

Item No.: 1071010

Type: SPTAF 1/ 2-3,5-IL-EX

PCB terminal block, Push-in spring connection



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

1 Main features



• No. of pos.	2	• 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	• Mounting type	Wave soldering

2 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
- ✓ 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



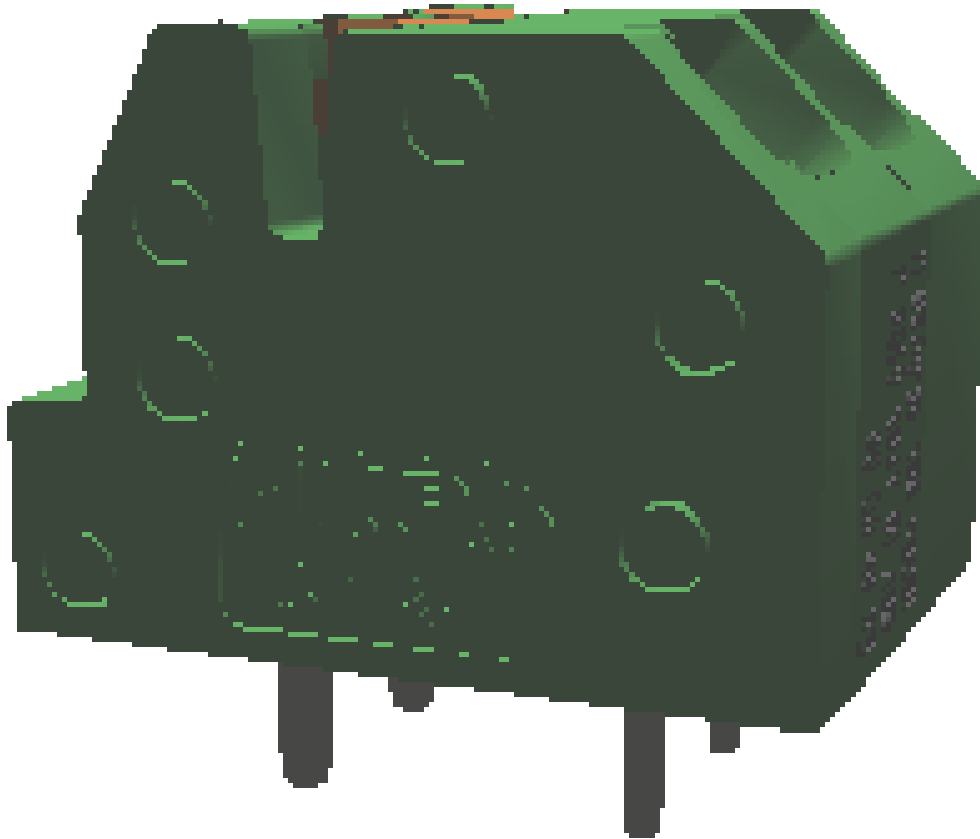
Make sure you always use the latest documentation.
It can be downloaded at: phoenixcontact.net/product/1071010

1071010 SPTAF 1/ 2-3,5-IL-EX**3 Table of contents**

1	Main features.....	1
2	Your advantages	1
3	Table of contents	2
4	3D model in PDF can be activated (Acrobat Reader only).....	3
5	General Technical Data	4
6	Conductor connection	5
7	Material properties.....	5
8	Dimensions.....	6
9	Series drawing.....	7
10	Product notes	8
11	Application.....	8
12	Packaging information	8
13	Mechanical tests.....	9
14	Electrical tests	10
15	Air and creepage distances	11
16	Current carrying capacity/derating curves	12
17	Environmental and durability tests	13
18	Approvals / Certificates.....	14
19	Commercial Data.....	15
20	Accessories.....	15

1071010 SPTAF 1/ 2-3,5-IL-EX

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



1071010 SPTAF 1/ 2-3,5-IL-EX**5 General Technical Data****5.1 item properties**

Item no.	1071010
Type	SPTAF 1/ 2-3,5-IL-EX
Product line	COMBICON Terminals S
Product type	PCB terminal block
Range of articles	SPTAF 1/..-IL-EX
Pitch	3.5 mm
Number of positions	2
Number of rows	1
Connection method	Push-in spring connection
Connection direction of the conductor to the PCB	45 °
Pin layout	Linear pinning
Solder pins per potential	2

1071010 SPTAF 1/ 2-3,5-IL-EX**6 Conductor connection****6.1 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, rigid	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

6.2 Connection capacity AWG

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

7 Material properties**7.1 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

7.2 Material of plastic parts

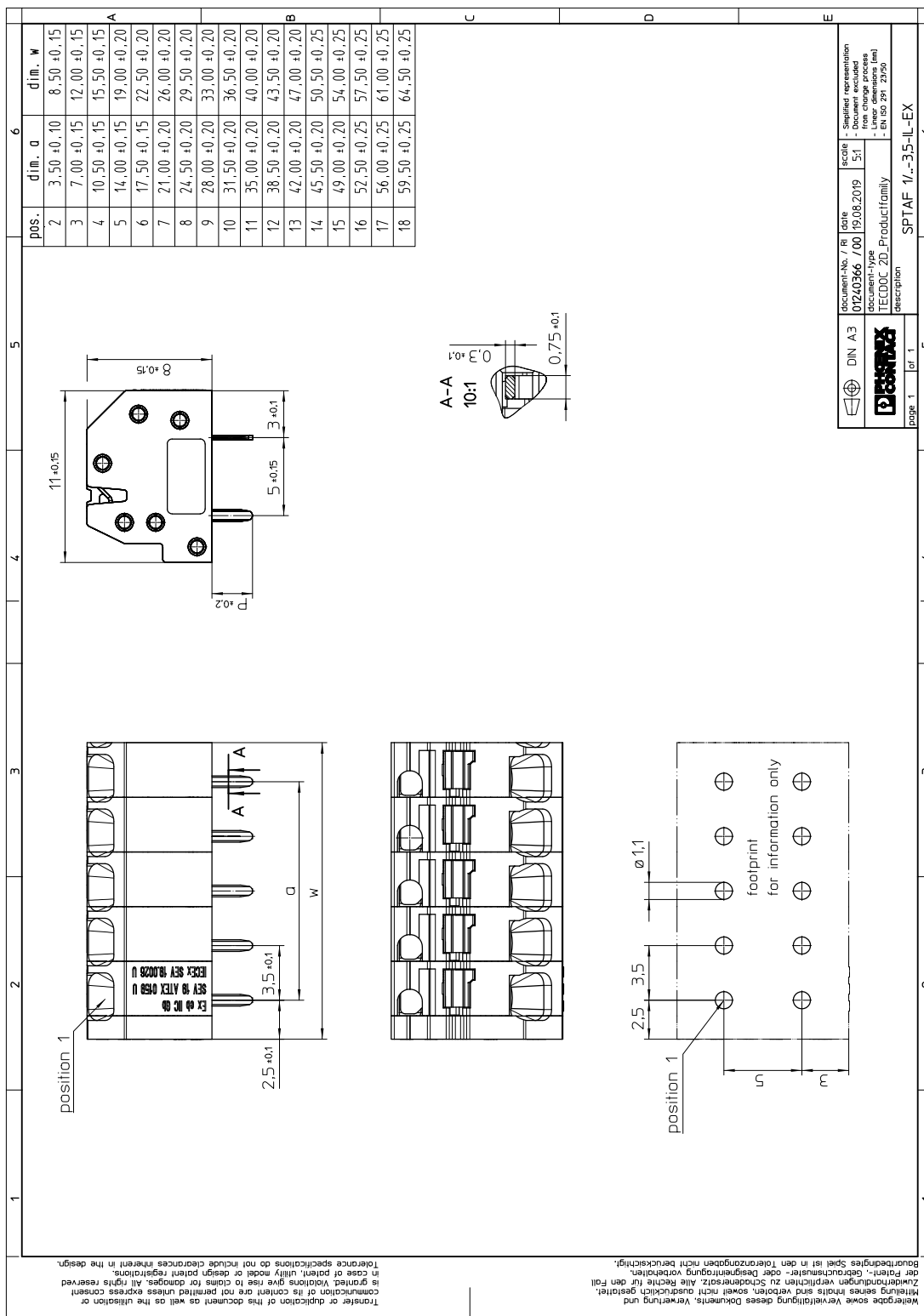
	Housing	Actuation element
Color	green (6021)	orange (2003)
Insulating material	PA	PBT
Insulating material group	I	IIIa
CTI according to IEC 60112	600	275
Flammability rating according to UL 94	V0	V0
Glow wire flammability index GWFI according to EN 60695-2-12	850	
Glow wire ignition temperature GWIT according to EN 60695-2-13	775	
Temperature for the ball pressure test according to EN 60695-10-2	125 °C	

1071010 SPTAF 1/ 2-3,5-IL-EX**8 Dimensions****8.1 Dimensions for the product**

Length	11 mm
Width	8.5 mm
Height (without solder pin)	8 mm
Total height	10.6 mm
Solder pin [P]	2.6 mm

1071010 SPTAF 1/ 2-3,5-IL-EX

9 Series drawing



DIN A3	document-No. / R / title	date	scale	Simplified representation
	01240366 / 700	19.08.2019	5:1	- according to
	document-type			- linear dimension
	TECDOC 2D_Productfamily			- Linear dimensions (mm)
	description			- EN ISO 291 2950
page 1	of 1			SPTAF 1/ 2-3,5-IL-EX

Wiedergabe sowie Vervielfältigung dieses Dokuments, Verwertung und Verbreitung, insbesondere auch auszugsweise, ist ohne schriftliche Genehmigung der Phoenix Contact AG. Die Phoenix Contact AG übernimmt keine Haftung für die Richtigkeit der Angaben. Nachdruck, Vervielfältigung und Verbreitung, auch auszugsweise, ist ohne schriftliche Genehmigung der Phoenix Contact AG. In case of partial utility, model or design patent registrations, is granted. Violations give rise to claims for damages. All rights reserved. Transfer or duplication of this document as well as the utilisation or communication of its content are not permitted unless express consent is granted. Violations give rise to claims for damages. All rights reserved. Tolerances specifications do not include clearances inherent in the design. Bauraufmaßes Spiel ist in den Toleranzangaben nicht berücksichtigt.

1071010 SPTAF 1/ 2-3,5-IL-EX**10 Product notes****10.1 General information**

Note on application	Maximum permissible outer diameter of the wire insulation ≤ 3 mm
Note on Ex protection	Certificate of conformity and EX certificate available upon request
Note on Ex protection	Further information is to be found in the installation notes.

10.2 Dimensions for PCB design

Hole diameter	1.1 mm
Pin dimensions	0.75 x 0.3 mm

11 Application**12 Packaging information**

Type of packaging	Tray
Pieces per package	210

12.1 Temperature limit values

Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (operation)	-60 °C ... 100 °C

1071010 SPTAF 1/ 2-3,5-IL-EX**13 Mechanical tests****13.1 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

13.2 Check for damage to conductor or loosening

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

1071010 SPTAF 1/ 2-3,5-IL-EX**14 Electrical tests**

Rated current / conductor cross section	16 A / 1.5 mm ²
Rated insulation voltage (III/2)	
Rated surge voltage (III/2)	
Contact resistance	0.8 mΩ
Degree of pollution	2

14.1 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

14.2 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

14.3 Insulation resistance

Specification	IEC 60512-3-1:2002-02
Result	Test passed
Insulation resistance, neighboring positions	> 5 MΩ

14.4 Mechanical connection test for the PCB terminal block

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

14.5 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

1071010 SPTAF 1/ 2-3,5-IL-EX**15 Air and creepage distances**

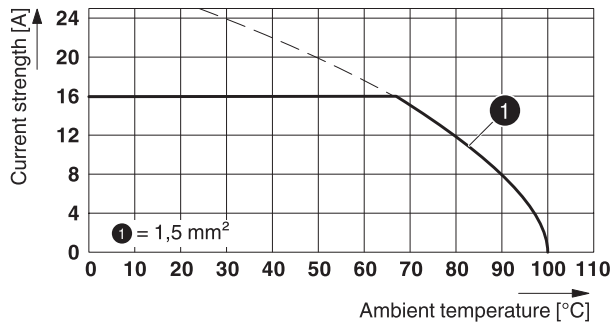
Component	PCB terminal block		
Specification			
Mains type	unearthed mains		
Insulating material group	I		
Comparative tracking index (IEC 60112)			
Rated insulation voltage			
Rated surge voltage			
Degree of pollution	3	2	2
Overvoltage category	III	III	II
Minimum clearance case A (inhomogeneous field)			
Minimum value of the creepage path requirement in acc. with table			

1071010 SPTAF 1/ 2-3,5-IL-EX

16 Current carrying capacity/derating curves

Specification	IEC 60947-7-4:2013-08
Note	Representation based on IEC 60512-5-2:2002-02
Reduction factor	1
Number of positions	4
Conductor cross section	1.5 mm ²

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



1071010 SPTAF 1/ 2-3,5-IL-EX**17 Environmental and durability tests****17.1 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	5g (60.1 - 150 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.

17.2 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

17.3 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	unenclosed basic insulation - protected against finger contact with IP20 test finger in acc. with IEC 60529 when connected, above the PCB

1071010 SPTAF 1/ 2-3,5-IL-EX

18 Approvals / Certificates

IECEX 

ATEX 

1071010 SPTAF 1/ 2-3,5-IL-EX**19 Commercial Data**

Item no.	1071010
Type	SPTAF 1/ 2-3,5-IL-EX
Pieces per package	210
Net weight	1.112 g
GTIN	4063151100773
	Information that applies locally, see link on page 1

20 Accessories

Description	Item 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