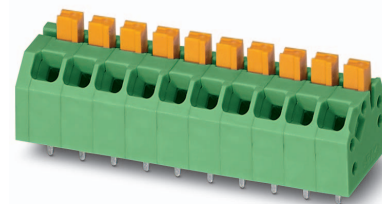


Data sheet

Order No.: 1071007

Type: SPTAF 1/10-3,5-EL-EX

PCB terminal block, Push-in spring connection



The figure shows 10-pos. standard item (without EX marking)

1 Main features



- | | | | |
|---------------------------|---------------------------|------------------------|------|
| • No. of pos. | 10 | • Nominal current | 16 A |
| • Conductor cross section | 1.5 mm ² | • Nominal voltage | 44 V |
| • Color | green (6021) | • Connection direction | 45 ° |
| • Pitch | 3.5 mm | • Type of packaging | Tray |
| • Connection method | Push-in spring connection | | |

2 Your advantages

- ✓ Time saving push-in connection, tools not required
- ✓ Defined contact force ensures that contact remains stable over the long term
- ✓ Finger-operated release button for very convenient operation
- ✓ Small component size for applications where space is at a premium
- ✓ Satisfies the more stringent safety requirements of “Ex eb” protection according to IEC 60079-7 for potentially explosive areas
- ✓ Quick and convenient testing using integrated test option



Make sure you always use the latest documentation.

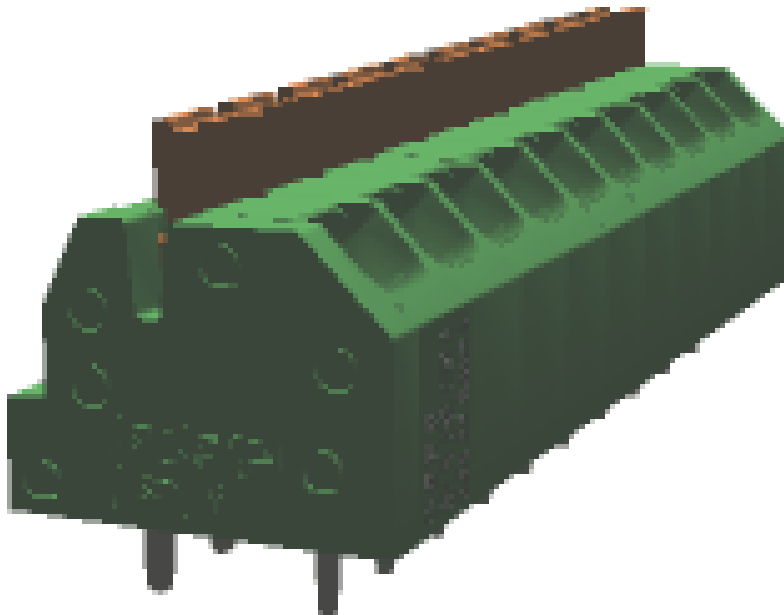
It can be downloaded at: phoenixcontact.net/product/1071007

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1071007 SPTAF 1/10-3,5-EL-EX

4 3D model in PDF can be activated (Acrobat Reader only)



1071007 SPTAF 1/10-3,5-EL-EX**5 General Technical Data****5.1 item properties**

| | |
|--|---------------------------|
| Order No. | 1071007 |
| Type | SPTAF 1/10-3,5-EL-EX |
| Product type | PCB terminal block |
| Range of articles | SPTAF 1/..-EL-EX |
| Pitch | 3.5 mm |
| Range of positions | 2...18 |
| Number of positions | 10 |
| Number of levels | 1 |
| Connection method | Push-in spring connection |
| Mounting type | Wave soldering |
| Connection direction of the conductor to the PCB | 45 ° |
| Pin layout | Linear pinning |
| Solder pins per potential | 2 |

5.2 Connection capacity

| | |
|---|---|
| Examination certificate | SEV 19 ATEX 0159 U |
| | 0344 ^(Ex) II 2G Ex eb IIC T6...T1 Gb |
| IECEX certificate | IECEX SEV 19.0026U |
| Conductor cross section, solid | 0.2 mm ² ... 1.5 mm ² (When connecting and possibly adjusting a solid conductor of 1.5 mm ² , the mechanical lateral forces, which can affect the terminal block, have to be absorbed by lateral support.) |
| Conductor cross section, flexible | 0.2 mm ² ... 1.5 mm ² |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.25 mm ² ... 0.75 mm ² |
| Conductor cross section flexible, with ferrule with plastic sleeve | 0.25 mm ² ... 0.75 mm ² |
| Stripping length | 8 mm |

5.3 Connection capacity AWG

| | |
|-----------------------------|-----------|
| Conductor cross section AWG | 24 ... 16 |
|-----------------------------|-----------|

6 Material properties**6.1 Material of metal parts**

| | |
|-------------------------|---|
| Note | WEEE/RoHS-compliant, whisker-free acc. to IEC 60068-2-82/JEDEC JESD 201 |
| Contact material | Cu alloy |
| Terminal point surface | Tin (2 - 4 μm Sn) |
| Soldering area surface | Tin (2 - 4 μm Sn) |
| Surface characteristics | hot-dip tin-plated |

6.2 Material of plastic parts

1071007 SPTAF 1/10-3,5-EL-EX

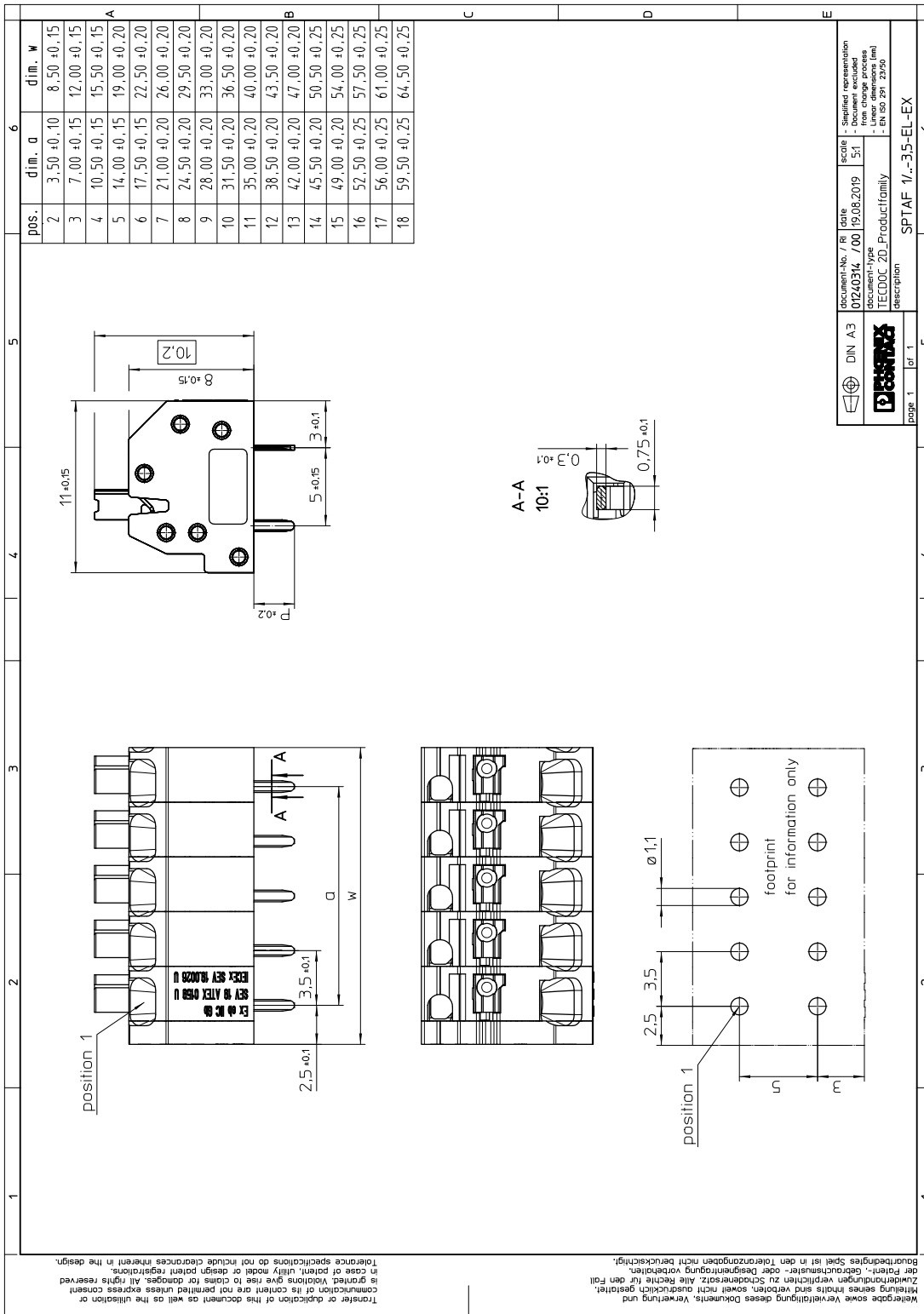
| | Housing | Actuation element |
|--|--------------|-------------------|
| Color | green (6021) | orange (2003) |
| Insulating material | PA | PBT |
| Insulating material group | I | |
| CTI according to IEC 60112 | 600 | 275 |
| Flammability rating according to UL 94 | V0 | V0 |

1071007 SPTAF 1/10-3,5-EL-EX**7 Dimensions****7.1 Dimensions for the product**

| | |
|-----------------------------|---------|
| Length | 11 mm |
| Width | 36.5 mm |
| Height (without solder pin) | 10.2 mm |
| Total height | 12.8 mm |
| Solder pin [P] | 2.6 mm |
| Dimension a | 31.5 mm |

1071007 SPTAF 1/10-3,5-EL-EX

8 Series drawing



| | | | | |
|--------------------------|-----------------------------|--------------------------|-----------------------------|--------------------------|
| document-No. / R / title | 01240314 / 700 / 19.08.2019 | scale | 1:1 | Supplied representation |
| document-type | TECDOC 2D_Productfamily | document-No. / R / title | 01240314 / 700 / 19.08.2019 | Scale |
| description | SPTAF 1/-3,5-EL-EX | document-type | TECDOC 2D_Productfamily | document-No. / R / title |
| description | SPTAF 1/-3,5-EL-EX | document-type | TECDOC 2D_Productfamily | document-No. / R / title |
| description | SPTAF 1/-3,5-EL-EX | document-type | TECDOC 2D_Productfamily | document-No. / R / title |

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1071007 SPTAF 1/10-3,5-EL-EX**8.1 Dimensions for PCB design**

| | |
|----------------|---------------|
| Hole diameter | 1.1 mm |
| Pin dimensions | 0.75 x 0.3 mm |

9 Application**9.1 General information**

| | |
|---------------------|---|
| Note on application | Maximum permissible outer diameter of the wire insulation ≤ 3 mm |
|---------------------|---|

10 Packaging information

| | |
|--------------------|------|
| Type of packaging | Tray |
| Pieces per package | 70 |

10.1 Temperature limit values

| | |
|---|-------------------|
| Ambient temperature (storage/transport) | -40 °C ... 70 °C |
| Ambient temperature (assembly) | -5 °C ... 100 °C |
| Ambient temperature (operation) | -40 °C ... 100 °C |

1071007 SPTAF 1/10-3,5-EL-EX**11 Mechanical tests****11.1 Pull-out test**

| | |
|--|--|
| Specification | IEC 60999-1:1999-11 |
| Result | Test passed |
| Conductor cross section/conductor type/tractive force actual value | 0.2 mm ² / solid / > 10 N |
| Conductor cross section/conductor type/tractive force actual value | 0.25 mm ² / flexible / > 10 N |
| Conductor cross section/conductor type/tractive force actual value | 1.5 mm ² / solid / > 40 N |
| Conductor cross section/conductor type/tractive force actual value | 1.5 mm ² / flexible / > 40 N |

11.2 Check for damage to conductor or loosening

| | |
|---------------|---------------------|
| Specification | IEC 60999-1:1999-11 |
| Result | Test passed |

1071007 SPTAF 1/10-3,5-EL-EX**12 Electrical tests****12.1 Electrical data**

| | |
|---|----------------------------|
| Rated current / conductor cross section | 16 A / 1.5 mm ² |
| Rated insulation voltage (III/2) | |
| Rated surge voltage (III/2) | |
| Contact resistance | |
| Degree of pollution | 2 |

12.2 Short-time withstand current test

| | |
|--|------------------------------|
| Specification | IEC 60947-7-4:2013-08 |
| Result | Test passed |
| Conductor cross section/short-time current | 1.5 mm ² / 50.4 A |

12.3 Aging test (climatic impact and corrosion testing)

| | |
|--|------------------------------|
| Specification | IEC 60947-7-4:2013-08 |
| Result | Test passed |
| Contact resistance R ₁ | 0.8 mΩ / 1.5 mm ² |
| Test sequence 1: low temperature storage | -40 °C / 2 h |
| Test sequence 2: heat storage | 168 h/100°C |
| Test sequence 3: noxious gas storage (ISO 6988) | KFW 0.2 S/1 cycle |
| Contact resistance R ₂ | 0.9 mΩ / 1.5 mm ² |
| Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 μs) | 2.95 kV |
| Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz) | 1.4 kV |

12.4 Mechanical connection test for the PCB terminal block

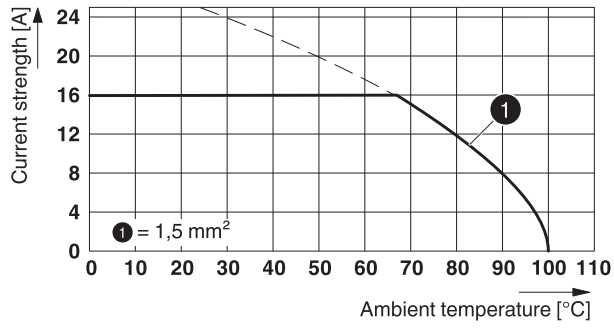
| | |
|---------------|-----------------------|
| Specification | IEC 60947-7-4:2013-08 |
| Result | Test passed |

12.5 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. |
| Conductor cross section/test current/temperature rise | 1.5 mm ² / 16 A / 33.5 K |

1071007 SPTAF 1/10-3,5-EL-EX**13 Current carrying capacity/derating curves**

Type: SPTAF 1/...-3,5-IL(EL)



1071007 SPTAF 1/10-3,5-EL-EX**14 Environmental and durability tests****14.1 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) |
| Test duration per axis | 2.5 h |
| Test directions | X-, Y- and Z-axis |
| Note | The connected conductor loops were guided to the test sample at a distance of approx. 10 cm. |

14.2 Assessment of fire risk (glow wire test)

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

14.3 Shock protection

| | |
|---|---|
| Specification | IEC 60529:1989-11 + AMD 1:1999-11 + AMD 2:2013-08 |
| Back of the hand protection (Ball ø 50) | guaranteed |
| Finger protection (movable test finger) | guaranteed |
| Note | |

15 Approvals

1071007 SPTAF 1/10-3,5-EL-EX**16 Commercial Data**

| | |
|--------------------|--|
| Order No. | 1071007 |
| Type | SPTAF 1/10-3,5-EL-EX |
| Pieces per package | 70 |
| Net weight | 5.074 g |
| GTIN | 4063151100742 |
| | Information that applies locally, see link on page 1 |
| Country of origin | Information that applies locally, see link on page 1 |

17 Accessories

| Description | Order No. | Type |
|--|-----------|---------------|
| Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.4 x 2.5 x 75 mm, 2-component grip, with non-slip grip | 1204504 | SZF 0-0,4X2,5 |