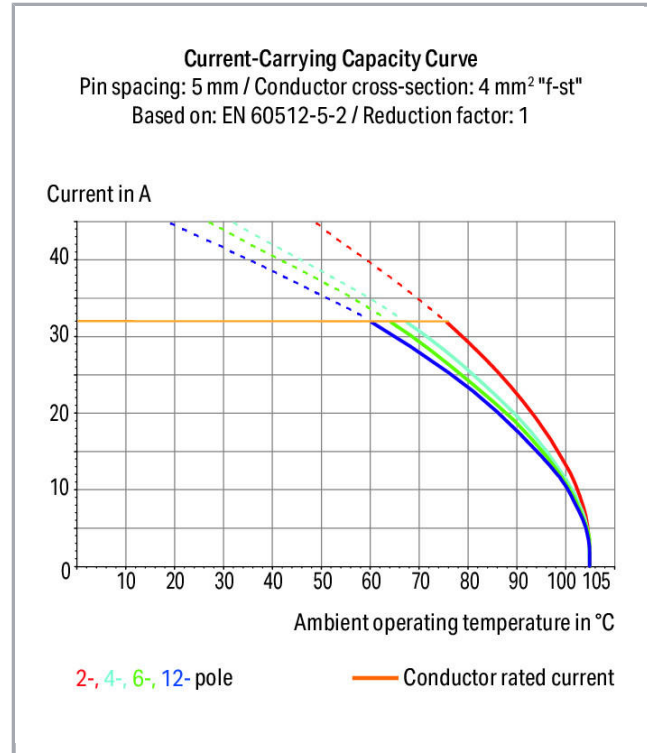


Data sheet | Item number: 745-3104

PCB terminal block; 4 mm²; Pin spacing 5 mm; 4-pole; CAGE CLAMP®; 4,00 mm²; gray



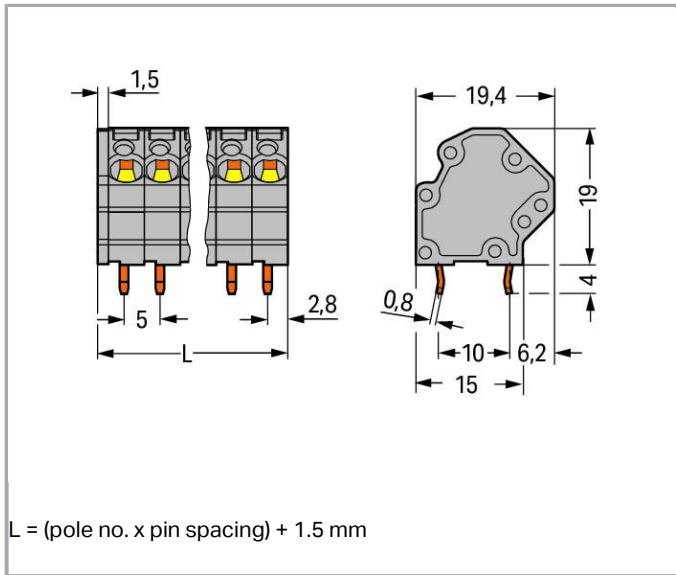
www.wago.com/745-3104



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

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



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

Data

Electrical data

Ratings per IEC/EN 60664-1

| Ratings per | IEC/EN 60664-1 |
|---------------------------------|-----------------------------------------------------------|
| Rated 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 |
| Rated voltage (II / 2) | 630 V |
| Rated impulse voltage (II / 2) | 4 kV |
| Rated current | 32 A |
| Legend (ratings) | (III / 2) ≙ Overvoltage category III / Pollution degree 2 |

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

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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 |
| Approvals per | UL 1059 |

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 |

Connection data

| | |
|-------------------------------------------------------------|--------------------------------------------|
| Connection technology | CAGE CLAMP® |
| Actuation type | Operating tool |
| Solid conductor | 0,08 ... 4 mm ² / 28 ... 12 AWG |
| Fine-stranded conductor | 0,08 ... 4 mm ² / 28 ... 12 AWG |
| Fine-stranded conductor with ferrule with plastic collar | 0,25 ... 2,5 mm ² |
| Fine-stranded conductor with ferrule without plastic collar | 0,25 ... 2,5 mm ² |
| Strip length | 8 ... 9 mm / 0.31 ... 0.35 inch |
| Conductor entry angle to the PCB | 45° |
| No. of poles | 4 |
| Total number of connection points | 4 |
| Total number of potentials | 4 |
| Number of connection types | 1 |
| Number of levels | 1 |

Geometrical Data

| | |
|-------------------------|----------------------|
| Pin spacing | 5 mm / 0.197 inch |
| Width | 21,5 mm / 0.846 inch |
| Height | 23 mm / 0.906 inch |
| Height from the surface | 19 mm / 0.748 inch |
| Depth | 19,4 mm / 0.764 inch |
| Solder pin length | 4 mm |
| Solder pin dimensions | 0,8 x 1,2 mm |

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

| | |
|-----------------------------------|--------------------------|
| Drilled hole diameter (tolerance) | 1,5 ^(+0,1) mm |
|-----------------------------------|--------------------------|

PCB contact

| | |
|-------------------------------------|------------------------------------------|
| PCB contact | THT |
| Solder pin arrangement | over the entire terminal strip (in-line) |
| Number of solder pins per potential | 2 |

Material Data

| | |
|-----------------------------|----------------------------------------|
| Color | gray |
| Material group | I |
| Insulating material | Polyamide 66 (PA 66) |
| 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 | 0.114 MJ |
| Weight | 7.4 g |

Environmental Requirements


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

Commercial data

| | |
|--------------------|---------------------|
| Product Group | 4 (Printed Circuit) |
| Packaging type | BOX |
| Country of origin | PL |
| GTIN | 4045454153694 |
| Customs Tariff No. | 85369010000 |

Approvals / Certificates

Country specific Approvals

| Logo | Approval | Additional Approval Text | Certificate name |
|------------------------------------------------------------------------------------|---------------------------------|--------------------------|------------------|
|  | CCA DEKRA Certification B.V. | EN 60947 | NTR NL-7095 |

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



CCA
DEKRA Certification B.V.

EN 60947

2160584.15




CSA
DEKRA Certification B.V.

C22.2 No. 158

1604421




UL-Approvals

| Logo | Approval | Additional Approval Text | Certificate name |
|----------------------------------------------------------------------------------|-----------------------------------------|--------------------------|------------------|
|  | cURus Underwriters Laboratories Inc. | UL 1059 | E45172 sec6 |

Counterpart

Compatible products

ferrule

| | | |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
|  | Item no.: 216-106 Ferrule; Sleeve for 2.5 mm ² / AWG 14; uninsulated; electro-tin plated | www.wago.com/216-106 |
|  | Item no.: 216-121 Ferrule; Sleeve for 0.5 mm ² / AWG 22; uninsulated; electro-tin plated | www.wago.com/216-121 |
| | Item no.: 216-122 Ferrule; Sleeve for 0.75 mm ² / AWG 20; uninsulated; electro-tin plated | www.wago.com/216-122 |
| | Item no.: 216-123 Ferrule; Sleeve for 1 mm ² / AWG 18; uninsulated; electro-tin plated | www.wago.com/216-123 |
| | Item no.: 216-124 Ferrule; Sleeve for 1.5 mm ² / AWG 16; uninsulated; electro-tin plated | www.wago.com/216-124 |
|  | Item no.: 216-131 Ferrule; Sleeve for 0.25 mm ² / AWG 24; uninsulated; electro-tin plated | www.wago.com/216-131 |
| | Item no.: 216-132 Ferrule; Sleeve for 0.34 mm ² / AWG 24; uninsulated; electro-tin plated | www.wago.com/216-132 |









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| | | |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
|  | 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.: 216-142 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.: 216-143 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.: 216-144 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 | www.wago.com/216-144 |
|  | Item no.: 216-151 Ferrule; Sleeve for 0.25 mm ² / AWG 24; uninsulated; electro-tin plated | www.wago.com/216-151 |
| | Item no.: 216-152 Ferrule; Sleeve for 0.34 mm ² / AWG 24; uninsulated; electro-tin plated | www.wago.com/216-152 |
|  | Item no.: 216-221 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; insulated; electro-tin plated; white | www.wago.com/216-221 |
| | Item no.: 216-222 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; gray | www.wago.com/216-222 |
|  | Item no.: 216-223 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; red | www.wago.com/216-223 |
| | Item no.: 216-224 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; black | www.wago.com/216-224 |
| | 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.: 216-243 Ferrule; Sleeve for 1 mm ² / 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 mm ² / 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.: 216-246 Ferrule; Sleeve for 2.5 mm ² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue | www.wago.com/216-246 |
|  | Item no.: 216-262 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/216-262 |
| | Item no.: 216-263 | |

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

| | | |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
|  | Ferrule; Sleeve for 1 mm ² / 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 mm ² / 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.: 216-266 Ferrule; Sleeve for 2.5 mm ² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue | www.wago.com/216-266 |
|  | Item no.: 216-284 Ferrule; Sleeve for 1.5 mm ² / 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.: 216-286 Ferrule; Sleeve for 2.5 mm ² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue | www.wago.com/216-286 |
| | Item no.: 216-321 Ferrule; Sleeve for 0.25 mm ² / AWG 24; insulated; electro-tin plated; yellow | www.wago.com/216-321 |
|  | Item no.: 216-322 Ferrule; Sleeve for 0.34 mm ² / 22 AWG; insulated; electro-tin plated; green | www.wago.com/216-322 |
| Test Accessories | | |
|  | Item no.: 210-136 Test plug; 2 mm Ø; with 500 mm cable; red | www.wago.com/210-136 |
|  | Item no.: 210-137 Test plug; 2.3 mm Ø; with 500 mm cable; yellow | www.wago.com/210-137 |
| tools | | |
|  | Item no.: 210-657 Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short | www.wago.com/210-657 |
| | Item no.: 210-658 Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; angled; short | www.wago.com/210-658 |
| | Item no.: 210-720 Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft | www.wago.com/210-720 |
| Marking accessories | | |
| | 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 |
| | 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 |
| | 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 |

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



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

Downloads

Documentation

Additional Information

| | | | |
|------------------------|-------------|---------------|----------|
| Technical explanations | Apr 3, 2019 | pdf 3.6 MB | Download |
|------------------------|-------------|---------------|----------|

CAD/CAE-Data

CAD data

| | | |
|-----------------------|-----|----------|
| 2D/3D Models 745-3104 | URL | Download |
|-----------------------|-----|----------|

CAE data

| | | |
|----------------------------|-----|----------|
| EPLAN Data Portal 745-3104 | URL | Download |
|----------------------------|-----|----------|

PCB Design

| | | |
|-------------------------------|-----|----------|
| Symbol and Footprint 745-3104 | URL | Download |
|-------------------------------|-----|----------|

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

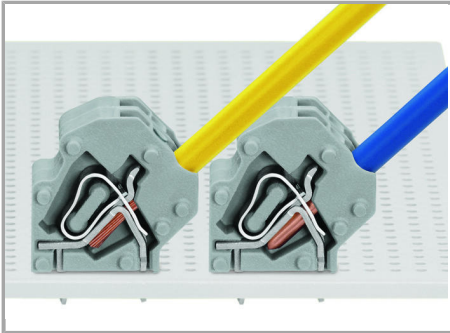
Subject to changes. Please also observe the further product documentation!

- 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

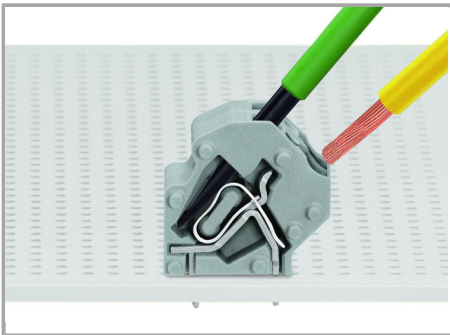
Installation Notes

Installation



Saving space: two PCB terminal strips arranged in a row.

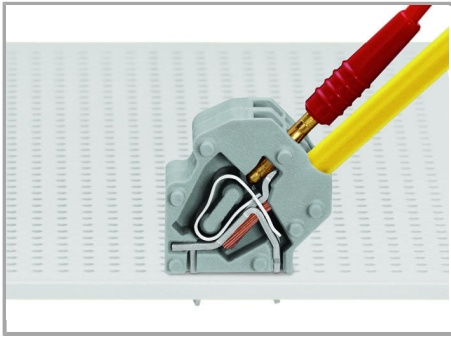
Conductor termination



Inserting a conductor via 3.5 mm screwdriver.

Testing

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!