

# SPC 4/ 5-ST-6,35 - PCB connector



1232903

<https://www.phoenixcontact.com/us/products/1232903>

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PCB connector, nominal cross section: 4 mm<sup>2</sup>, color: black, nominal current: 24 A, rated voltage (III/2): 1000 V, contact surface: Tin, contact connection type: Socket, number of rows: 1, number of positions: 5, product range: SPC 4/..-ST, pitch: 6.35 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON PC 4, locking: without, mounting: without, type of packaging: packed in cardboard

## Your advantages

- Time saving push-in connection, tools not required
- Defined contact force ensures that contact remains stable over the long term
- Optimized for tight installation situations: operation and conductor connection from one direction
- 600 V UL approval in the smallest of dimensions

## Commercial data

Item number	1232903
Packing unit	50 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)
Sales key	AA04
Product key	AADFAA
GTIN	4063151334765
Weight per piece (including packing)	18 g
Weight per piece (excluding packing)	2.22 g
Customs tariff number	85366990
Country of origin	CN

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## Technical data

### Product properties

Product type	PCB connector
Product family	SPC 4/...-ST
Product line	COMBICON Connectors L
Number of positions	5
Pitch	6.35 mm
Number of rows	1

### Data management status

Article revision	00
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### Electrical properties

Nominal current $I_N$	24 A
Nominal voltage $U_N$	1000 V
Contact resistance	0.81 m $\Omega$
Rated voltage (III/3)	1000 V
Rated surge voltage (III/3)	8 kV
Rated voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
Rated voltage (II/2)	1000 V
Rated surge voltage (II/2)	6 kV

### Connection data

#### Connection technology

Connector system	COMBICON PC 4
Nominal cross section	4 mm <sup>2</sup>
Contact connection type	Socket

#### Interlock

Locking type	without
Mounting flange	without

#### Conductor connection

Connection method	Push-in spring connection
Conductor/PCB connection direction	0 °
Conductor cross section rigid	0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross section AWG	24 ... 10
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Cylindrical gauge a x b / diameter	3.6 mm x 3.1 mm / 3.0 mm
Stripping length	10 mm ... 12 mm

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## Specifications for ferrules without insulating collar

recommended crimping tool	1212034 CRIMPFOX 6
ferrules without insulating collar, according to DIN 46228-1	Cross section: 0.5 mm <sup>2</sup> ; Length: 10 mm
	Cross section: 0.75 mm <sup>2</sup> ; Length: 10 mm
	Cross section: 1 mm <sup>2</sup> ; Length: 10 mm
	Cross section: 1.5 mm <sup>2</sup> ; Length: 10 mm ... 12 mm
	Cross section: 2.5 mm <sup>2</sup> ; Length: 12 mm
	Cross section: 4 mm <sup>2</sup> ; Length: 12 mm

## Specifications for ferrules with insulating collar

recommended crimping tool	1212034 CRIMPFOX 6
ferrules with insulating collar, according to DIN 46228-4	Cross section: 0.25 mm <sup>2</sup> ; Length: 10 mm ... 12 mm
	Cross section: 0.34 mm <sup>2</sup> ; Length: 10 mm ... 12 mm
	Cross section: 0.5 mm <sup>2</sup> ; Length: 10 mm ... 12 mm
	Cross section: 0.75 mm <sup>2</sup> ; Length: 10 mm ... 12 mm
	Cross section: 1 mm <sup>2</sup> ; Length: 10 mm ... 12 mm
	Cross section: 1.5 mm <sup>2</sup> ; Length: 10 mm ... 12 mm
	Cross section: 2.5 mm <sup>2</sup> ; Length: 10 mm ... 12 mm
	Cross section: 4 mm <sup>2</sup> ; Length: 10 mm ... 12 mm

## 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	hot-dip tin-plated
Metal surface terminal point (top layer)	Tin (4 - 8 µm Sn)
Metal surface contact area (top layer)	Tin (4 - 8 µm Sn)

### Material data - housing

Color (Housing)	black (9005)
Insulating material	PA
Insulating material group	I
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	300 °C

### Material data – actuating element

Color (Actuating element)	orange (2003)
Insulating material	PA
Insulating material group	I

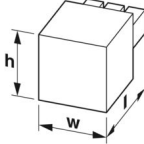
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CTI according to IEC 60112	600
Flammability rating according to UL 94	V0

## Dimensions

Dimensional drawing	
Pitch	6.35 mm
Width [w]	32.95 mm
Height [h]	16.6 mm
Length [l]	36.85 mm

## 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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## Mechanical tests

### Conductor connection

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

### Test for conductor damage and slackening

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

### Repeated connection and disconnection

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

### Pull-out test

Specification	IEC 60999-1:1999-11
Conductor cross section/conductor type/tractive force setpoint/actual value	0.2 mm <sup>2</sup> / solid / > 10 N
	0.2 mm <sup>2</sup> / flexible / > 10 N
	4 mm <sup>2</sup> / solid / > 60 N
	4 mm <sup>2</sup> / flexible / > 60 N

### Insertion and withdrawal forces

Specification	IEC 60512-13-2:2006-02
Result	Test passed
No. of cycles	25
Insertion strength per pos. approx.	5 N
Withdraw strength per pos. approx.	4 N

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## Resistance of inscriptions

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

## Polarization and coding

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

## Visual inspection

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

## Dimension check

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

## Environmental and real-life conditions

### 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

### Durability test

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

### Climatic test

Specification	ISO 22479:2019-05
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

### 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

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## 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 | 1. Insulation coordination

Specification	IEC 61984:2008-10
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	1000 V
Rated surge voltage (III/3)	8 kV
minimum clearance value - non-homogenous field (III/3)	8 mm
minimum creepage distance (III/3)	12.5 mm
Rated insulation voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
minimum clearance value - non-homogenous field (III/2)	8 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)	5.5 mm

### Air clearances and creepage distances | 2. Insulation coordination

Specification	IEC 60664-1:2020-05
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	1000 V AC/DC
Rated surge voltage (III/3)	8 kV
minimum clearance value - non-homogenous field (III/3)	8 mm
minimum creepage distance (III/3)	12.5 mm
Rated insulation voltage (III/2)	1250 V DC
Rated surge voltage (III/2)	8 kV
minimum clearance value - non-homogenous field (III/2)	8 mm
minimum creepage distance (III/2)	8 mm
Rated insulation voltage (II/2)	1500 V DC
Rated surge voltage (II/2)	8 kV

# SPC 4/ 5-ST-6,35 - PCB connector



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minimum clearance value - non-homogenous field (I/2)	8 mm
minimum creepage distance (I/2)	8 mm

## Packaging specifications

Type of packaging	packed in cardboard
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# SPC 4/ 5-ST-6,35 - PCB connector

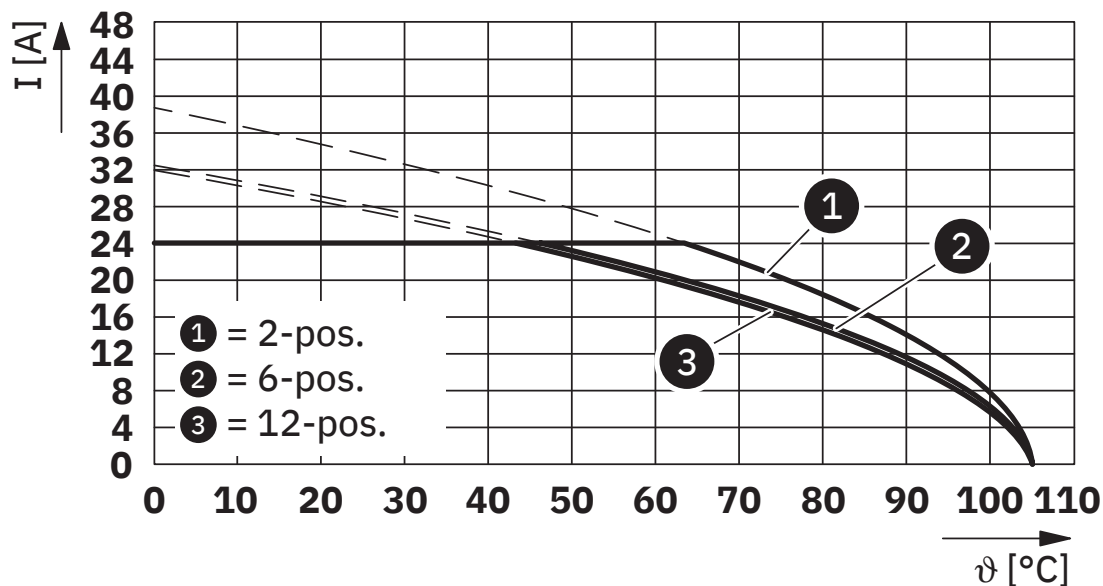


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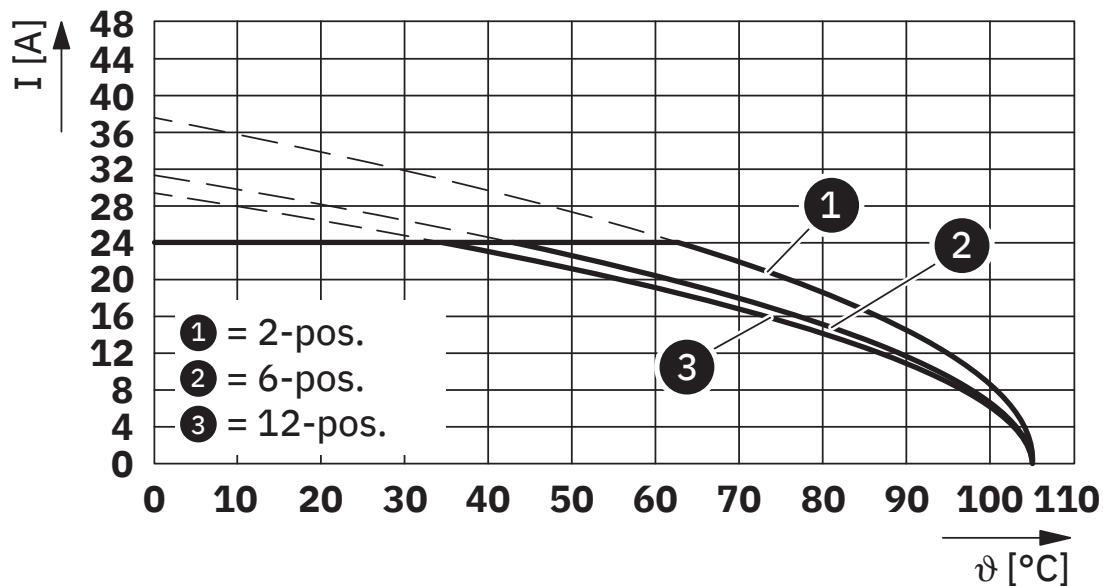
## Drawings

Diagram



Type: SPC 4/...-ST-6,35 with PCV 4/...-G-6,35 P... THR

Diagram



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

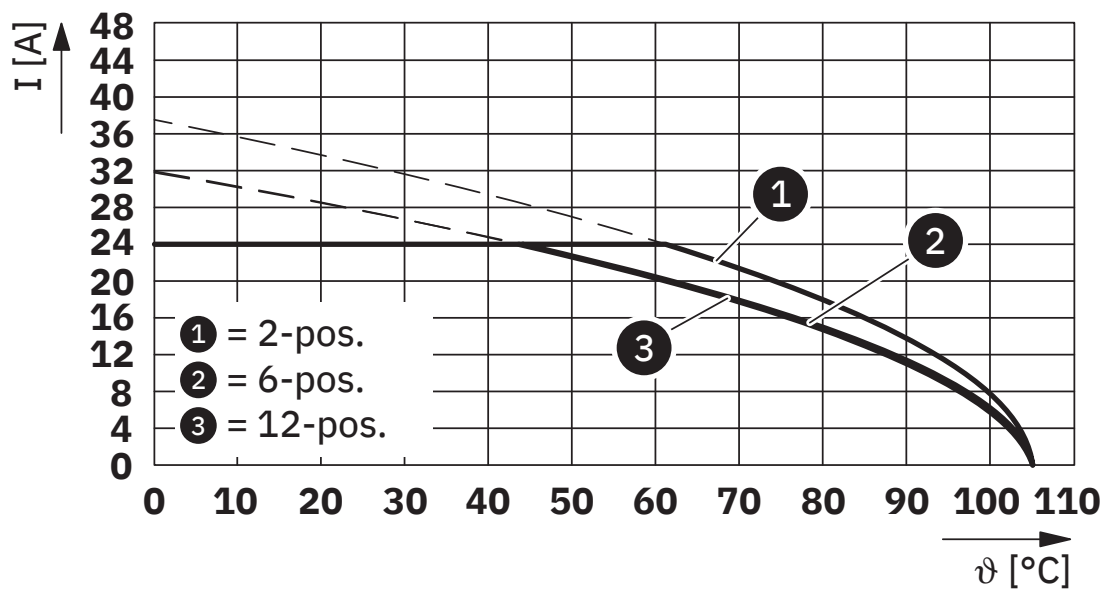
# SPC 4/ 5-ST-6,35 - PCB connector



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Diagram



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

# SPC 4/ 5-ST-6,35 - PCB connector





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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1232903>

 <b>UL Recognized</b> Approval ID: E60425-2024-07-11				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
Use group F	600 V	22 A	24 - 10	-

 <b>cULus Recognized</b> Approval ID: E60425-2024-07-11				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
Use group B	600 V	22 A	24 - 10	-
Use group C	600 V	22 A	24 - 10	-
Use group D	600 V	5 A	24 - 10	-

# SPC 4/ 5-ST-6,35 - PCB connector



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## Classifications

### ECLASS

ECLASS-11.0	27460202
ECLASS-12.0	27460202
ECLASS-13.0	27460202

### ETIM

ETIM 9.0	EC002638
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# SPC 4/ 5-ST-6,35 - PCB connector



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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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# SPC 4/ 5-ST-6,35 - PCB connector

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## Accessories

### CRIMPFOX CENTRUS 6S - Crimping pliers

1213144

<https://www.phoenixcontact.com/us/products/1213144>



Crimping pliers, for uninsulated and insulated ferrules, DIN 46228 Part 1 and 4, from 0.14 mm<sup>2</sup> ... 6 mm<sup>2</sup>, also for TWIN ferrules up to 2 x 4 mm<sup>2</sup>, automatic cross section adjustment, lateral insertion, equipped with fall protection

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### CRIMPFOX CENTRUS 6H - Crimping pliers

1213146

<https://www.phoenixcontact.com/us/products/1213146>



Crimping pliers, for uninsulated and insulated ferrules, DIN 46228 Part 1 and 4, from 0.14 mm<sup>2</sup> ... 6 mm<sup>2</sup>, also for TWIN ferrules up to 2 x 4 mm<sup>2</sup>, automatic cross section adjustment, lateral insertion, equipped with fall protection

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## CRIMPFOX 6 - Crimping pliers

1212034

<https://www.phoenixcontact.com/us/products/1212034>



Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 0.25 mm<sup>2</sup> ... 6.0 mm<sup>2</sup>, lateral entry, trapezoidal crimp

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## AI 4 -10 GY - Ferrule

3200535

<https://www.phoenixcontact.com/us/products/3200535>



Ferrule, sleeve length: 10 mm, color: gray

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## AI 4 -12 GY - Ferrule

3200959

<https://www.phoenixcontact.com/us/products/3200959>



Ferrule, sleeve length: 12 mm, color: gray

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## A 4 -12 - Ferrule

3200315

<https://www.phoenixcontact.com/us/products/3200315>



Ferrule, color: silver

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## SZS 0,6X3,5 - Screwdriver

1205053

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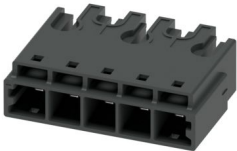


Actuation tool, for ST terminal blocks, insulated, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

## PC 4/ 5-G-6,35 P26 THR - PCB header

1234272

<https://www.phoenixcontact.com/us/products/1234272>



PCB headers, nominal cross section: 4 mm<sup>2</sup>, color: black, nominal current: 24 A, rated voltage (III/2): 800 V, contact surface: Tin, contact connection type: Pin, number of rows: 1, number of positions: 5, product range: PC 4/..-G-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: Standard, locking: without, mounting: without, type of packaging: packed in cardboard

# SPC 4/ 5-ST-6,35 - PCB connector

1232903

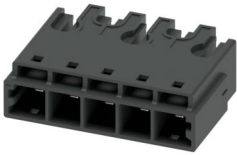
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## PC 4/ 5-G-6,35 P26 THR R72 - PCB header

1301946

<https://www.phoenixcontact.com/us/products/1301946>



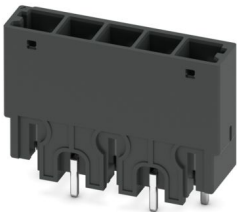
PCB headers, nominal cross section: 4 mm<sup>2</sup>, color: black, nominal current: 24 A, rated voltage (III/2): 800 V, contact surface: Tin, contact connection type: Pin, number of rows: 1, number of positions: 5, product range: PC 4/..-G-THR, pitch: 6.35 mm, mounting: THR soldering / wave soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm, number of solder pins per potential: 1, plug-in system: COMBICON PC 4, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: 72 mm wide tape

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## PCV 4/ 5-G-6,35 P26 THR - PCB header

1271660

<https://www.phoenixcontact.com/us/products/1271660>



PCB headers, nominal cross section: 4 mm<sup>2</sup>, color: black, nominal current: 24 A, rated voltage (III/2): 800 V, contact surface: Tin, contact connection type: Pin, number of rows: 1, number of positions: 5, product range: PCV 4/..-G-THR, pitch: 6.35 mm, mounting: THR soldering / wave soldering, pin layout: Zigzag pinning W, solder pin [P]: 2.6 mm, number of solder pins per potential: 1, plug-in system: COMBICON PC 4, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard

# SPC 4/ 5-ST-6,35 - PCB connector

1232903

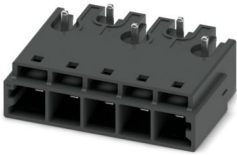
<https://www.phoenixcontact.com/us/products/1232903>



## PC 4/ 5-GU-6,35 P26 THR - PCB header

1247567

<https://www.phoenixcontact.com/us/products/1247567>

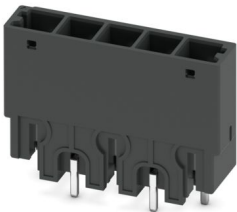


PCB headers, nominal cross section: 4 mm<sup>2</sup>, color: black, nominal current: 24 A, rated voltage (III/2): 800 V, contact surface: Tin, contact connection type: Pin, number of rows: 1, number of positions: 5, product range: PC 4/...-GU-THR, pitch: 6.35 mm, mounting: THR soldering / wave soldering, pin layout: Zigzag pinning W, 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: without, type of packaging: packed in cardboard

## PC 4/ 5-GU-6,35 P26 THR R72 - PCB header

1301967

<https://www.phoenixcontact.com/us/products/1301967>



PCB headers, nominal cross section: 4 mm<sup>2</sup>, color: black, nominal current: 24 A, rated voltage (III/2): 800 V, contact surface: Tin, contact connection type: Pin, number of rows: 1, number of positions: 5, product range: PC 4/...-GU-THR, pitch: 6.35 mm, mounting: THR soldering / wave soldering, pin layout: Linear pinning, 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: without, type of packaging: 72 mm wide tape

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