

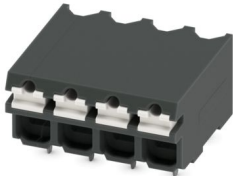
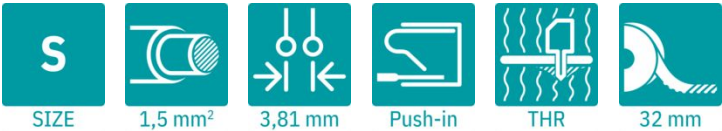
# SPT-THR 1,5/ 4-H-3,81 P20 R32 - PCB terminal block



1823764

<https://www.phoenixcontact.com/nl/products/1823764>

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: 17.5 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm<sup>2</sup>, number of potentials: 4, number of rows: 1, number of positions per row: 4, product range: SPT 1,5/...-H-THR, pitch: 3.81 mm, connection method: Push-in spring connection, mounting: THR soldering / wave soldering, conductor/PCB connection direction: 0 °, color: black, Pin layout: Linear pinning, Solder pin [P]: 2 mm, number of solder pins per potential: 2, type of packaging: 32 mm wide tape. Suitable for CAT5

## Your advantages

- Satisfies CAT5 requirements in accordance with EN 50173 and ISO/IEC 11801

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1823764                        |
| Packing unit                         | 250 pc                         |
| Minimum order quantity               | 250 pc                         |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | AALCCD                         |
| Product key                          | AALCCD                         |
| GTIN                                 | 4046356814416                  |
| Weight per piece (including packing) | 3,49 g                         |
| Weight per piece (excluding packing) | 3,49 g                         |
| Customs tariff number                | 85369010                       |
| Country of origin                    | PL                             |

# SPT-THR 1,5/ 4-H-3,81 P20 R32 - PCB terminal block



1823764

<https://www.phoenixcontact.com/nl/products/1823764>

## Technical data

### Product properties

|                           |                      |
|---------------------------|----------------------|
| Product family            | SPT 1,5/..-H-THR     |
| Product line              | COMBICON Terminals S |
| Number of positions       | 4                    |
| Pitch                     | 3.81 mm              |
| Number of connections     | 4                    |
| Number of rows            | 1                    |
| Number of potentials      | 4                    |
| Pin layout                | Linear pinning       |
| Solder pins per potential | 2                    |

### Electrical properties

#### Properties

|                             |        |
|-----------------------------|--------|
| Nominal current $I_N$       | 17.5 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)        | 320 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

|                       |                     |
|-----------------------|---------------------|
| Nominal cross section | 1.5 mm <sup>2</sup> |
|-----------------------|---------------------|

#### Conductor connection

|                                                                         |                                              |
|-------------------------------------------------------------------------|----------------------------------------------|
| Connection method                                                       | Push-in spring connection                    |
| Conductor cross-section rigid                                           | 0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>  |
| Conductor cross-section flexible                                        | 0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>  |
| Conductor cross-section AWG                                             | 24 ... 16                                    |
| Conductor cross-section, flexible, with ferrule, without plastic sleeve | 0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>  |
| Conductor cross-section, flexible, with ferrule, with plastic sleeve    | 0.2 mm <sup>2</sup> ... 0.75 mm <sup>2</sup> |
| Stripping length                                                        | 8 mm                                         |

# SPT-THR 1,5/ 4-H-3,81 P20 R32 - PCB terminal block



1823764

<https://www.phoenixcontact.com/nl/products/1823764>

## 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 µm - 8 µm Sn)                                                             |
| Metal surface soldering area (top layer) | Tin (4 µm - 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           |

### Material data – actuating element

|                                        |              |
|----------------------------------------|--------------|
| Color (Actuating element)              | white (9010) |
| Insulating material                    | PA GF        |
| Insulating material group              | I            |
| CTI according to IEC 60112             | 600          |
| 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. |
| Assembly note       | This item is not suitable for PCB cleaning with liquids.                                                    |

## Dimensions

|                     |  |
|---------------------|--|
| Dimensional drawing |  |
|---------------------|--|

# SPT-THR 1,5/ 4-H-3,81 P20 R32 - PCB terminal block



1823764

<https://www.phoenixcontact.com/nl/products/1823764>

|                       |              |
|-----------------------|--------------|
| Pitch                 | 3.81 mm      |
| Width [w]             | 15.43 mm     |
| Height [h]            | 9.7 mm       |
| Length [l]            | 13.6 mm      |
| Installed height      | 7.7 mm       |
| Solder pin length [P] | 2 mm         |
| Pin dimensions        | 0.7 x 0.3 mm |

## PCB design

|               |        |
|---------------|--------|
| Pin spacing   | 7 mm   |
| Hole diameter | 1.1 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<br>setpoint/actual value | 0.2 mm <sup>2</sup> / solid / > 10 N    |
|                                                                                | 0.2 mm <sup>2</sup> / flexible / > 10 N |
|                                                                                | 1.5 mm <sup>2</sup> / solid / > 40 N    |
|                                                                                | 1.5 mm <sup>2</sup> / flexible / > 40 N |

### Flexion test

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

## Electrical tests

### Temperature-rise test

|                                   |                                                                                                                                |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Specification                     | IEC 60947-7-4:2019-01                                                                                                          |
| Requirement temperature-rise test | The sum of ambient temperature and temperature rise of the PCB terminal block shall not exceed the upper limiting temperature. |

### Insulation resistance

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

### Air clearances and creepage distances |

|                                        |                       |
|----------------------------------------|-----------------------|
| Specification                          | IEC 60947-7-4:2013-08 |
| Insulating material group              | IIIa                  |
| Comparative tracking index (IEC 60112) | CTI 175               |

# SPT-THR 1,5/ 4-H-3,81 P20 R32 - PCB terminal block



1823764

<https://www.phoenixcontact.com/nl/products/1823764>

|                                                        |        |
|--------------------------------------------------------|--------|
| 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)                        | 320 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)                       | 3.2 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 (storage/transport) | -40 °C ... 70 °C                                                              |
| Relative humidity (storage/transport)   | 30 % ... 70 %                                                                 |
| Ambient temperature (assembly)          | -5 °C ... 100 °C                                                              |
| Ambient temperature (operation)         | -40 °C ... 105 °C (Depending on the current carrying capacity/derating curve) |

### Ambient conditions

|                                         |                                                                               |
|-----------------------------------------|-------------------------------------------------------------------------------|
| Ambient temperature (operation)         | -40 °C ... 105 °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                                                              |

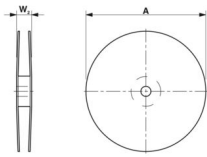
## Packaging specifications

# SPT-THR 1,5/ 4-H-3,81 P20 R32 - PCB terminal block



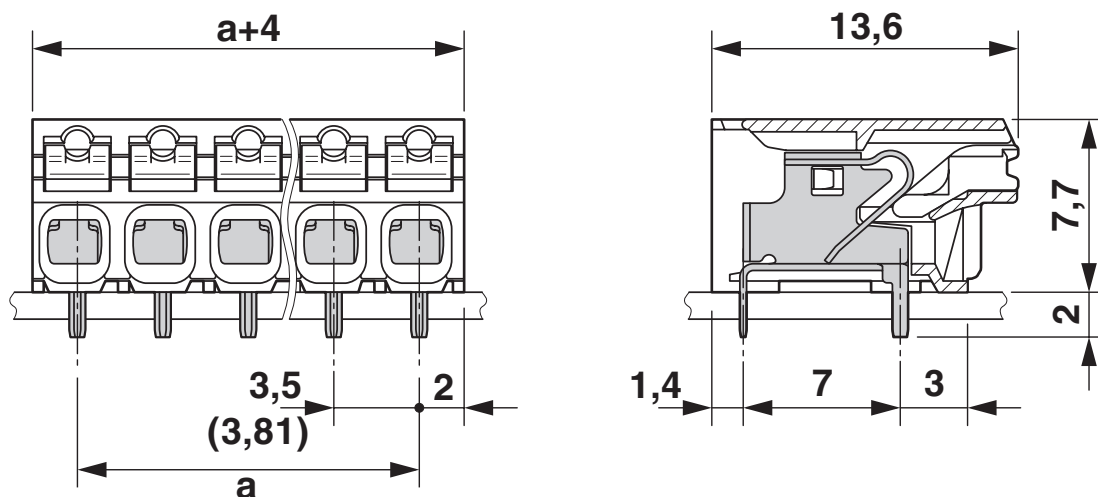
1823764

<https://www.phoenixcontact.com/nl/products/1823764>

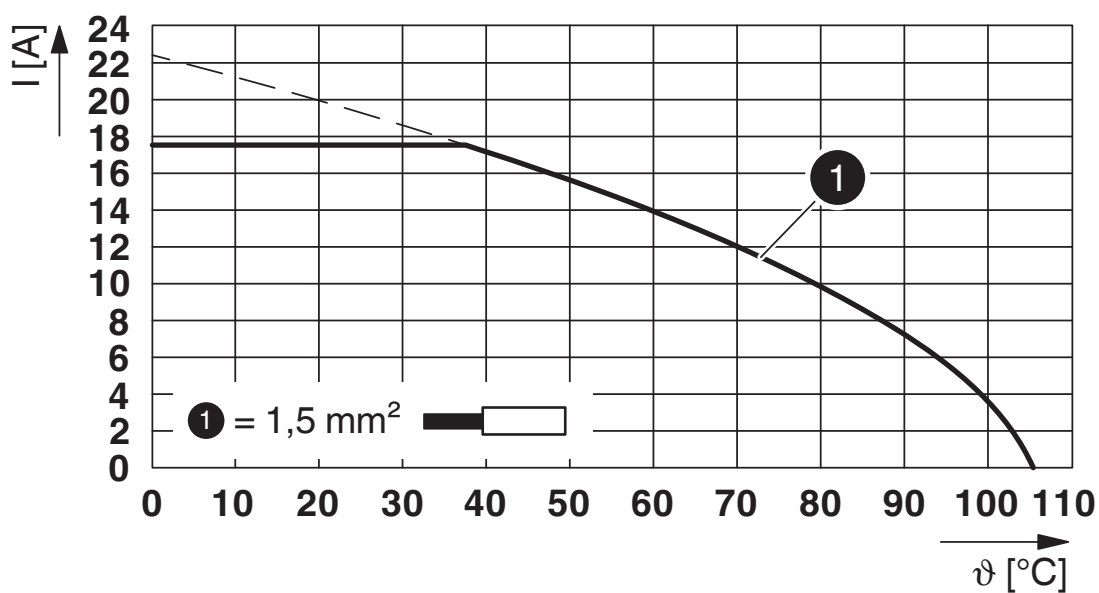
|                             |                                                                                    |
|-----------------------------|------------------------------------------------------------------------------------|
| Dimensional drawing         |  |
| Type of packaging           |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

## Drawings

Dimensional drawing



Diagram



Type: SPT-THR 1,5/...-H-3,81 P...

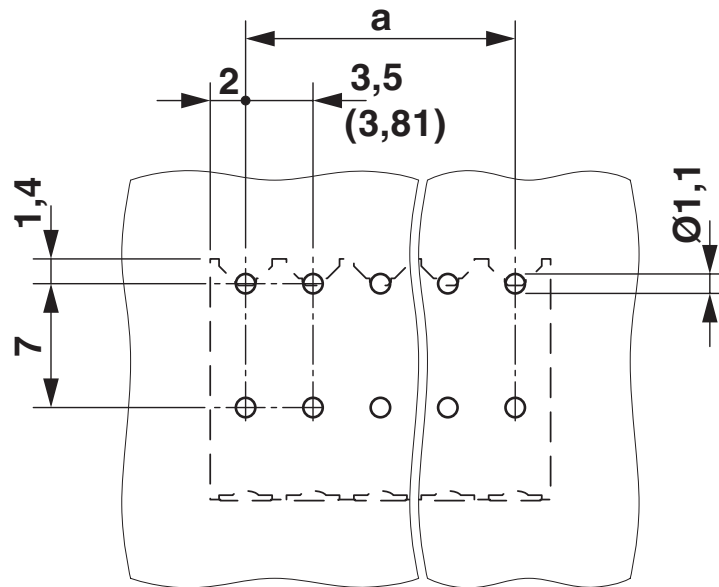
# SPT-THR 1,5/ 4-H-3,81 P20 R32 - PCB terminal block



1823764

<https://www.phoenixcontact.com/nl/products/1823764>

Drilling plan/solder pad geometry



# SPT-THR 1,5/ 4-H-3,81 P20 R32 - PCB terminal block



1823764

<https://www.phoenixcontact.com/nl/products/1823764>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/nl/products/1823764>

|  <b>cULus Recognized</b><br>Approval ID: E60425-20061129 |                       |                       |                   |                             |
|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                                           | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| B                                                                                                                                         | 300 V                 | 10 A                  | 24 - 16           | -                           |
| D                                                                                                                                         | 300 V                 | 10 A                  | 24 - 16           | -                           |

|  <b>VDE approval of drawings</b><br>Approval ID: 40046113 |                       |                       |                   |                             |
|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                                            | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine                                                                                                                                      | 160 V                 | 17.5 A                | -                 | 0.2 - 1.5                   |

# SPT-THR 1,5/ 4-H-3,81 P20 R32 - PCB terminal block



1823764

<https://www.phoenixcontact.com/nl/products/1823764>

## Classifications

### ECLASS

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

### ETIM

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

### UNSPSC

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

# SPT-THR 1,5/ 4-H-3,81 P20 R32 - PCB terminal block



1823764

<https://www.phoenixcontact.com/nl/products/1823764>

## 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 2026 © - all rights reserved  
<https://www.phoenixcontact.com>

PHOENIX CONTACT B.V.  
Hengelder 56 6902 PA Zevenaar  
Postbus 246 6900 AE Zevenaar  
(0316) 59 17 20  
[sales@phoenixcontact.nl](mailto:sales@phoenixcontact.nl)