

Data sheet | Item number: 231-646/018-000

Male connector; 16-pole; Pin spacing 5.08 mm ; snap-in mounting feet; orange



www.wago.com/231-646_018-000



Subject to changes. Please also observe the further product documentation!

WAGO Corporation
Germantown, WI 53022
Phone: 1-800-DIN-RAIL (346-7245) | Fax: (262) 255-6222
Email: info.us@wago.com | Web: www.wago.us

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Dimensions in mm

$L = (\text{pole no.} - 1) \times \text{pin spacing} + 8.2 \text{ mm}$

$L_1 = L - 1.7 \text{ mm}$

$L_2 = L - 1.2 \text{ mm}$

Item description

- Universal connection for all conductor types
- Easy cable pre-assembly and on-unit wiring via vertical and horizontal CAGE CLAMP® actuation
- For wire-to-wire and board-to-wire connections
- Versions available with snap-in mounting feet or flanges for panel or through-panel mounting

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- With coding fingers

Data

Notes

Safety information 1

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. 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

IEC Approvals

Ratings per	IEC/EN 60664-1
Rated voltage (III / 3)	320 V
Rated surge voltage (III/3)	4 kV
Rated voltage (III/2)	320 V
Rated surge voltage (III/2)	4 kV
Nominal voltage (II/2)	630 V
Rated surge voltage (II/2)	4 kV
Rated current	12 A
Legend (ratings)	(III / 2) $\hat{=}$ Overvoltage category III / Pollution degree 2

UL Approvals

Approvals per	UL 1059
Rated voltage UL (Use Group B)	300 V
Rated current UL (Use Group B)	15 A
Rated voltage UL (Use Group D)	300 V
Rated current UL (Use Group D)	10 A

Ratings per UL

Rated voltage UL 1977	600 V
Rated current UL 1977	15 A

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CSA Approvals

Approvals per	CSA
Rated voltage CSA (Use Group B)	300 V
Rated current CSA (Use Group B)	15 A
Rated voltage CSA (Use Group D)	300 V
Rated current CSA (Use Group D)	10 A

Connection data

Total number of connection points	16
Total number of potentials	16
Number of connection types	1
Number of levels	1

Connection 1

Connection technology	CAGE CLAMP®
Actuation type	Operating tool
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 1.5 mm ²
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 2.5 mm ²
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch
Number of poles	16
Conductor entry direction to mating direction	0°

Physical data

Pin spacing	5.08 mm / 0.2 inch
Width	84.48 mm / 3.326 inch
Height	18.8 mm / 0.74 inch
Height from the surface	14.3 mm / 0.563 inch
Depth	27.5 mm / 1.083 inch

Mechanical data

Housing sheet thickness	0.6 ... 1.2 mm / 0.024 ... 0.047 inch
Mounting type	Snap-in foot
Mounting type	Panel mounting

Subject to changes. Please also observe the further product documentation!



Plug-in connection

Contact type (pluggable connector)	Male connector/plug
Connector (connection type)	for conductor
Mismating protection	No
Locking of plug-in connection	Without

Material data

Color	orange
Material group	I
Insulation material	Polyamide (PA66)
Flammability class per UL94	V0
Clamping spring material	Chrome nickel spring steel (CrNi)
Contact material	Electrolytic copper (E _{Cu})
Contact plating	tin-plated
Fire load	0.403 MJ
Weight	23.6 g

Environmental requirements

Limit temperature range	-60 ... +100 °C
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Commercial data

Product Group	3 (Multi Conn. System)
PU (SPU)	25 Stück
Packaging type	box
Country of origin	DE
GTIN	4044918260978
Customs tariff number	8536694040

Approvals / Certificates

Country specific Approvals

Logo	Approval	Additional Approval Text	Certificate name
	CB DEKRA Certification B.V.	IEC 61984	NL-39756
	CSA DEKRA Certification B.V.	C22.2	1466354

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KEMA/KEUR
DEKRA Certification B.V.



EN 61984

2190761.01

Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
	ABS American Bureau of Shipping	-	19- HG1869876- PDA
	BV Bureau Veritas S.A.	IEC 60998	11915/D0 BV
	DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAE000016Z

UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UL UL International Germany GmbH	UL 1977	E45171
	UR Underwriters Laboratories Inc.	UL 1059	E45172

Counterpart



Item no.231-316/026-000

1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 16-pole; 2,50 mm²; orange

www.wago.com/231-316/026-000

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Optional accessories

Insulations stops

Insulation stop



Item no.: 231-672
Insulation stop; 0.75 - 1 mm²; dark gray

www.wago.com/231-672



Item no.: 231-670
Insulation stop; 0.08-0.2 mm² / 0.2 mm² "s"; white

www.wago.com/231-670



Item no.: 231-671
Insulation stop; 0.25 - 0.5 mm²; light gray

www.wago.com/231-671

Mounting adapter

Mounting accessories



Item no.: 209-148
Multi mounting adapter; for DIN-35 rail; 25 mm wide; gray

www.wago.com/209-148

Tools

Operating tool



Item no.: 209-130
Operating tool; suitable for 264, 280 and 281 Series; 1-way; of insulating material; white

www.wago.com/209-130



Item no.: 209-132
Operating tool; for connecting comb-style jumper bar; 2-way; of insulating material

www.wago.com/209-132



Item no.: 231-159
Operating tool; natural

www.wago.com/231-159



Item no.: 210-250
Operating tool; for MCS MINI & MIDI with CAGE CLAMP® connection; red

www.wago.com/210-250



Item no.: 231-231
Combination operating tool; red

www.wago.com/231-231



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

www.wago.com/210-657














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

www.wago.com/210-720

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	Item no.: 231-131 Operating tool; made of insulating material; 1-way; loose; white	www.wago.com/231-131
	Item no.: 231-291 Operating tool; made of insulating material; 1-way; loose; red	www.wago.com/231-291
	Item no.: 280-432 Operating tool; made of insulating material; 2-way; white	www.wago.com/280-432
	Item no.: 280-434 Operating tool; made of insulating material; 4-way	www.wago.com/280-434
	Item no.: 280-437 Operating tool; made of insulating material; 7-way	www.wago.com/280-437
	Item no.: 280-440 Operating tool; made of insulating material; 10-way	www.wago.com/280-440
	Item no.: 280-435 Operating tool; made of insulating material; 5-way; gray	www.wago.com/280-435
	Item no.: 280-436 Operating tool; made of insulating material; 6-way	www.wago.com/280-436
	Item no.: 280-438 Operating tool; made of insulating material; 8-way	www.wago.com/280-438
	Item no.: 280-433 Operating tool; made of insulating material; 3-way	www.wago.com/280-433
Strain relief		
Strain relief housing		
	Item no.: 232-646 Strain relief housing; orange	www.wago.com/232-646
Marking accessories		
Marking strip		
	Item no.: 210-331/508-103 Marking strips; as a DIN A4 sheet; MARKED; 1-12 (200x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive; white	www.wago.com/210-331/508-103
	Item no.: 210-331/508-104 Marking strips; as a DIN A4 sheet; MARKED; 13-24 (200x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive; white	www.wago.com/210-331/508-104
	Item no.: 210-332/508-202 Marking strips; as a DIN A4 sheet; MARKED; 1-16 (160x); Height of marker strip: 3 mm; Strip length 182 mm; Horizontal marking; Self-adhesive; white	www.wago.com/210-332/508-202

Subject to changes. Please also observe the further product documentation!

Item no.: 210-332/508-204

Marking strips; as a DIN A4 sheet; MARKED; 17-32 (160x); Height of marker strip: 3 mm; Strip length 182 mm; Horizontal marking; Self-adhesive; white

www.wago.com/210-332/508-204

Item no.: 210-332/508-206

Marking strips; as a DIN A4 sheet; MARKED; 33-48 (160x); Height of marker strip: 3 mm; Strip length 182 mm; Horizontal marking; Self-adhesive; white

www.wago.com/210-332/508-206

Item no.: 210-332/508-205

Marking strips; as a DIN A4 sheet; MARKED; 1-32 (80x); Height of marker strip: 3 mm; Strip length 182 mm; Horizontal marking; Self-adhesive; white

www.wago.com/210-332/508-205

Jumpers

Jumper



Item no.: 231-905

Jumper; for conductor entry; 5-way; insulated; gray

www.wago.com/231-905



Item no.: 231-903

Jumper; for conductor entry; 3-way; insulated; gray

www.wago.com/231-903



Item no.: 231-907

Jumper; for conductor entry; 7-way; insulated; gray

www.wago.com/231-907



Item no.: 231-910

Jumper; for conductor entry; 10-way; insulated; gray

www.wago.com/231-910



Item no.: 231-902

Jumper; for conductor entry; 2-way; insulated; gray

www.wago.com/231-902

Ferrules

Ferrule



Item no.: 216-101

Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated; silver-colored

www.wago.com/216-101



Item no.: 216-104

Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated; silver-colored

www.wago.com/216-104



Item no.: 216-106

Ferrule; Sleeve for 2.5 mm² / AWG 14; uninsulated; electro-tin plated; silver-colored

www.wago.com/216-106



Item no.: 216-102

Ferrule; Sleeve for 0.75 mm² / AWG 20; uninsulated; electro-tin plated; silver-colored

www.wago.com/216-102



Item no.: 216-103

Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated

www.wago.com/216-103



Item no.: 216-123

Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated; silver-colored

www.wago.com/216-123



Item no.: 216-122

Ferrule; Sleeve for 0.75 mm² / AWG 20; uninsulated; electro-tin plated; silver-colored

www.wago.com/216-122



Subject to changes. Please also observe the further product documentation!



	Item no.: 216-124 Ferrule; Sleeve for 1.5 mm ² / AWG 16; uninsulated; electro-tin plated	www.wago.com/216-124
	Item no.: 216-142 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92	www.wago.com/216-142
	Item no.: 216-132 Ferrule; Sleeve for 0.34 mm ² / AWG 24; uninsulated; electro-tin plated	www.wago.com/216-132
	Item no.: 216-121 Ferrule; Sleeve for 0.5 mm ² / AWG 22; uninsulated; electro-tin plated; silver-colored	www.wago.com/216-121
	Item no.: 216-143 Ferrule; Sleeve for 1 mm ² / AWG 18; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92	www.wago.com/216-143
	Item no.: 216-131 Ferrule; Sleeve for 0.25 mm ² / AWG 24; uninsulated; electro-tin plated; silver-colored	www.wago.com/216-131
	Item no.: 216-141 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92	www.wago.com/216-141
	Item no.: 216-152 Ferrule; Sleeve for 0.34 mm ² / AWG 24; uninsulated; electro-tin plated	www.wago.com/216-152
	Item no.: 216-203 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; red	www.wago.com/216-203
	Item no.: 216-202 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; gray	www.wago.com/216-202
	Item no.: 216-151 Ferrule; Sleeve for 0.25 mm ² / AWG 24; uninsulated; electro-tin plated	www.wago.com/216-151
	Item no.: 216-204 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; black	www.wago.com/216-204
	Item no.: 216-144 Ferrule; Sleeve for 1.5 mm ² / AWG 16; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92; silver-colored	www.wago.com/216-144
	Item no.: 216-201 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; insulated; electro-tin plated; white	www.wago.com/216-201
	Item no.: 216-223 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; red	www.wago.com/216-223
	Item no.: 216-241 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white	www.wago.com/216-241
	Item no.: 216-242 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray	www.wago.com/216-242
	Item no.: 216-222	

Subject to changes. Please also observe the further product documentation!



Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray

www.wago.com/216-222

Item no.: 216-221

Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white

www.wago.com/216-221

Item no.: 216-224

Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black

www.wago.com/216-224

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

www.wago.com/216-243

Item no.: 216-244

Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black

www.wago.com/216-244

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

www.wago.com/216-263

Item no.: 216-264

Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black

www.wago.com/216-264

Item no.: 216-284

Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black

www.wago.com/216-284

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

www.wago.com/216-262

Item no.: 216-301

Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow

www.wago.com/216-301

Item no.: 216-321

Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow

www.wago.com/216-321

Item no.: 216-322

Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; green

www.wago.com/216-322

Item no.: 216-302

Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise

www.wago.com/216-302

Coding

Coding



Item no.: 231-129

Coding key; snap-on type; light gray

www.wago.com/231-129

Cover

Cover



Item no.: 231-669

Lockout caps; for covering unused clamping units; orange

www.wago.com/231-669

Mounting

Mounting accessories

Subject to changes. Please also observe the further product documentation!



Item no.: 209-137

Mounting adapter; can be used as end stop; 6.5 mm wide; gray

www.wago.com/209-137

Downloads

Documentation

Additional Information

Technical explanations	2019 Apr 3	pdf 2.0 MB	Download
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CAD files

CAD data

2D/3D Models 231-646/018-000	URL	Download
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CAE data

EPLAN Data Portal 231-646/018-000	URL	Download
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ZUKEN Portal 231-646/018-000	URL	Download
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EPLAN Data Portal 231-646/018-000	URL	Download
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Environmental Product Compliance

Compliance Search

Environmental Product Compliance 231-646/018-000	URL	Download
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1-conductor male connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 16-pole;
Snap-in mounting feet; 2,50 mm²; orange

Installation Notes

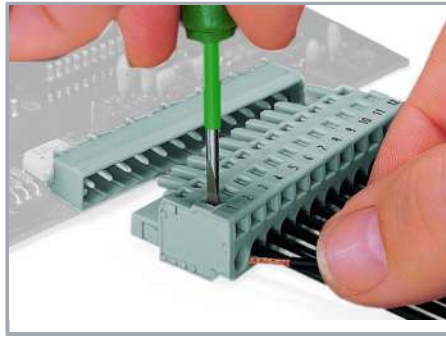
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Inserting a conductor via 3.5 mm screwdriver – CAGE CLAMP® actuation parallel to conductor entry.



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

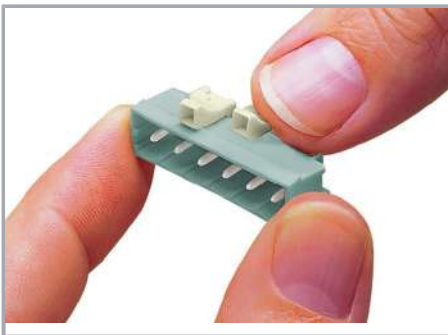


Inserting a conductor into CAGE CLAMP® unit via operating lever (231-291).



Inserting a conductor via operating tool.

Coding



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

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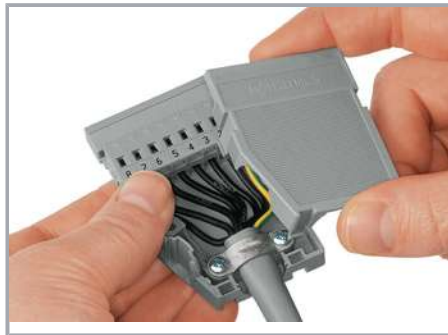
Testing – female connector with CAGE CLAMP®

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

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Labeling via direct marking or self-adhesive strips.

Product family

MCS MIDI Classic

[Show all products from the family](#)

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