

PCB terminal block - SPT 2,5/ 4-H-5,0-EX



1732409

<https://www.phoenixcontact.com/pc/products/1732409>

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PCB terminal block, nominal current: 23 A, nominal cross section: 2.5 mm², number of potentials: 4, number of rows: 1, number of positions per row: 4, product range: SPT 2,5/..-H-EX, pitch: 5 mm, connection method: Push-in spring connection, mounting: Wave soldering, conductor/PCB connection direction: 0 °, color: green, Pin layout: Linear pinning, Solder pin [P]: 2.5 mm, number of solder pins per potential: 2, type of packaging: packed in cardboard

Your advantages

- Time saving push-in connection, tools not required
- Defined contact force ensures that contact remains stable over the long term
- Clamping space opened by means of fixed screwdriver enables convenient conductor connection
- Operation and conductor connection from one direction enable integration into front of device
- Satisfies the more stringent safety requirements of "Ex eb" protection according to IEC 60079-7 for potentially explosive areas
- Two solder pins reduce the mechanical strain on the soldering spots

Commercial Data

| | |
|--------------------------------------|--------------------------------|
| Item number | 1732409 |
| Packing unit | 50 pc |
| Minimum order quantity | 1 pc |
| Note | Made to Order (non-returnable) |
| Product Key | AAMBFA |
| Catalog Page | Page 163 (C-1-2013) |
| GTIN | 4046356282949 |
| Weight per Piece (including packing) | 5.233 g |
| Weight per Piece (excluding packing) | 4.41 g |
| Customs tariff number | 85369010 |
| Country of origin | DE |

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Technical Data

Product properties

| | |
|---------------------------|--------------------------------|
| Product line | COMBICON Terminals M |
| Product type | Printed circuit board terminal |
| Number of positions | 4 |
| Pitch | 5 mm |
| Number of connections | 4 |
| Number of rows | 1 |
| Number of potentials | 4 |
| Pin layout | Linear pinning |
| Solder pins per potential | 2 |

Electrical properties

| | |
|---|--------------------------|
| Nominal current I_N | 23 A |
| Nominal voltage U_N | 176 V |
| Rated current / conductor cross section | 23 A/2.5 mm ² |
| Degree of pollution | 3 |
| Rated voltage (III/3) | 176 V |

Ex data

Ex approval

| | |
|---------------------------------|-----------------------------|
| Identification | 0344□ II 2GD / Ex eb IIC Gb |
| EU-type examination certificate | KEMA 07ATEX0193 U |
| IECEx certificate | IECEx KEM 07.0057 U |

Connection data

Connection technology

| | |
|-----------------------|---------------------|
| Nominal cross section | 2.5 mm ² |
|-----------------------|---------------------|

Conductor connection

| | |
|---|--|
| Connection method | Push-in spring connection |
| Conductor cross section solid | 0.2 mm ² ... 4 mm ² |
| Conductor cross section flexible | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross section AWG | 24 ... 14 |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.25 mm ² ... 2.5 mm ² (Stripping length 8 mm) |
| Conductor cross section, flexible, with ferrule, with plastic sleeve | 0.25 mm ² ... 1.5 mm ² (Stripping length 8 mm) |
| Stripping length | 10 mm |

Mounting

| | |
|---------------|----------------|
| Mounting type | Wave soldering |
| Pin layout | Linear pinning |

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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) | green (6021) |
| Insulating material | PA |
| Insulating material group | I |
| CTI according to IEC 60112 | 600 |
| Flammability rating according to UL 94 | V0 |
| Glow wire flammability index GWFI according to EN 60695-2-12 | 850 |
| Glow wire ignition temperature GWIT according to EN 60695-2-13 | 775 |
| Temperature for the ball pressure test according to EN 60695-10-2 | 125 °C |

Material data – actuating element

| | |
|----------|----|
| Color () | () |
|----------|----|

Notes

| | |
|---------------------|--|
| Note on application | Rated insulation voltage with pitch spacer RZ-SPT 2,5-2,5: 275 V RZ-SPT 2,5-5,0: 440 V |
|---------------------|--|

Dimensions

| | |
|-----------------------|---------|
| Dimensional drawing | |
| Pitch | 5 mm |
| Width [w] | 21.4 mm |
| Height [h] | 16 mm |
| Length [l] | 14.4 mm |
| Installed height | 13.5 mm |
| Solder pin length [P] | 2.5 mm |

PCB design

| | |
|-------------|--------|
| Pin spacing | 8.2 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 | 0.2 mm ² / solid / > 10 N |
| | 0.2 mm ² / flexible / > 10 N |
| | 4 mm ² / solid / > 60 N |
| | 2.5 mm ² / flexible / > 50 N |

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 | 10 ⁹ Ω |

Air clearances and creepage distances |

| | |
|--|---------|
| Insulating material group | I |
| Comparative tracking index (IEC 60112) | CTI 600 |
| Rated insulation voltage (III/3) | 176 V |
| minimum clearance value - non-homogenous field (III/3) | 3 mm |
| minimum creepage distance (III/3) | 3.2 mm |
| minimum clearance value - non-homogenous field (III/2) | 3 mm |
| minimum creepage distance (III/2) | 3 mm |
| minimum clearance value - non-homogenous field (II/2) | 3 mm |
| minimum creepage distance (II/2) | 3.2 mm |

Environmental and real-life conditions

Vibration test

| | |
|------------------------|-----------------------------|
| Specification | IEC 60068-2-6:1995-03 |
| Frequency | 10 - 150 - 10 Hz |
| Sweep speed | 1 octave/min |
| Amplitude | 0.35 mm (10 Hz ... 60.1 Hz) |
| Sweep speed | 5g (60.1 Hz ... 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) | -50 °C ... 110 °C |
| Ambient temperature (storage/transport) | -40 °C ... 70 °C |
| Relative humidity (storage/transport) | 30 % ... 70 % |
| Ambient temperature (assembly) | -5 °C ... 100 °C |

Packaging specifications

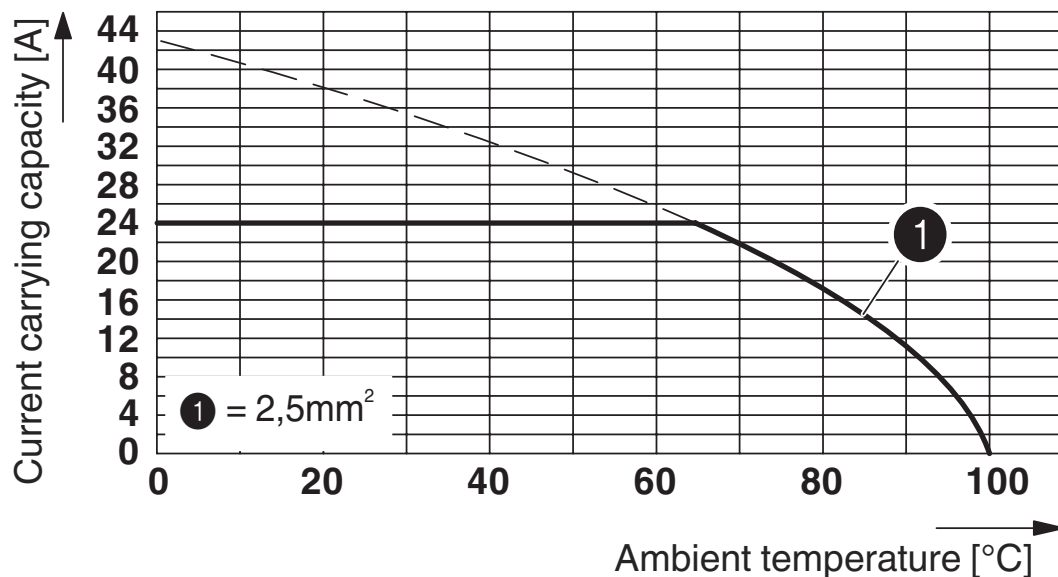
| | |
|-------------------|---------------------|
| Type of packaging | packed in cardboard |
|-------------------|---------------------|

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Drawings

Diagram



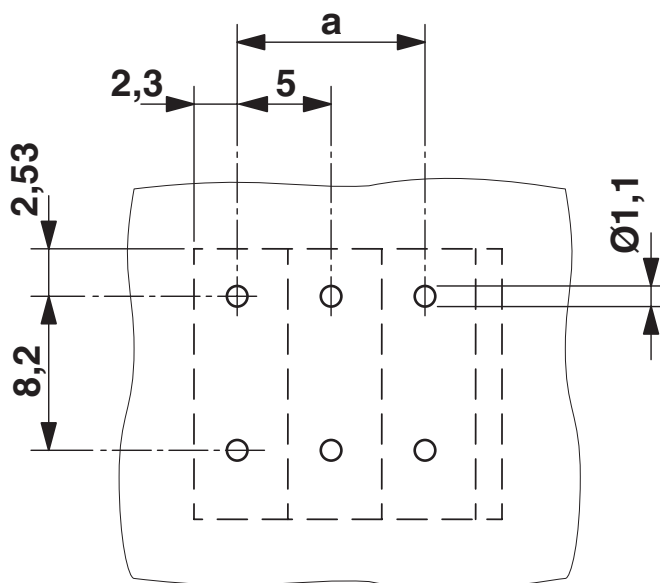
Type: SPT 2,5/5-H-5,0

Test following DIN EN 60512-5-2:2003-01

Reduction factor = 1

No. of positions: 5

Drilling plan/solder pad geometry




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
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Approvals

|  cULus Recognized Approval ID: E60425-20061129 | | | | |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal Voltage U_N | Nominal Current I_N | Cross Section AWG | Cross Section mm^2 |
| Use group B | 300 V | 20 A | 24 - 12 | - |
| Use group D | 150 V | 15 A | 24 - 12 | - |
| Use group C | 150 V | 20 A | 24 - 12 | - |

|  ATEX Approval ID: KEMA 07ATEX0193 U | |
|---|--|
|---|--|

|  IECEX Approval ID: IECEX KEM 07.0057U | |
|---|--|
|---|--|

|  EAC Ex Approval ID: B.00065/19 | |
|--|--|
|--|--|

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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 - SZF 1-0,6X3,5 - 1204517

<https://www.phoenixcontact.com/pc/products/1204517>



Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

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