

Data Sheet | Item Number: 713-1111/107-9037/034-000

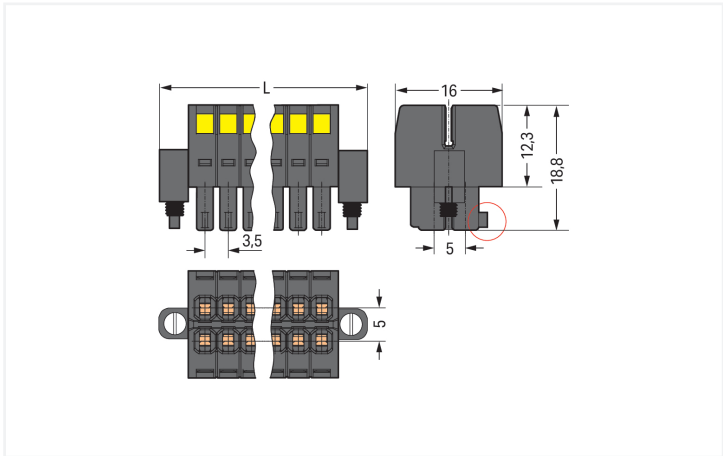
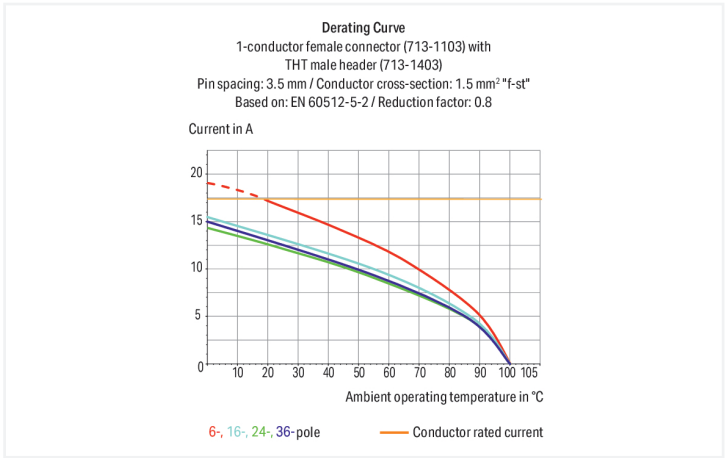
1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 22-pole; 100% protected against mismatching; Screw flange; Strain relief plate; direct marking; 1,50 mm²; black

<https://www.wago.com/713-1111/107-9037/034-000>

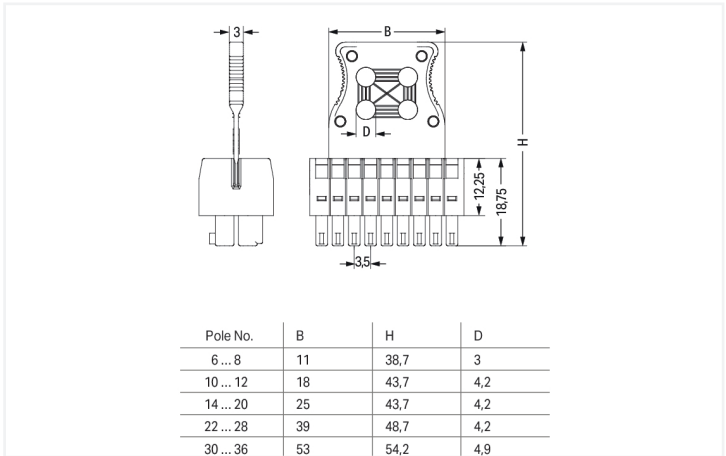


Color: ■ black

Similar to illustration



Dimensions in mm
 $L = [(pole\ no./2) - 1] \times pin\ spacing + 13.6\ mm$ Coding finger (red circle)



Dimensions in mm
The arrangement of the attachments for cable ties allows single conductors or multi-core cables to be secured in different ways. The width of the cable ties must correspond to the hole dimensions of the strain relief plates shown above. Cable ties and binding tools are not offered by WAGO.

Female connector, 713 Series, CAGE CLAMP®

Our female connector (item number 713-1111/107-9037/034-000) is designed for seamless electrical installations. Ensure that the strip lengths are between 6 and 7 mm when connecting conductors to this female connector. Featuring one conductor terminal along with CAGE CLAMP®, this connector is highly versatile. Our trusted universal connection known as CAGE CLAMP® is the industry standard when it comes to connection technology and electrical interconnections. The dimensions are (48.6 x 48.7 x 16) mm (width x height x depth). Depending on the type of conductor, this female connector is suitable for conductor cross sections ranging from 0.08 mm² to 1.5 mm².

Tin is used for coating the contact surfaces. The strain relief plate secures the connected conductors, simplifying wire handling..



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		80 V	160 V	250 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	50 V	-
Rated current		10 A	10 A	-
Approvals per		CSA		
Use group		B	C	D
Rated voltage		300 V	-	-
Rated current		10 A	-	-

Connection Data																						
Clamping units	22	Connection 1 <table><tr><td>Connection technology</td><td>CAGE CLAMP®</td></tr><tr><td>Actuation type</td><td>Operating tool</td></tr><tr><td>Actuation direction 1</td><td>Operation perpendicular to conductor entry</td></tr><tr><td>Solid conductor</td><td>0.08 ... 1.5 mm² / 28 ... 16 AWG</td></tr><tr><td>Fine-stranded conductor</td><td>0.08 ... 1.5 mm² / 28 ... 16 AWG</td></tr><tr><td>Fine-stranded conductor; with insulated ferrule</td><td>0.25 ... 1 mm²</td></tr><tr><td>Fine-stranded conductor; with uninsulated ferrule</td><td>0.25 ... 1 mm²</td></tr><tr><td>Strip length</td><td>6 ... 7 mm / 0.24 ... 0.28 inches</td></tr><tr><td>Pole number</td><td>22</td></tr><tr><td>Conductor entry direction to mating direction</td><td>0 °</td></tr></table>	Connection technology	CAGE CLAMP®	Actuation type	Operating tool	Actuation direction 1	Operation perpendicular to conductor entry	Solid conductor	0.08 ... 1.5 mm² / 28 ... 16 AWG	Fine-stranded conductor	0.08 ... 1.5 mm² / 28 ... 16 AWG	Fine-stranded conductor; with insulated ferrule	0.25 ... 1 mm²	Fine-stranded conductor; with uninsulated ferrule	0.25 ... 1 mm²	Strip length	6 ... 7 mm / 0.24 ... 0.28 inches	Pole number	22	Conductor entry direction to mating direction	0 °
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Pole number	22																					
Conductor entry direction to mating direction	0 °																					
Total number of potentials	22																					
Number of connection types	1																					
Number of levels	2																					

Physical data	
Pin spacing	3.5 mm / 0.138 inches
Width	48.6 mm / 1.913 inches
Height	16 mm / 0.63 inches
Depth	48.7 mm / 1.917 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																																						
Locking of plug-in connection		Screw flange																																						
Strain relief		Strain relief plate																																						
Material data																																								
Note (material data)		Information on material specifications can be found here																																						
Color		black																																						
Material group		II																																						
Insulation material (main housing)		Glass fiber-reinforced polyamide (PA66 GF)																																						
Flammability class per UL94		V0																																						
Clamping spring material		Chrome-nickel spring steel (CrNi)																																						
Contact material		Copper alloy																																						
Contact Plating		Tin																																						
Fire load		0.212 MJ																																						
Weight		13.3 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></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
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Processing temperature	-35 ... +60 °C																																							



Environmental Testing	
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)	25 pcs
Packaging type	Box
Country of origin	PL
GTIN	4050821178194
Customs tariff number	85366990990

Product Classification	
UNSPSC	39121409
eCl@ss 10.0	27-14-11-06
eCl@ss 9.0	27-14-11-06
ETIM 9.0	EC001284
ETIM 10.0	EC001284
ECCN	NO US CLASSIFICATION

Environmental Product Compliance	
REACH Candidate List Substance	Perfluorobutane sulfonic acid (PFBS) and its salts
RoHS Compliance Status	Compliant, No Exemption
SCIP notification number (Austria)	6f060ecc-031c-4e5a-96ca-66682775c397
SCIP notification number (Belgium)	36b6bcf8-55d4-458e-bd67-31471f136120
SCIP notification number (Bulgaria)	4f78460c-5e9f-4afa-ab88-c5ad51b17f17
SCIP notification number (Czech Republic)	92cef92d-8a54-4049-965e-93b1fed3ea54
SCIP notification number (Denmark)	ed95b8de-e28c-4172-a760-1829cdd0879d
SCIP notification number (Finland)	131acf28-0868-42b8-823f-0fc410a17dec
SCIP notification number (France)	944f7254-0863-490d-a0b1-004d8002e7c3
SCIP notification number (Germany)	71e512d9-29b9-4888-bb5f-63b45f7426ca
SCIP notification number (Hungary)	6af75cbc-9939-41d4-9437-82917b0fbda0
SCIP notification number (Italy)	d017c53c-9715-4d5b-9899-f202935b05f8
SCIP notification number (Netherlands)	ce34aeab-d303-4f07-9cd5-8f024933ca0f
SCIP notification number (Poland)	d6f09ee5-65dc-4606-8b35-b78178ab75c7
SCIP notification number (Romania)	71aede7d-1bcf-46bd-987a-8b492f5a1a0d
SCIP notification number (Sweden)	8625a104-24fd-4a5d-a23e-9b4d24bc34b2



Approvals / Certificates

General approvals



Approval	Standard	Certificate Name
CB DEKRA Certification B.V.	IEC 61984	NL-102427
CSA CSA Group	C22.2	2315087
KEMA/KEUR DEKRA Certification B.V.	EN 61984	71-133740
UL Underwriters Laboratories Inc.	UL 1059	UL-US-L45172-6187124-22905991-1

Declarations of conformity and manufacturer's declarations



Approval	Standard	Certificate Name
Railway WAGO GmbH & Co. KG	-	Z00004423.000

Downloads

Environmental Product Compliance

Compliance Search

Documentation

Additional Information			
Technical Section	03.04.2019	pdf 2027.26 KB	

1 Compatible Products

1.1 System counterpart

1.1.1 Male connector/plug



[Item No.: 713-1431/107-000](#)
THT male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; Threaded flange; Pin spacing 3.5 mm; 22-pole; black



[Item No.: 713-1411/107-000](#)
THT male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; Threaded flange; Pin spacing 3.5 mm; 22-pole; black



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.: 216-131 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
 Item No.: 216-221 Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white	 Item No.: 216-141 Ferrule; Sleeve for 0.5 mm² / 20 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92	 Item No.: 216-101 Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated; silver-colored	 Item No.: 216-121 Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated; silver-colored
 Item No.: 216-242 Ferrule; Sleeve for 0.75 mm² / 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 mm² / 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 mm² / 18 AWG; insulated; electro-tin plated; gray	 Item No.: 216-222 Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray
 Item No.: 216-142 Ferrule; Sleeve for 0.75 mm² / 18 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92	 Item No.: 216-102 Ferrule; Sleeve for 0.75 mm² / AWG 20; uninsulated; electro-tin plated; silver-colored	 Item No.: 216-122 Ferrule; Sleeve for 0.75 mm² / AWG 20; uninsulated; electro-tin plated; silver-colored	 Item No.: 216-243 Ferrule; Sleeve for 1 mm² / 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 mm² / 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 mm² / AWG 18; insulated; electro-tin plated; red	 Item No.: 216-223 Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red	 Item No.: 216-103 Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated
 Item No.: 216-143 Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92	 Item No.: 216-123 Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated; silver-colored		

1.2.2 Stickers with operating instructions

1.2.2.1 Stickers with operating instructions



Item No.: 210-493
Stickers for operating instructions



1.2.3 Strain relief

1.2.3.1 Strain relief plate



Item No.: 713-128
Strain relief plate; for female connectors;
39 mm wide; 1 part; Pin spacing 3.5 mm;
black

1.2.4 Tool

1.2.4.1 Operating tool



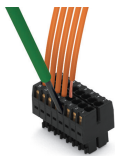
Item No.: 210-719
Operating tool; Blade: 2.5 x 0.4 mm; with a
partially insulated shaft



Item No.: 210-647
Operating tool; Blade: 2.5 x 0.4 mm; with a
partially insulated shaft; multicoloured

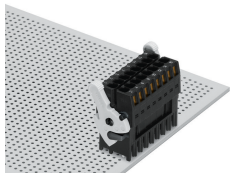
Installation Notes

Conductor termination

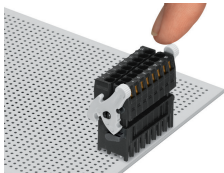


Inserting a conductor via (2.5 x 0.4) mm
screwdriver.

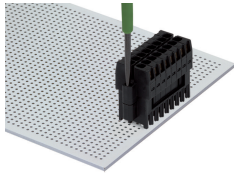
Locking system



Lever as a lock – when closed, female
connector is locked.



Lever as a disconnection aid – when open-
ed, female connector is disconnected.
Rotating the lever lifts the female
connector out of the male header.



Screw interlock can only be disconnected
using a tool.

Coding

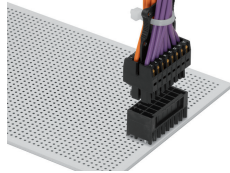


Coding a female connector by removing
coding finger(s).

Strain relief



Strain relief plate for field assembly



Centered strain relief plate anchors conductors for easy disconnection.