

**Data sheet | Item number: 745-3109**

PCB terminal block; 4 mm<sup>2</sup>; Pin spacing 5 mm; 9-pole; CAGE CLAMP®; 4,00 mm<sup>2</sup>; gray

[www.wago.com/745-3109](http://www.wago.com/745-3109)



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

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## Item description

- PCB terminal strips with screwdriver-actuated CAGE CLAMP® connection
- Versions with Ex approval
- Mixed-color PCB terminal strips from factory
- Space-saving configuration of terminal strips when placed behind each other
- Custom color combinations
- Double solder pins for high mechanical stability
- Integrated testing tap

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

**Data****Notes**

Variants:

Other pole numbers

Versions for Ex e II and Ex i

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****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                 | 32 A  |
| Legend (ratings)              | (III / 2) $\hat{=}$ Overvoltage category III / Pollution degree 2 |

**Ratings per UL**

| Approvals per                  | UL 1059 |
|--------------------------------|---------|
| Rated voltage UL (Use Group B) | 300 V   |
| Rated current UL (Use Group B) | 20 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) | 20 A  |
| Rated voltage CSA (Use Group D) | 300 V |
| Rated current CSA (Use Group D) | 10 A  |

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## Connection data

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

## Connection 1

|   |  |
|---|--|
| Connection technology                             | CAGE CLAMP®                                |
| Actuation type                                    | Operating tool                             |
| Solid conductor                                   | 0.08 ... 4 mm <sup>2</sup> / 28 ... 12 AWG |
| Fine-stranded conductor                           | 0.08 ... 4 mm <sup>2</sup> / 28 ... 12 AWG |
| Fine-stranded conductor; with insulated ferrule   | 0.25 ... 2.5 mm <sup>2</sup>               |
| Fine-stranded conductor; with uninsulated ferrule | 0.25 ... 2.5 mm <sup>2</sup>               |
| Strip length                                      | 8 ... 9 mm / 0.31 ... 0.35 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                               | 23 mm / 0.906 inches     |
| Height from the surface              | 19 mm / 0.748 inches     |
| Depth                                | 19.4 mm / 0.764 inches   |
| Solder pin length                    | 4 mm                     |
| Solder pin dimensions                | 0.8 x 1.2 mm             |
| Drilled hole diameter with tolerance | 1.5 <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 | 2  |

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



## 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            | Electrolytic copper (E <sub>Cu</sub> ) |
| Contact plating             | Tin                                    |
| Fire load                   | 0.244 MJ                               |
| Weight                      | 16.2 g                                 |

## 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)              | 60 pcs                         |
| Packaging type        | box                            |
| Country of origin     | PL                             |
| GTIN                  | 4045454153748                  |
| 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      | EN 60947                 | NTR NL-          |

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



|  |               |               |
|--|---------------|---------------|
| DEKRA Certification B.V.                       |               | 7095          |
| <b>CCA</b><br>DEKRA Certification B.V.         | EN 60947      | 71-<br>112275 |
| <b>CSA</b><br>DEKRA Certification B.V.         | C22.2 No. 158 | 1604421       |
| <b>cURus</b><br>Underwriters Laboratories Inc. | UL 1059       | E45172        |

#### Declarations of conformity and manufacturer's declarations

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

#### Optional accessories

##### Tool

| Operating tool           |   |  |
|--------------------------|---|--|
| <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.: 210-658</b> | Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; angled; short; multicoloured | <a href="http://www.wago.com/210-658">www.wago.com/210-658</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> |

##### 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> |  | <a href="http://www.wago.com/216-132">www.wago.com/216-132</a> |

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

**Item no.: 216-121**

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

[www.wago.com/216-121](http://www.wago.com/216-121)

**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

[www.wago.com/216-143](http://www.wago.com/216-143)

**Item no.: 216-131**

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

[www.wago.com/216-131](http://www.wago.com/216-131)

**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

[www.wago.com/216-141](http://www.wago.com/216-141)

**Item no.: 216-152**

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

[www.wago.com/216-152](http://www.wago.com/216-152)

**Item no.: 216-151**

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

[www.wago.com/216-151](http://www.wago.com/216-151)

**Item no.: 216-144**

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

[www.wago.com/216-144](http://www.wago.com/216-144)

**Item no.: 216-223**

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

[www.wago.com/216-223](http://www.wago.com/216-223)

**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

[www.wago.com/216-241](http://www.wago.com/216-241)

**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

[www.wago.com/216-242](http://www.wago.com/216-242)

**Item no.: 216-222**

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

[www.wago.com/216-222](http://www.wago.com/216-222)

**Item no.: 216-221**

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

[www.wago.com/216-221](http://www.wago.com/216-221)

**Item no.: 216-224**

Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; insulated; electro-tin plated; black

[www.wago.com/216-224](http://www.wago.com/216-224)

**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

[www.wago.com/216-243](http://www.wago.com/216-243)

**Item no.: 216-244**

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

[www.wago.com/216-244](http://www.wago.com/216-244)

**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

[www.wago.com/216-263](http://www.wago.com/216-263)

**Item no.: 216-246**

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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

[www.wago.com/216-246](http://www.wago.com/216-246)

**Item no.: 216-266**

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

[www.wago.com/216-266](http://www.wago.com/216-266)

**Item no.: 216-264**

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

[www.wago.com/216-264](http://www.wago.com/216-264)

**Item no.: 216-286**

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

[www.wago.com/216-286](http://www.wago.com/216-286)

**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

[www.wago.com/216-262](http://www.wago.com/216-262)

**Item no.: 216-321**

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

[www.wago.com/216-321](http://www.wago.com/216-321)

**Item no.: 216-322**

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

[www.wago.com/216-322](http://www.wago.com/216-322)

## Testing and measuring

### Testing accessories

**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)

## Marking accessories

### Marking strip

**Item no.: 210-332/500-202**

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/210-332/500-202](http://www.wago.com/210-332/500-202)

**Item no.: 210-332/500-206**

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/210-332/500-206](http://www.wago.com/210-332/500-206)

**Item no.: 210-332/500-205**

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/210-332/500-205](http://www.wago.com/210-332/500-205)

**Item no.: 210-332/500-204**

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/210-332/500-204](http://www.wago.com/210-332/500-204)

## Downloads

### Documentation

#### Additional Information

2019 年4月3日

pdf

Download

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## CAD/CAE-Data

### CAD data

|                       |                     |                          |
|-----------------------|---------------------|--------------------------|
| 2D/3D Models 745-3109 | <a href="#">URL</a> | <a href="#">Download</a> |
|-----------------------|---------------------|--------------------------|

### CAE data

|                            |                     |                          |
|----------------------------|---------------------|--------------------------|
| EPLAN Data Portal 745-3109 | <a href="#">URL</a> | <a href="#">Download</a> |
|----------------------------|---------------------|--------------------------|

|                       |                     |                          |
|-----------------------|---------------------|--------------------------|
| ZUKEN Portal 745-3109 | <a href="#">URL</a> | <a href="#">Download</a> |
|-----------------------|---------------------|--------------------------|

### PCB Design

|                               |                     |                          |
|-------------------------------|---------------------|--------------------------|
| Symbol and Footprint 745-3109 | <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

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

- Zuken CadStar 3 and 4
- Zuken CR-5000 and CR-8000

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

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## Environmental Product Compliance

### Compliance Search

Environmental Product Compliance 745-3109

URL

Download

PCB terminal block; 4 mm<sup>2</sup>; Pin spacing 5 mm; 9-pole; CAGE CLAMP®; 4,00 mm<sup>2</sup>; gray

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## Installation Notes

### Installation



Saving space: two PCB terminal strips arranged in a row

### Conductor termination



Inserting a conductor via 3.5 mm screwdriver.

### Testing

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



Testing with 2 mm Ø test plug.

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