

# PC 4/12-GU-6,35 P26 THR - PCB header



1247577

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PCB headers, nominal cross section: 4 mm<sup>2</sup>, color: black, nominal current: 24 A, rated voltage (III/2): 800 V, contact surface: Sn, contact connection type: Pin, number of rows: 1, number of positions: 12, product range: PC 4/..-GU-THR, pitch: 6.35 mm, mounting: THR soldering / wave soldering, pin layout: Zigzag pinning M, solder pin [P]: 2.6 mm, number of solder pins per potential: 1, plug-in system: COMBICON PC 4, Pin connector pattern alignment: reversed, locking: without, mounting method: without, type of packaging: packed in cardboard



## Your advantages

- Designed for integration into the SMT soldering process
- Increased touch protection in the pin connector pattern for maximum safety even when not plugged in
- Easy PCB replacement thanks to plug-in modules

## Commercial data

Item number	1247577
Packing unit	50 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)
Sales key	AA04
Product key	AADTBB
GTIN	4063151350413
Weight per piece (including packing)	20.088 g
Weight per piece (excluding packing)	35 g
Customs tariff number	85366930
Country of origin	CN

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## Technical data

### Product properties

Product type	PCB headers
Product family	PC 4/..-GU-THR
Product line	COMBICON Connectors L
Number of positions	12
Pitch	6.35 mm
Number of rows	1
Pin layout	Zigzag pinning M
Solder pins per potential	1

### Electrical properties

#### Properties

Nominal current $I_N$	24 A
Nominal voltage $U_N$	800 V
Contact resistance	0.81 mΩ
Rated voltage (III/3)	630 V
Rated surge voltage (III/3)	6 kV
Rated voltage (III/2)	800 V
Rated surge voltage (III/2)	6 kV
Rated voltage (II/2)	1000 V
Rated surge voltage (II/2)	6 kV

### Mounting

Mounting type	THR soldering / wave soldering
Pin layout	Zigzag pinning M

#### 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 μm - 5 μm Sn)
Metal surface contact area (middle layer)	Nickel (1.3 μm - 3 μm Ni)
Metal surface soldering area (top layer)	Tin (3 μm - 5 μm Sn)

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Metal surface soldering area (middle layer)	Nickel (1.3 $\mu\text{m}$ - 3 $\mu\text{m}$ Ni)
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## Material data - housing

Color (Housing)	black (9005)
Insulating material	LCP
Insulating material group	IIIa
CTI according to IEC 60112	175
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	200 °C

## Notes

Notes on operation	In accordance with IEC 61984, COMBICON connectors have no switching power (COC). During designated use, they must not be plugged in or disconnected when carrying voltage or under load.
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## Dimensions

Dimensional drawing	
Pitch	6.35 mm
Width [w]	79.15 mm
Height [h]	12.8 mm
Length [l]	25 mm
Installed height	10.2 mm
Solder pin length [P]	2.6 mm
Pin dimensions	1.2 x 1 mm

## PCB design

Hole diameter	1.7 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

### Resistance of inscriptions

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

## Polarization and coding

Specification	IEC 60512-13-5:2006-02
Result	Test passed

## Contact holder in insert

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

## Insertion and withdrawal forces

Specification	IEC 60512-13-2:2006-02
Result	Test passed
No. of cycles	25
Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	6 N

## 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

### Air clearances and creepage distances |

Specification	IEC 60664-1:2020-05
Insulating material group	IIIa
Comparative tracking index (IEC 60112)	CTI 175
Rated insulation voltage (III/3)	630 V
Rated surge voltage (III/3)	6 kV
minimum clearance value - non-homogenous field (III/3)	5.5 mm
minimum creepage distance (III/3)	10 mm
Rated insulation voltage (III/2)	800 V
Rated surge voltage (III/2)	6 kV
minimum clearance value - non-homogenous field (III/2)	5.5 mm
minimum creepage distance (III/2)	8 mm
Rated insulation voltage (II/2)	1000 V
Rated surge voltage (II/2)	6 kV
minimum clearance value - non-homogenous field (II/2)	5.5 mm
minimum creepage distance (II/2)	10 mm

## Environmental and real-life conditions

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## Durability test

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	9.8 kV
Contact resistance $R_1$	0.81 m $\Omega$
Contact resistance $R_2$	0.95 m $\Omega$
Insertion/withdrawal cycles	25
Insulation resistance, neighboring positions	> 5 M $\Omega$

## Climatic test

Specification	EN ISO 22479:2022-06
Corrosive stress	0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/1 cycle
Thermal stress	105 °C/168 h
Power-frequency withstand voltage	4.26 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	50 m/s <sup>2</sup> (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis

## Ambient conditions

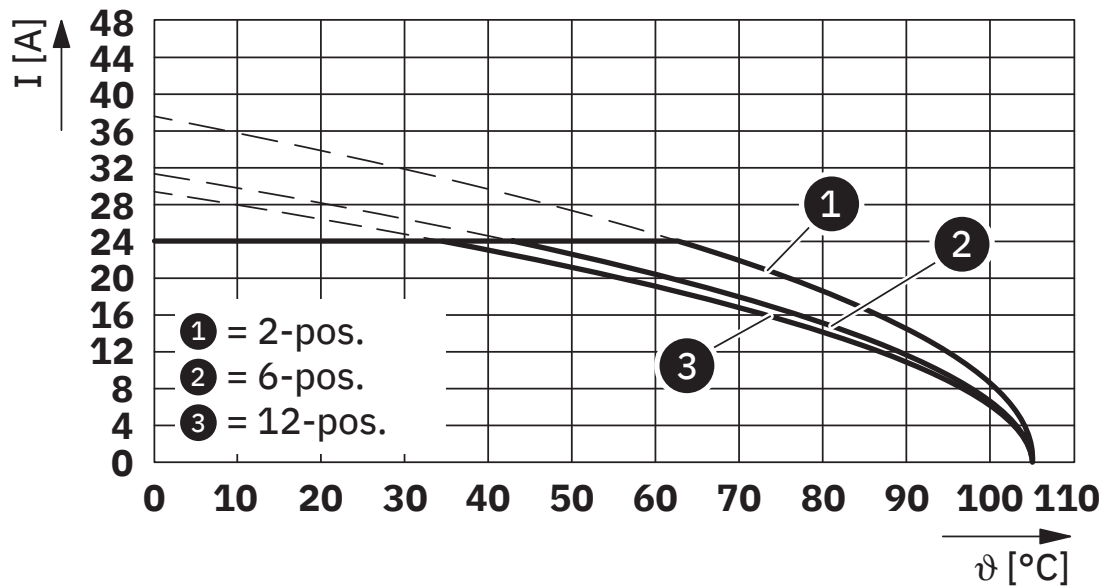
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (operation)	-40 °C ... 105 °C (dependent on the derating curve)

## Packaging specifications

Type of packaging	packed in cardboard
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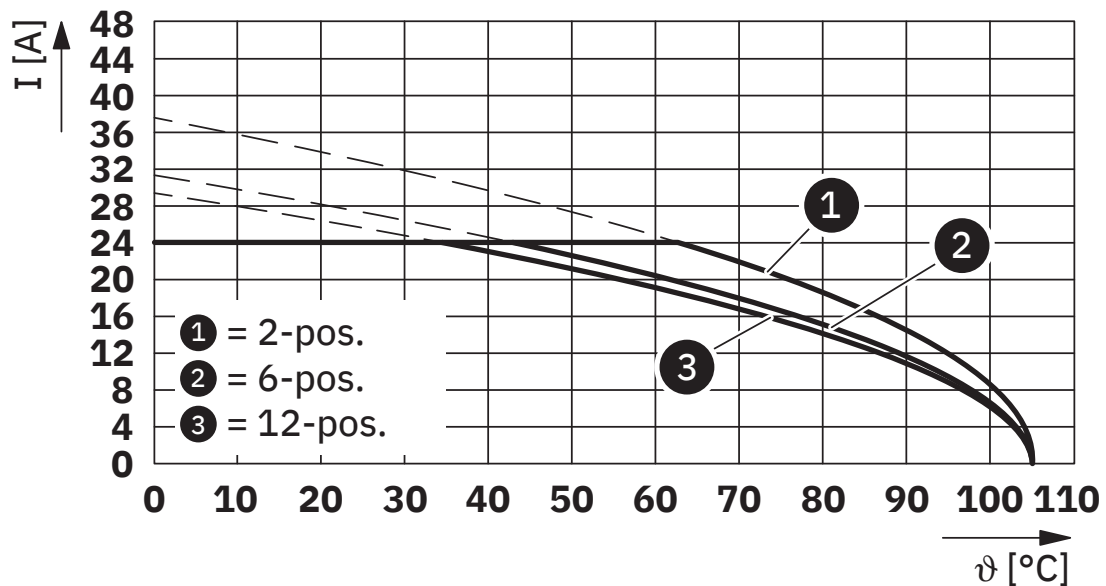
Drawings

Diagram



Type: SPC 4/...-ST-6,35 with PC 4/...-GU-6,35 P... THR

Diagram

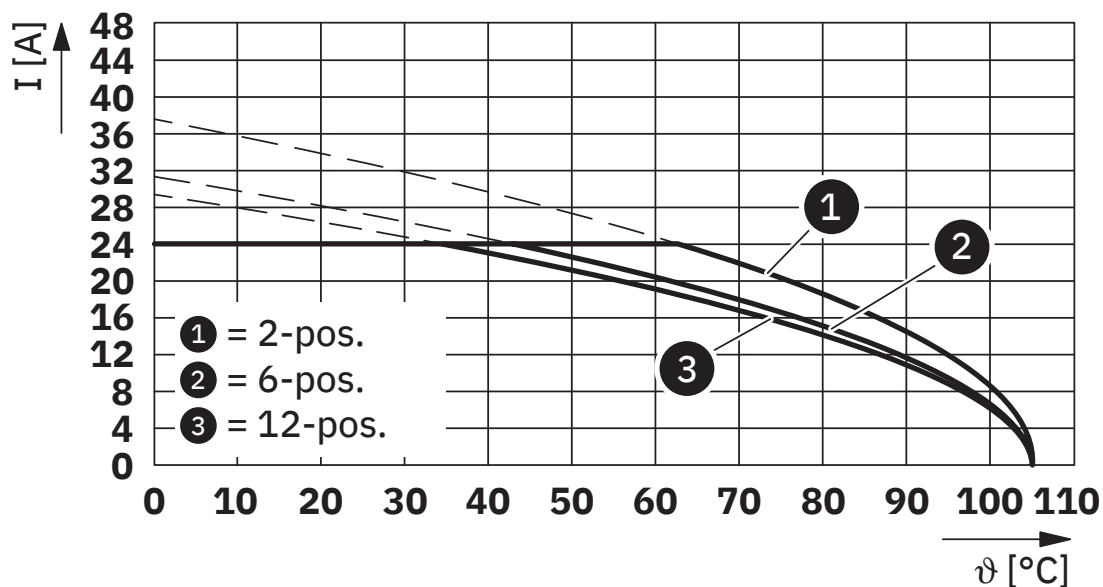


Type: SPC 4/...-STL...-6,35 with PC 4/...-GU-6,35 P... THR

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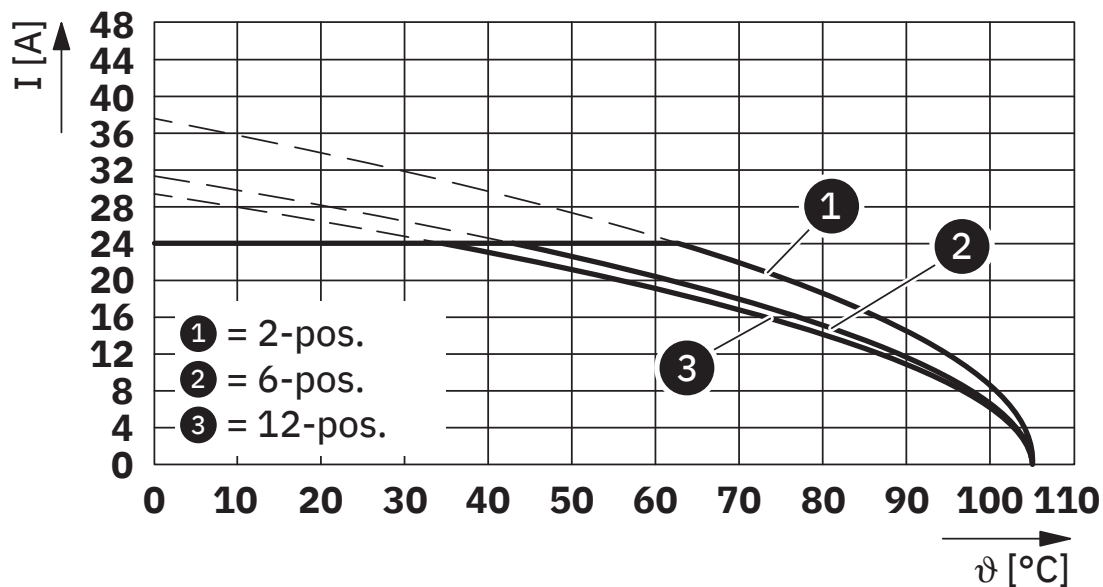
<https://www.phoenixcontact.com/us/products/1247577>

Diagram



Type: SPC 4/...-STTL-6,35 with PC 4/...-GU-6,35 P... THR

Diagram



Type: SPC 4/...-STL...-SH-6,35 with PC 4/...-GU-6,35 P... THR

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1247577>

 <b>UL Recognized</b> Approval ID: E60425-20240415				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
F	600 V	23 A	-	-

 <b>cULus Recognized</b> Approval ID: E60425-20240415				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
B	300 V	23 A	-	-
C	300 V	23 A	-	-
D	600 V	5 A	-	-

 <b>VDE Zeichengenehmigung</b> Approval ID: 40061144				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine	1000 V	24 A	-	-

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## Classifications

### ECLASS

ECLASS-13.0	27460201
ECLASS-15.0	27460201

### ETIM

ETIM 10.0	EC002637
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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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