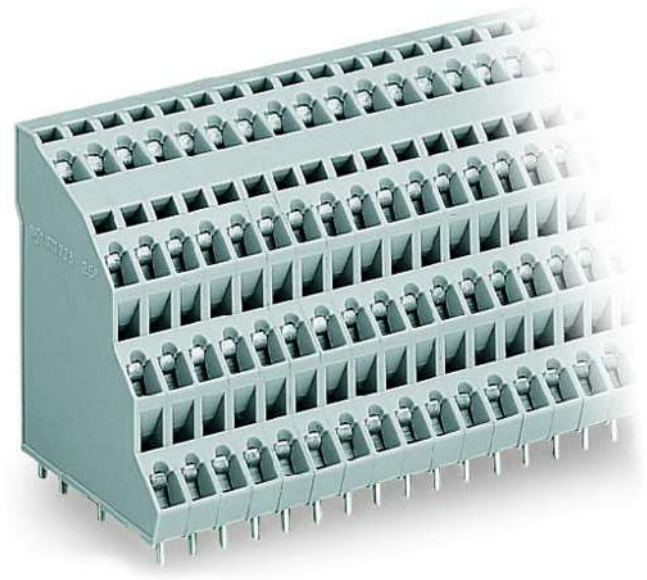
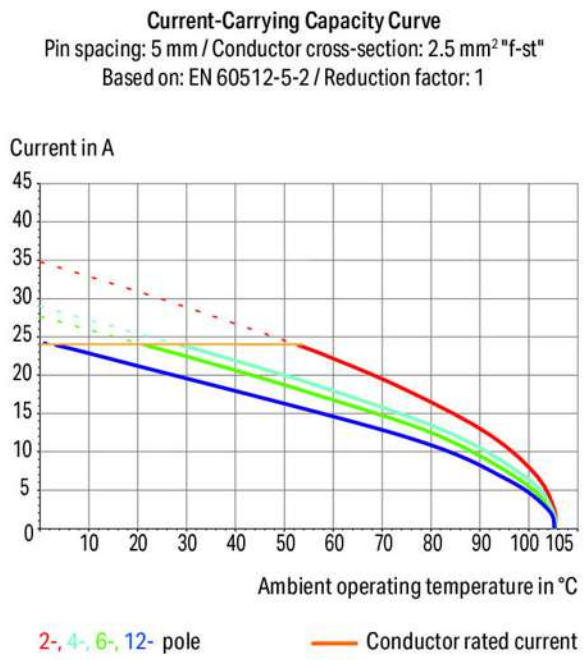
**Data sheet | Item number: 738-108**

Quadruple-deck PCB terminal block; 2.5 mm²; Pin spacing 5 mm; 4 x 8-pole; CAGE CLAMP®; 2,50 mm²; gray

www.wago.com/738-108



RoHS Compliant ✓ BOMcheck.net Color:

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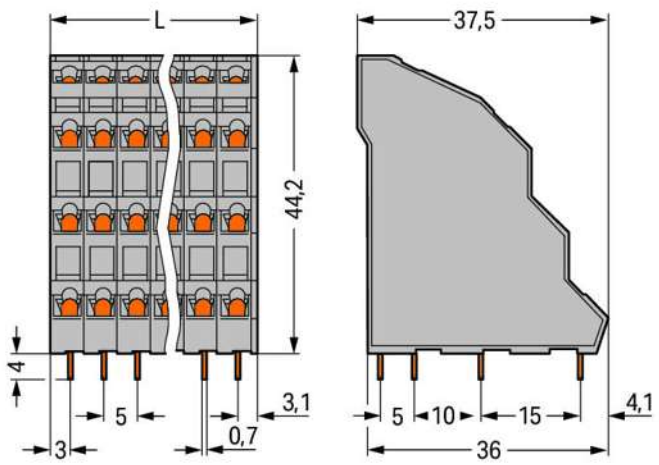
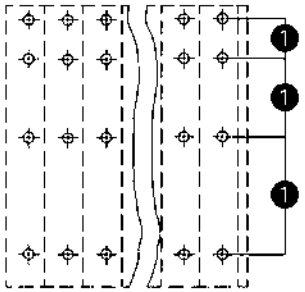



L = (pole no. x pin spacing) + 1 mm




(1) Solder pins in a row

## Item description

- PCB terminal strips with screwdriver-actuated CAGE CLAMP® connection
- High-density, quadruple-deck design for space-efficient wiring of multiple conductors in confined areas
- Angled conductor entry and CAGE CLAMP® actuation streamline operation
- Custom marking for all termination levels

## Data

## Electrical data

### Ratings per IEC/EN 60664-1

| | |
|---|---|
| Ratings per | IEC/EN 60664-1 |
| Ratings note | Between the modules |
| Rated voltage (III / 3) | 250 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 | 18 A |
| Ratings according to 2 | IEC/EN 60664-1 |

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| | |
|---|---|
| Ratings note 2 | Between the decks |
| Rated voltage (III / 3) 2 | 320 V |
| Rated impulse voltage (III / 3) 2 | 4 kV |
| Rated voltage (III / 2) 2 | 320 V |
| Rated impulse voltage (III / 2) 2 | 4 kV |
| Rated voltage (II / 2) 2 | 630 V |
| Rated impulse voltage (II / 2) 2 | 4 kV |
| Rated current (2) | 18 A |
| Legend (ratings) | (III / 2) ≙ Overvoltage category III / Pollution degree 2 |

## 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 |
| Approvals per | UL 1059 |

## Approvals per CSA

| | |
|---|---|
| Rated voltage CSA (Use Group B) | 300 V |
| Rated current CSA (Use Group B) | 10 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 … 2,5 mm² / 28 … 12 AWG |
| Fine-stranded conductor | 0,08 … 2,5 mm² / 28 … 12 AWG |
| Fine-stranded conductor with ferrule with plastic collar | 0,25 … 1,5 mm² |
| Fine-stranded conductor with ferrule without plastic collar | 0,25 … 2,5 mm² |
| Strip length | 5 … 6 mm / 0.2 … 0.24 inch |
| Conductor entry angle to the PCB | 45 ° |
| No. of poles | 8 |
| Total number of connection points | 32 |
| Total number of potentials | 32 |
| Number of connection types | 1 |

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| | |
|---|---|
| Number of levels | 4 |
| Note (conductor cross-section) | 12 AWG: THHN, THWN |

## Geometrical Data

| | |
|---|---|
| Pin spacing | 5 mm / 0.197 inch |
| Width | 41 mm / 1.614 inch |
| Height | 48,2 mm / 1.898 inch |
| Height from the surface | 44,2 mm / 1.74 inch |
| Depth | 37,5 mm / 1.476 inch |
| Solder pin length | 4 mm |
| Solder pin dimensions | 0,7 x 0,7 mm |
| Drilled hole diameter (tolerance) | $1{,}3^{(+0{,}1)}$ mm |

## PCB contact

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

## 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 | 0.666 MJ |
| Weight | 48.6 g |

## Environmental Requirements

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

## Commercial data

| | |
|---|---|
| Product Group | 4 (Printed Circuit) |
| Packaging type | BOX |

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| | |
|---|---|
| Country of origin | PL |
| GTIN | 4045454160951 |
| Customs Tariff No. | 85369010000 |

## Approvals / Certificates

### Country specific Approvals

| Logo | Approval | Additional Approval Text | Certificate name |
|---|---|---|---|
| | **CCA**<br>DEKRA Certification B.V. | EN 60947 | 2160584.20 |
| | **CCA**<br>DEKRA Certification B.V. | EN 60947 | NTR NL-7103 |
| | **CCA**<br>DEKRA Certification B.V. | EN 60947-7-4 | NTR NL 7378 |
| | **CCA**<br>DEKRA Certification B.V. | EN 60947-7-4 | 2169331.19 |
| | **CSA**<br>DEKRA Certification B.V. | C22.2 No. 158 | 1711139 |

### Ship Approvals

| Logo | Approval | Additional Approval Text | Certificate name |
|---|---|---|---|
| | **ABS**<br>American Bureau of Shipping | - | 19-HG1869876-PDA |
| | **DNV GL**<br>Det Norske Veritas, Germanischer Lloyd | - | TAE000016Z |

### UL-Approvals

Certificate

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| Logo | Approval | Additional Approval Text | name |
|---|---|---|---|
| | **UR**<br>Underwriters Laboratories Inc. | UL 1059 | E45172,<br>sec. 6 |

## Counterpart

## Compatible products

**ferrule**

| | | |
|---|---|---|
| | **Item no.: 216-101**<br>Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated | www.wago.com/216-101 |
| | **Item no.: 216-102**<br>Ferrule; Sleeve for 0.75 mm² / AWG 20; uninsulated; electro-tin plated | www.wago.com/216-102 |
| | **Item no.: 216-103**<br>Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated | www.wago.com/216-103 |
| | **Item no.: 216-104**<br>Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated | www.wago.com/216-104 |
| | **Item no.: 216-106**<br>Ferrule; Sleeve for 2.5 mm² / AWG 14; uninsulated; electro-tin plated | www.wago.com/216-106 |
| | **Item no.: 216-121**<br>Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated | www.wago.com/216-121 |
| | **Item no.: 216-122**<br>Ferrule; Sleeve for 0.75 mm² / AWG 20; uninsulated; electro-tin plated | www.wago.com/216-122 |
| | **Item no.: 216-123**<br>Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated | www.wago.com/216-123 |
| | **Item no.: 216-124**<br>Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated | www.wago.com/216-124 |
|  | **Item no.: 216-131**<br>Ferrule; Sleeve for 0.25 mm² / AWG 24; uninsulated; electro-tin plated | www.wago.com/216-131 |
| | **Item no.: 216-132**<br>Ferrule; Sleeve for 0.34 mm² / AWG 24; uninsulated; electro-tin plated | www.wago.com/216-132 |
| | **Item no.: 216-141** | |

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| | | |
|---|---|---|
|  | Ferrule; Sleeve for 0.5 mm² / 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**<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 | www.wago.com/216-142 |
|  | **Item no.: 216-143**<br>Ferrule; Sleeve for 1 mm² / 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**<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 | www.wago.com/216-144 |
| | **Item no.: 216-151**<br>Ferrule; Sleeve for 0.25 mm² / AWG 24; uninsulated; electro-tin plated | www.wago.com/216-151 |
| | **Item no.: 216-152**<br>Ferrule; Sleeve for 0.34 mm² / AWG 24; uninsulated; electro-tin plated | www.wago.com/216-152 |
| | **Item no.: 216-201**<br>Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white | www.wago.com/216-201 |
| | **Item no.: 216-202**<br>Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray | www.wago.com/216-202 |
| | **Item no.: 216-203**<br>Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red | www.wago.com/216-203 |
| | **Item no.: 216-204**<br>Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black | www.wago.com/216-204 |
| | **Item no.: 216-221**<br>Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white | www.wago.com/216-221 |
| | **Item no.: 216-222**<br>Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray | www.wago.com/216-222 |
| | **Item no.: 216-223**<br>Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red | www.wago.com/216-223 |
| | **Item no.: 216-224**<br>Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black | www.wago.com/216-224 |
| | **Item no.: 216-241**<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 | www.wago.com/216-241 |
| | **Item no.: 216-242**<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 | www.wago.com/216-242 |
| | **Item no.: 216-243**<br>Ferrule; Sleeve for 1 mm² / 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** | |

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|---|---|---|
| | Ferrule; Sleeve for 1.5 mm² / 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.: 216-262**<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 | www.wago.com/216-262 |
| | **Item no.: 216-263**<br>Ferrule; Sleeve for 1 mm² / 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**<br>Ferrule; Sleeve for 1.5 mm² / 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.: 216-284**<br>Ferrule; Sleeve for 1.5 mm² / 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.: 216-301**<br>Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow | www.wago.com/216-301 |
| | **Item no.: 216-302**<br>Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; green | www.wago.com/216-302 |
| | **Item no.: 216-321**<br>Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow | www.wago.com/216-321 |
| | **Item no.: 216-322**<br>Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; green | www.wago.com/216-322 |
| **Marking accessories** | | |
| | **Item no.: 210-332/500-202**<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 | www.wago.com/210-332/500-202 |
| | **Item no.: 210-332/500-204**<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 | www.wago.com/210-332/500-204 |
| | **Item no.: 210-332/500-205**<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 | www.wago.com/210-332/500-205 |
| | **Item no.: 210-332/500-206**<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 | www.wago.com/210-332/500-206 |
| **check** | | |
| | **Item no.: 231-126**<br>Testing plug module with contact stud; for 280, 736, 737, 738, 780 Series; Pin spacing 5 mm / 0.197 in; 2,50 mm²; gray | www.wago.com/231-126 |
| | **Item no.: 231-155**<br>Testing plug module with contact stud; Pin spacing 5 mm / 0.197 in; 2,50 mm²; gray | www.wago.com/231-155 |
| **tools** | | |

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|---|---|---|
| | **Item no.: 210-657**<br>Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short | www.wago.com/210-657 |
| | **Item no.: 210-658**<br>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**<br>Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft | www.wago.com/210-720 |

## Downloads

### Documentation

**Additional Information**

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

## CAD/CAE-Data

**CAD data**

| | | |
|---|---|---|
| 2D/3D Models 738-108 | URL | Download |

**CAE data**

| | | |
|---|---|---|
| EPLAN Data Portal 738-108 | URL | Download |

**PCB Design**

| | | |
|---|---|---|
| Symbol and Footprint 738-108 | 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

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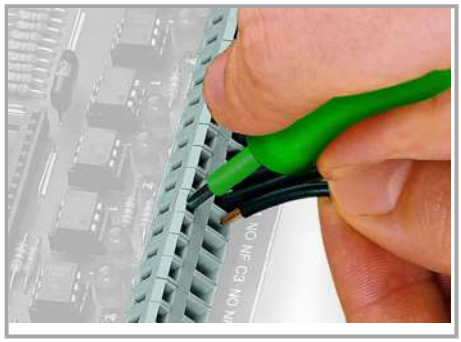
- OrCAD 9.X PCB and Capture
- PADS PowerPCB 3, 3.5, 4.X, and 5.X
- PADS PowerPCB and PowerLogic 3.0
- PCAD 2000, 2001, 2002, 2004, and 2006
- Pulsonix 8.5 or newer
- STL
- 3D STEP
- TARGET 3001!
- View Logic ViewDraw
- Quadcept
- Zuken CadStar 3 and 4
- Zuken CR-5000 and CR-8000

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

## Installation Notes

### Conductor termination



Inserting a conductor via 3.5 mm screwdriver.

Screwdriver actuation parallel to conductor entry.

### Application



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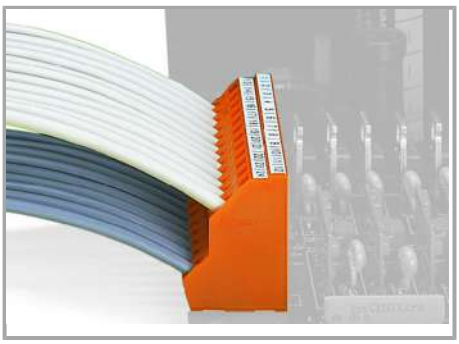


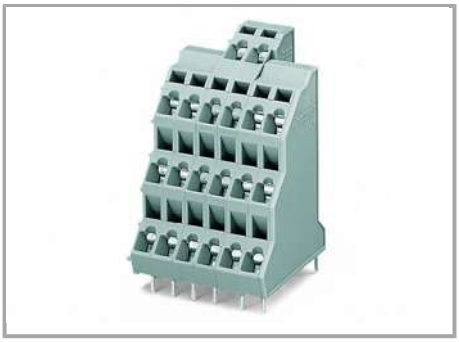
Low space requirements due to high-density design
– double-deck PCB terminal strip – 736 Series.

**Possible combination:**

Double- (736 Series) and triple-deck PCB terminal strips (737 Series) upon request

**Possible combination:**

Double- (736 Series) and triple-deck PCB terminal strips (737 Series) upon request

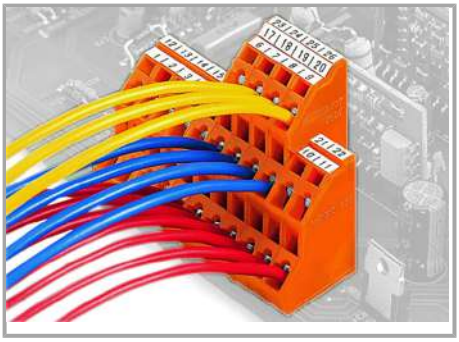


**Possible combination:**

Double- (737 Series) and quadruple-deck PCB terminal strips (738 Series) upon request

**Possible combination:**

Double- (737 Series) and quadruple-deck PCB terminal strips (738 Series) upon request



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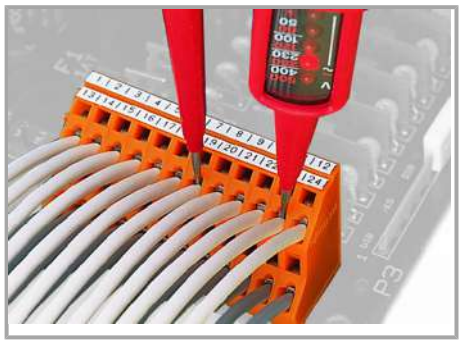
### Testing



Testing via contact area above the conductors.

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