

# PTSM 0,5/ 5-2,5-V THR R44 - PCB terminal block



1770982

<https://www.phoenixcontact.com/us/products/1770982>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Printed circuit board terminal, nominal current: 6 A, rated voltage (III/2): 160 V, nominal cross section: 0.5 mm<sup>2</sup>, number of potentials: 5, number of rows: 1, number of positions per row: 5, product range: PTSM 0,5/..-V-THR, pitch: 2.5 mm, connection method: Push-in spring connection, mounting: THR soldering / wave soldering, conductor/PCB connection direction: 90 °, color: black, Pin layout: Linear pinning, Solder pin [P]: 2.1 mm, number of solder pins per potential: 2, type of packaging: 44 mm wide tape

## Your advantages

- Time saving push-in connection, tools not required
- Defined contact force ensures that contact remains stable over the long term
- High current carrying capacity of 6 A in very compact dimensions
- Designed for integration into the SMT soldering process
- Vertical connection enables multi-row arrangement on the PCB

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1770982       |
| Packing unit                         | 310 pc        |
| Minimum order quantity               | 310 pc        |
| Sales key                            | AA11          |
| Product key                          | AAKCAC        |
| GTIN                                 | 4046356459563 |
| Weight per piece (including packing) | 2.97 g        |
| Weight per piece (excluding packing) | 2.85 g        |
| Customs tariff number                | 85369010      |
| Country of origin                    | IN            |

# PTSM 0,5/ 5-2,5-V THR R44 - PCB terminal block



1770982

<https://www.phoenixcontact.com/us/products/1770982>

## Technical data

### Product properties

|                           |                                            |
|---------------------------|--------------------------------------------|
| Product type              | Printed circuit board terminal             |
| Product family            | PTSM 0,5/...-V-THR                         |
| Product line              | COMBICON Terminals XS                      |
| Type                      | Component suitable for through hole reflow |
| Number of positions       | 5                                          |
| Pitch                     | 2.5 mm                                     |
| Number of connections     | 5                                          |
| Number of rows            | 1                                          |
| Number of potentials      | 5                                          |
| Pin layout                | Linear pinning                             |
| Solder pins per potential | 2                                          |

### Electrical properties

#### Properties

|                             |        |
|-----------------------------|--------|
| Nominal current $I_N$       | 6 A    |
| Nominal voltage $U_N$       | 160 V  |
| Rated voltage (III/3)       | 32 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)        | 160 V  |
| Rated surge voltage (II/2)  | 2.5 kV |

### Connection data

#### Connection technology

|                       |                                            |
|-----------------------|--------------------------------------------|
| Type                  | Component suitable for through hole reflow |
| Nominal cross section | 0.5 mm <sup>2</sup>                        |

#### Conductor connection

|                                                                       |                                                                                                                                                                          |
|-----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Connection method                                                     | Push-in spring connection                                                                                                                                                |
| Conductor cross-section rigid                                         | 0.14 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>                                                                                                                             |
| Conductor cross-section flexible                                      | 0.2 mm <sup>2</sup> ... 0.5 mm <sup>2</sup> (up to 0.75 mm <sup>2</sup> supported, with a stripping length of 7.5 mm and a rated insulation voltage of 32 V at III/2)    |
| Conductor cross-section AWG                                           | 26 ... 20                                                                                                                                                                |
| Conductor cross-section flexible, with ferrule without plastic sleeve | 0.25 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>                                                                                                                             |
| Conductor cross-section, flexible, with ferrule, with plastic sleeve  | 0.25 mm <sup>2</sup> ... 0.34 mm <sup>2</sup> (possible from 0.14 mm <sup>2</sup> , when using ferrule AI 0.14- 6 GY in combination with crimping pliers CRIMPFOX 10T-F) |
| Cylindrical gauge a x b / diameter                                    | - / 1.2 mm                                                                                                                                                               |
| Stripping length                                                      | 6 mm                                                                                                                                                                     |

# PTSM 0,5/ 5-2,5-V THR R44 - PCB terminal block



1770982

<https://www.phoenixcontact.com/us/products/1770982>

## Mounting

|               |                                |
|---------------|--------------------------------|
| Mounting type | THR soldering / wave soldering |
| Pin layout    | Linear pinning                 |

### Processing notes

|                                           |                       |
|-------------------------------------------|-----------------------|
| Process                                   | Reflow/wave soldering |
| Moisture Sensitive Level                  | MSL 1                 |
| Classification temperature T <sub>c</sub> | 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 (4 - 8 µm Sn)                                                                |
| Metal surface soldering area (top layer) | Tin (4 - 8 µm Sn)                                                                |

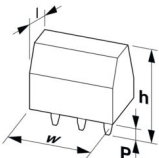
### Material data - housing

|                                        |              |
|----------------------------------------|--------------|
| 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 | Pick and place pads may protrude beyond the components. The PCB layout must ensure that collisions are avoided when components are assembled. |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|

## Dimensions

|                       |                                                                                      |
|-----------------------|--------------------------------------------------------------------------------------|
| Dimensional drawing   |  |
| Pitch                 | 2.5 mm                                                                               |
| Width [w]             | 13 mm                                                                                |
| Height [h]            | 12.1 mm                                                                              |
| Length [l]            | 5 mm                                                                                 |
| Installed height      | 10 mm                                                                                |
| Solder pin length [P] | 2.1 mm                                                                               |
| Pin dimensions        | 0.3 x 0.8 mm                                                                         |

# PTSM 0,5/ 5-2,5-V THR R44 - PCB terminal block



1770982

<https://www.phoenixcontact.com/us/products/1770982>

## PCB design

|               |        |
|---------------|--------|
| Pin spacing   | 2.5 mm |
| Hole diameter | 1.2 mm |

## Mechanical tests

### Connection test

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

### Test for conductor damage and slackening

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

### Pull-out test

|                                                                             |                                          |
|-----------------------------------------------------------------------------|------------------------------------------|
| Specification                                                               | IEC 60998-2-2:2002-12                    |
| Conductor cross-section/conductor type/tractive force setpoint/actual value | 0.14 mm <sup>2</sup> / solid / > 10 N    |
|                                                                             | 0.2 mm <sup>2</sup> / flexible / > 10 N  |
|                                                                             | 0.5 mm <sup>2</sup> / solid / > 20 N     |
|                                                                             | 0.75 mm <sup>2</sup> / flexible / > 30 N |

### Flexion test

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

## Electrical tests

### Temperature-rise test

|                                   |                                |
|-----------------------------------|--------------------------------|
| Specification                     | IEC 60998-2-1:2002-12          |
| Requirement temperature-rise test | Increase in temperature ≤ 45 K |

### Insulation resistance

|                                              |                     |
|----------------------------------------------|---------------------|
| Specification                                | IEC 60998-1:2002-12 |
| Insulation resistance, neighboring positions | > 5 MΩ              |

### Air clearances and creepage distances |

|                                                        |                     |
|--------------------------------------------------------|---------------------|
| Specification                                          | IEC 60664-1:2007-04 |
| Insulating material group                              | IIIa                |
| Comparative tracking index (IEC 60112)                 | CTI ≥ 175 to < 400  |
| Rated insulation voltage (III/3)                       | 32 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 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)                      | 2 mm                |

# PTSM 0,5/ 5-2,5-V THR R44 - PCB terminal block



1770982

<https://www.phoenixcontact.com/us/products/1770982>

|                                                       |        |
|-------------------------------------------------------|--------|
| Rated insulation voltage (II/2)                       | 160 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

### Vibration test

|                        |                             |
|------------------------|-----------------------------|
| Specification          | IEC 60068-2-6:2007-12       |
| Frequency              | 10 - 150 - 10 Hz            |
| Sweep speed            | 1 octave/min                |
| Amplitude              | 0.35 mm (10 Hz ... 60.1 Hz) |
| Acceleration           | 5g (60.1 Hz ... 150 Hz)     |
| Test duration per axis | 2.5 h                       |
| Test directions        | X-, Y- and Z-axis           |

### Glow-wire test

|                  |                     |
|------------------|---------------------|
| Specification    | IEC 60998-1:2002-12 |
| Temperature      | 850 °C              |
| Time of exposure | 5 s                 |

### Ambient conditions

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

## Packaging specifications

|                             |                                                                                      |
|-----------------------------|--------------------------------------------------------------------------------------|
| Dimensional drawing         |  |
| Type of packaging           | 44 mm wide tape                                                                      |
| [W] tape width              | 44 mm                                                                                |
| [W2] coil overall dimension | ≤ 50.4 mm                                                                            |
| [A] coil diameter           | ≤ 330 mm                                                                             |
| Outer packaging type        | Transparent-Bag                                                                      |

# PTSM 0,5/ 5-2,5-V THR R44 - PCB terminal block

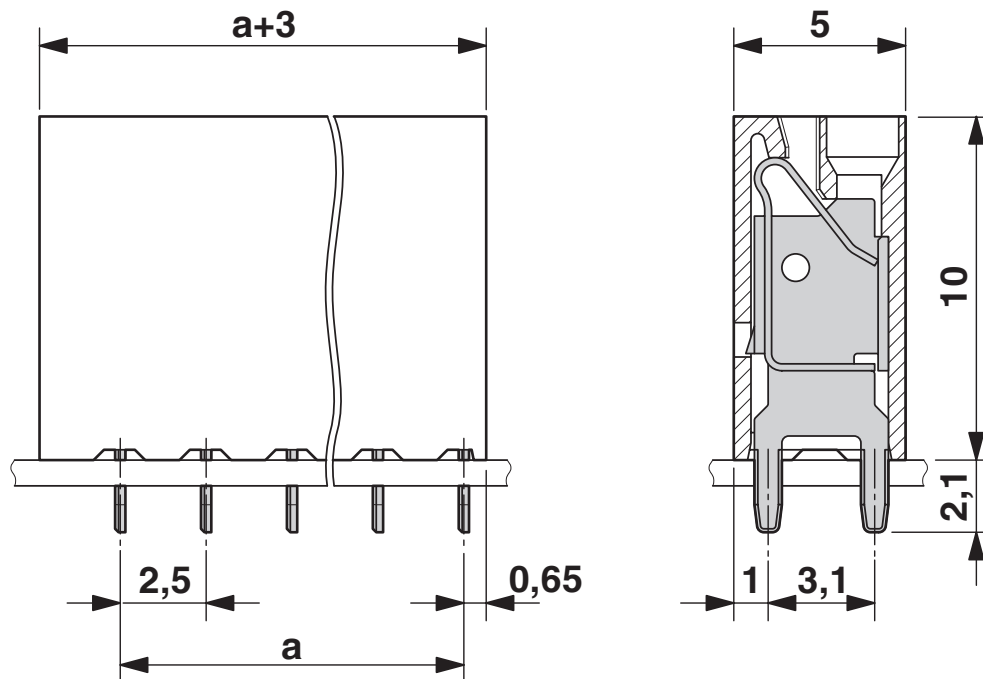


1770982

<https://www.phoenixcontact.com/us/products/1770982>

## Drawings

Dimensional drawing



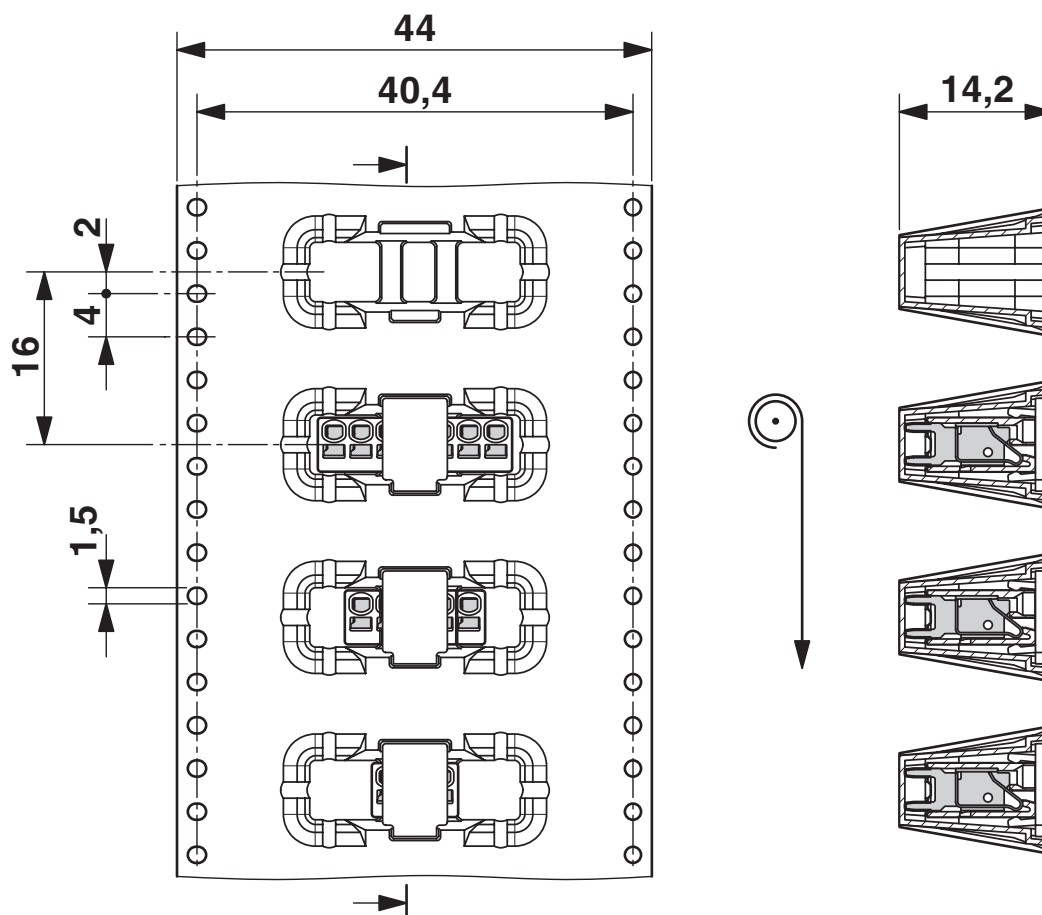
# PTSM 0,5/ 5-2,5-V THR R44 - PCB terminal block

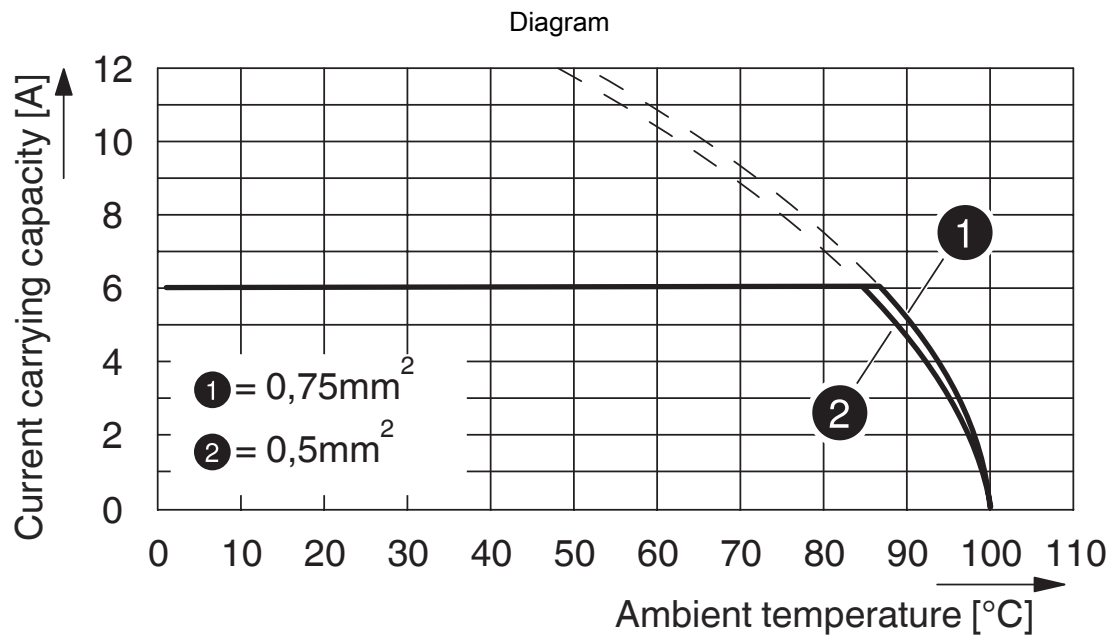
1770982

<https://www.phoenixcontact.com/us/products/1770982>



Dimensional drawing





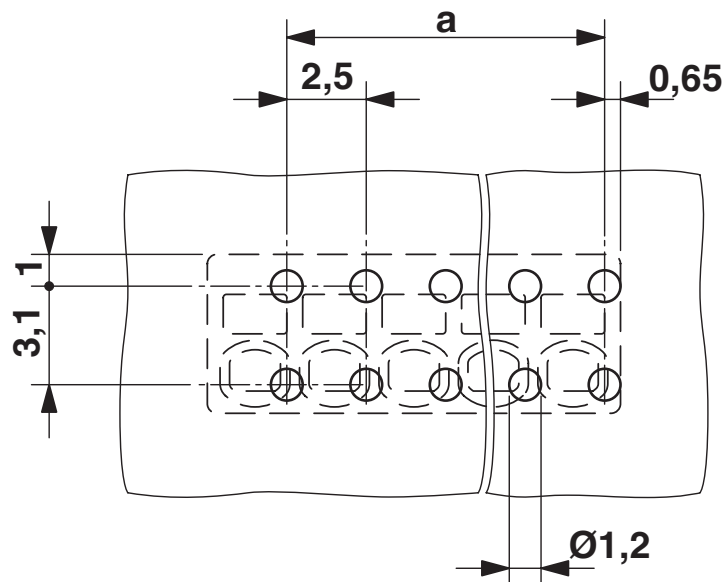
Type: PTSM 0,5/...-2,5-V THR R44

Tested according to DIN EN 60512-5-2:2003-01

Reduction factor = 1

Number of positions: 5

Drilling plan/solder pad geometry



# PTSM 0,5/ 5-2,5-V THR R44 - PCB terminal block



1770982

<https://www.phoenixcontact.com/us/products/1770982>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1770982>

|  <b>UL Recognized</b><br>Approval ID: E118976-20130619 |                       |                       |                   |                             |
|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                                         | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| B                                                                                                                                       |                       |                       |                   |                             |
|                                                                                                                                         | 150 V                 | 5 A                   | 26 - 18           | -                           |

|  <b>cULus Recognized</b><br>Approval ID: E60425-20030527 |                       |                       |                   |                             |
|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                                           | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| B                                                                                                                                         |                       |                       |                   |                             |
|                                                                                                                                           | 150 V                 | 5 A                   | 26 - 20           | -                           |

|  <b>VDE Zeichengenehmigung</b><br>Approval ID: 40048725 |                       |                       |                   |                             |
|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                                            | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine                                                                                                                                      |                       |                       |                   |                             |
|                                                                                                                                            | 160 V                 | 6 A                   | -                 | 0.14 - 0.5                  |

# PTSM 0,5/ 5-2,5-V THR R44 - PCB terminal block



1770982

<https://www.phoenixcontact.com/us/products/1770982>

## Classifications

### ECLASS

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

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC002643 |
|----------|----------|

### UNSPSC

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

# PTSM 0,5/ 5-2,5-V THR R44 - PCB terminal block



1770982

<https://www.phoenixcontact.com/us/products/1770982>

## 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% |
|-------------------------------------|----------------------------|

Phoenix Contact 2025 © - all rights reserved  
<https://www.phoenixcontact.com>

Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)