

PCB terminal block - PTSM 0,5/ 4-2,5-H SMD R24



1702474

<https://www.phoenixcontact.com/us/products/1702474>

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PCB terminal block, nominal current: 6 A, rated voltage (III/2): 160 V, nominal cross section: 0.5 mm², number of potentials: 4, number of rows: 1, number of positions per row: 4, product range: PTSM 0,5/..-H-SMD, pitch: 2.5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, color: black, Pin layout: Linear pad geometry, number of solder pins per potential: 1, type of packaging: 24 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
- Additional solder anchors reduce the mechanical strain on the soldering spots

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Commercial Data

| | |
|--------------------------------------|--------------------|
| Item number | 1702474 |
| Packing unit | 1 pc |
| Minimum order quantity | 770 pc |
| Sales Key | A03 |
| Product Key | AAKDAA |
| Catalog Page | Page 53 (C-1-2013) |
| GTIN | 4046356592314 |
| Weight per Piece (including packing) | 1.546 g |
| Weight per Piece (excluding packing) | 1.433 g |
| Customs tariff number | 85369010 |
| Country of origin | IN |

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Technical Data

Product properties

| | |
|-----------------------|--------------------------------|
| Product line | COMBICON Terminals XS |
| Product type | Printed circuit board terminal |
| Number of positions | 4 |
| Pitch | 2.5 mm |
| Number of connections | 4 |
| Number of rows | 1 |
| Number of potentials | 4 |
| Pin layout | Linear pad geometry |

Electrical properties

| | |
|-----------------------------|--------|
| Nominal current I_N | 6 A |
| Nominal voltage U_N | 160 V |
| Pollution degree | 3 |
| 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 |

Connection data

Connection technology

| | |
|-----------------------|---------------------|
| Nominal cross section | 0.5 mm ² |
|-----------------------|---------------------|

Conductor connection

| | |
|---|---|
| Connection method | Push-in spring connection |
| Conductor cross section solid | 0.14 mm ² ... 0.5 mm ² |
| Conductor cross section flexible | 0.2 mm ² ... 0.5 mm ² (up to 0.75 mm ² 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 ² ... 0.5 mm ² |
| Conductor cross section, flexible, with ferrule, with plastic sleeve | 0.25 mm ² ... 0.34 mm ² |
| Cylindrical gauge a x b / diameter | - / 1.2 mm |
| Stripping length | 6 mm |

Mounting

| | |
|-----------------------------|---------------|
| Mounting type SMD soldering | SMD soldering |
| Mounting type | SMD soldering |

Processing notes

| | |
|--------------------------|------------------|
| Process | Reflow soldering |
| Moisture Sensitive Level | MSL 1 |

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| | |
|----------------------------------|--------|
| Classification temperature T_c | 260 °C |
| Solder cycles in the reflow | 3 |

Material specifications

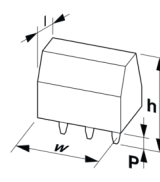
Material data - contact

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

Material data - housing

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

Dimensions

| | |
|---------------------|--|
| Dimensional drawing |  |
| Pitch | 2.5 mm |
| Width [w] | 12.6 mm |
| Height [h] | 5.12 mm |
| Length [l] | 9 mm |
| Installed height | 5.12 mm |

PCB design

| | |
|--------------|--------------|
| Pad geometry | 1.4 x 3.4 mm |
| Pin spacing | 2.5 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

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| | |
|---|--|
| Specification | IEC 60998-2-2:2002-12 |
| Conductor cross section/conductor type/tractive force setpoint/actual value | 0.14 mm ² / solid / > 10 N |
| | 0.2 mm ² / flexible / > 10 N |
| | 0.5 mm ² / solid / > 20 N |
| | 0.75 mm ² / 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 60664-1:1992-10 + A1:2000-02 + A2:2002-05 |
| Insulating material group | IIIa |
| Comparative tracking index (IEC 60112) | CTI 175 |
| 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) | 1.3 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) | 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) | 1.6 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 - 60.1 Hz) |
| Sweep speed | 5g (60.1 - 150 Hz) |
| Test duration per axis | 2.5 h |

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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 | 24 mm wide tape |
| [W] tape width | 24 mm |
| [W2] coil overall dimension | 30.4 mm |
| [A] coil diameter | 330 mm |
| Outer packaging type | Transparent-Bag |
| ESD level | (D) electrostatically conductive |
| Specification | DIN EN 61340-5-1 (VDE 0300-5-1): 2008-07 |

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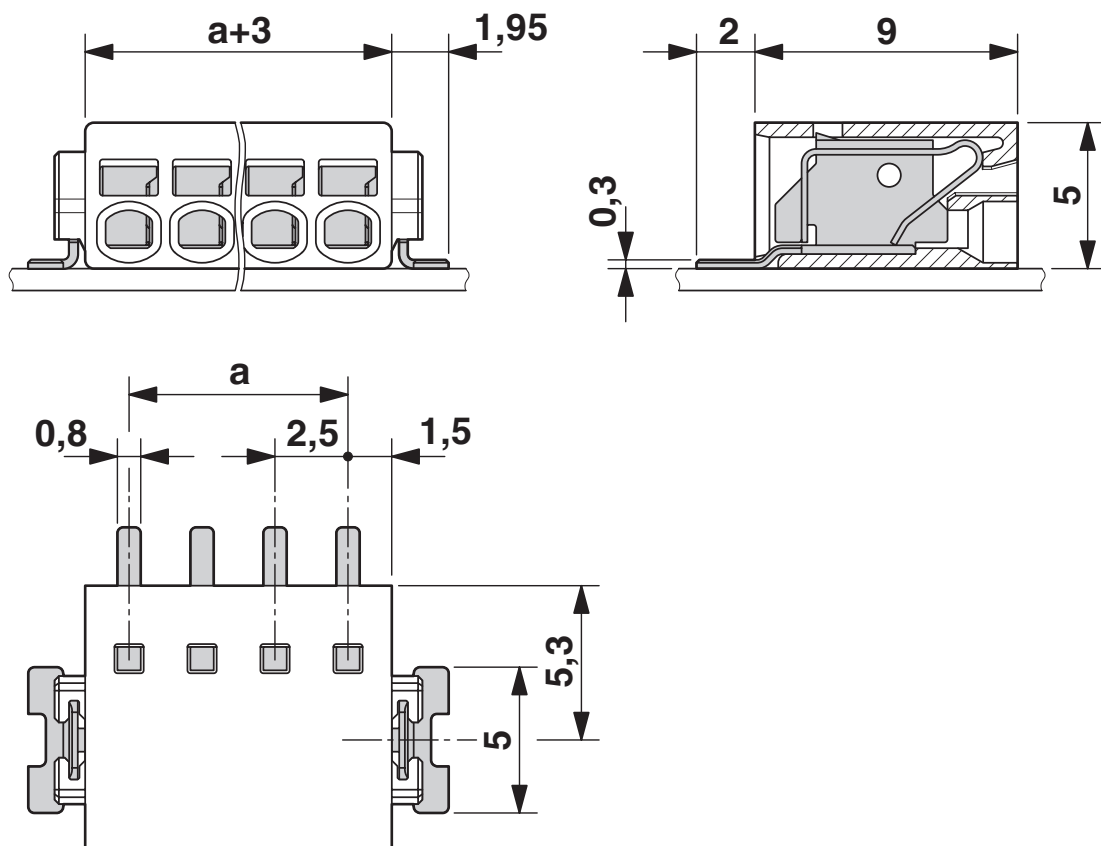


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Drawings

Dimensional drawing



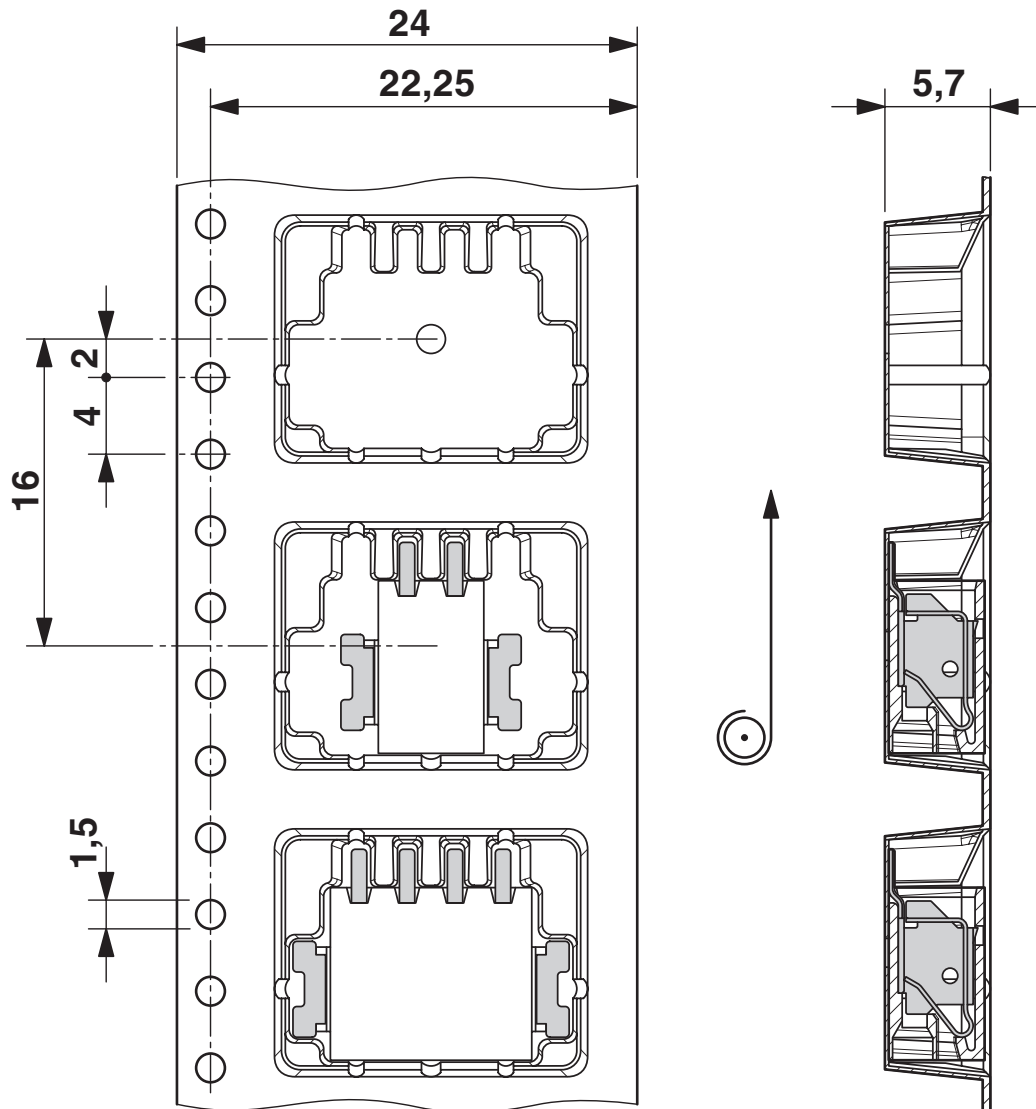
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Dimensional drawing

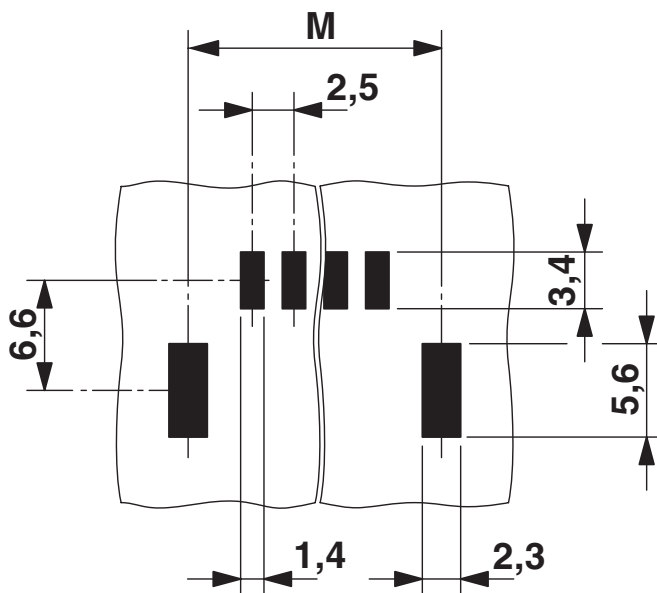


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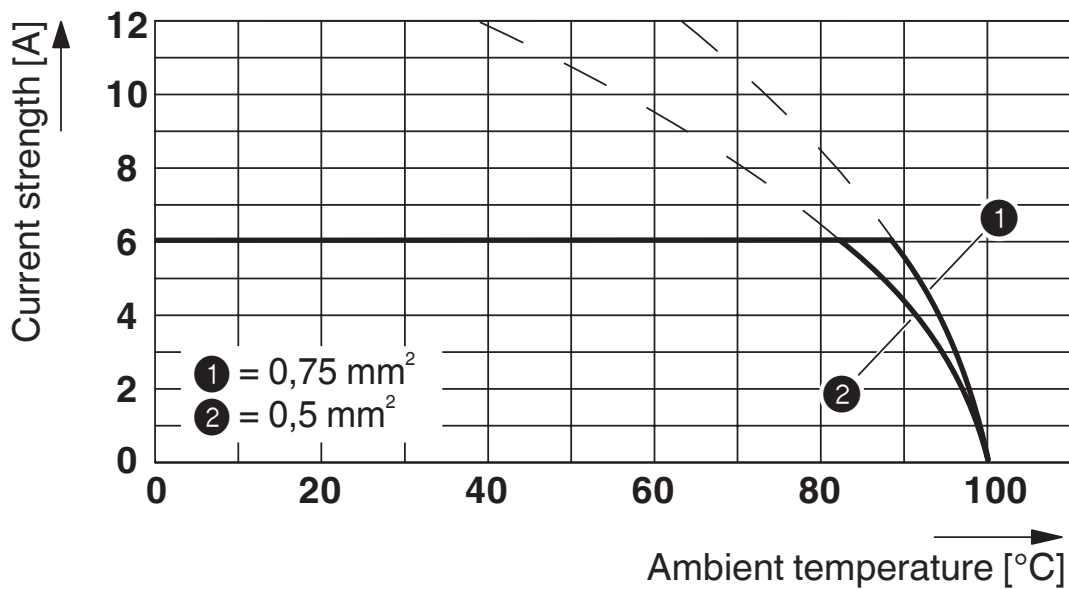
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Drilling plan/solder pad geometry



Dimension M: 12.7 mm

Diagram



Type: PTSM 0,5/...-2,5-H- SMD R44

Tested in accordance with DIN EN 60512-5-2:2003-01

Reduction factor = 1

No. of positions: 5


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Approvals

|  UL Recognized Approval ID: E118976-20130619 | | | | |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal Voltage U_N | Nominal Current I_N | Cross Section AWG | Cross Section mm^2 |
| Use group B | | | | |
| | 150 V | 5 A | 26 - 18 | - |

|  EAC Approval ID: B.01687 | | | | |
|--|--|--|--|--|
|--|--|--|--|--|

|  cULus Recognized Approval ID: E60425-20030527 | | | | |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal Voltage U_N | Nominal Current I_N | Cross Section AWG | Cross Section mm^2 |
| Use group B | | | | |
| | 150 V | 5 A | 26 - 20 | - |

|  VDE Zeichengenehmigung Approval ID: 40048725 | | | | |
|--|--|--|--|--|
|--|--|--|--|--|

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Classifications

ECLASS

| | |
|---------------|----------|
| ECLASS-9.0 | 27440401 |
| ECLASS-10.0.1 | 27440401 |
| ECLASS-11.0 | 27460101 |

ETIM

| | |
|----------|----------|
| ETIM 8.0 | EC002643 |
|----------|----------|

UNSPSC

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

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Environmental Product Compliance

| | |
|------------|---|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
| | No hazardous substances above threshold values |

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Accessories

Screwdriver

Screwdriver - SZS 0,4X2,0 - 1205202

<https://www.phoenixcontact.com/us/products/1205202>



Micro screwdriver, bladed, size: 0.4 x 2.0 x 60 mm, 2-component grip, with non-slip grip and twist cap

Ferrule

Ferrule - AI 0,25- 6 BU - 3203040

<https://www.phoenixcontact.com/us/products/3203040>



Ferrule, sleeve length: 6 mm, length: 10.5 mm, color: blue

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Ferrule

Ferrule - AI 0,25- 6 YE - 3203024

<https://www.phoenixcontact.com/us/products/3203024>



Ferrule, sleeve length: 6 mm, length: 10.5 mm, color: yellow

Ferrule

Ferrule - AI 0,34- 6 TQ - 3203053

<https://www.phoenixcontact.com/us/products/3203053>



Ferrule, sleeve length: 6 mm, length: 10.5 mm, color: turquoise

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PCB terminal block

PCB terminal block - SAMPLE PTSM 0,5/ 4-2,5-H-SMD - 1701077

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PCB terminal block, nominal current: 6 A, rated voltage (III/2): 160 V, nominal cross section: 0.5 mm², number of potentials: 4, number of rows: 1, number of positions per row: 4, product range: PTSM 0,5/..-H-SMD, pitch: 2.5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, color: black, Pin layout: Linear pad geometry, Solder pin [P]: 2 mm, number of solder pins per potential: 1, type of packaging: packed in cardboard. SAMPLE set with 5 items in belt section. When used as part of soldering process, please use items without SAMPLE marking

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