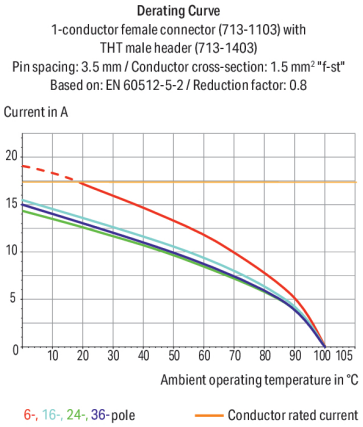
Data Sheet | Item Number: 713-1103/037-9037

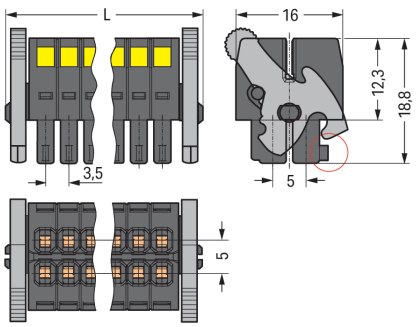
1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 6-pole; 100% protected against mismating; Levers; direct marking; 1,50 mm²; black

https://www.wago.com/713-1103/037-9037



Color: ■ black

Similar to illustration



Dimensions in mm
L = [(pole no./2) – 1] x pin spacing + 12.2 mmCoding finger (red circle)

Female connector, 713 Series, with 3.5 mm pin spacing

Our female connector (item number 713-1103/037-9037) simplifies electrical installations. Ensure that the strip lengths are between 6 and 7 mm when connecting conductors to this female connector. 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: (19 x 18.8 x 16) mm (width x height x depth). Depending on the conductor type, this female connector is ideal 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
Total number of potentials	6
Number of connection types	1
Number of levels	2

Connection 1

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 °

Physical data

Pin spacing	3.5 mm / 0.138 inches
Width	19.2 mm / 0.756 inches
Height	16.5 mm / 0.65 inches
Depth	22.3 mm / 0.878 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	Locking lever

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	0.057 MJ
Weight	4.3 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

 Continued on next page

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	4050821177197
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)	33c46dd3-a587-4b0e-abad-1f36e12106b8
SCIP notification number (Belgium)	d4eabebf-e74f-46c2-9272-44b906621695
SCIP notification number (Bulgaria)	db67462e-8b10-4a55-ae8f-0fa2c3b38dfa
SCIP notification number (Czech Republic)	e1932da4-f7ec-489e-881d-07c0f0202231
SCIP notification number (Denmark)	c66e10f5-f3ae-4a73-8651-db2503253c15
SCIP notification number (Finland)	ce3a6374-48df-4000-a278-09c5e05f2db8
SCIP notification number (France)	718788c2-98eb-4e9d-9b61-7474db3ef6e1
SCIP notification number (Germany)	ff48b513-d096-4cae-bb3b-a2987cb00c24
SCIP notification number (Hungary)	d64ac83c-41a3-42d3-8117-9bb7530c89dc
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SCIP notification number (Netherlands)	a989918e-7c50-4e95-bb2f-111bc6840d24
SCIP notification number (Poland)	8df1a20f-7ae3-4dd0-b239-013ac218582c
SCIP notification number (Romania)	8cdaa90d-5aa3-495e-aa2e-f5b65007a6ac
SCIP notification number (Sweden)	1d00bcfb-f4ee-480b-a150-cae3a3c3097d

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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

Declarations of conformity and manufacturer's declarations

Approval	Standard	Certificate Name
Railway WAGO GmbH & Co. KG	-	Z00004422.000

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance
713-1103/037-9037

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.: 713-1423/116-000/997-405
THR male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismating; Levers; in tape-and-reel packaging; Pin spacing 3.5 mm; 6-pole; black

Item No.: 713-1423/116-000
THR male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismating; Levers; Pin spacing 3.5 mm; 6-pole; black

Item No.: 713-1403/116-000/997-405
THR male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismating; Levers; in tape-and-reel packaging; Pin spacing 3.5 mm; 6-pole; black

Item No.: 713-1403/116-000
THR male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismating; Levers; Pin spacing 3.5 mm; 6-pole; black

Item No.: 713-1423/037-000
THT male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismating; Levers; Pin spacing 3.5 mm; 6-pole; black

Item No.: 713-1403/037-000
THT male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismating; Levers; Pin spacing 3.5 mm; 6-pole; black

 Continued on next page

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

 Continued on next page

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

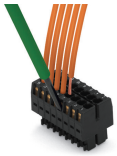
1.2.4.1 Operating tool

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

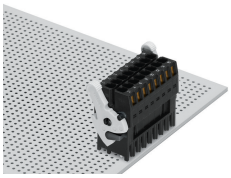
Installation Notes

Conductor termination

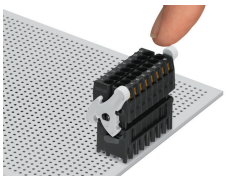


Inserting a conductor via (2.5 x 0.4) mm screwdriver.

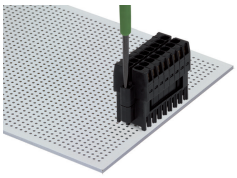
Locking system



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

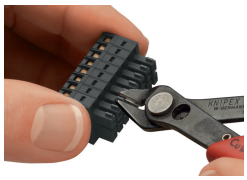


Lever as a disconnection aid – when opened, female connector is disconnected. Rotating the lever lifts the female connector out of the male header.



Screw interlock can only be disconnected using a tool.

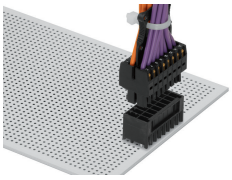
Coding



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.