

Data Sheet | Item Number: 713-1103/107-047

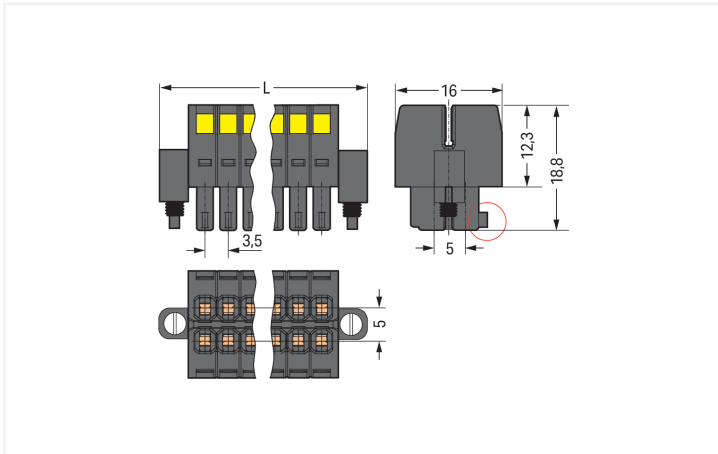
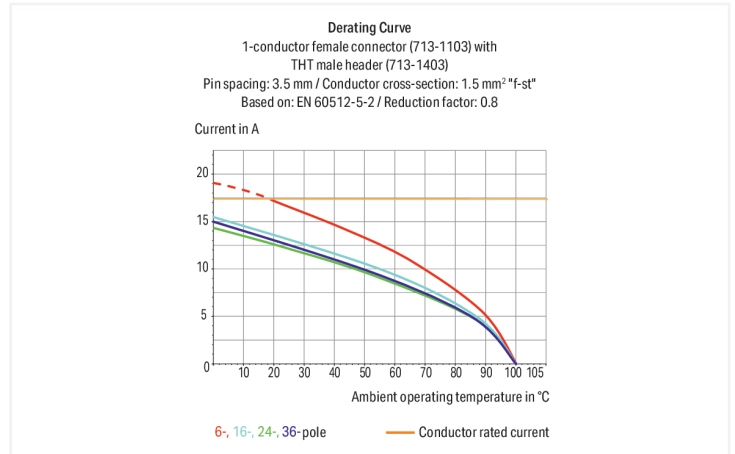
1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 6-pole; 100% protected against mismatching; Screw flange; direct marking; 1,50 mm²; black

<https://www.wago.com/713-1103/107-047>



Color: ■ black

Similar to illustration



Dimensions in mm

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

Female connector, 713 Series, black

This female connector (item number 713-1103/107-047) provides seamless electrical installations. Strip lengths must be between 6 and 7 mm when connecting conductors to this female connector. This product features one conductor terminal and utilizes CAGE CLAMP®. Our CAGE CLAMP® connection provides a reliable 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. The dimensions are (20.6 x 18.8 x 16) mm (width x height x depth). Depending on the conductor type, 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.



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	6	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>6</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	6	Conductor entry direction to mating direction	0°
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Pole number	6																					
Conductor entry direction to mating direction	0°																					
Total number of potentials	6																					
Number of connection types	1																					
Number of levels	2																					

Physical data	
Pin spacing	3.5 mm / 0.138 inches
Width	20.6 mm / 0.811 inches
Height	16 mm / 0.63 inches
Depth	18.8 mm / 0.74 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
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		0.06 MJ
Weight		4 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



Environmental Testing	
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	4050821177661
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	
RoHS Compliance Status	Compliant, No Exemption

Approvals / Certificates					
General approvals			Declarations of conformity and manufacturer's declarations		
  					
Approval	Standard	Certificate Name	Approval	Standard	Certificate Name
CB DEKRA Certification B.V.	IEC 61984	NL-102427	Railway WAGO GmbH & Co. KG	-	Z00004422.000
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			



Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance713-1103/107-047

Documentation

Additional Information

Technical Section03.04.2019pdf2027.26 KB

1 Compatible Products

1.1 System counterpart

1.1.1 Male connector/plug



Item No.: 713-1423/107-000
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; 6-pole; black



Item No.: 713-1403/107-000
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; 6-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



1.2.1.1 Ferrule



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.: 713-126
Strain relief plate; for female connectors; 11 mm wide; 1 part; Pin spacing 3.5 mm; black

1.2.4 Tool

1.2.4.1 Operating tool



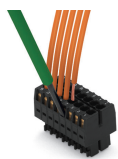
Item No.: 210-719
Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft



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

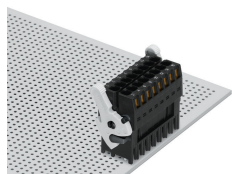
Installation Notes

Conductor termination

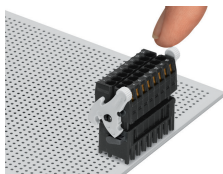


Inserting a conductor via (2.5 x 0.4) mm screwdriver.

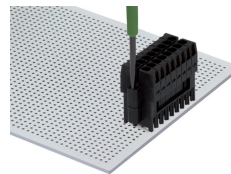
Locking system



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

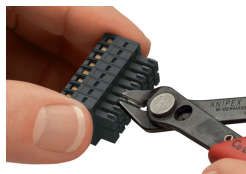


Lever as a disconnection aid – when opened, female connector is disconnected. Rotating the lever lifts the female connector out of the male header.



Screw interlock can only be disconnected using a tool.

Coding

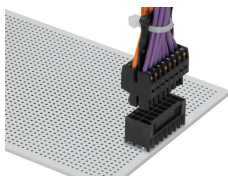


Coding a female connector by removing coding finger(s).

Strain relief



Strain relief plate for field assembly



Centered strain relief plate anchors conductors for easy disconnection.