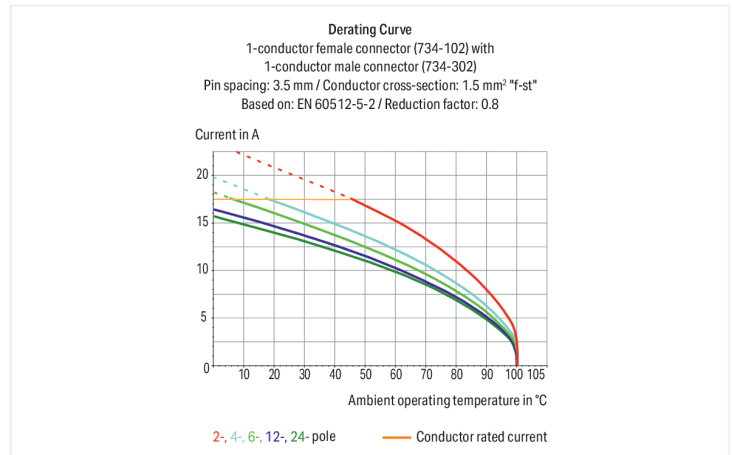


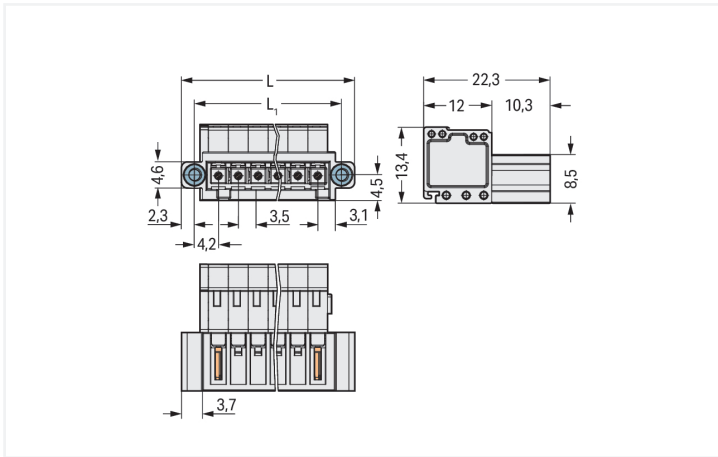
## Data Sheet | Item Number: 734-310/109-000

1-conductor male connector; CAGE CLAMP®; 1.5 mm<sup>2</sup>; Pin spacing 3.5 mm; 10-pole; 100% protected against mismatching; Threaded flange; light gray

<https://www.wago.com/734-310/109-000>



Color: ■ light gray



Dimensions in mm

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

Male connector, 734 Series, 0° conductor exit to connection direction

This male connector (item number 734-310/109-000) provides fault-free electrical installations. Conductors can only be connected to this male connector if their strip length is between 6 and 7 mm. This product features one conductor terminal and utilizes CAGE CLAMP®. Our trusted universal connection known as CAGE CLAMP® is the industry standard for connection technology and electrical interconnections. Dimensions: (44.5 x 13.4 x 22.3) mm (width x height x depth). Depending on the conductor type, this male connector is suitable for conductor cross sections ranging from 0.08 mm<sup>2</sup> to 1.5 mm<sup>2</sup>.

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	10
Total number of potentials	10
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 <sup>2</sup> / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 1.5 mm <sup>2</sup> / 28 ... 14 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 1.5 mm <sup>2</sup>
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 1.5 mm <sup>2</sup>
Note (conductor cross-section)	Terminating 1.5 mm <sup>2</sup> 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	10
Conductor entry direction to mating direction	0°

### Physical data

Pin spacing	3.5 mm / 0.138 inches
Width	44.5 mm / 1.752 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)	<a href="#">Information on material specifications can be found here</a>
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 <sub>Cu</sub> )
Contact Plating	Tin
Fire load	0.153 MJ
Weight	8.9 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 <sub>1</sub> = 5 Hz to f <sub>2</sub> = 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 <sub>1</sub> = 5 Hz to f <sub>2</sub> = 150 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	4055143266451
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)	b029f257-2366-44a7-8cd8-96cb696c131c
SCIP notification number (Belgium)	184ca107-4a12-443e-949e-851e52732153
SCIP notification number (Bulgaria)	54eb692e-d799-4190-a39a-aa1efa69aa04
SCIP notification number (Czech Republic)	8b04a5ee-d9be-412f-b334-f9a2e3b1e34b
SCIP notification number (Denmark)	e8072b02-84f4-48c7-8242-d0a02b3748d6
SCIP notification number (Finland)	991c37fc-b0e6-4b77-b6a0-8fb0d2370fc1
SCIP notification number (France)	98c0c754-872c-4ded-be74-0e024f13f73c
SCIP notification number (Germany)	e1f86142-830c-409a-8d0d-d4f2e0e4eade
SCIP notification number (Hungary)	b30cb8e0-2a12-4dab-a5ff-5b21e1dd911b
SCIP notification number (Italy)	ab754461-610f-41b3-964d-3655b213567f
SCIP notification number (Netherlands)	2b56c1a8-b68a-4d6f-9b80-5c580ad942a7
SCIP notification number (Poland)	ef20c4ff-f8e1-4a2b-9585-58021e3900af
SCIP notification number (Romania)	a2291243-df3b-4a5a-a240-d8b36c4d5cfc
SCIP notification number (Sweden)	4d905a03-c0e8-41fe-b86c-acac4ee9a8fc

**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 734-310/109-000	<a href="#">↓</a>

**Documentation**

Additional Information			
Technical Section	03.04.2019	pdf 2027.26 KB	<a href="#">↓</a>

CAD/CAE-Data

**CAD data**  
 2D/3D Models  
 734-310/109-000

**CAE data**  
 ZUKEN Portal  
 734-310/109-000

1 Compatible Products

1.1 System counterpart

1.1.1 Female connector/socket



**Item No.: 734-110/107-000**  
 1-conductor female connector; CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 10-pole; 100% protected against mismatching; Screw flange; light gray

**Item No.: 2734-110/107-000**  
 1-conductor female connector; push-button; Push-in CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 10-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

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

1.2.4 Marking

1.2.4.1 Marking strip

 <b>Item No.: 210-332/350-202</b> 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	 <b>Item No.: 210-332/350-204</b> 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	 <b>Item No.: 210-332/350-206</b> 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 0,5mm<sup>2</sup>

## 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**

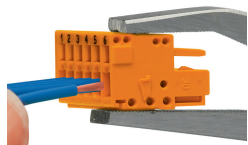
Operating tool; for MCS MINI and MIDI with CAGE CLAMP® connection; red

**Item No.: 734-191**

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

## Installation Notes

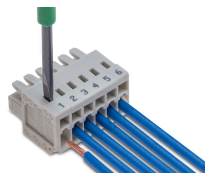
### Conductor termination



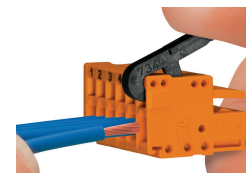
Inserting a conductor into CAGE CLAMP® unit via operating tool (210-251 or 210-250).



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

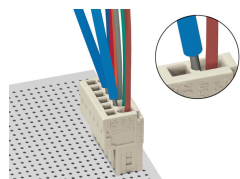


Inserting a conductor via (2.5 x 0.4) mm screwdriver – CAGE CLAMP® actuation perpendicular to conductor entry.



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