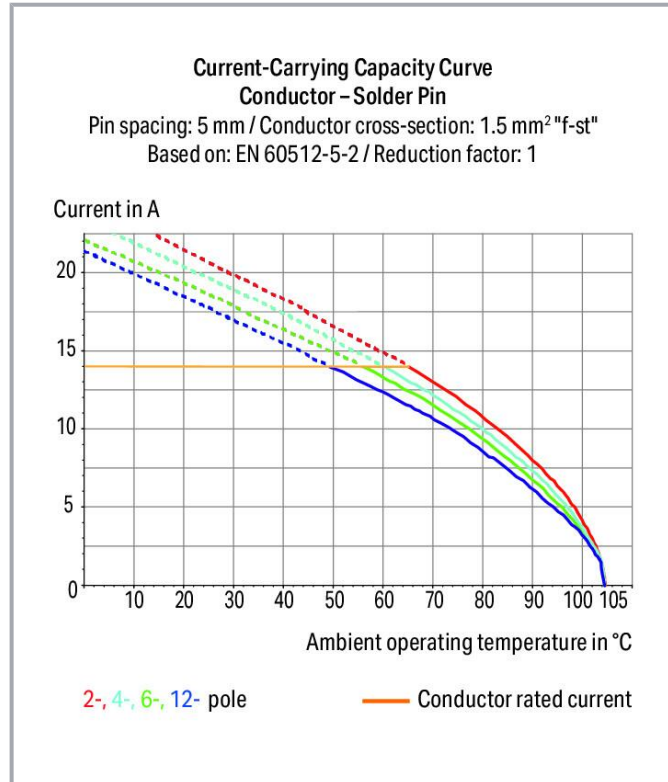


**Data sheet | Item number: 816-109**

2-conductor PCB terminal block; 1.5 mm<sup>2</sup>; Pin spacing 5 mm; 9-pole; Push-in  
CAGE CLAMP®; 1,50 mm<sup>2</sup>; gray



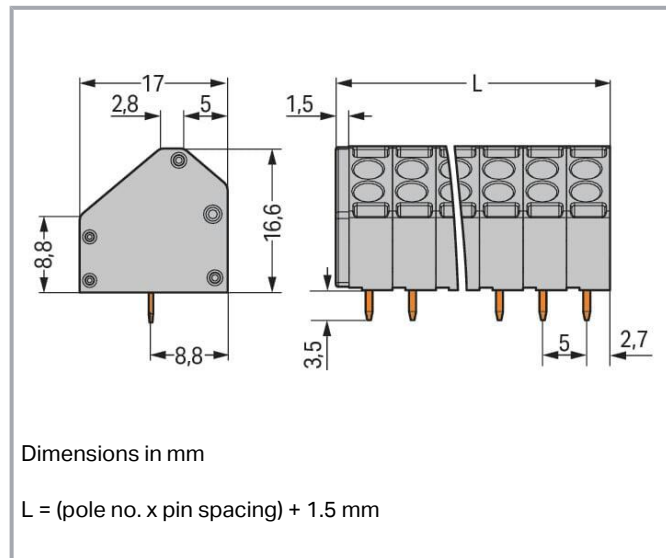
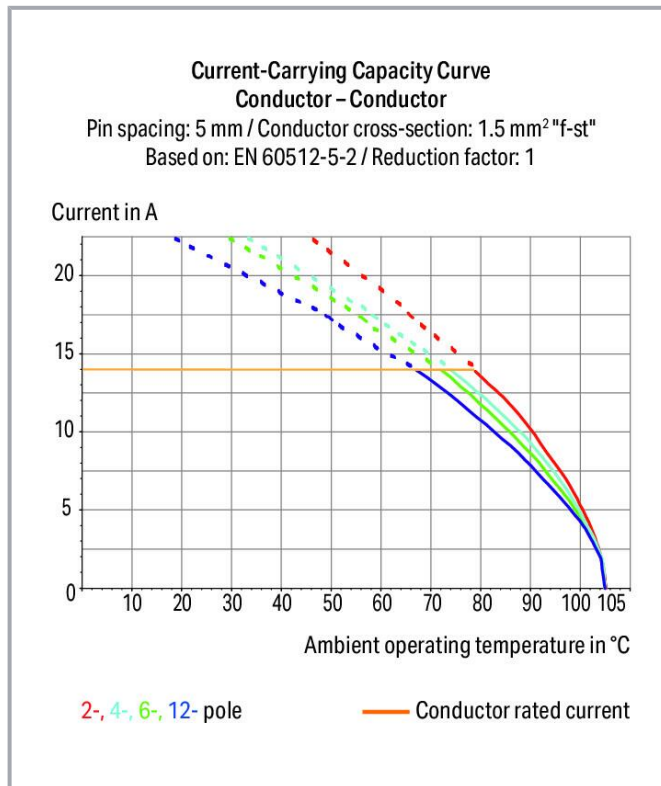
[www.wago.com/816-109](http://www.wago.com/816-109)



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)

Do you have any questions about our products?  
We are always happy to take your call at +49 (571) 887-44222.



## Item description

- Two-conductor terminal strips with screwdriver actuation and Push-in CAGE CLAMP<sup>®</sup> connection
- Double entries for supply and power distribution
- Simple, reliable connection via clamping units featuring individual operating slots
- Simple, push-in termination of solid and ferruled conductors

## Data

### Notes

Variants:

Other pole numbers

Other colors

Mixed-color PCB connector strips

Direct marking

Other versions (or variants) can be requested from WAGO Sales or configured at <https://configurator.wago.com/>.

## Electrical data

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

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32423 Minden

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### 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                 | 14 A  |
| Legend (ratings)              | (III / 2) ≙ 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) | 10 A    |
| Rated voltage UL (Use Group D) | 300 V   |
| Rated current UL (Use Group D) | 10 A    |

### Ratings per CSA

|                                 |       |
|---------------------------------|-------|
| Approvals per                   | CSA   |
| Rated voltage CSA (Use Group B) | 300 V |
| Rated current CSA (Use Group B) | 8 A   |
| Rated voltage CSA (Use Group D) | 300 V |

### Connection data

|                            |    |
|----------------------------|----|
| Connection points          | 18 |
| Total number of potentials | 9  |
| Number of connection types | 1  |
| Number of levels           | 2  |

### Connection 1

|   |   |
|---|---|
| Connection technology                           | Push-in CAGE CLAMP®                         |
| Actuation type                                  | Operating tool                              |
| Solid conductor                                 | 0.2 ... 1.5 mm <sup>2</sup> / 24 ... 16 AWG |
| Fine-stranded conductor                         | 0.2 ... 1.5 mm <sup>2</sup> / 24 ... 16 AWG |
| Fine-stranded conductor; with insulated ferrule | 0.2 ... 1 mm <sup>2</sup>                   |

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



|   |                                    |
|---|------------------------------------|
| Fine-stranded conductor; with uninsulated ferrule | 0.2 ... 1.5 mm <sup>2</sup>        |
| Strip length                                      | 9 ... 10 mm / 0.35 ... 0.39 inches |
| Conductor connection direction to PCB             | 45 °                               |
| Pole number                                       | 9                                  |

### Physical data

|                                      |                          |
|--------------------------------------|--------------------------|
| Pin spacing                          | 5 mm / 0.197 inches      |
| Width                                | 46.5 mm / 1.831 inches   |
| Height                               | 20.1 mm / 0.791 inches   |
| Height from the surface              | 16.6 mm / 0.654 inches   |
| Depth                                | 17 mm / 0.669 inches     |
| Solder pin length                    | 3.5 mm                   |
| Solder pin dimensions                | 0.8 x 0.5 mm             |
| Drilled hole diameter with tolerance | 1.1 <sup>(+0.1)</sup> mm |

### Plug-in connection

|                                      |    |
|--------------------------------------|----|
| Plugging without loss of pin spacing | No |
|--------------------------------------|----|

### PCB contact

|                                     |  |
|-------------------------------------|--|
| PCB contact                         | THT                                      |
| Solder pin arrangement              | over the entire terminal strip (in-line) |
| Number of solder pins per potential | 1  |

### 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                   | 0.206 MJ   |
| Weight                      | 10.7 g   |

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

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## Environmental requirements

|                         |                 |
|-------------------------|-----------------|
| Limit temperature range | -60 ... +105 °C |
|-------------------------|-----------------|

## Commercial data





|                       |                                |
|-----------------------|--------------------------------|
| Product Group         | 4 (Printed Circuit Connectors) |
| eCl@ss 10.0           | 27-44-04-01                    |
| eCl@ss 9.0            | 27-44-04-01                    |
| ETIM 8.0              | EC002643                       |
| ETIM 7.0              | EC002643                       |
| PU (SPU)              | 70 (35) pcs                    |
| Packaging type        | box                            |
| Country of origin     | CH                             |
| GTIN                  | 4045454732196                  |
| Customs tariff number | 85369010000                    |

## Environmental Product Compliance

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

## Approvals / Certificates

### General approvals












| Logo   | Approval                             | Additional Approval Text | Certificate name |
|--|--------------------------------------|--------------------------|------------------|
|  | CCA<br>DEKRA Certification B.V.      | EN 60947                 | NTR NL<br>7057   |
|  | CCA<br>DEKRA Certification B.V.      | EN 60947                 | 2158696.01       |
|  | CSA<br>DEKRA Certification B.V.      | C22.2                    | 1132097          |
|  | UR<br>Underwriters Laboratories Inc. | UL 1059                  | E45172           |

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

## Declarations of conformity and manufacturer's declarations

| Logo   | Approval   | Additional Approval Text | Certificate name |
|--|--|--------------------------|------------------|
|  | EU-Declaration of Conformity<br>WAGO GmbH & Co. KG | -                        | -                |
|  | UK-Declaration of Conformity<br>WAGO GmbH & Co. KG | -                        | -                |

## Optional accessories

| Ferrule   |  |  |
|---|--|--|
|    | <b>Item no.: 216-101</b><br>Ferrule; Sleeve for 0.5 mm <sup>2</sup> / AWG 22; uninsulated; electro-tin plated; silver-colored  | <a href="http://www.wago.com/216-101">www.wago.com/216-101</a> |
|    | <b>Item no.: 216-104</b><br>Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; uninsulated; electro-tin plated; silver-colored  | <a href="http://www.wago.com/216-104">www.wago.com/216-104</a> |
|  | <b>Item no.: 216-102</b><br>Ferrule; Sleeve for 0.75 mm <sup>2</sup> / AWG 20; uninsulated; electro-tin plated; silver-colored   | <a href="http://www.wago.com/216-102">www.wago.com/216-102</a> |
|  | <b>Item no.: 216-103</b><br>Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; uninsulated; electro-tin plated  | <a href="http://www.wago.com/216-103">www.wago.com/216-103</a> |
|  | <b>Item no.: 216-123</b><br>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><br>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><br>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><br>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><br>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><br>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><br>Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; uninsulated; electro-tin plated; electrolytic copper; gastight   | <a href="http://www.wago.com/216-143">www.wago.com/216-143</a> |




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



crimped; acc. to DIN 46228, Part 1/08.92

|  |   |  |
|--|---|--|
|  | <b>Item no.: 216-131</b><br>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><br>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><br>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.: 216-203</b><br>Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; red  | <a href="http://www.wago.com/216-203">www.wago.com/216-203</a> |
|  | <b>Item no.: 216-202</b><br>Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray  | <a href="http://www.wago.com/216-202">www.wago.com/216-202</a> |
|  | <b>Item no.: 216-151</b><br>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><br>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.: 216-201</b><br>Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; white  | <a href="http://www.wago.com/216-201">www.wago.com/216-201</a> |
|  | <b>Item no.: 216-223</b><br>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> |
|  | <b>Item no.: 216-241</b><br>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><br>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><br>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><br>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.: 216-243</b><br>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.: 216-263</b><br>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.: 216-262</b><br>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.: 216-301</b><br>Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow  | <a href="http://www.wago.com/216-301">www.wago.com/216-301</a> |

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

|   |   |  |
|---|---|--|
|  | <b>Item no.: 216-321</b><br>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><br>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> |
|  | <b>Item no.: 216-302</b><br>Ferrule; Sleeve for 0.34 mm <sup>2</sup> / 22 AWG; insulated; electro-tin plated; light turquoise | <a href="http://www.wago.com/216-302">www.wago.com/216-302</a> |




### Marking accessories

#### Marking strip

|  |  |  |
|--|--|--|
|    | <b>Item no.: 210-833</b><br>Marking strips; 25 m on roll; 6 mm wide; plain; Self-adhesive; white   | <a href="http://www.wago.com/210-833">www.wago.com/210-833</a>                 |
|    | <b>Item no.: 210-332/500-202</b><br>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><br>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><br>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><br>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> |

### Tool

#### Operating tool

|  |  |  |
|--|--|--|
|  | <b>Item no.: 210-648</b><br>Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft; angled; short | <a href="http://www.wago.com/210-648">www.wago.com/210-648</a> |
|  | <b>Item no.: 210-647</b><br>Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft; multicoloured | <a href="http://www.wago.com/210-647">www.wago.com/210-647</a> |
|  | <b>Item no.: 210-719</b><br>Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft                | <a href="http://www.wago.com/210-719">www.wago.com/210-719</a> |

### Downloads

#### Documentation

#### Additional Information

|                   |            |     |          |
|-------------------|------------|-----|----------|
| Technical Section | 2019 Apr 3 | pdf | Download |
|-------------------|------------|-----|----------|

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



## CAD/CAE-Data

### CAD data

|                      |                     |                          |
|----------------------|---------------------|--------------------------|
| 2D/3D Models 816-109 | <a href="#">URL</a> | <a href="#">Download</a> |
|----------------------|---------------------|--------------------------|

### PCB Design

|                              |                     |                          |
|------------------------------|---------------------|--------------------------|
| Symbol and Footprint 816-109 | <a href="#">URL</a> | <a href="#">Download</a> |
|------------------------------|---------------------|--------------------------|

CAX data for your PCB design, consisting of "schematic symbols and PCB footprints", allow easy integration of the WAGO component into your development environment.

### Supported formats:

- Accel EDA 14 & 15
- Altium 6 to current version
- Cadence Allegro
- DesignSpark
- Eagle Libraries
- KiCad
- Mentor Graphics BoardStation
- Mentor Graphics Design Architect
- Mentor Graphics Design Expedition 99 and 2000
- OrCAD 9.X PCB and Capture
- PADS PowerPCB 3, 3.5, 4.X, and 5.X
- PADS PowerPCB and PowerLogic 3.0
- PCAD 2000, 2001, 2002, 2004, and 2006
- Pulsonix 8.5 or newer
- STL
- 3D STEP
- TARGET 3001!
- View Logic ViewDraw
- Quadcept
- Zuken CadStar 3 and 4
- Zuken CR-5000 and CR-8000

PCB Component Libraries (EDA), PCB CAD Library Ultra Librarian

### CAE data

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

## Environmental Product Compliance

### Compliance Search

Environmental Product Compliance 816-109

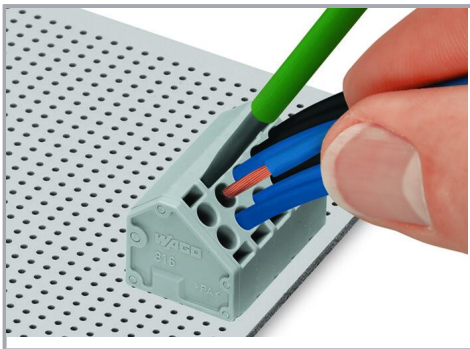
[URL](#)

[Download](#)

2-conductor PCB terminal block; 1.5 mm<sup>2</sup>; Pin spacing 5 mm; 9-pole; Push-in CAGE CLAMP®; 1,50 mm<sup>2</sup>; gray

## Installation Notes

### Conductor termination



Open the clamping unit via screwdriver (3.5 mm blade) to insert/remove fine-stranded conductors.

Push in solid and ferruled, fine-stranded conductors until fully inserted.

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

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