

## Data Sheet | Item Number: 713-1109

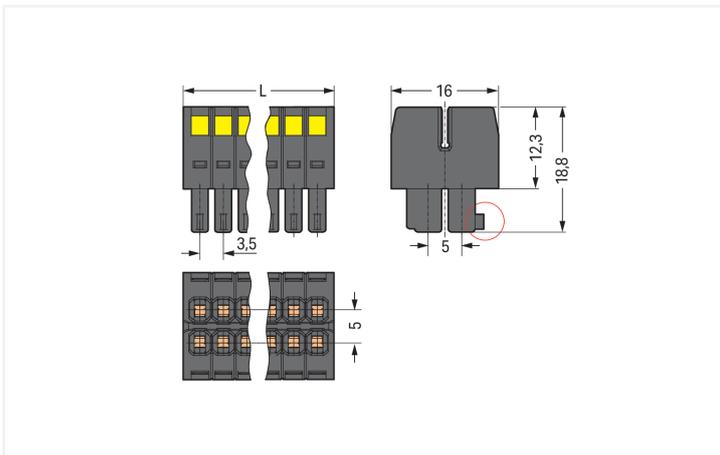
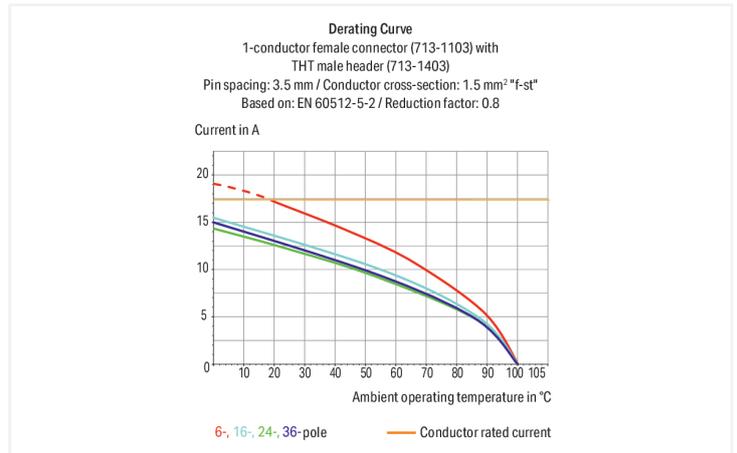
1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm<sup>2</sup>; Pin spacing 3.5 mm; 18-pole; 100% protected against mismatching; 1,50 mm<sup>2</sup>; black

<https://www.wago.com/713-1109>



Color: ■ black

Similar to illustration



Dimensions in mm

$L = [(pole\ no./2) - 1] \times pin\ spacing + 5.2\ mm$  Coding finger (red circle)

Female connector, 713 Series, with 3.5 mm pin spacing

Our female connector (item number 713-1109) is designed for 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 tried-and-tested universal connection known as CAGE CLAMP® is the industry standard for connection technology and electrical interconnections. Dimensions: (33.2 x 16 x 18.8) mm (width x height x depth). This female connector is suitable for conductor cross sections ranging from 0.08 mm<sup>2</sup> to 1.5 mm<sup>2</sup>.

The contact surface is coated with tin.

## 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			Approvals per		UL 1059		
Overvoltage category		III	III	II	Use group	B	C	D	
Pollution degree		3	2	2	Rated voltage	300 V	50 V	-	
Nominal voltage		80 V	160 V	250 V	Rated current	10 A	10 A	-	
Rated impulse withstand voltage		2.5 kV	2.5 kV	2.5 kV					
Rated current		10 A	10 A	10 A					

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

## Connection Data

Clamping units	18	<b>Connection 1</b>		
Total number of potentials	18	Connection technology	CAGE CLAMP®	
Number of connection types	1	Actuation type	Operating tool	
Number of levels	2	Actuation direction 1	Operation perpendicular to conductor entry	
		Solid conductor	0.08 ... 1.5 mm <sup>2</sup> / 28 ... 16 AWG	
		Fine-stranded conductor	0.08 ... 1.5 mm <sup>2</sup> / 28 ... 16 AWG	
		Fine-stranded conductor; with insulated ferrule	0.25 ... 1 mm <sup>2</sup>	
		Fine-stranded conductor; with uninsulated ferrule	0.25 ... 1 mm <sup>2</sup>	
		Strip length	6 ... 7 mm / 0.24 ... 0.28 inches	
		Pole number	18	
		Conductor entry direction to mating direction	0°	

## Physical data

Pin spacing	3.5 mm / 0.138 inches
Width	33.2 mm / 1.307 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

### Material data

Note (material data)	<a href="#">Information on material specifications can be found here</a>
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	0.137 MJ
Weight	9.2 g

### Environmental requirements

Limit temperature range	-60 ... +100 °C
Processing temperature	-35 ... +60 °C

### Commercial data

Product Group	3 (Multi Conn. System)
PU (SPU)	25 pcs
Packaging type	Box
Country of origin	PL
GTIN	4045454667368
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
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**Approvals / Certificates**

**General approvals** | **Declarations of conformity and manufacturer's declarations**

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

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

**Downloads**

**Environmental Product Compliance**

Compliance Search

Environmental Product Compliance 713-1109	<a href="#">↓</a>
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**Documentation**

Additional Information

Technical Section	03.04.2019	pdf 2027.26 KB	<a href="#">↓</a>
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**CAD/CAE-Data**

CAD data

2D/3D Models 713-1109	<a href="#">↓</a>
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CAE data

ZUKEN Portal 713-1109	<a href="#">↓</a>
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**1 Compatible Products**

**1.1 System counterpart**

**1.1.1 Male connector/plug**

<p><b>Item No.: 713-1429/105-000/997-407</b>                  THR male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; in tape-and-reel packaging; Pin spacing 3.5 mm; 18-pole; black</p>	<p><b>Item No.: 713-1429/105-000</b>                  THR male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; Pin spacing 3.5 mm; 18-pole; black</p>	<p><b>Item No.: 713-1409/105-000/997-407</b>                  THR male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; in tape-and-reel packaging; Pin spacing 3.5 mm; 18-pole; black</p>	<p><b>Item No.: 713-1409/105-000</b>                  THR male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; Pin spacing 3.5 mm; 18-pole; black</p>

1.1.1 Male connector/plug



**Item No.: 713-1429**

THT male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; Pin spacing 3.5 mm; 18-pole; black

**Item No.: 713-1409**

THT male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; Pin spacing 3.5 mm; 18-pole; black

**Item No.: 713-1469**

THT male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; with orientation nose; Pin spacing 3.5 mm; 18-pole; black

1.2 Optional Accessories

1.2.1 Ferrule

1.2.1.1 Ferrule



**Item No.: 216-301**

Ferrule; Sleeve for 0.25 mm<sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow



**Item No.: 216-321**

Ferrule; Sleeve for 0.25 mm<sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow



**Item No.: 216-131**

Ferrule; Sleeve for 0.25 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated; silver-colored



**Item No.: 216-302**

Ferrule; Sleeve for 0.34 mm<sup>2</sup> / 22 AWG; insulated; electro-tin plated; light turquoise



**Item No.: 216-322**

Ferrule; Sleeve for 0.34 mm<sup>2</sup> / 22 AWG; insulated; electro-tin plated; light turquoise



**Item No.: 216-132**

Ferrule; Sleeve for 0.34 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated



**Item No.: 216-201**

Ferrule; Sleeve for 0.5 mm<sup>2</sup> / 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 mm<sup>2</sup> / 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 mm<sup>2</sup> / 20 AWG; insulated; electro-tin plated; white



**Item No.: 216-141**

Ferrule; Sleeve for 0.5 mm<sup>2</sup> / 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 mm<sup>2</sup> / AWG 22; uninsulated; electro-tin plated; silver-colored



**Item No.: 216-121**

Ferrule; Sleeve for 0.5 mm<sup>2</sup> / AWG 22; uninsulated; electro-tin plated; silver-colored



**Item No.: 216-242**

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



**Item No.: 216-262**

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



**Item No.: 216-202**

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray



**Item No.: 216-222**

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray



**Item No.: 216-142**

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 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 mm<sup>2</sup> / AWG 20; uninsulated; electro-tin plated; silver-colored



**Item No.: 216-122**

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / AWG 20; uninsulated; electro-tin plated; silver-colored



**Item No.: 216-243**

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



**Item No.: 216-263**

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



**Item No.: 216-203**

Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; red



**Item No.: 216-223**

Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; red



**Item No.: 216-103**

Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; uninsulated; electro-tin plated



**Item No.: 216-143**

Ferrule; Sleeve for 1 mm<sup>2</sup> / 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 mm<sup>2</sup> / 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.: 713-127**

Strain relief plate; for female connectors; 25 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

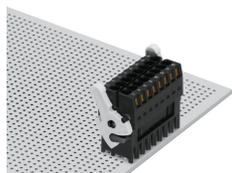
## Installation Notes

### Conductor termination

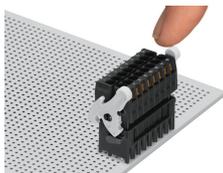


Inserting a conductor via (2.5 x 0.4) mm screwdriver.

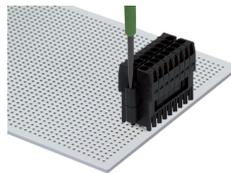
### Locking system



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.