

PCB terminal block - SPT-SMD 1,5/ 4-V-3,5 R44 - 1824103

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's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



PCB terminal block, nominal current: 13.5 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm², pitch: 3.5 mm, number of positions: 4, connection method: Push-in spring connection, mounting: SMD soldering, conductor/PCB connection direction: 90 °, color: black, Pin layout: Linear pad geometry. Sample values available under SAMPLE SPT...


The figure shows the 10-position version

Your advantages

- Time saving push-in connection, tools not required
- Defined contact force ensures that contact remains stable over the long term
- Intuitive use through colour coded actuation lever
- Designed for integration into the SMT soldering process
- Operation and conductor connection from one direction enable integration into front of device
- Quick and convenient testing using integrated test option
- Two soldering spots per position reduce the mechanical strain on the soldering spots



Key Commercial Data

| | |
|------------------------|---|
| Packing unit | 200 pc |
| Minimum order quantity | 200 pc |
| GTIN |  4 046356 816205 |
| GTIN | 4046356816205 |

Technical data

Item properties

| | |
|---------------------------|---------------------------|
| Brief article description | PCB terminal block |
| Range of articles | SPT 1,5/..-V-SMD |
| Pitch | 3.5 mm |
| Number of positions | 4 |
| Connection method | Push-in spring connection |
| Mounting type | SMD soldering |
| Pin layout | Linear pad geometry |

PCB terminal block - SPT-SMD 1,5/ 4-V-3,5 R44 - 1824103

Technical data

Item properties

| | |
|-----------------------|---|
| Number of levels | 1 |
| Number of connections | 4 |
| Number of potentials | 4 |

Electrical parameters

| | |
|-----------------------------|--------|
| Nominal current | 13.5 A |
| Nom. voltage | 160 V |
| Rated voltage | 160 V |
| Rated voltage (III/2) | 160 V |
| Rated voltage (II/2) | 320 V |
| Rated surge voltage (III/3) | 2.5 kV |
| Rated surge voltage (III/2) | 2.5 kV |
| Rated surge voltage (II/2) | 2.5 kV |

Connection capacity

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

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 for the product

| | |
|-----------------------------|---------|
| Length [l] | 7.7 mm |
| Width [w] | 14.5 mm |
| Height [h] | 13.6 mm |
| Pitch | 3.5 mm |
| Height (without solder pin) | 13.6 mm |

PCB terminal block - SPT-SMD 1,5/ 4-V-3,5 R44 - 1824103

Technical data

Dimensions for the product

| | |
|----------------|--------------|
| Pin spacing | 7 mm |
| Pin dimensions | 0.7 x 0.3 mm |

Dimensions for PCB design

| | |
|---------------|--------|
| Hole diameter | 1.1 mm |
| Pin spacing | 7 mm |

Packaging information

| | |
|-----------------------------|-----------------|
| Type of packaging | 44 mm wide tape |
| Pieces per package | 200 |
| Denomination packing units | Pcs. |
| [W] tape width | 44 mm |
| [A] coil diameter | 330 mm |
| [W2] coil overall dimension | 50.4 mm |
| Outer packaging type | Transparent-Bag |

General product information

| | |
|--------------|--|
| Type of note | Assembly instruction: |
| Note | This item is not suitable for PCB cleaning with liquids. |

Processing notes

| | |
|---|--|
| Process | Reflow soldering |
| Specification | Following IPC/JEDEC J-STD-020D.1:2008-03 |
| | Following IEC 60068-2-58:2005-02 |
| Moisture Sensitive Level | MSL 1 |
| Classification temperature T _c | 260 °C |
| Solder cycles in the reflow | 3 |

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

| | |
|--|-----------------------|
| Connection test | IEC 60998-2-2:2002-12 |
| Test result | Test passed |
| Test for conductor damage and slackening | IEC 60998-2-2:2002-12 |
| | Test passed |

Pull-out test

| | |
|--|---|
| Pull-out test | IEC 60998-2-2:2002-12 |
| | Test passed |
| Conductor cross section / conductor type / tensile force | 0.2 mm ² / solid / > 10 N |
| | 0.2 mm ² / flexible / > 10 N |

PCB terminal block - SPT-SMD 1,5/ 4-V-3,5 R44 - 1824103

Technical data

Pull-out test

| | |
|--|---|
| | 1.5 mm ² / solid / > 40 N |
| | 1.5 mm ² / flexible / > 40 N |

Mechanical tests according to standard

| | |
|--------------------|--------------------------|
| Test specification | IEC 60998-2-2 (in parts) |
|--------------------|--------------------------|

Electrical tests

| | |
|-----------------------------|---------------------|
| Rated current | 13.5 A |
| Conductor cross section | 1.5 mm ² |
| Rated voltage (III/2) | 160 V |
| Rated surge voltage (III/2) | 2.5 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) | 1.5 mm |
| Minimum clearance - inhomogeneous field (III/2) | 1.5 mm |
| Minimum clearance - inhomogeneous field (II/2) | 1.5 mm |
| Minimum creepage distance value (III/3) | 2.5 mm |
| Minimum creepage distance value (III/2) | 1.6 mm |
| Minimum creepage distance value (II/2) | 3.2 mm |

Temperature-rise test

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

Current carrying capacity / derating curves

| | |
|---------------------|---|
| Caption | Type: SPT-SMD 1,5/...-V-3,5(3,81) R.. Tested in accordance with DIN EN 60512-5-2:2003-01 Reduction factor = 1 Number of positions: 5 |
| Specification | Following IEC 60512-5-2:2002-02 |
| Number of positions | 5 |
| Reduction factor | 1 |

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 |

Resistance to ageing, humidity and penetration of solids

PCB terminal block - SPT-SMD 1,5/ 4-V-3,5 R44 - 1824103

Technical data

Resistance to ageing, humidity and penetration of solids

| | |
|------------|-----------------|
| Dry heat | 168 h/100°C |
| Humid heat | 48 h/30 °C/92 % |

Insulation resistance

| | |
|--|---------------------|
| Specification | IEC 60998-1:2002-12 |
| Result | Test passed |
| Insulation resistance, neighboring positions | 1 TΩ |

Glow-wire test

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

Mechanical strength/tumbling barrel test

| | |
|-----------------------|---------------------|
| Specification | IEC 60998-1:2002-12 |
| Height of fall | 50 cm |
| Number of drop cycles | 50 |
| Rotation speed | 5 rpm |

Standards and Regulations

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

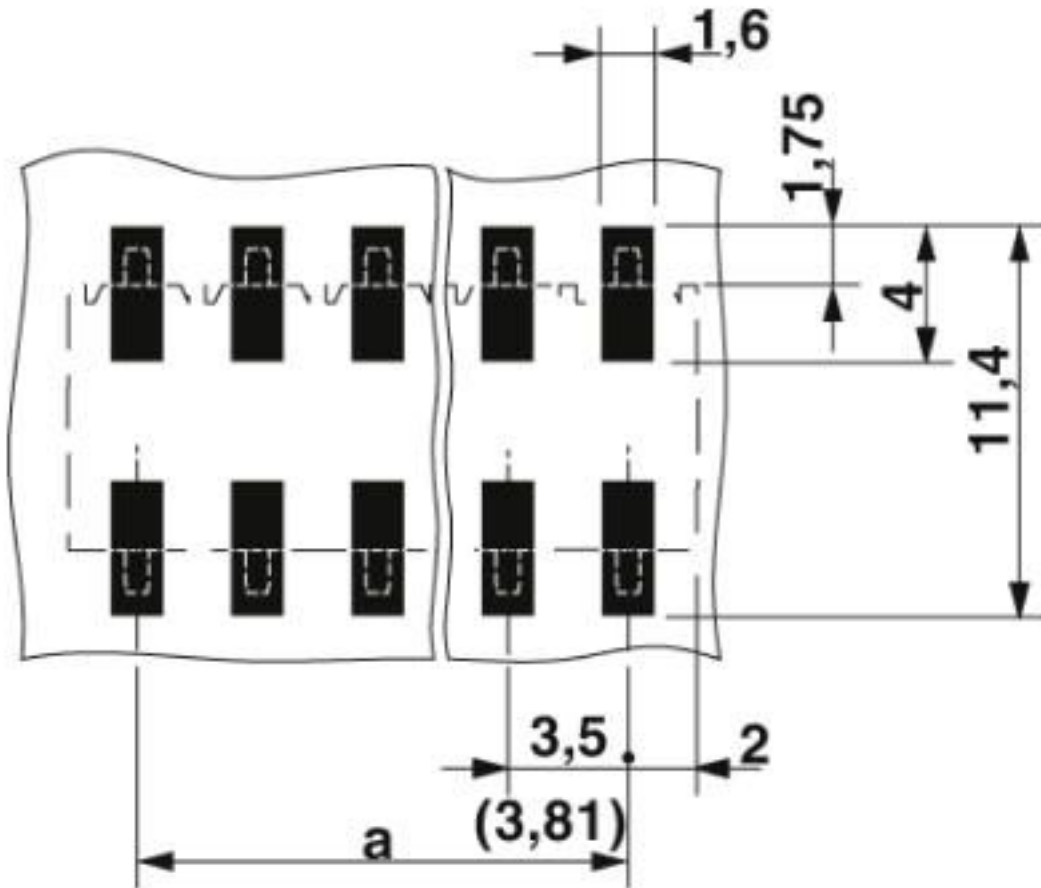
Environmental Product Compliance

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

Drawings

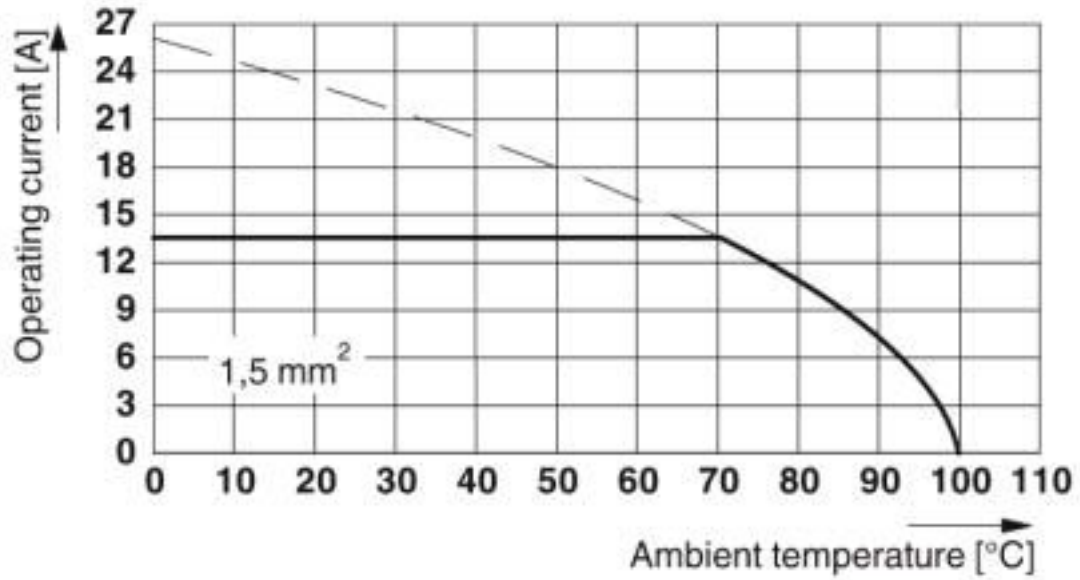
PCB terminal block - SPT-SMD 1,5/ 4-V-3,5 R44 - 1824103

Drilling diagram



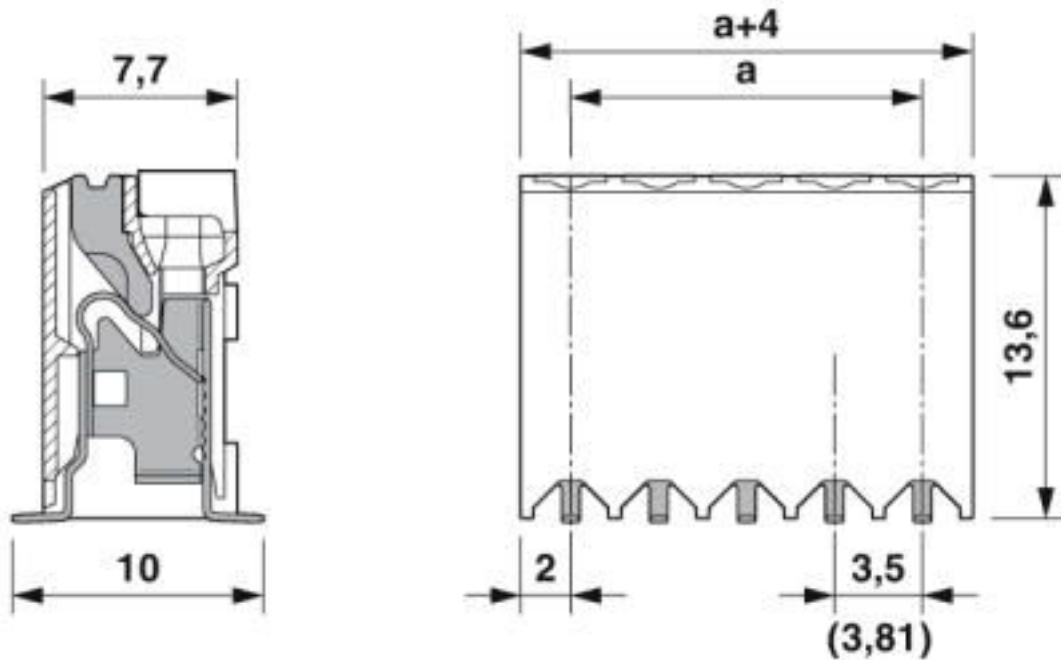
PCB terminal block - SPT-SMD 1,5/ 4-V-3,5 R44 - 1824103

Diagram



Type: SPT-SMD 1,5/...-V-3,5(3,81) R..
Tested in accordance with DIN EN 60512-5-2:2003-01
Reduction factor = 1
Number of positions: 5

Dimensional drawing



PCB terminal block - SPT-SMD 1,5/ 4-V-3,5 R44 - 1824103

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

IECEE CB Scheme / VDE Zeichengenehmigung / EAC / cULus Recognized

Ex Approvals

Approval details

PCB terminal block - SPT-SMD 1,5/ 4-V-3,5 R44 - 1824103

Approvals

| | | | |
|----------------------------|--|---|-----------|
| IECEE CB Scheme | | http://www.iecee.org/ | DE1-60621 |
| Nominal voltage UN | | 160 V | |
| Nominal current IN | | 13.5 A | |
| mm ² /AWG/kcmil | | 0.2-1.5 | |

| | | | |
|----------------------------|--|---|----------|
| VDE Zeichengenehmigung | | http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx | 40046113 |
| Nominal voltage UN | | 160 V | |
| Nominal current IN | | 13.5 A | |
| mm ² /AWG/kcmil | | 0.2-1.5 | |

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

| | | | |
|----------------------------|-------|---|-----------------|
| cULus Recognized | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | E60425-20061129 |
| | B | D | |
| Nominal voltage UN | 300 V | 300 V | |
| Nominal current IN | 10 A | 10 A | |
| mm ² /AWG/kcmil | 24-16 | 24-16 | |

Accessories

Accessories

Cable end sleeve

Ferrule - A 0,5 - 8 - 3202481



Ferrule, length: 8 mm, color: silver

PCB terminal block - SPT-SMD 1,5/ 4-V-3,5 R44 - 1824103

Accessories

Ferrule - A 0,75- 8 - 3202504



Ferrule, length: 8 mm, color: silver

Ferrule - A 1 - 8 - 3202517



Ferrule, length: 8 mm, color: silver

Ferrule - AI 0,25- 8 YE - 3203037



Ferrule, sleeve length: 8 mm, length: 12.5 mm, color: yellow

Ferrule - AI 0,5 - 8 WH - 3200014



Ferrule, sleeve length: 8 mm, length: 14 mm, color: white

Ferrule - AI 0,5 - 8 WH -1000 - 3200881



Ferrule, sleeve length: 8 mm, length: 14 mm, color: white

PCB terminal block - SPT-SMD 1,5/ 4-V-3,5 R44 - 1824103

Accessories

Ferrule - AI 0,75- 8 GY - 3200519



Ferrule, sleeve length: 8 mm, length: 14 mm, color: gray

Ferrule - AI 0,75- 8 GY -1000 - 3200894



Ferrule, sleeve length: 8 mm, length: 14 mm, color: gray

Crimping tool

Crimping pliers - CRIMPFOX 6 - 1212034



Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 0.25 mm² ... 6.0 mm², lateral entry, trapezoidal crimp

Printed circuit board terminal

Sample set - SAMPLE SPT-SMD 1,5/ 4-V-3,5 - 1843430



PCB terminal block, nominal current: 13.5 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm², pitch: 3.5 mm, number of positions: 4, connection method: Push-in spring connection, mounting: SMD soldering, conductor/PCB connection direction: 90 °, color: black, Pin layout: Linear pad geometry. SAMPLE set with 5 items in belt section. When used as part of soldering process, please use items without SAMPLE marking

Screwdriver tools

Screwdriver - SZS 0,4X2,5 VDE - 1205037



Screwdriver, slot-headed, VDE insulated, size: 0.4 x 2.5 x 80 mm, 2-component grip, with non-slip grip

Phoenix Contact 2020 © - all rights reserved
<http://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG
Flachmarktstr. 8
32825 Blomberg
Germany
Tel. +49 5235 300
Fax +49 5235 3 41200
<http://www.phoenixcontact.com>

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Fixed Terminal Blocks](#) category:

Click to view products by [Phoenix Contact](#) manufacturer:

Other Similar products are found below :

[MBE-1512](#) [MBE-154](#) [MBE-156](#) [MBES-153](#) [MBES-156](#) [MH-2512](#) [MHE-132](#) [MHE-163](#) [MI-254 \(35\)](#) [MI-272](#) [880507](#) [MPT-275](#)
[15602-04-08-21](#) [BA311TU](#) [BA411SU](#) [MV-152](#) [MV-252-D](#) [MV-253/NCNOC](#) [MV-254-D](#) [MV-255](#) [MV-462](#) [MV-493](#) [MVE-252](#) [MVE-253](#)
[MVE-273](#) [MVEB-153](#) [1700096](#) [1705142](#) [1712417](#) [1713020](#) [1713088](#) [1745195](#) [1760594](#) [1776118-2](#) [1790852](#) [1-796689-8](#) [1-796692-6](#)
[1800001](#) [1800114](#) [1995279](#) [20020314-C121B01LF](#) [CB2-12](#) [KP03215000J0G](#) [KP04215000J0G](#) [S451](#) [282802-2](#) [29.007](#) [29.116](#) [30.103](#)
[30.106](#)