

**Data Sheet | Item Number: 2086-1212**

THR PCB terminal block; push-button; 1.5 mm<sup>2</sup>; Pin spacing 3.5 mm; 12-pole; Push-in CAGE CLAMP®; 1,50 mm<sup>2</sup>; black

<https://www.wago.com/2086-1212>

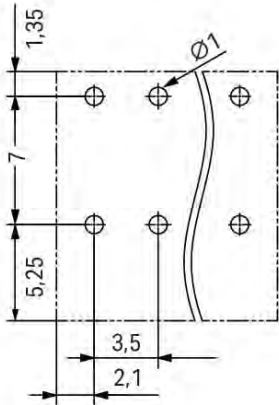
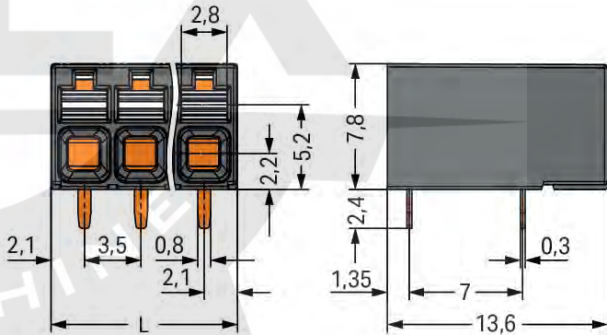
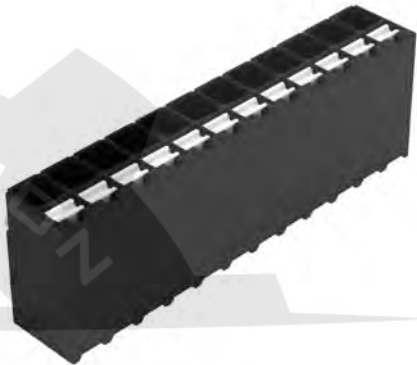
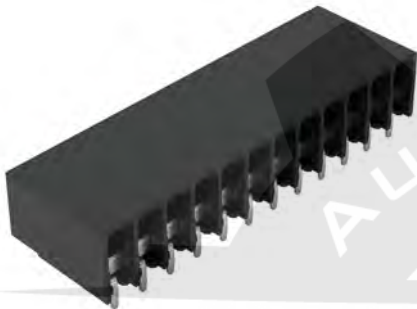


Color: black



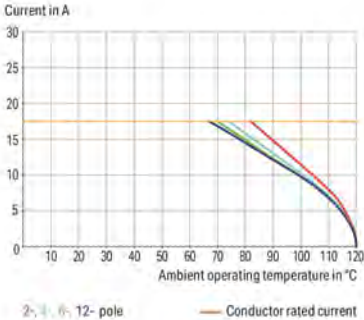
Dimensions in mm

$L = (\text{pole no.} - 1) \times \text{pin spacing} + 4.2 \text{ mm}$



Dimensions in mm

Current-Carrying Capacity Curve  
Pin spacing: 3.5 mm / Conductor cross-section: 1.5 mm<sup>2</sup> "I-st"  
Based on: EN 60512-5-2 / Reduction factor: 1





- Ideal for compact device connection, panel feedthrough and tight spaces
- Push-in CAGE CLAMP® termination of solid and ferruled conductors
- SMD and THR versions available
- Push-button moves parallel to conductor entry
- Conductor connection and mating direction parallel or perpendicular to the PCB
- Optionally available with in-line or staggered pins (3.5 and 5 mm pin spacing)

| Notes |                                                                                                                                                                                                                                                                                                                                                                                          |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Note  | Application notes:<br>Suitable for lead-free, reflow-soldering profiles per DIN EN 61760-1 and IEC 60068-2-58 up to max. 260°C peak temperature. Due to application-specific variables (component configuration and orientation, type of soldering machine, solder paste), trial runs are recommended to ensure product and process compatibility under actual manufacturing conditions. |

| Electrical data               |                                                           |                                |         |
|-------------------------------|-----------------------------------------------------------|--------------------------------|---------|
| Ratings per IEC/EN            |                                                           | Ratings per UL 1059            |         |
| Ratings per                   | IEC/EN 60664-1                                            | Approvals per                  | UL 1059 |
| Nominal voltage (III/3)       | 160 V                                                     | Rated voltage UL (Use Group B) | 300 V   |
| Rated impulse voltage (III/3) | 2.5 kV                                                    | Rated current UL (Use Group B) | 14 A    |
| Rated voltage (III/2)         | 160 V                                                     | Rated voltage UL (Use Group D) | 300 V   |
| Rated impulse voltage (III/2) | 2.5 kV                                                    | Rated current UL (Use Group D) | 10 A    |
| Nominal voltage (II/2)        | 320 V                                                     |                                |         |
| Rated surge voltage (II/2)    | 2.5 kV                                                    |                                |         |
| Rated current                 | 17.5 A                                                    |                                |         |
| Legend (ratings)              | (III / 2) Δ Overvoltage category III / Pollution degree 2 |                                |         |

| Ratings per CSA                 |       |
|---------------------------------|-------|
| Approvals per                   | CSA   |
| Rated voltage CSA (Use Group B) | 300 V |
| Rated current CSA (Use Group B) | 14 A  |
| Rated voltage CSA (Use Group D) | 300 V |
| Rated current CSA (Use Group D) | 14 A  |

| Connection data            |    |                                                   |                                   |
|----------------------------|----|---------------------------------------------------|-----------------------------------|
| Total number of potentials | 12 | Connection 1                                      |                                   |
| Number of connection types | 1  | Connection technology                             | Push-in CAGE CLAMP®               |
| Number of levels           | 1  | Actuation type                                    | Push-button                       |
|                            |    | Solid conductor                                   | 0.14 ... 1.5 mm² / 28 ... 16 AWG  |
|                            |    | Fine-stranded conductor                           | 0.14 ... 1.5 mm² / 26 ... 14 AWG  |
|                            |    | Fine-stranded conductor; with insulated ferrule   | 0.25 ... 0.75 mm²                 |
|                            |    | Fine-stranded conductor; with uninsulated ferrule | 0.25 ... 1.5 mm²                  |
|                            |    | Strip length                                      | 8 ... 9 mm / 0.31 ... 0.35 inches |
|                            |    | Conductor connection direction to PCB             | 0°                                |
|                            |    | Pole number                                       | 12                                |

### Physical data

|                                    |                        |
|------------------------------------|------------------------|
| Pin spacing                        | 3.5 mm / 0.138 inches  |
| Width                              | 42.7 mm / 1.681 inches |
| Height                             | 10.2 mm / 0.402 inches |
| Height from the surface            | 7.8 mm / 0.307 inches  |
| Depth                              | 13.6 mm / 0.535 inches |
| Solder pin length                  | 2.4 mm                 |
| Solder pin dimensions              | 0.3 x 0.8 mm           |
| Plated through-hole diameter (THR) | 1 (+0.1) mm            |

### PCB contact

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

### Material Data

|                             |                                                                          |
|-----------------------------|--------------------------------------------------------------------------|
| Note (material data)        | <a href="#">Information on material specifications can be found here</a> |
| Color                       | black                                                                    |
| Material group              | I                                                                        |
| Insulation material         | Polyphthalamide (PPA GF)                                                 |
| 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                   | 0.122 MJ                                                                 |
| Weight                      | 5.7 g                                                                    |

### Environmental requirements

|                                  |                 |
|----------------------------------|-----------------|
| Limit temperature range          | -60 ... +105 °C |
| Processing temperature           | -35 ... +60 °C  |
| Continuous operating temperature | -60 ... +105 °C |

### Commercial data

|                       |               |
|-----------------------|---------------|
| ETIM 8.0              | EC002643      |
| ETIM 7.0              | EC002643      |
| PU (SPU)              | 72 pcs        |
| Country of origin     | CH            |
| GTIN                  | 4066966142174 |
| Customs tariff number | 85369010000   |



Approvals / Certificates

General approvals



| Approval                              | Standard      | Certificate Name |
|---------------------------------------|---------------|------------------|
| CB<br>DEKRA Certification B.V.        | IEC 60947-7-4 | NL-74022         |
| CSA<br>CSA Group                      | C22.2         | 80060692         |
| KEMA/KEUR<br>DEKRA Certification B.V. | EN 60947-7-4  | 71-119449        |
| UL<br>Underwriters Laboratories Inc.  | UL 1059       | E45172           |

Downloads

Environmental Product Compliance

| Compliance Search                          |
|--------------------------------------------|
| Environmental Product Compliance 2086-1212 |

Documentation

| Additional Information    |
|---------------------------|
| Technical Section         |
| 03.04.2019 pdf 1949.09 KB |
| pdf 535.32 KB             |

CAD/CAE-Data

| CAD data               | CAE data               |
|------------------------|------------------------|
| 2D/3D Models 2086-1212 | ZUKEN Portal 2086-1212 |

1 Compatible Products

1.1 Optional Accessories

1.1.1 Ferrule



1.1.1.1 Ferrule

|                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br><b>Item No.: 216-301</b><br>Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow                                                                  | <br><b>Item No.: 216-151</b><br>Ferrule; Sleeve for 0.25 mm² / AWG 24; uninsulated; electro-tin plated                                                                                        | <br><b>Item No.: 216-131</b><br>Ferrule; Sleeve for 0.25 mm² / AWG 24; uninsulated; electro-tin plated; silver-colored                                                             | <br><b>Item No.: 216-302</b><br>Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise                                                              |
| <br><b>Item No.: 216-132</b><br>Ferrule; Sleeve for 0.34 mm² / AWG 24; uninsulated; electro-tin plated                                                                        | <br><b>Item No.: 216-152</b><br>Ferrule; Sleeve for 0.34 mm² / AWG 24; uninsulated; electro-tin plated                                                                                        | <br><b>Item No.: 216-241</b><br>Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white | <br><b>Item No.: 216-201</b><br>Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white                                                                         |
| <br><b>Item No.: 216-141</b><br>Ferrule; Sleeve for 0.5 mm² / 20 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92 | <br><b>Item No.: 216-101</b><br>Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated; silver-colored                                                                         | <br><b>Item No.: 216-121</b><br>Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated; silver-colored                                                              | <br><b>Item No.: 216-242</b><br>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 |
| <br><b>Item No.: 216-202</b><br>Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray                                                                    | <br><b>Item No.: 216-142</b><br>Ferrule; Sleeve for 0.75 mm² / 18 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92                | <br><b>Item No.: 216-102</b><br>Ferrule; Sleeve for 0.75 mm² / AWG 20; uninsulated; electro-tin plated; silver-colored                                                             | <br><b>Item No.: 216-133</b><br>Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated                                                                                |
| <br><b>Item No.: 216-143</b><br>Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92   | <br><b>Item No.: 216-144</b><br>Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92; silver-colored | <br><b>Item No.: 216-104</b><br>Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated; silver-colored                                                              |                                                                                                                                                                                                                                                                       |

1.1.2 Test and measurement

1.1.2.1 Testing accessories

|                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br><b>Item No.: 859-500</b><br>WAGO Test pin; 1 mm Ø; 30 V AC / 60 V DC; CAT0; 1 A; 10 mm uninsulated; Test lead for soldering up to 0,5mm² | <br><b>Item No.: 735-500</b><br>WAGO Test pin; 1 mm Ø; 30 V AC / 60 V DC; CAT0; 1 A; 6 mm uninsulated; Test lead for soldering up to 0,5mm² |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

1.1.3 Tool

1.1.3.1 Operating tool

|                                                                                                                                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br><b>Item No.: 210-719</b><br>Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Installation Notes

### Conductor termination



Inserting solid conductor via push-in termination.

### Conductor termination



Inserting and removing fine-stranded conductors via push-buttons.

### Conductor removal



Removing a conductor via push-button.

### Testing



Testing via 1 mm Ø test pin.  
Touch contact with current bar

Marking



Pole marking via direct marking perpendicular to conductor entry.

