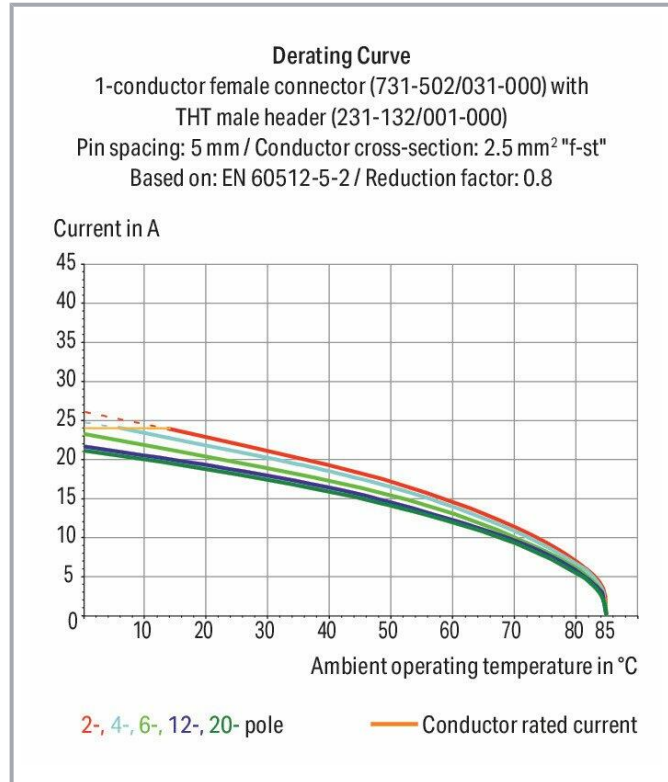


**Data sheet | Item number: 731-512/031-000**

1-conductor female connector, angled; CAGE CLAMP®; 2.5 mm<sup>2</sup>; Pin spacing 5 mm; 12-pole; clamping collar; DIN-35 rail/panel mounting; 2,50 mm<sup>2</sup>; gray



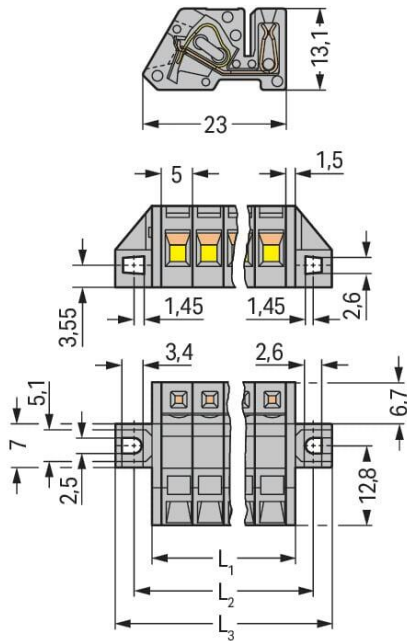
[www.wago.com/731-512/031-000](http://www.wago.com/731-512/031-000)



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

WAGO GmbH & Co. KG  
Hansastr. 27  
32423 Minden  
Phone: +49571 887-0 | Fax: +49571 887-169  
Email: [info.de@wago.com](mailto:info.de@wago.com) | Web: [www.wago.com](http://www.wago.com)

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Dimensions in mm

$L_1 = (\text{pole no.} \times \text{pin spacing}) + 3 \text{ mm}$

$L_2 = (\text{pole no.} \times \text{pin spacing}) + 8.8 \text{ mm}$

$L_3 = (\text{pole no.} \times \text{pin spacing}) + 14.8 \text{ mm}$

## Item description

- Universal connection for all conductor types
- Available with snap-in mounting feet or flanges for panel or through-panel mounting
- Mounting adapter allows versions with snap-in mounting feet to be DIN-35 rail mounted
- Easy conductor termination, even when halves are mated

## Data

### 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

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WAGO GmbH & Co. KG

Hansastr. 27

32423 Minden

Phone: +49571 887-0 | Fax: +49571 887-169

Email: [info.de@wago.com](mailto:info.de@wago.com) | Web: [www.wago.com](http://www.wago.com)

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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

Ratings per	IEC/EN 60664-1
Nominal voltage (III/3)	320 V
Rated impulse voltage (III/3)	4 kV
Rated voltage (III/2)	320 V
Rated impulse 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

### Ratings per UL 1059

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 1977

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

### Ratings per CSA

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

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



## Connection data

Connection points	12
Total number of potentials	12
Number of connection types	1
Number of levels	1

## Connection 1

Connection technology	CAGE CLAMP®
Actuation type	Operating tool
Actuation direction 1	Operation parallel 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	7 ... 8 mm / 0.28 ... 0.31 inches
Pole number	12
Conductor entry direction to mating direction	90 °

## Physical data

Pin spacing	5 mm / 0.197 inches
Width	74.8 mm / 2.945 inches
Height	13.1 mm / 0.516 inches
Depth	23 mm / 0.906 inches

## Mechanical Data

Variable coding	No
Direct ground contact to DIN-rail/drilled hole/housing	No
Design	angled; mountable
Mounting type	Mounting flange
Mounting type	Feed-through mounting Panel mounting
Anti-rotation protection	Yes

## Plug-in connection

Contact type (pluggable connector)	Female connector/socket
Connector (connection type)	for conductor

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



Mismatching protection	No
Plugging without loss of pin spacing	No
Locking of plug-in connection	none

## Material Data

Note (material data)

Information on material specifications can be found here

Color	gray
Material group	I
Insulation material	Polyamide (PA66)
Flammability class per UL94	V0
Clamping spring material	Chrome-nickel spring steel (CrNi)
Contact material	Copper alloy
Contact plating	Tin
Fire load	0.586 MJ
Weight	17.6 g

## Environmental requirements

Limit temperature range	-60 ... +85 °C
Processing temperature	-35 ... +60 °C

## Commercial data

Product Group	3 (Multi Conn. System)
eCl@ss 10.0	27-44-03-09
eCl@ss 9.0	27-44-03-09
ETIM 8.0	EC002638
ETIM 7.0	EC002638
PU (SPU)	25 pcs
Packaging type	box
Country of origin	PL
GTIN	4044918575249
Customs tariff number	85366990990





## Environmental Product Compliance

RoHS Compliance Status	Compliant, No Exemption
------------------------	-------------------------



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

## Approvals / Certificates

### General approvals

Logo	Approval	Additional Approval Text	Certificate name
	<b>CB</b> DEKRA Certification B.V.	IEC 61984	NL-39756 /A1
	<b>CSA</b> DEKRA Certification B.V.	C22.2	1466354
	<b>KEMA/KEUR</b> DEKRA Certification B.V.	EN 61984	71-121453
	<b>UL</b> Underwriters Laboratories Inc.	UL 1977	E45171
	<b>UL</b> Underwriters Laboratories Inc.	UL 1059	E45172

### Approvals for marine applications

Logo	Approval	Additional Approval Text	Certificate name
	<b>ABS</b> American Bureau of Shipping	-	19-HG1869876-PDA
	<b>BV</b> Bureau Veritas S.A.	IEC 60998	11915/D0 BV

## Counterpart


















**Item no.231-612**  
 1-conductor male connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 2,50 mm²; gray

[www.wago.com/231-612](http://www.wago.com/231-612)

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

## Optional accessories



### Tool

Operating tool		
	<b>Item no.: 209-130</b> Operating tool; made of insulating material; 1-way; for 264 Series (1-/2-way), 280, 281 Series (up to 3-way); natural	<a href="http://www.wago.com/209-130">www.wago.com/209-130</a>
	<b>Item no.: 231-159</b> Operating tool; natural	<a href="http://www.wago.com/231-159">www.wago.com/231-159</a>
	<b>Item no.: 231-231</b> Combination operating tool; red	<a href="http://www.wago.com/231-231">www.wago.com/231-231</a>
	<b>Item no.: 210-657</b> Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured	<a href="http://www.wago.com/210-657">www.wago.com/210-657</a>
	<b>Item no.: 210-720</b> Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured	<a href="http://www.wago.com/210-720">www.wago.com/210-720</a>
	<b>Item no.: 231-131</b> Operating tool; made of insulating material; 1-way; loose; white	<a href="http://www.wago.com/231-131">www.wago.com/231-131</a>
	<b>Item no.: 231-291</b> Operating tool; made of insulating material; 1-way; loose; red	<a href="http://www.wago.com/231-291">www.wago.com/231-291</a>
	<b>Item no.: 280-432</b> Operating tool; made of insulating material; 2-way; white	<a href="http://www.wago.com/280-432">www.wago.com/280-432</a>
	<b>Item no.: 280-434</b> Operating tool; made of insulating material; 4-way	<a href="http://www.wago.com/280-434">www.wago.com/280-434</a>
	<b>Item no.: 280-437</b> Operating tool; made of insulating material; 7-way	<a href="http://www.wago.com/280-437">www.wago.com/280-437</a>
	<b>Item no.: 280-440</b> Operating tool; made of insulating material; 10-way	<a href="http://www.wago.com/280-440">www.wago.com/280-440</a>
	<b>Item no.: 280-435</b> Operating tool; made of insulating material; 5-way; gray	<a href="http://www.wago.com/280-435">www.wago.com/280-435</a>
	<b>Item no.: 280-436</b> Operating tool; made of insulating material; 6-way	<a href="http://www.wago.com/280-436">www.wago.com/280-436</a>
	<b>Item no.: 280-438</b> Operating tool; made of insulating material; 8-way	<a href="http://www.wago.com/280-438">www.wago.com/280-438</a>
	<b>Item no.: 280-433</b> Operating tool; made of insulating material; 3-way	<a href="http://www.wago.com/280-433">www.wago.com/280-433</a>

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

## Marking accessories

### Marking strip

	<b>Item no.: 210-332/500-202</b> 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	<a href="http://www.wago.com/210-332/500-202">www.wago.com/210-332/500-202</a>
	<b>Item no.: 210-332/500-206</b> 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	<a href="http://www.wago.com/210-332/500-206">www.wago.com/210-332/500-206</a>
	<b>Item no.: 210-332/500-205</b> 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	<a href="http://www.wago.com/210-332/500-205">www.wago.com/210-332/500-205</a>
	<b>Item no.: 210-332/500-204</b> 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	<a href="http://www.wago.com/210-332/500-204">www.wago.com/210-332/500-204</a>





## Jumpers

### Jumper

	<b>Item no.: 231-905</b> Jumper; for conductor entry; 5-way; insulated; gray	<a href="http://www.wago.com/231-905">www.wago.com/231-905</a>
	<b>Item no.: 231-903</b> Jumper; for conductor entry; 3-way; insulated; gray	<a href="http://www.wago.com/231-903">www.wago.com/231-903</a>
	<b>Item no.: 231-907</b> Jumper; for conductor entry; 7-way; insulated; gray	<a href="http://www.wago.com/231-907">www.wago.com/231-907</a>
	<b>Item no.: 231-910</b> Jumper; for conductor entry; 10-way; insulated; gray	<a href="http://www.wago.com/231-910">www.wago.com/231-910</a>
	<b>Item no.: 231-902</b> Jumper; for conductor entry; 2-way; insulated; gray	<a href="http://www.wago.com/231-902">www.wago.com/231-902</a>

## Mounting

### Mounting accessories

	<b>Item no.: 209-147</b> Self-tapping screw	<a href="http://www.wago.com/209-147">www.wago.com/209-147</a>
	<b>Item no.: 231-194</b> Self-tapping screw; B 2.2x13, fixing hole 1.8 mm Ø	<a href="http://www.wago.com/231-194">www.wago.com/231-194</a>
	<b>Item no.: 231-195</b> Screw with nut; M2x12; for fixing element	<a href="http://www.wago.com/231-195">www.wago.com/231-195</a>
	<b>Item no.: 231-295</b> Screw with nut	<a href="http://www.wago.com/231-295">www.wago.com/231-295</a>

## Testing and measuring

### Testing accessories

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














**Item no.: 210-136**

Test plug; 2 mm Ø; with 500 mm cable; red

[www.wago.com/210-136](http://www.wago.com/210-136)**Item no.: 231-661**Test plugs for female connectors; for 5 mm and 5.08 mm pin spacing; 2,50 mm<sup>2</sup>; light gray[www.wago.com/231-661](http://www.wago.com/231-661)**Ferrule**

## Ferrule

	<b>Item no.: 216-106</b> Ferrule; Sleeve for 2.5 mm <sup>2</sup> / AWG 14; uninsulated; electro-tin plated; silver-colored	<a href="http://www.wago.com/216-106">www.wago.com/216-106</a>
	<b>Item no.: 216-123</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; uninsulated; electro-tin plated; silver-colored	<a href="http://www.wago.com/216-123">www.wago.com/216-123</a>
	<b>Item no.: 216-122</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / AWG 20; uninsulated; electro-tin plated; silver-colored	<a href="http://www.wago.com/216-122">www.wago.com/216-122</a>
	<b>Item no.: 216-124</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; uninsulated; electro-tin plated	<a href="http://www.wago.com/216-124">www.wago.com/216-124</a>
	<b>Item no.: 216-142</b> 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	<a href="http://www.wago.com/216-142">www.wago.com/216-142</a>
	<b>Item no.: 216-132</b> Ferrule; Sleeve for 0.34 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated	<a href="http://www.wago.com/216-132">www.wago.com/216-132</a>
	<b>Item no.: 216-121</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / AWG 22; uninsulated; electro-tin plated; silver-colored	<a href="http://www.wago.com/216-121">www.wago.com/216-121</a>
	<b>Item no.: 216-143</b> 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	<a href="http://www.wago.com/216-143">www.wago.com/216-143</a>
	<b>Item no.: 216-131</b> Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated; silver-colored	<a href="http://www.wago.com/216-131">www.wago.com/216-131</a>
	<b>Item no.: 216-141</b> 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	<a href="http://www.wago.com/216-141">www.wago.com/216-141</a>
	<b>Item no.: 216-152</b> Ferrule; Sleeve for 0.34 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated	<a href="http://www.wago.com/216-152">www.wago.com/216-152</a>
	<b>Item no.: 216-151</b> Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated	<a href="http://www.wago.com/216-151">www.wago.com/216-151</a>
	<b>Item no.: 216-144</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92; silver-colored	<a href="http://www.wago.com/216-144">www.wago.com/216-144</a>
	<b>Item no.: 216-223</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; red	<a href="http://www.wago.com/216-223">www.wago.com/216-223</a>

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WAGO GmbH &amp; Co. KG

Hansastr. 27




32423 Minden

Phone: +49571 887-0 | Fax: +49571 887-169

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	<b>Item no.: 216-241</b> 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	<a href="http://www.wago.com/216-241">www.wago.com/216-241</a>
	<b>Item no.: 216-242</b> 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	<a href="http://www.wago.com/216-242">www.wago.com/216-242</a>
	<b>Item no.: 216-222</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray	<a href="http://www.wago.com/216-222">www.wago.com/216-222</a>
	<b>Item no.: 216-221</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; white	<a href="http://www.wago.com/216-221">www.wago.com/216-221</a>
	<b>Item no.: 216-224</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; black	<a href="http://www.wago.com/216-224">www.wago.com/216-224</a>
	<b>Item no.: 216-243</b> 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	<a href="http://www.wago.com/216-243">www.wago.com/216-243</a>
	<b>Item no.: 216-244</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black	<a href="http://www.wago.com/216-244">www.wago.com/216-244</a>
	<b>Item no.: 216-263</b> 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	<a href="http://www.wago.com/216-263">www.wago.com/216-263</a>
	<b>Item no.: 216-246</b> Ferrule; Sleeve for 2.5 mm <sup>2</sup> / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue	<a href="http://www.wago.com/216-246">www.wago.com/216-246</a>
	<b>Item no.: 216-264</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black	<a href="http://www.wago.com/216-264">www.wago.com/216-264</a>
	<b>Item no.: 216-284</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black	<a href="http://www.wago.com/216-284">www.wago.com/216-284</a>
	<b>Item no.: 216-262</b> 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	<a href="http://www.wago.com/216-262">www.wago.com/216-262</a>
	<b>Item no.: 216-321</b> Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow	<a href="http://www.wago.com/216-321">www.wago.com/216-321</a>
	<b>Item no.: 216-322</b> Ferrule; Sleeve for 0.34 mm <sup>2</sup> / 22 AWG; insulated; electro-tin plated; light turquoise	<a href="http://www.wago.com/216-322">www.wago.com/216-322</a>

**Strain relief**

Strain relief housing

**Item no.: 232-612**

Strain relief housing; for female and male connectors; 2 parts; Pin spacing 5 mm; 12-pole; gray

[www.wago.com/232-612](http://www.wago.com/232-612)

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

WAGO GmbH &amp; Co. KG

Hansastr. 27

32423 Minden

Phone: +49571 887-0 | Fax: +49571 887-169

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## Downloads

### Documentation

#### Additional Information

Technical Section	2019 Apr 3	pdf	Download
Technical explanations		2.0 MB	

## CAD/CAE-Data

### CAD data

2D/3D Models 731-512/031-000	URL	Download
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### CAE data

EPLAN Data Portal 731-512/031-000	URL	Download
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ZUKEN Portal 731-512/031-000	URL	Download
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EPLAN Data Portal 731-512/031-000	URL	Download
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## Environmental Product Compliance

### Compliance Search

Environmental Product Compliance 731-512/031-000	URL	Download
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1-conductor female connector, angled; CAGE CLAMP®; 2.5 mm<sup>2</sup>; Pin spacing 5 mm;

12-pole; clamping collar; DIN-35 rail/panel mounting; 2,50 mm<sup>2</sup>; gray

## Installation Notes

### Application

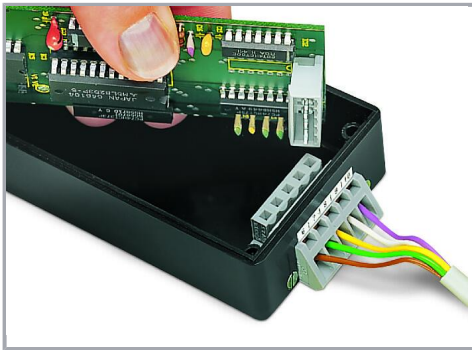
Subject to changes. Please also observe the further product documentation!



Angled female connector –

a male header with straight solder pins is used for horizontal PCB mounting in narrow housings.

### Application



Angled female connector –

used as through-panel connector; termination ports and operating slots are located outside the housing – panel thickness up to 2 mm.

### Product family

**MCS MIDI Classic**

[Show all products from the family](#)

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