

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



1247577

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

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PCB headers, nominal cross section: 4 mm², 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 - 5 μm Sn)
Metal surface contact area (middle layer)	Nickel (1.3 - 3 μm Ni)
Metal surface soldering area (top layer)	Tin (3 - 5 μm Sn)

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Metal surface soldering area (middle layer)	Nickel (1.3 - 3 µm Ni)
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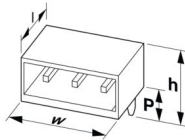
Material data - housing

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

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

Vibration test

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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 ² (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis

Durability test

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	9.8 kV
Contact resistance R ₁	0.81 mΩ
Contact resistance R ₂	0.95 mΩ
Insertion/withdrawal cycles	25
Insulation resistance, neighboring positions	> 5 MΩ

Climatic test

Specification	EN ISO 22479:2022-06
Corrosive stress	0.2 dm ³ SO ₂ on 300 dm ³ /40 °C/1 cycle
Thermal stress	105 °C/168 h
Power-frequency withstand voltage	4.26 kV

Ambient conditions

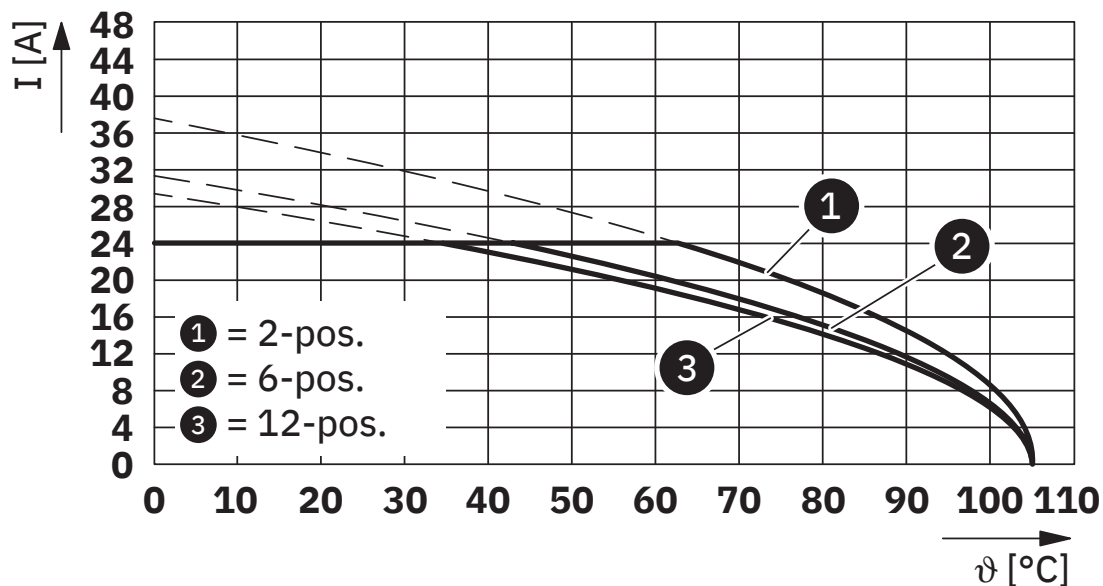
Ambient temperature (operation)	-40 °C ... 105 °C (dependent on the derating curve)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

Packaging specifications

Type of packaging	packed in cardboard
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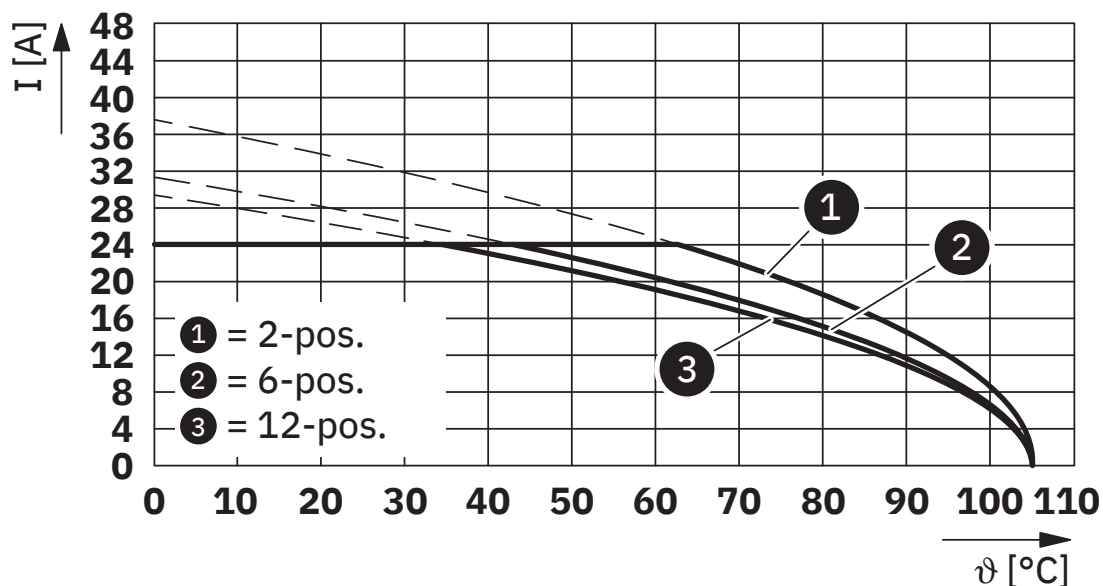
Drawings

Diagram

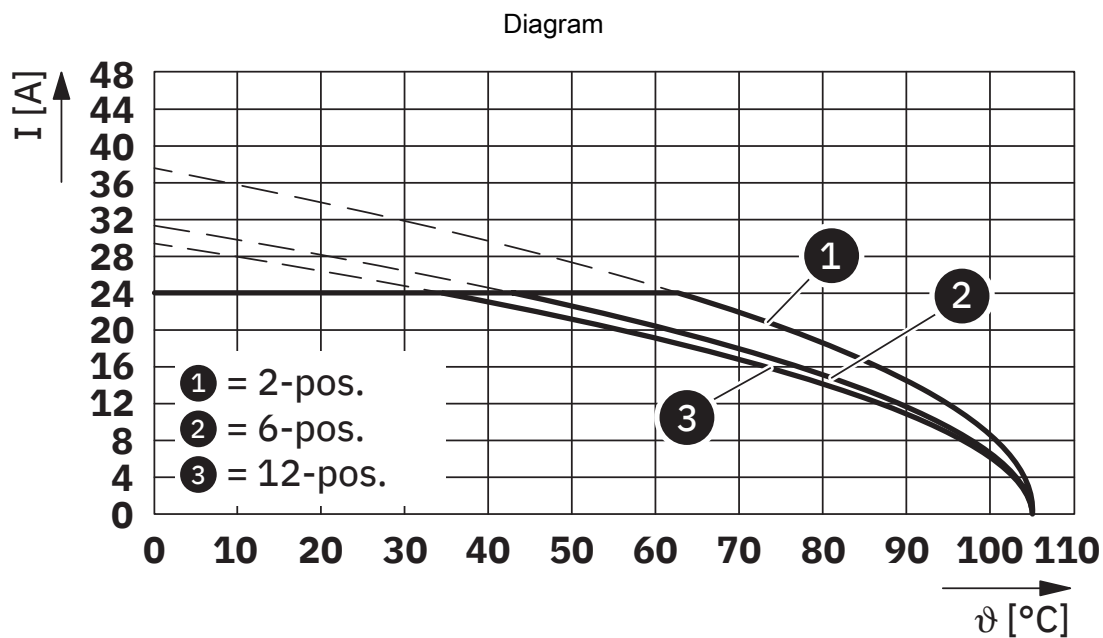


Type: SPC 4/...-ST-6,35 with PC 4/...-GU-6,35 P... THR

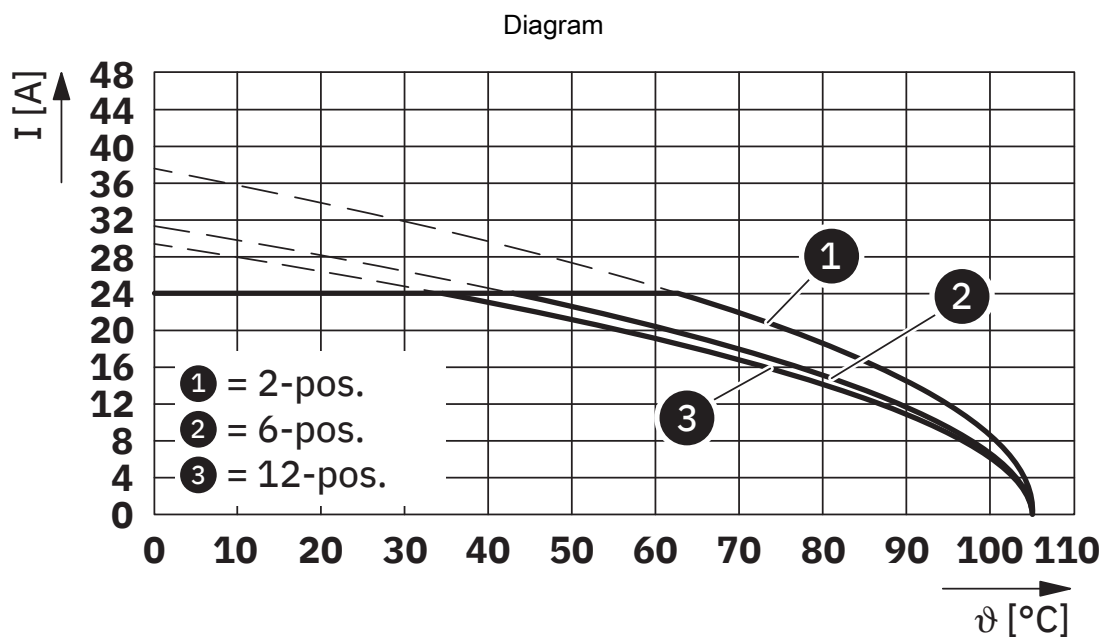
Diagram



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



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



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

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Approvals

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 UL Recognized Approval ID: E60425-20240415				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
F	600 V	23 A	-	-

 cULus Recognized Approval ID: E60425-20240415				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B	300 V	23 A	-	-
C	300 V	23 A	-	-
D	600 V	5 A	-	-

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Classifications

ECLASS

ECLASS-13.0	27460201
ECLASS-15.0	27460201

ETIM

ETIM 9.0	EC002637
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Environmental product compliance

EU RoHS	
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%

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