

## Data Sheet | Item Number: 731-613/019-000

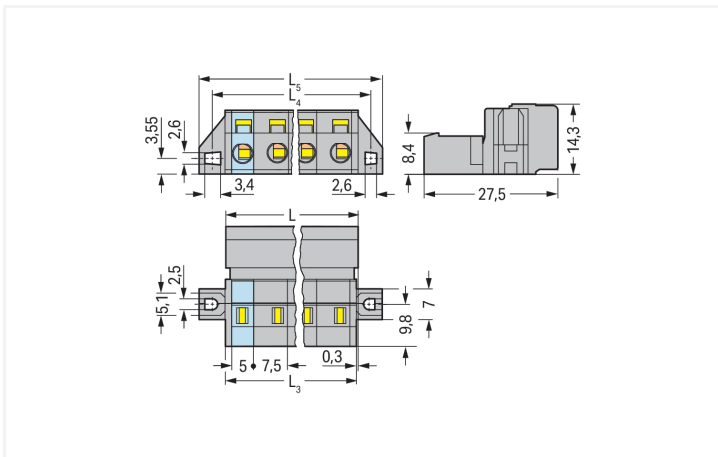
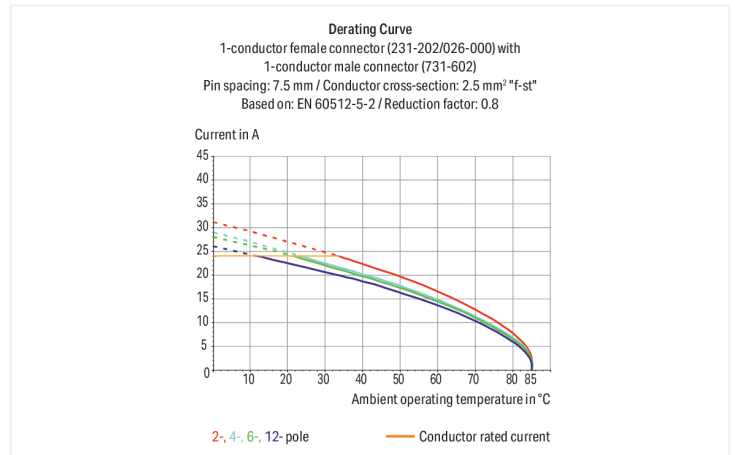
1-conductor male connector; CAGE CLAMP®; 2.5 mm<sup>2</sup>; Pin spacing 7.5 mm; 13-pole; clamping collar; 2,50 mm<sup>2</sup>; gray

<https://www.wago.com/731-613/019-000>



Color: ■ gray

Similar to illustration



Dimensions in mm

$L = (\text{pole no.} - 1) \times \text{pin spacing} + 8.2 \text{ mm}$   
 $L_3 = L - 0.2 \text{ mm}$   
 $L_4 = L_3 + 5.8 \text{ mm}$   
 $L_5 = L_3 + 11.8 \text{ mm}$

Male connector, 731 Series, gray

This male connector (item number 731-613/019-000) is designed for hassle-free electrical installations. Strip lengths must be 9 mm when connecting conductors to this male connector. Featuring one conductor terminal along with CAGE CLAMP®, this product delivers reliable performance. Our proven universal connection known as CAGE CLAMP® is the industry standard for connection technology and electrical interconnections. The item's dimensions are (109.8 x 14.3 x 27.5) mm (width x height x depth). This male connector is suitable for conductor cross sections ranging from 0.08 mm<sup>2</sup> to 2.5 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			Approvals per		UL 1059		
Overvoltage category		III	III	II	Use group	B	C	D	
Pollution degree		3	2	2	Rated voltage	300 V	-	300 V	
Nominal voltage		500 V	630 V	1000 V	Rated current	15 A	-	10 A	
Rated impulse withstand voltage		6 kV	6 kV	6 kV					
Rated current		12 A	12 A	12 A					

Approvals per		UL 1977			Approvals per		CSA		
Rated voltage		600 V			Use group	B	C	D	
Rated current		15 A			Rated voltage	300 V	-	300 V	
					Rated current	15 A	-	10 A	

## Connection Data

Clamping units	13	<b>Connection 1</b>	
Total number of potentials	13	Connection technology	CAGE CLAMP®
Number of connection types	1	Actuation type	Operating tool
Number of levels	1	Actuation direction 1	Operation parallel to conductor entry
		Actuation direction 2	Operation perpendicular to conductor entry
		Solid conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
		Fine-stranded conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
		Fine-stranded conductor; with insulated ferrule	0.25 ... 1.5 mm <sup>2</sup>
		Fine-stranded conductor; with uninsulated ferrule	0.25 ... 2.5 mm <sup>2</sup>
		Strip length	9 mm / 0.35 inches
		Pole number	13
		Conductor entry direction to mating direction	0°

## Physical data

Pin spacing	7.5 mm / 0.295 inches
Width	109.8 mm / 4.323 inches
Height	14.3 mm / 0.563 inches
Depth	27.5 mm / 1.083 inches

### Mechanical data

Variable coding	Yes
Mounting type	Mounting flange
Mounting type	Feed-through mounting Panel mounting
Anti-rotation protection	Yes
Suitable for through-panel applications	Yes

### Plug-in connection

Contact type (pluggable connector)	Male connector/plug
Connector (connection type)	for conductor
Mismating protection	No

### Material data

Note (material data)	<a href="#">Information on material specifications can be found here</a>
Color	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	0.489 MJ
Weight	24.7 g

### Environmental requirements

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

### Commercial data

Product Group	3 (Multi Conn. System)
PU (SPU)	10 pcs
Packaging type	Box
Country of origin	DE
GTIN	4044918288644
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, No Exemption
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**Approvals / Certificates**

**General approvals** **Approvals for marine applications**



Approval	Standard	Certificate Name
UR Underwriters Laboratories Inc.	UL 1059	E45172
UR Underwriters Laboratories Inc.	UL 1977	E 45171

Approval	Standard	Certificate Name
BV Bureau Veritas S.A.	IEC 60998	11915/E0 BV

**Downloads**

**Environmental Product Compliance**

Compliance Search	
Environmental Product Compliance 731-613/019-000	↓

**Documentation**

Additional Information			
Technical Section	03.04.2019	pdf 2027.26 KB	↓

**CAD/CAE-Data**

CAD data	
2D/3D Models 731-613/019-000	↓

CAE data	
EPLAN Data Portal 731-613/019-000	↓
ZUKEN Portal 731-613/019-000	↓

## 1 Compatible Products

### 1.1 System counterpart

#### 1.1.1 Female connector/socket



**Item No.: 231-213/026-000**

1-conductor female connector; CAGE CLAMP®; 2.5 mm<sup>2</sup>; Pin spacing 7.5 mm; 13-pole; gray



**Item No.: 232-843**

THT female header; angled; Pin spacing 7.5 mm; 13-pole; 0.6 x 1.0 mm solder pin; gray



**Item No.: 232-743**

THT female header; straight; Pin spacing 7.5 mm; 13-pole; 0.6 x 1.0 mm solder pin; gray

### 1.2 Optional Accessories

#### 1.2.1 Coding

##### 1.2.1.1 Coding



**Item No.: 231-130**

Coding key; snap-on type; light gray

#### 1.2.2 Cover

##### 1.2.2.1 Cover



**Item No.: 231-668**

Lockout caps; for covering unused clamping units; gray

#### 1.2.3 Ferrule

##### 1.2.3.1 Ferrule



**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.: 216-141**

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



**Item No.: 216-242**

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 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.: 216-142**

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



**Item No.: 216-243**

Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; un-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; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red



**Item No.: 216-143**

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



**Item No.: 216-244**

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 4/09.90; black



**Item No.: 216-264**

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 4/09.90; black



**Item No.: 216-284**

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 4/09.90; black



**Item No.: 216-144**

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



**Item No.: 216-106**

Ferrule; Sleeve for 2.5 mm<sup>2</sup> / AWG 14; un-insulated; electro-tin plated; silver-colored

## 1.2.4 Installation

### 1.2.4.1 Mounting accessories



**Item No.: 231-295**  
Screw with nut



**Item No.: 231-195**  
Screw with nut; M2x12; for fixing element



**Item No.: 209-147**  
Self-tapping screw



**Item No.: 231-194**  
Self-tapping screw; B 2.2x13, fixing hole 1.8 mm Ø

## 1.2.5 Insulation stop

### 1.2.5.1 Insulation stop



**Item No.: 231-673**  
Insulation stop; 0.08-0.2 mm<sup>2</sup> / 0.2 mm<sup>2</sup> "s"; white



**Item No.: 231-674**  
Insulation stop; 0.25 - 0.5 mm<sup>2</sup>; light gray



**Item No.: 231-675**  
Insulation stop; 0.75 - 1 mm<sup>2</sup>; dark gray

## 1.2.6 Marking

### 1.2.6.1 Marking strip



**Item No.: 210-331/750-202**  
Marking strips; as a DIN A4 sheet; MARKED; 1-16 (100x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive; white



**Item No.: 210-332/750-020**  
Marking strips; as a DIN A4 sheet; MARKED; 1-20 (80x); Height of marker strip: 3 mm; Strip length 182 mm; Horizontal marking; Self-adhesive; white

## 1.2.7 Tool

### 1.2.7.1 Operating tool



**Item No.: 210-720**  
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured



**Item No.: 210-657**  
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured



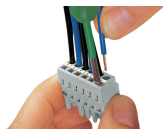
**Item No.: 231-291**  
Operating tool; made of insulating material; 1-way; loose; red



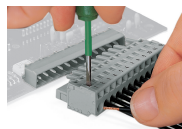
**Item No.: 231-131**  
Operating tool; made of insulating material; 1-way; loose; white

## Installation Notes

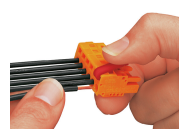
### Conductor termination



Inserting a conductor via 3.5 mm screwdriver – CAGE CLAMP® actuation parallel to conductor entry.



Inserting a conductor via 3.5 mm screwdriver – CAGE CLAMP® actuation perpendicular to conductor entry.

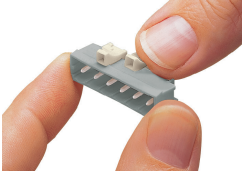


Inserting a conductor into CAGE CLAMP® unit via operating tool (231-291).



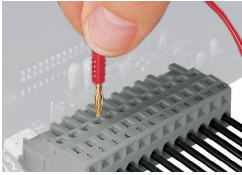
Inserting a conductor via operating tool.

## Coding



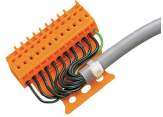
Coding a male header – fitting coding key (s).

## Testing

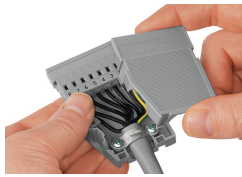


Testing – female connector with CAGE CLAMP®  
Integrated test ports for testing perpendicular to conductor entry via 2 or 2.3 mm Ø test plug

## Installation

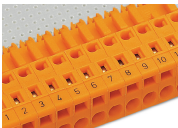


Male connector with strain relief plate



Strain relief housing shown with a male connector equipped with CAGE CLAMP®

## Marking



Labeling via direct marking or self-adhesive strips.