

# PST 1,3/ 4-5,0 L18 - Pin strip

1990504

<https://www.phoenixcontact.com/us/products/1990504>

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The figure shows a 6-position version

Pin strip, nominal cross section: 1.5 mm<sup>2</sup>, color: black, nominal current: 12 A (depends on the plug used), rated voltage (III/2): 320 V, contact surface: Sn, contact connection type: Pin, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, product range: PST 1,3/..-V, pitch: 5 mm, mounting: THR soldering / wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm, plug-in system: COMBICON PST 1,3, locking: without, mounting method: without, type of packaging: packed in cardboard, The maximum current depends on the plug used. The lower of the two current values apply for plug and pin strip. The pin strip is made of highly temperature resistant plastic and is thus suitable for the reflow process.

## Your advantages

- Suitable for wave and reflow soldering processes
- Optimum pin geometry for all COMBICON pin strip connectors

## Commercial data

Item number	1990504
Packing unit	250 pc
Minimum order quantity	250 pc
Sales key	AA03
Product key	AACTFA
GTIN	4017918958015
Weight per piece (including packing)	0.924 g
Weight per piece (excluding packing)	0.899 g
Customs tariff number	85366930
Country of origin	DE

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## Technical data

### Product properties

Product type	Pin strip
Product family	PST 1,3/..-V
Product line	COMBICON Connectors M
Number of positions	4
Pitch	5 mm
Number of connections	4
Number of rows	1
Number of potentials	4
Mounting type	without
Pin layout	Linear pinning

### Electrical properties

#### Properties

Nominal current $I_N$	12 A (depends on the plug used)
Nominal voltage $U_N$	320 V
Contact resistance	1.6 m $\Omega$
Rated voltage (III/3)	250 V
Rated surge voltage (III/3)	4 kV
Rated voltage (III/2)	320 V
Rated surge voltage (III/2)	4 kV
Rated voltage (II/2)	400 V
Rated surge voltage (II/2)	4 kV

### Mounting

Mounting type	THR soldering / wave soldering
Pin layout	Linear pinning

#### Processing notes

Process	Reflow/wave soldering
Moisture Sensitive Level	MSL 1
Classification temperature $T_c$	260 °C
Solder cycles in the reflow	3

### 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 contact area (top layer)	Tin (3 $\mu$ m - 5 $\mu$ m Sn)

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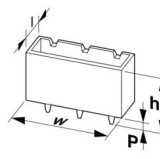
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Metal surface contact area (middle layer)	Nickel (1 $\mu\text{m}$ - 3 $\mu\text{m}$ Ni)
Metal surface soldering area (top layer)	Tin (3 $\mu\text{m}$ - 5 $\mu\text{m}$ Sn)
Metal surface soldering area (middle layer)	Nickel (1 $\mu\text{m}$ - 3 $\mu\text{m}$ Ni)

## Material data - housing

Color (Housing)	black (9005)
Insulating material	PA
Insulating material group	IIIa
CTI according to IEC 60112	250
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

## Dimensions

Dimensional drawing	
Pitch	5 mm
Width [w]	20 mm
Height [h]	18 mm
Length [l]	2.8 mm
Installed height	14.5 mm
Solder pin length [P]	3.5 mm
Pin dimensions	$\varnothing$ 1.3 mm

## PCB design

Hole diameter	1.3 mm
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## Mechanical tests

### Visual inspection

Specification	IEC 60512-1-1:2002-02
Result	Test passed

### Dimension check

Specification	IEC 60512-1-2:2002-02
Result	Test passed

### Insertion and withdrawal forces

Result	Test passed
No. of cycles	25

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Insertion strength per pos. approx.	5 N
Withdraw strength per pos. approx.	5 N

## Contact holder in insert

Specification	IEC 60512-15-1:2008-05
Contact holder in insert Requirements >20 N	Test passed

## Resistance of inscriptions

Specification	IEC 60068-2-70:1995-12
Result	Test passed

## Electrical tests

### Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	12

### Insulation resistance

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

### Temperature cycles

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

### Air clearances and creepage distances |

Specification	IEC 60664-1:2007-04
Insulating material group	IIIa
Comparative tracking index (IEC 60112)	CTI 250
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)	4 mm
Rated insulation voltage (III/2)	320 V
Rated surge voltage (III/2)	4 kV
minimum clearance value - non-homogenous field (III/2)	3 mm
minimum creepage distance (III/2)	3.2 mm
Rated insulation voltage (II/2)	400 V
Rated surge voltage (II/2)	4 kV
minimum clearance value - non-homogenous field (II/2)	3 mm
minimum creepage distance (II/2)	4 mm

## Environmental and real-life conditions

### Durability test

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	4.8 kV

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Contact resistance $R_1$	1.6 m $\Omega$
Contact resistance $R_2$	1.7 m $\Omega$
Insertion/withdrawal cycles	25
Insulation resistance, neighboring positions	> 5 M $\Omega$

## Climatic test

Specification	ISO 6988:1985-02
Corrosive stress	0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/1 cycle
Thermal stress	100 °C/168 h
Power-frequency withstand voltage	2.21 kV

## Vibration test

Specification	IEC 60068-2-6:2007-12
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

## Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (operation)	-40 °C ... 100 °C (dependent on the derating curve)

## Ambient conditions

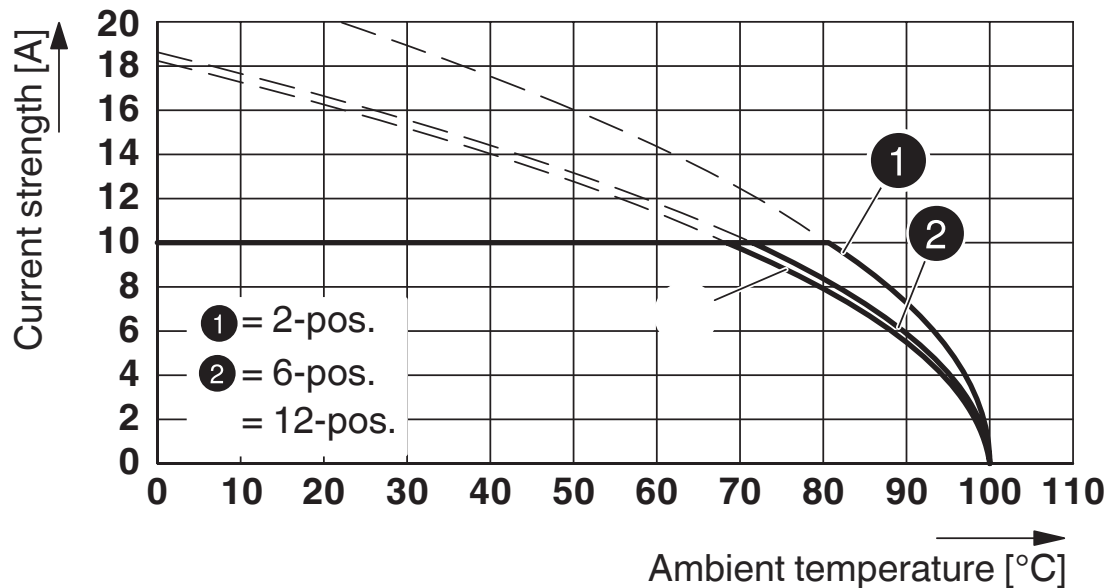
Ambient temperature (operation)	-40 °C ... 100 °C (dependent on the derating curve)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

## Packaging specifications

Type of packaging	packed in cardboard
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## Drawings

Diagram



Type: PTS 1,5/...-PH-5,0 CLIP with PST 1,3/...-5,0

Diagram



Type: PT 1,5/...-PVH-5,0 with PST 1,3/...-5,0



Type: PTS 1,5/...-PH-5,0 with PST 1,3/...-5,0



Derating curve for: PT 1,5/...-PH-5,0 with PST 1,3/...5,0

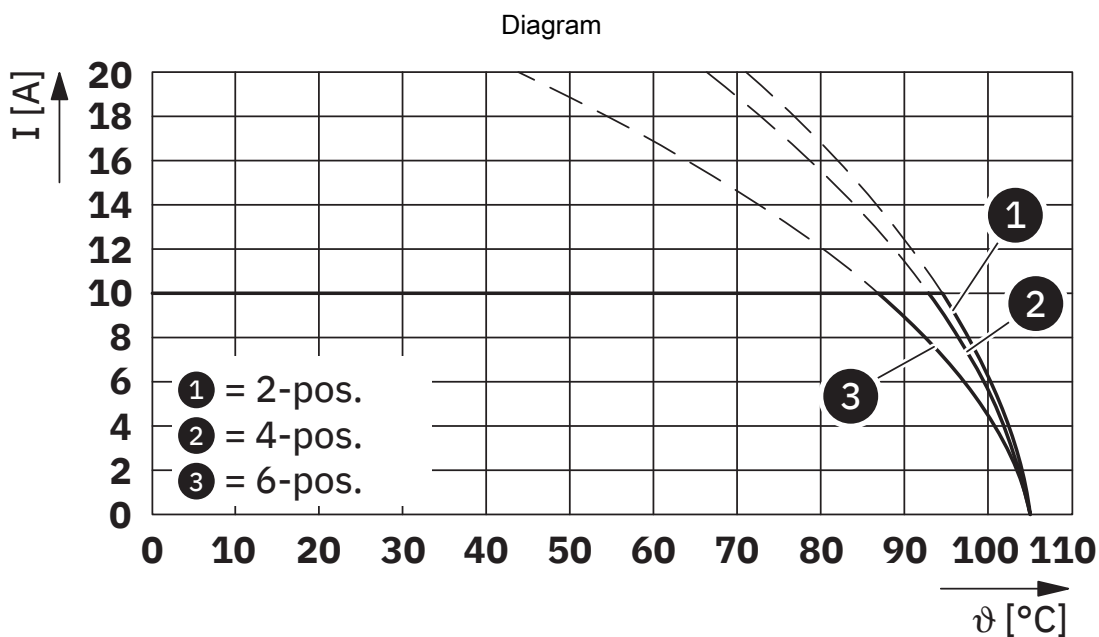
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Type: PTDA 2,5/...-PH-5,0 with PST 1,3/...-5,0

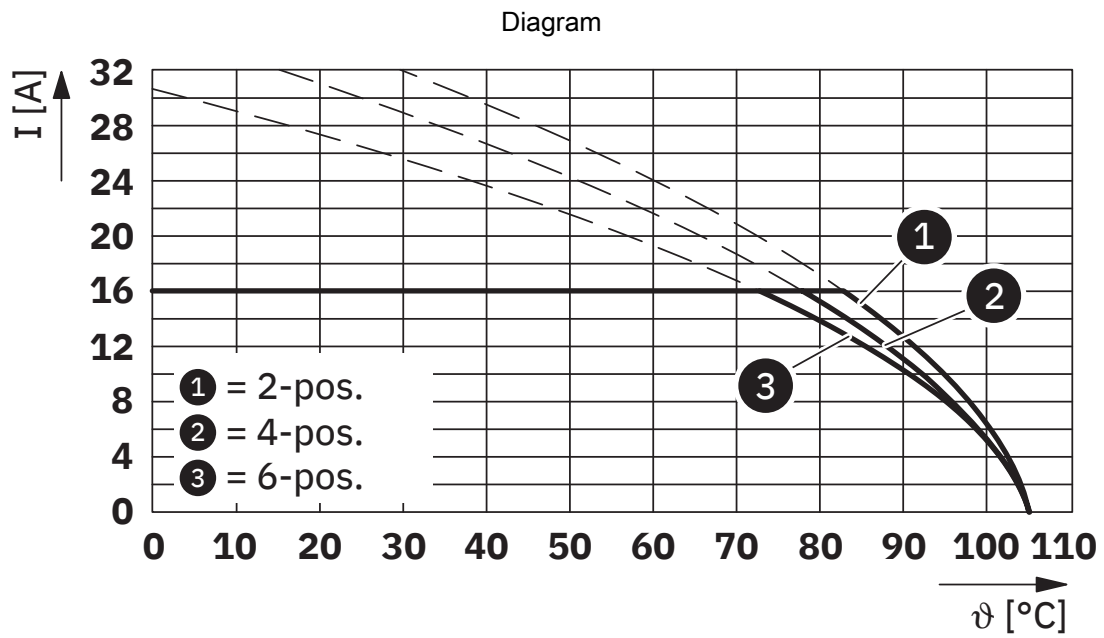


Type: PTS 1,5/...-PH-5,0 CLIP-B with PST 1,3/...-5,0

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Type: PTS 1,5/...-PH-5,0 CLIP-B connection point to connection point

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1990504>

 <b>cULus Recognized</b> Approval ID: E60425-20030211		Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
B		300 V	16 A	-	-
D		300 V	10 A	-	-

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## Classifications

### ECLASS

ECLASS-13.0	27460201
ECLASS-15.0	27460201

### ETIM

ETIM 10.0	EC002637
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### UNSPSC

UNSPSC 21.0	39121400
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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### 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%
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### EF3.1 Climate Change

CO2e kg	0.002 kg CO2e
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