# PTQ 0,3/ 2-2,5 THR R32 - PCB terminal block

1702610

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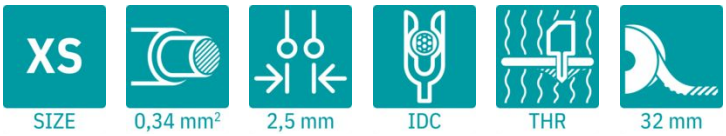
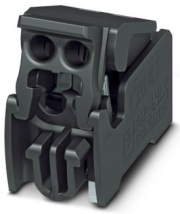


Printed circuit board terminal, nominal current: 4 A, rated voltage (III/2): 160 V, nominal cross section: 0.34 mm$^2$, number of potentials: 2, number of rows: 1, number of positions per row: 2, product range: PTQ 0,3/..-THR, pitch: 2.5 mm, connection method: Displacement connection, mounting: THR soldering / wave soldering, conductor/PCB connection direction: 0 °, color: black, Pin layout: Zigzag pinning W, Solder pin [P]: 2 mm, number of solder pins per potential: 1, type of packaging: 32 mm wide tape. Suitable for CAT5

## Your advantages

- Connection without conductor pretreatment for huge time savings
- Finger-operated QUICKON insulation displacement connection enables repeated conductor connection
- Designed for integration into the SMT soldering process
- Supplied in tape-on-reel packing according to IEC 60286-3 for automated mounting
- Anti-rotation pins reduce the mechanical strain on the soldering spots
- Satisfies CAT5 requirements in accordance with EN 50173 and ISO/IEC 11801

## Commercial data

| | |
|---|---|
| Item number | 1702610 |
| Packing unit | 250 pc |
| Minimum order quantity | 250 pc |
| Sales key | AA11 |
| Product key | AAKKAA |
| GTIN | 4046356599498 |
| Weight per piece (including packing) | 2.556 g |
| Weight per piece (excluding packing) | 2.556 g |
| Customs tariff number | 85369010 |
| Country of origin | PL |

# Technical data

## Product properties

| | |
|---|---|
| Product type | Printed circuit board terminal |
| Product family | PTQ 0,3/..-THR |
| Product line | COMBICON Terminals XS |
| Type | PC termination block |
| Number of positions | 2 |
| Pitch | 2.5 mm |
| Number of connections | 2 |
| Number of rows | 1 |
| Number of potentials | 2 |
| Pin layout | Zigzag pinning W |
| Solder pins per potential | 1 |

## Electrical properties

### Properties

| | |
|---|---|
| Nominal current $I_N$ | 4 A |
| Nominal voltage $U_N$ | 160 V |
| Rated voltage (III/3) | 160 V |
| Rated surge voltage (III/3) | 2.5 kV |
| Rated voltage (III/2) | 160 V |
| Rated surge voltage (III/2) | 2.5 kV |
| Rated voltage (II/2) | 200 V |
| Rated surge voltage (II/2) | 2.5 kV |

### Data transmission

| | |
|---|---|
| Signal type | Ethernet |
| Frequency range | to 100 MHz |
| Transmission medium | Copper |
| Transmission characteristics (category) | CAT5 (IEC 11801) |
| Data transmission rate | 100 Mbps |

## Connection data

### Connection technology

| | |
|---|---|
| Type | PC termination block |
| Nominal cross section | 0.34 mm² |

### Conductor connection

| | |
|---|---|
| Connection method | Displacement connection |
| Conductor cross-section rigid | 0.14 mm² ... 0.34 mm² |
| Conductor cross-section flexible | 0.14 mm² ... 0.34 mm² |
| Conductor cross-section AWG | 26 ... 22 |

## Mounting

| | |
|---|---|
| Mounting type | THR soldering / wave soldering |
| Pin layout | Zigzag pinning W |

Processing notes

| | |
|---|---|
| Process | Reflow/wave soldering |
| Moisture Sensitive Level | MSL 1 |
| Classification temperature $T_c$ | 260 °C |
| Solder cycles in the reflow | 3 |

## Material specifications

Material data - contact

| | |
|---|---|
| Note | WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/JEDEC JESD 201 |
| Contact material | Cu alloy |
| Surface characteristics | hot-dip tin-plated |
| Metal surface terminal point (top layer) | Tin (3 µm - 5 µm Sn) |
| Metal surface terminal point (middle layer) | Nickel (1.3 µm - 3 µm Ni) |
| Metal surface soldering area (top layer) | Tin (3 µm - 5 µm Sn) |
| Metal surface soldering area (middle layer) | Nickel (1.3 µm - 3 µm Ni) |

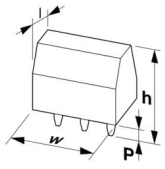
Material data - housing

| | |
|---|---|
| Color (Housing) | black (9005) |
| Insulating material | LCP |
| Insulating material group | IIIa |
| CTI according to IEC 60112 | 175 |
| Flammability rating according to UL 94 | V0 |

## Notes

| | |
|---|---|
| Note on application | The item is qualified for CAT5 Ethernet applications. For this reason, it is suited for use in IoT devices. |

## Dimensions

| | |
|---|---|
| Dimensional drawing |  |
| Pitch | 2.5 mm |
| Width [w] | 7 mm |
| Height [h] | 10 mm |
| Length [l] | 17.55 mm |
| Installed height | 8 mm |
| Solder pin length [P] | 2 mm |

| | |
|---|---|
| Pin dimensions | 0.9 x 0.4 mm |

PCB design

| | |
|---|---|
| Pin spacing | 2.5 mm |
| Hole diameter | 1.1 mm |

## Mechanical tests

Connection test

| | |
|---|---|
| Specification | IEC 60998-2-3:2002-12 |
| Result | Test passed |

Pull-out test

| | |
|---|---|
| Specification | IEC 60999-1:1999-11 |
| Conductor cross-section/conductor type/tractive force setpoint/actual value | 0.2 mm² / solid / > 10 N |
| | 0.2 mm² / flexible / > 10 N |

## Electrical tests

Temperature-rise test

| | |
|---|---|
| Specification | IEC 60998-1:2002-12 |
| Requirement temperature-rise test | Increase in temperature ≤ 45 K |

Short-time withstand current

| | |
|---|---|
| Specification | IEC 60998-2-3:2002-12 |

Insulation resistance

| | |
|---|---|
| Specification | IEC 60512-3-1:2002-02 |
| Insulation resistance, neighboring positions | > 5 MΩ |

Temperature cycles

| | |
|---|---|
| Specification | IEC 60998-2-3:2002-12 |
| Result | Test passed |

Air clearances and creepage distances |

| | |
|---|---|
| Specification | IEC 60664-1:2007-04 |
| Insulating material group | IIIa |
| Comparative tracking index (IEC 60112) | CTI 175 |
| Rated insulation voltage (III/3) | 160 V |
| Rated surge voltage (III/3) | 2.5 kV |
| minimum clearance value - non-homogenous field (III/3) | 1.5 mm |
| minimum creepage distance (III/3) | 2.5 mm |
| Rated insulation voltage (III/2) | 160 V |
| Rated surge voltage (III/2) | 2.5 kV |
| minimum clearance value - non-homogenous field (III/2) | 1.5 mm |
| minimum creepage distance (III/2) | 1.6 mm |
| Rated insulation voltage (II/2) | 200 V |
| Rated surge voltage (II/2) | 2.5 kV |

| | |
|---|---|
| minimum clearance value - non-homogenous field (II/2) | 1.5 mm |
| minimum creepage distance (II/2) | 2 mm |

## Environmental and real-life conditions

Shocks

| | |
|---|---|
| Specification | IEC 60068-2-27:2008-02 |
| Pulse shape | Half-sine |
| Acceleration | 15g |
| Shock duration | 11 ms |
| Test directions | X-, Y- and Z-axis |

Railway application: Shocks

| | |
|---|---|
| Acceleration | 15g |
| Shock duration | 11 ms |
| Test directions | X-, Y- and Z-axis |

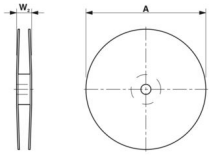
Glow-wire test

| | |
|---|---|
| Specification | IEC 60998-1:2002-12 |
| Time of exposure | 5 s |

Ambient conditions

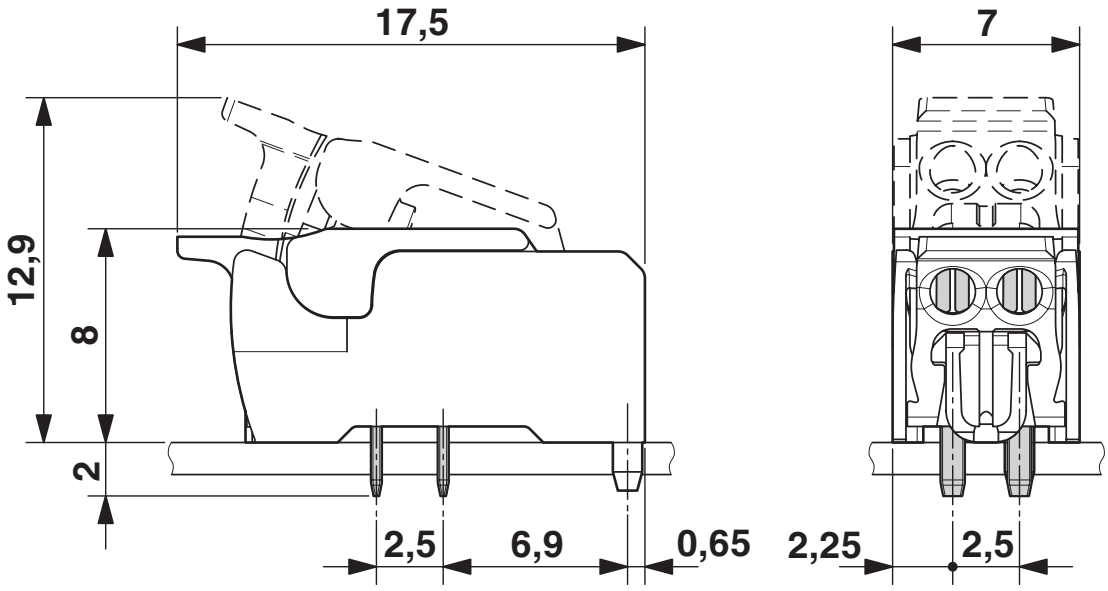
| | |
|---|---|
| Ambient temperature (storage/transport) | -40 °C ... 70 °C |
| Relative humidity (storage/transport) | 30 % ... 70 % |
| Ambient temperature (assembly) | -5 °C ... 100 °C |
| Ambient temperature (operation) | -40 °C ... 100 °C (Depending on the current carrying capacity/derating curve) |

## Packaging specifications

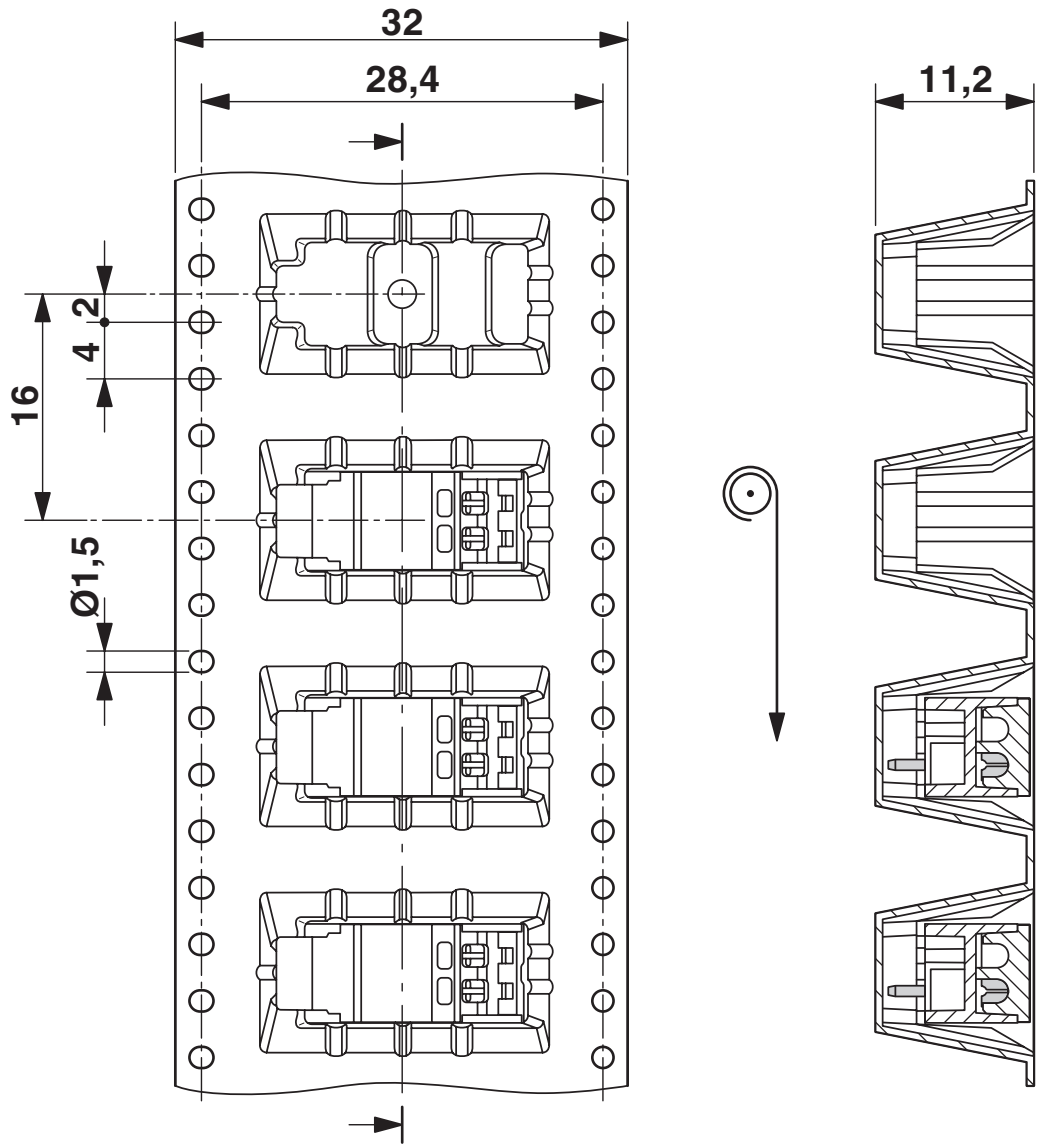
| | |
|---|---|
| Dimensional drawing |  |
| Type of packaging | 32 mm wide tape |
| [W] tape width | 32 mm |
| [W2] coil overall dimension | ≤ 38.4 mm |
| [A] coil diameter | ≤ 330 mm |
| Outer packaging type | Transparent-Bag |

## Drawings

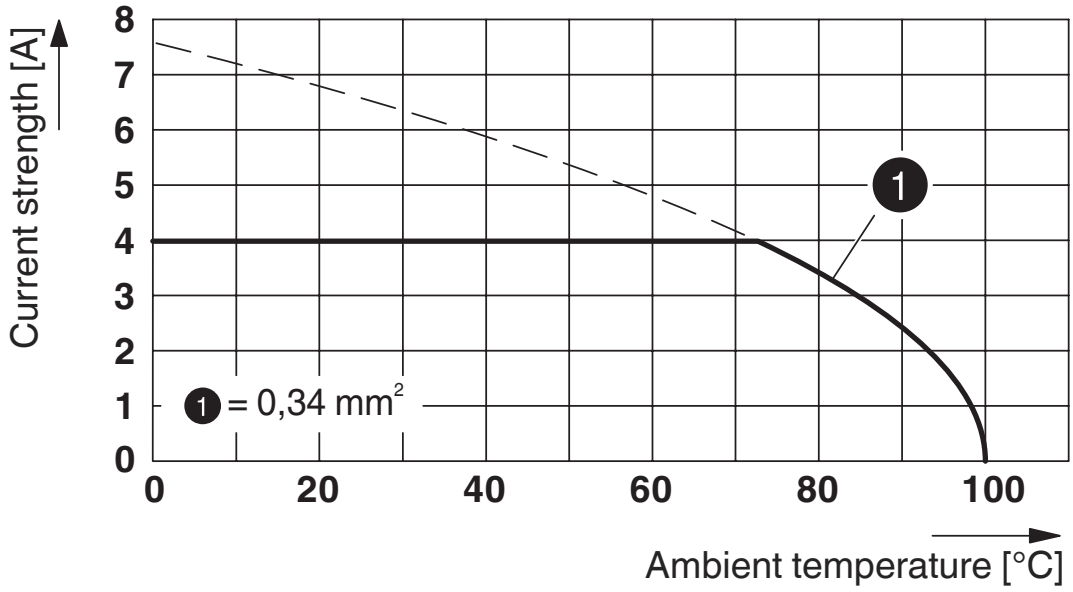
Dimensional drawing



Dimensional drawing



Diagram




Type: PTQ 0,3/..-2,5(-L) THR R32

## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1702610

**cULus Recognized**
Approval ID: E60425-20110108

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| B | | | | |
| | 150 V | 2 A | 24 | - |

**VDE report with production monitoring**
Approval ID: 40034315

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| keine | | | | |
| | 130 V | 4 A | - | - 0.2 |

## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-13.0 | 27460101 |
| ECLASS-15.0 | 27460101 |

### ETIM

| | |
|---|---|
| ETIM 10.0 | EC002643 |

### UNSPSC

| | |
|---|---|
| UNSPSC 21.0 | 39121400 |

## Environmental product compliance

EU RoHS

| | |
|---|---|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |

China RoHS

| | |
|---|---|
| Environment friendly use period (EFUP) | EFUP-E |
| | No hazardous substances above the limits |

EU REACH SVHC

| | |
|---|---|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |

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