

1935417

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Printed circuit board terminal, nominal current: 17.5 A, rated voltage (III/2): 400 V, nominal cross section: 1.5 mm², number of potentials: 12, number of rows: 1, number of positions per row: 12, product range: PT 1,5/..-V, pitch: 5 mm, connection method: Screw connection with wire protector, mounting: Wave soldering, conductor/PCB connection direction: 90 °, color: green, Pin layout: Linear pinning, Solder pin [P]: 3.5 mm, number of solder pins per potential: 1, type of packaging: packed in cardboard

### Your advantages

- · Well-known connection principle allows worldwide use
- · Low temperature rise, thanks to maximum contact force
- · High terminal block capacity thanks to rectangular terminal block space
- · Allows connection of two conductors
- The latching on the side enables various numbers of positions to be combined

#### Commercial data

Item number	1935417
Packing unit	50 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)
Sales key	AA12
Product key	AALFMD
GTIN	4017918923990
Weight per piece (including packing)	12.61 g
Weight per piece (excluding packing)	11.889 g
Customs tariff number	85369010
Country of origin	CN



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### Technical data

### Product properties

Product type	Printed circuit board terminal
Product family	PT 1,5/V
Product line	COMBICON Terminals S
Туре	PC termination block
Number of positions	12
Pitch	5 mm
Number of connections	12
Number of rows	1
Number of potentials	12
Pin layout	Linear pinning
Solder pins per potential	1

### Electrical properties

#### Properties

Nominal current I <sub>N</sub>	17.5 A
Nominal voltage U <sub>N</sub>	400 V
Rated voltage (III/3)	250 V
Rated surge voltage (III/3)	4 kV
Rated voltage (III/2)	400 V
Rated surge voltage (III/2)	4 kV
Rated voltage (II/2)	630 V
Rated surge voltage (II/2)	4 kV

### Connection data

### Connection technology

Nominal cross section 1.5 mm <sup>2</sup>	

Conductor connection	
Connection method	Screw connection with wire protector
Conductor cross-section rigid	0.2 mm² 2.5 mm²
Conductor cross-section flexible	0.2 mm² 2.5 mm²
Conductor cross-section AWG	26 14
Conductor cross-section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> 1.5 mm <sup>2</sup>
Conductor cross-section, flexible, with ferrule, with plastic sleeve	0.25 mm² 1.5 mm²
2 conductors with same cross section, solid	0.2 mm² 0.75 mm²
2 conductors with same cross section, flexible	0.2 mm² 0.75 mm²
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	0.25 mm² 0.34 mm²



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2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm² 0.75 mm²
Stripping length	5 mm
Tightening torque	0.35 Nm 0.4 Nm

### Mounting

Mounting type	Wave soldering
Pin layout	Linear pinning

### 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	Tin-plated
Metal surface terminal point (top layer)	Tin (3 - 12 μm Sn)
Metal surface terminal point (middle layer)	Nickel (1.5 - 4 μm Ni)
Metal surface soldering area (top layer)	Tin (3 - 12 μm Sn)
Metal surface soldering area (middle layer)	Nickel (1.5 - 4 μm Ni)

#### Material data - housing

Color (Housing)	green (6021)
Insulating material	PA
Insulating material group	1
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

### Notes

Note on application	For safe conductor connection, always adhere to a defined tightening torque. Particularly in the case of PCB terminal blocks with two or three positions, the individual solder pin for each contact point cannot compensate for this. That is why the terminal blocks must be supported during conductor connection (held with one hand, support on the housing).

#### **Dimensions**

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Dimensional drawing	h p



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Pitch	5 mm
Width [w]	60 mm
Height [h]	12.5 mm
Length [I]	11.4 mm
Installed height	9 mm
Solder pin length [P]	3.5 mm
Pin dimensions	ø 1 mm
PCB design	
Pin spacing	5 mm
Hole diameter	1.3 mm

#### Mechanical tests

#### Test for conductor damage and slackening

Specification	IEC 60998-2-1:1990-04			
Result	Test passed			
Pull-out test				
Specification	IEC 60998-2-1:1990-04			
Conductor cross-section/conductor type/tractive force	0.2 mm² / solid / > 10 N			
setpoint/actual value	0.2 mm² / flexible / > 10 N			
	2.5 mm² / solid / > 50 N			
	2.5 mm² / flexible / > 50 N			
Torque test				
Specification	IEC 60998-2-1:1990-04			

#### Electrical tests

# Temperature-rise test Specification

Requirement temperature-rise test	Increase in temperature ≤ 45 K
Insulation resistance	
Specification	IFC 60998-2-1:1990-04

 $10^9\,\Omega$ 

IEC 60998-2-1:1990-04

#### Air clearances and creepage distances |

Insulation resistance, neighboring positions

All clearances and creepage distances		
Specification	IEC 60947-1:2007-06 + A1:2010-12 + A2:2014-09	
Insulating material group	1	
Comparative tracking index (IEC 60112)	CTI 600	
Rated insulation voltage (III/3)	250 V	
Rated surge voltage (III/3)	4 kV	
minimum clearance value - non-homogenous field (III/3)	3 mm	
minimum creepage distance (III/3)	3.2 mm	
Note on connection cross section	With connected conductor 2.5 mm² (solid).	



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Rated insulation voltage (III/2)	400 V
Rated surge voltage (III/2)	4 kV
minimum clearance value - non-homogenous field (III/2)	3 mm
minimum creepage distance (III/2)	3 mm
Rated insulation voltage (II/2)	630 V
Rated surge voltage (II/2)	4 kV
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)
Acceleration	5g (60.1 Hz 150 Hz)
Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis

#### Glow-wire test

Specification	IEC 60998-2-1:1990-04
Temperature	850 °C
Time of exposure	5 s

#### Ambient conditions

Ambient temperature (operation)	-40 °C 100 °C (Depending on the current carrying capacity/derating curve)
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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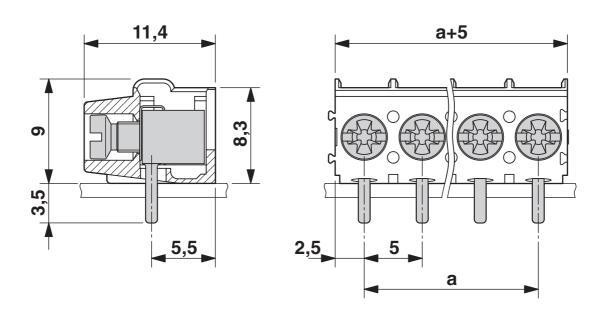


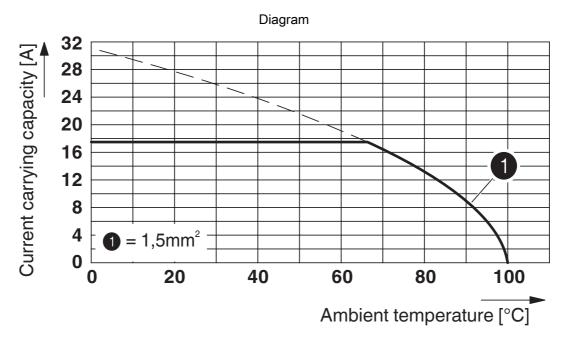
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### Drawings

#### Dimensional drawing





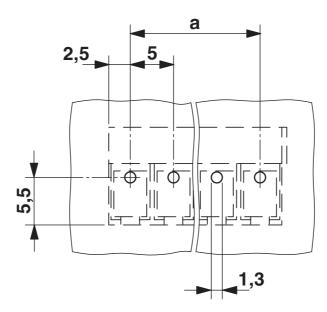
Type: PT 1,5/...-5,0-V



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### Drilling plan/solder pad geometry





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### **Approvals**

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1935417

CULus Recognized Approval ID: E60425-20030211				
	Nominal voltage $U_N$	Nominal current I <sub>N</sub>	Cross section AWG	Cross section mm <sup>2</sup>
В				
	300 V	18 A	26 - 12	-
D				
	300 V	10 A	26 - 12	-

<b>₹</b>	VDE report with production monitoring Approval ID: 40031691				
		Nominal voltage U <sub>N</sub>	Nominal current I <sub>N</sub>	Cross section AWG	Cross section mm <sup>2</sup>
keine					
		250 V	24 A	-	0.2 - 2.5

VDE appr Approval ID:	VDE approval of drawings Approval ID: 40055523			
	Nominal voltage U <sub>N</sub>	Nominal current I <sub>N</sub>	Cross section AWG	Cross section mm <sup>2</sup>
keine				
	400 V	17.5 A	-	0.2 - 1.5



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### Classifications

UNSPSC 21.0

#### **ECLASS**

	ECLASS-13.0	27460101
	ECLASS-15.0	27460101
ET	ПМ	
	ETIM 9.0	EC002643
UN	ISPSC	

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### Environmental product compliance

#### EU RoHS

20 10.10	
Fulfills EU RoHS substance requirements	Yes, No exemptions
China RoHS	
Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits
EU REACH SVHC	
REACH candidate substance (CAS No.)	No substance above 0.1 wt%
EF3.0 Climate Change	
CO2e kg	0.253 kg CO2e

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