver-colored



Item No.: 216-224
Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black



Item No.: 216-124
Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated

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

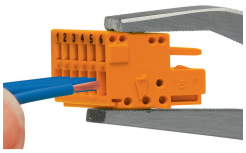


Item No.: 210-250
Operating tool; for MCS MINI and MIDI with CAGE CLAMP® connection; red

Item No.: 734-191
Operating tool; made of insulating material; 1-way; loose; black

Installation Notes

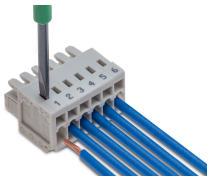
Conductor termination



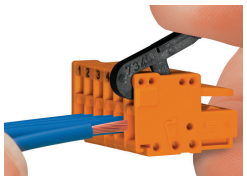
Inserting a conductor into CAGE CLAMP® unit via operating tool (210-251 or 210-250).



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

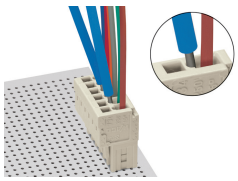


Inserting a conductor via (2.5 x 0.4) mm screwdriver – CAGE CLAMP® actuation perpendicular to conductor entry.



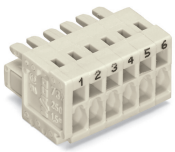
Inserting a conductor into CAGE CLAMP® unit via operating tool (734-191).

Testing



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

Marking



Labeling via direct marking or self-adhesive strips.

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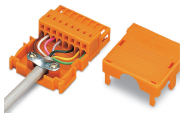
Installation



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

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