

PCB terminal block - FRONT 2,5-V/SA 5 - 1700037

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PCB terminal block, nominal current: 24 A, rated voltage (III/2): 400 V, nominal cross section: 2.5 mm², pitch: 5 mm, number of positions: 1, connection method: Front screw connection, mounting: Wave soldering, conductor/PCB connection direction: 90 °, color: green, Pin layout: Linear pinning, Solder pin [P]: 3.5 mm. The article can be aligned to create different nos. of positions!

Your advantages

- ✓ Well-known connection principle allows worldwide use
- ✓ Low temperature rise, thanks to maximum contact force
- ✓ Allows connection of two conductors
- ✓ Operation and conductor connection from one direction enable integration into front of device
- ✓ Two solder pins reduce the mechanical strain on the soldering spots
- ✓ The latching on the side enables various numbers of positions to be combined



Key Commercial Data

| | |
|------------------------|---------------|
| Packing unit | 50 pc |
| Minimum order quantity | 50 pc |
| GTIN | |
| GTIN | 4017918022723 |

Technical data

Item properties

| | |
|---------------------------|------------------------|
| Brief article description | PCB terminal block |
| Range of articles | FRONT 2,5-V/SA 5 |
| Pitch | 5 mm |
| Number of positions | 1 |
| Connection method | Front screw connection |
| Screw thread | M2,5 |
| Mounting type | Wave soldering |
| Pin layout | Linear pinning |
| Number of levels | 1 |

PCB terminal block - FRONT 2,5-V/SA 5 - 1700037

Technical data

Item properties

| | |
|-----------------------|---|
| Number of connections | 1 |
| Number of potentials | 1 |

Electrical parameters

| | |
|-----------------------------|-------|
| Nominal current | 24 A |
| Nom. voltage | 400 V |
| Rated voltage | 250 V |
| Rated voltage (III/2) | 400 V |
| Rated voltage (II/2) | 630 V |
| Rated surge voltage (III/3) | 4 kV |
| Rated surge voltage (III/2) | 4 kV |
| Rated surge voltage (II/2) | 4 kV |

Connection capacity

| | |
|---|---|
| Connection method | Front screw connection |
| pluggable | Yes |
| Conductor cross section solid | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross section flexible | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross section AWG / kcmil | 24 ... 14 |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.25 mm ² ... 1.5 mm ² |
| Conductor cross section, flexible, with ferrule, with plastic sleeve | 0.25 mm ² ... 1.5 mm ² |
| 2 conductors with same cross section, solid | 0.2 mm ² ... 0.75 mm ² |
| 2 conductors with same cross section, flexible | 0.2 mm ² ... 0.75 mm ² |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve | 0.25 mm ² ... 0.34 mm ² |
| Stripping length | 9 mm |
| Torque | 0.4 Nm ... 0.5 Nm |

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 | 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 |

PCB terminal block - FRONT 2,5-V/SA 5 - 1700037

Technical data

Material data - housing

| | |
|---|--------|
| Temperature for the ball pressure test according to EN 60695-10-2 | 125 °C |
|---|--------|

Dimensions for the product

| | |
|-----------------------------|--------------|
| Length [l] | 18.5 mm |
| Width [w] | 6.8 mm |
| Height [h] | 23.18 mm |
| Pitch | 5 mm |
| Height (without solder pin) | 19.5 mm |
| Solder pin [P] | 3.5 mm |
| Pin spacing | 5 mm |
| Pin dimensions | 0.8 x 0.8 mm |

Dimensions for PCB design

| | |
|---------------|--------|
| Hole diameter | 1.2 mm |
| Pin spacing | 5 mm |

Packaging information

| | |
|----------------------------|---------------------|
| Type of packaging | packed in cardboard |
| Pieces per package | 50 |
| Denomination packing units | Pcs. |

Ambient conditions

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

Termination and connection method

| | |
|--|---------------------|
| Test for conductor damage and slackening | IEC 60999-1:1999-11 |
| | Test passed |

Pull-out test

| | |
|--|---|
| Pull-out test | IEC 60999-1:1999-11 |
| | Test passed |
| Conductor cross section / conductor type / tensile force | 0.2 mm ² / solid / > 10 N |
| | 0.2 mm ² / flexible / > 10 N |
| | 2.5 mm ² / flexible / > 50 N |
| | 2.5 mm ² / solid / > 50 N |

Mechanical tests according to standard

| | |
|--------------------|---------------|
| Test specification | IEC 60947-7-4 |
|--------------------|---------------|

Electrical tests

| | |
|-------------------------|---------------------|
| Rated current | 24 A |
| Conductor cross section | 2.5 mm ² |
| Rated voltage (III/2) | 400 V |

PCB terminal block - FRONT 2,5-V/SA 5 - 1700037

Technical data

Electrical tests

| | |
|-----------------------------|------|
| Rated surge voltage (III/2) | 4 kV |
|-----------------------------|------|

Air clearances and creepage distances

| | |
|---|---------------------|
| Clearances and creepage distances | IEC 60664-1:2007-04 |
| Specification | IEC 60664-1:2007-04 |
| Minimum clearance - inhomogeneous field (III/3) | 3 mm |
| Minimum clearance - inhomogeneous field (III/2) | 3 mm |
| Minimum clearance - inhomogeneous field (II/2) | 3 mm |
| Minimum creepage distance value (III/3) | 3.2 mm |
| Minimum creepage distance value (III/2) | 3 mm |
| Minimum creepage distance value (II/2) | 3.2 mm |

Temperature-rise test

| | |
|-----------------------------------|--|
| Specification | IEC 60947-7-4:2013-08 |
| Result | Test passed |
| Requirement temperature-rise test | The sum of ambient temperature and temperature rise of the PCB terminal block shall not exceed the upper limiting temperature. |

Current carrying capacity / derating curves

| | |
|---------------------|---|
| Caption | Type: FRONT 2,5-V/SA 5/.. |
| Specification | IEC 60947-7-4:2013-08 |
| Number of positions | 1 |
| Reduction factor | 1 |
| Note | Representation based on IEC 60512-5-2:2002-02 |

Vibration test

| | |
|------------------------|------------------------|
| Specification | IEC 60068-2-6:2007-12 |
| Result | Test passed |
| Frequency | 10 - 150 - 10 Hz |
| Sweep speed | 1 octave/min |
| Amplitude | 0.35 mm (10 - 60.1 Hz) |
| Acceleration | 5 g (60.1 - 150 Hz) |
| Test duration per axis | 2.5 h |

Insulation resistance

| | |
|--|-----------------------|
| Specification | IEC 60512-3-1:2002-02 |
| Result | Test passed |
| Insulation resistance, neighboring positions | > 0.2 TΩ |

Glow-wire test

| | |
|------------------|------------------------|
| Specification | IEC 60695-2-10:2013-04 |
| Result | Test passed |
| Temperature | 850 °C |
| Time of exposure | 5 s |

PCB terminal block - FRONT 2,5-V/SA 5 - 1700037

Technical data

Alternating climate test

| | |
|------------------|-------------------|
| Result | Test passed |
| Specification | ISO 6988:1985-02 |
| Corrosive stress | KFW 0.2 S/1 cycle |

Standards and Regulations

| | |
|--|--------|
| Connection in acc. with standard | EN-VDE |
| | CSA |
| Flammability rating according to UL 94 | V0 |

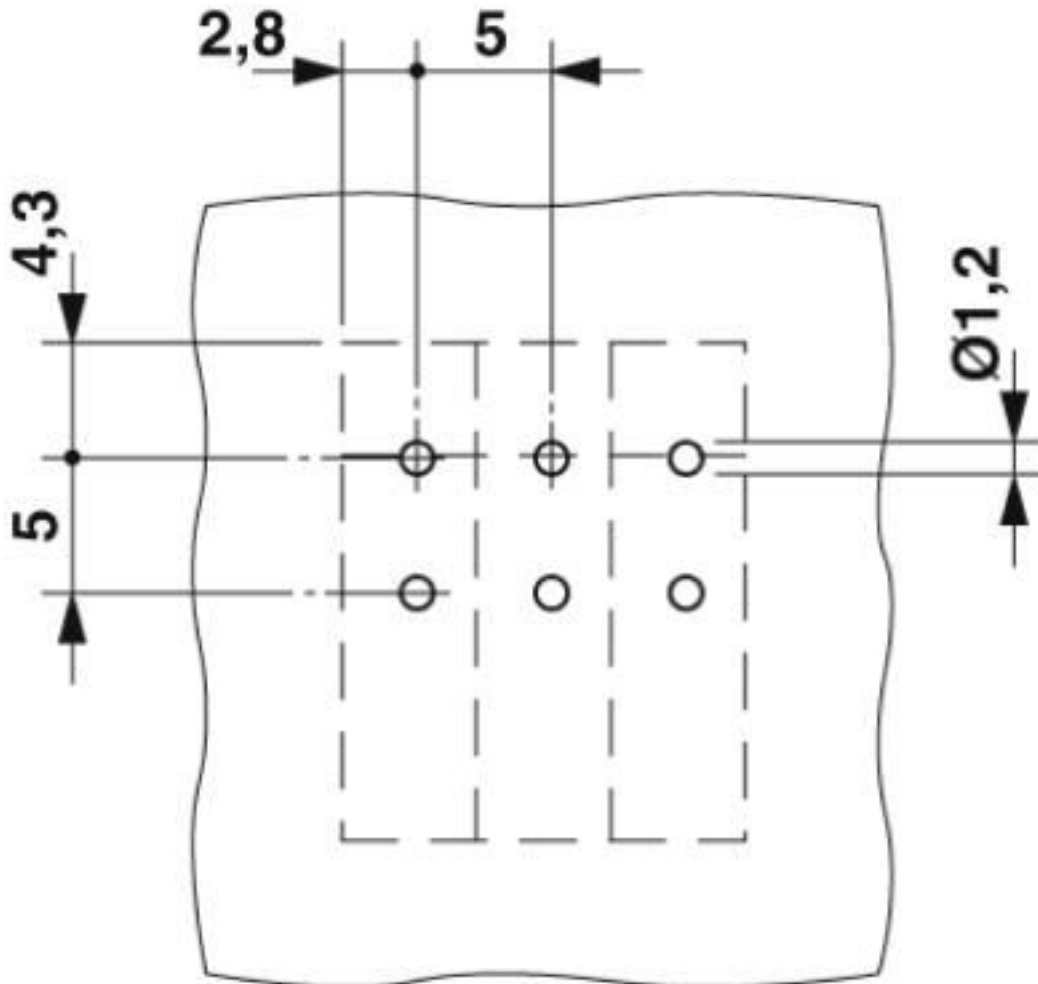
Environmental Product Compliance

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

Drawings

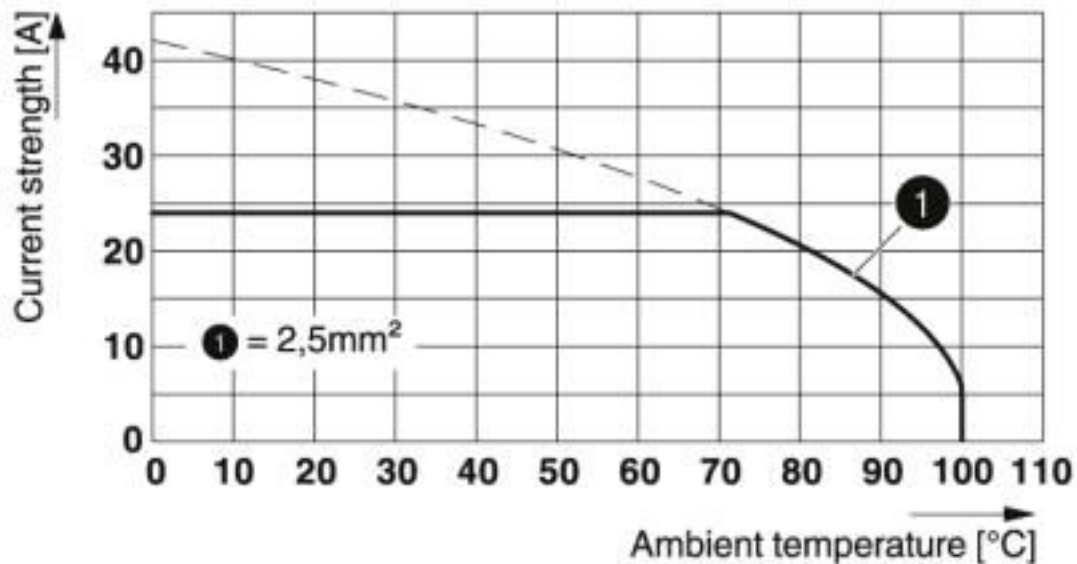
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Drilling diagram



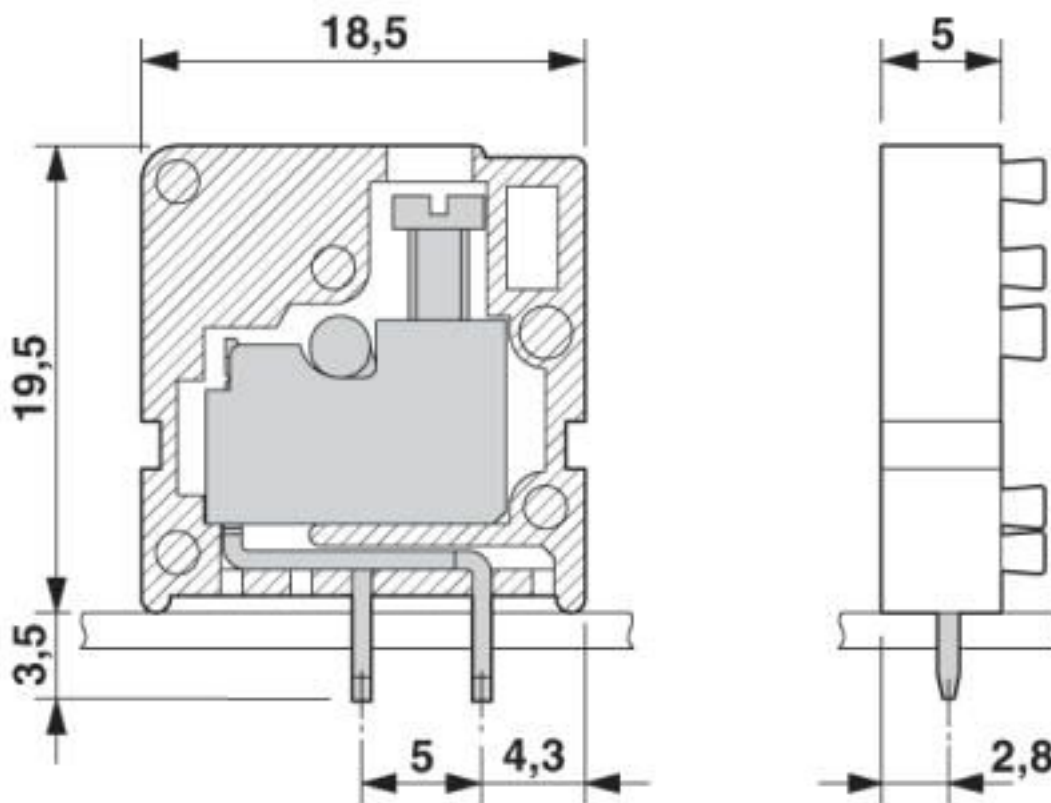
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Diagram



Type: FRONT 2,5-V/SA...
Tested according to DIN EN 60512-5-2:2003-01
Reduction factor = 1
Number of positions: 5

Dimensional drawing



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Classifications

eCl@ss

| | |
|---------------|----------|
| eCl@ss 10.0.1 | 27440401 |
| eCl@ss 4.0 | 27141100 |
| eCl@ss 4.1 | 27141100 |
| eCl@ss 5.0 | 27141100 |
| eCl@ss 5.1 | 27261100 |
| eCl@ss 6.0 | 27261100 |
| eCl@ss 7.0 | 27440401 |
| eCl@ss 8.0 | 27440401 |
| eCl@ss 9.0 | 27440401 |

ETIM

| | |
|----------|----------|
| ETIM 3.0 | EC001121 |
| ETIM 4.0 | EC002643 |
| ETIM 5.0 | EC002643 |
| ETIM 6.0 | EC002643 |
| ETIM 7.0 | EC002643 |

UNSPSC

| | |
|---------------|----------|
| UNSPSC 6.01 | 30211801 |
| UNSPSC 7.0901 | 39121432 |
| UNSPSC 11 | 39121432 |
| UNSPSC 12.01 | 39121432 |
| UNSPSC 13.2 | 39121432 |
| UNSPSC 18.0 | 39121432 |
| UNSPSC 19.0 | 39121432 |
| UNSPSC 20.0 | 39121432 |
| UNSPSC 21.0 | 39121432 |

Approvals

Approvals

Approvals

DNV GL / CSA / RS / EAC / cULus Recognized

Ex Approvals

Approval details

PCB terminal block - FRONT 2,5-V/SA 5 - 1700037

Approvals

| | | | |
|--------|--|---|------------|
| DNV GL | | https://approvalfinder.dnvgl.com/ | TAE00001EV |
|--------|--|---|------------|

| | | | |
|----------------------------|-------|---|-------|
| CSA | | http://www.csagroup.org/services-industries/product-listing/ | 13631 |
| | B | D | |
| Nominal voltage UN | 300 V | 300 V | |
| Nominal current IN | 10 A | 10 A | |
| mm ² /AWG/kcmil | 24-12 | 24-12 | |

| | | | |
|----|--|---|--------------|
| RS | | http://www.rs-head.spb.ru/en/index.php | 17.00014.272 |
|----|--|---|--------------|

| | | | |
|-----|--|--|---------|
| EAC | | | B.01687 |
|-----|--|--|---------|

| | | | |
|----------------------------|-------|---|-----------------|
| cULus Recognized | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | E60425-19860303 |
| | B | D | |
| Nominal voltage UN | 300 V | 300 V | |
| Nominal current IN | 10 A | 10 A | |
| mm ² /AWG/kcmil | 30-12 | 30-12 | |

Accessories

Accessories

End cover

End cover - D-FRONT 2,5-V-O.Z. - 1700011



End cover, necessary at the end of a terminal row, 2.5 mm thick, color: green

Labeled terminal marker

PCB terminal block - FRONT 2,5-V/SA 5 - 1700037

Accessories

Marker card - SK 5/3,8:FORTL.ZAHLEN - 0804183



Marker card, Card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... (99)100, mounting type: adhesive, for terminal block width: 5 mm, lettering field size: 5 x 3.8 mm

Marker pen

Marker pen - B-STIFT - 1051993



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

Pitch spacer

Pitch spacer - RZ 2,5-FRONT 2,5 V - 1700082



Pitch spacer, raises the pitch by 2.5 mm, interlocks with terminal block of the same shape, color: green

Screwdriver tools

Screwdriver - SZS 0,6X3,5 - 1205053



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

Terminal marking

Marker card - SK U/3,8 WH:UNBEDRUCKT - 0803906



Marker card, Sheet, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, Office printing systems, mounting type: adhesive, for terminal block width: 210 mm, lettering field size: 186 x 3.8 mm, Number of individual labels: 1440

PCB terminal block - FRONT 2,5-V/SA 5 - 1700037

Accessories

Marker card - SK 5/3,8:UNBEDRUCKT - 0805409



Marker card, Card, white, unlabeled, can be labeled with: Marker pen, mounting type: adhesive, for terminal block width: 5 mm, lettering field size: 5 x 3.8 mm

Marker strip - SK 3,8 WH:REEL - 0805218



Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: adhesive, for terminal block width: 90000 mm, lettering field size: continuous x 3.8#mm, Number of individual labels: 210000

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