

# FKCN 2,5/18-ST - PCB connector



1732894

<https://www.phoenixcontact.com/de/produkte/1732894>

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PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, number of potentials: 18, number of rows: 1, number of positions: 18, number of connections: 18, product range: FKCN 2,5/..-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

## Your advantages

- Time saving push-in connection, tools not required
- Intuitive use through colour coded actuation lever
- Extremely small design for the respective conductor cross section
- Defined contact force ensures that contact remains stable over the long term
- Can be combined with the MSTB 2,5 range

## Commercial Data

Item number	1732894
Packing unit	50 pc
Minimum order quantity	50 pc
Note	Made to Order (non-returnable)
Sales Key	E1 - Leiterplattenanschl.
Product Key	AACFEA
GTIN	4046356163897
Weight per Piece (including packing)	23,01 g
Weight per Piece (excluding packing)	22,487 g
Customs tariff number	85366990
Country of origin	BG

# FKCN 2,5/18-ST - PCB connector



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## Technical Data

### Product properties

Type	Standard
Product line	COMBICON Connectors M
Product type	PCB plug
Product family	FKCN 2,5/...-ST
Number of positions	18
Pitch	5 mm
Number of connections	18
Number of rows	1
Mounting flange	without
Number of potentials	18

### Electrical properties

Nominal current $I_N$	12 A
Nominal voltage $U_N$	320 V
Degree of pollution	3
Contact resistance	1.1 m $\Omega$
Rated voltage (III/3)	320 V
Rated surge voltage (III/3)	4 kV
Rated voltage (III/2)	320 V
Rated surge voltage (III/2)	4 kV
	630 V
Rated surge voltage (II/2)	4 kV

### Connection data

#### Connection technology

Type	Standard
Connector system	COMBICON MSTB 2,5
Nominal cross section	2.5 mm <sup>2</sup>
Type of contact	Female connector

#### Interlock

Locking type	without
Mounting flange	without

#### Conductor connection

Connection method	Push-in spring connection
Conductor/PCB connection direction	0 °
Conductor cross section solid	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section AWG	24 ... 16
Conductor cross section flexible, with ferrule without plastic	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>

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sleeve	
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Cylindrical gauge a x b / diameter	2.4 mm x 1.5 mm / 1.6 mm
Stripping length	10 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)

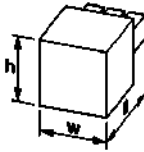
### Material data - housing

Color (Housing)	green (6021)
Insulating material	PBT
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0

### Material data – actuating element

Color (Actuating element)	orange (2003)
Insulating material	PA
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0

## Dimensions

Dimensional drawing	
Pitch	5 mm
Width [w]	90 mm
Height [h]	10.9 mm
Length [l]	27.1 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

# FKCN 2,5/18-ST - PCB connector



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## 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
	1.5 mm <sup>2</sup> / solid / > 40 N
	2.5 mm <sup>2</sup> / flexible / > 50 N

## 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

## 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

## 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

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Amplitude	0.35 mm (10 Hz ... 60.1 Hz)
Sweep speed	5g (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h

## Durability test

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	4.8 kV
Contact resistance R <sub>1</sub>	1.1 mΩ
Contact resistance R <sub>2</sub>	1.1 mΩ
Insertion/withdrawal cycles	25
Insulation resistance, neighboring positions	> 5 MΩ

## 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

## 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

## Electrical tests

### Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	18

### Insulation resistance

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

### Air clearances and creepage distances |

Specification	IEC 60664-1:2007-04
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	320 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 mm
Rated insulation voltage (II/2)	630 V

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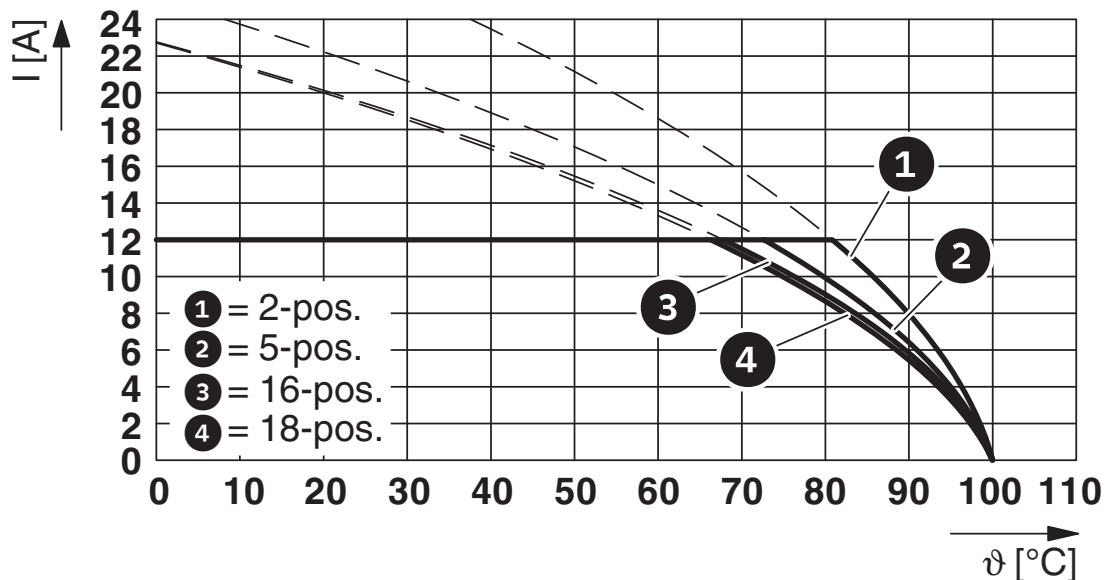
Rated surge voltage (II/2)	4 kV
minimum clearance value - non-homogenous field (II/2)	3 mm
minimum creepage distance (II/2)	3.2 mm

## Packaging specifications

Type of packaging	packed in cardboard
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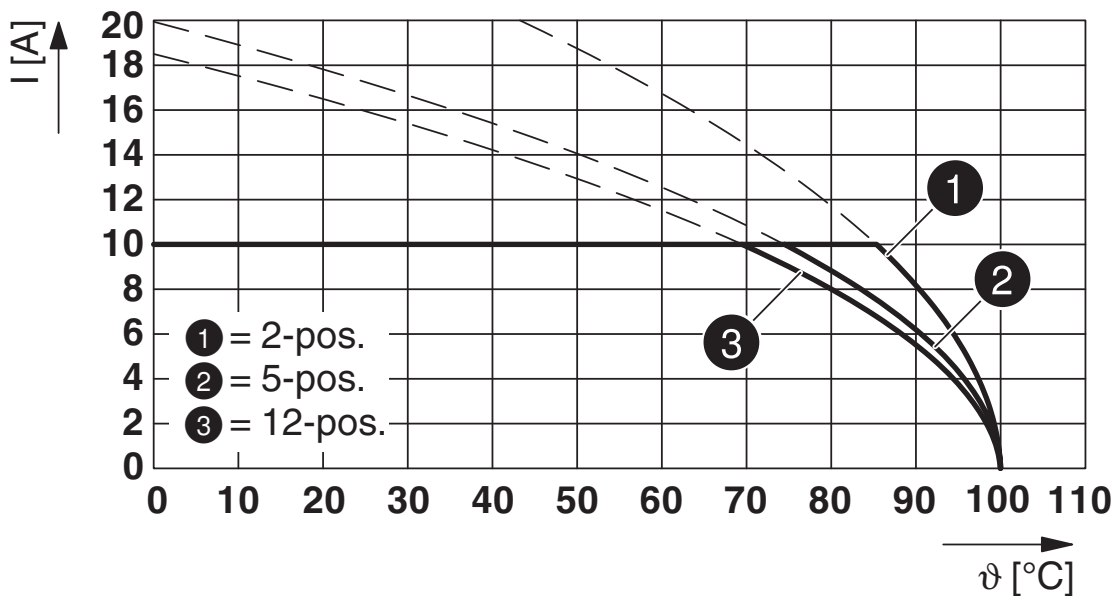
## Drawings

Diagram



Type: FKCN 2,5/...-ST with MSTBW 2,5/...-G

Diagram



Type: FKCN 2,5/...-ST with MDSTB 2,5/...-G

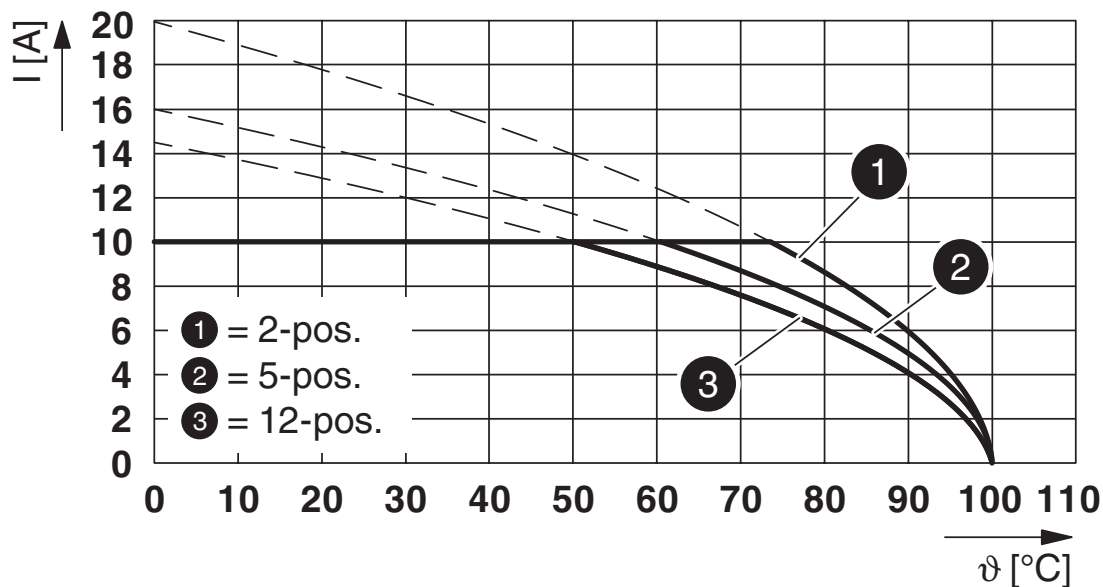
# FKCN 2,5/18-ST - PCB connector



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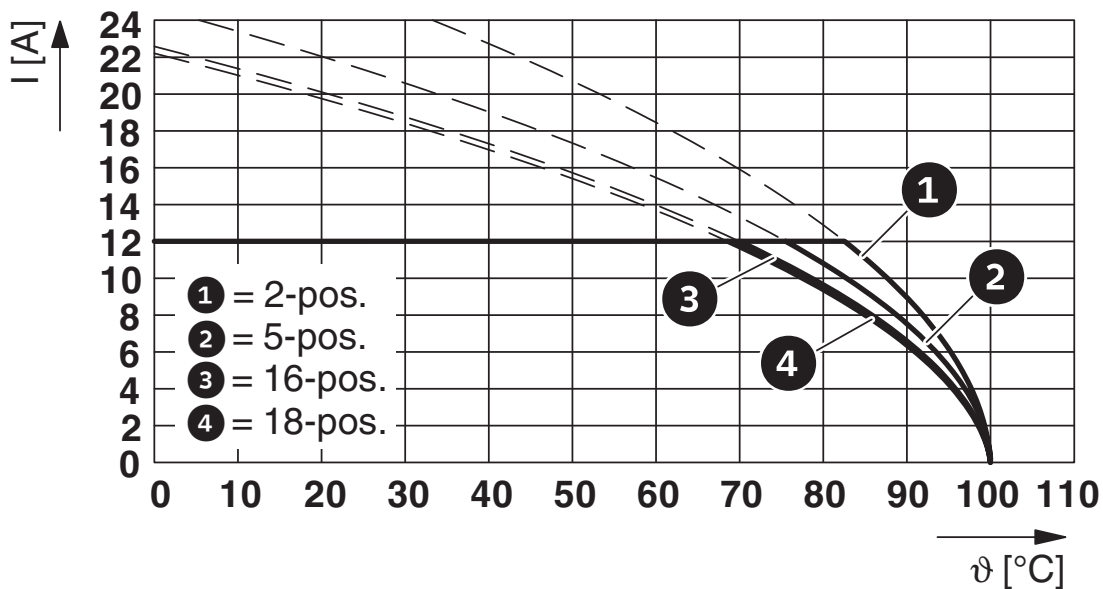
<https://www.phoenixcontact.com/de/produkte/1732894>

Diagram



Type: FKCN 2,5/...-ST with MDSTBVA 2,5/...-G

Diagram



Type: FKCN 2,5/...-ST with SMSTB 2,5/...-G

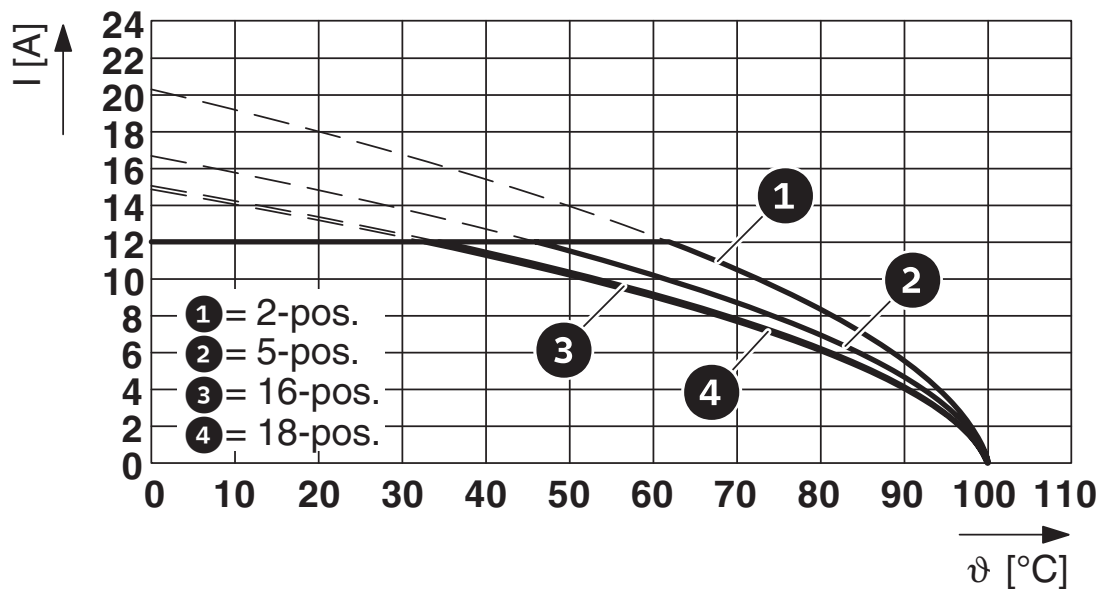
# FKCN 2,5/18-ST - PCB connector



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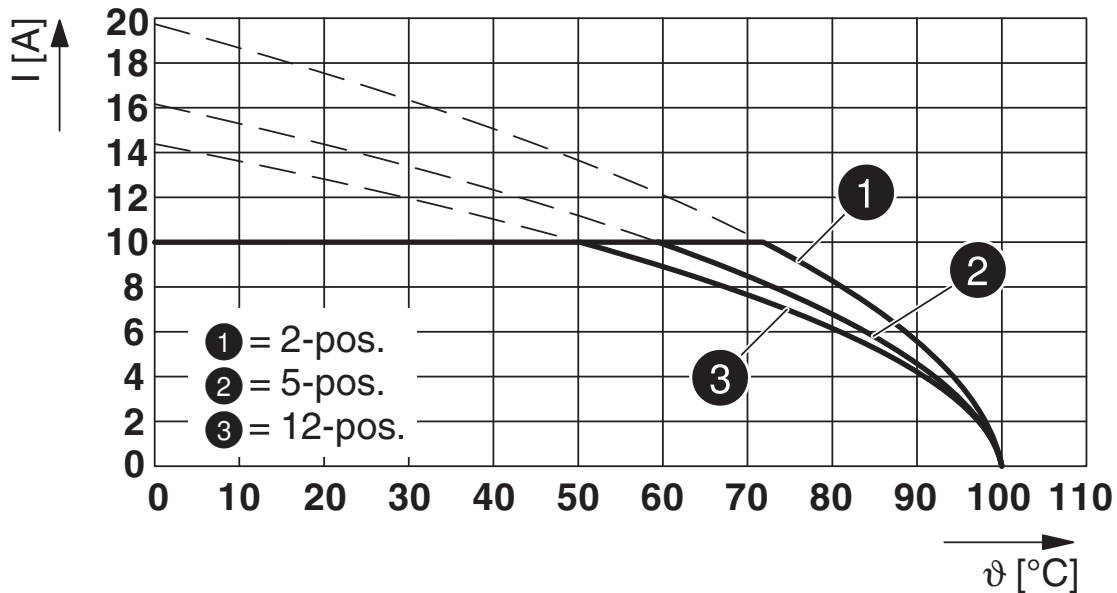
<https://www.phoenixcontact.com/de/produkte/1732894>

Diagram



Type: FKCN 2,5/...-ST with MSTBV 2,5/...-G

Diagram



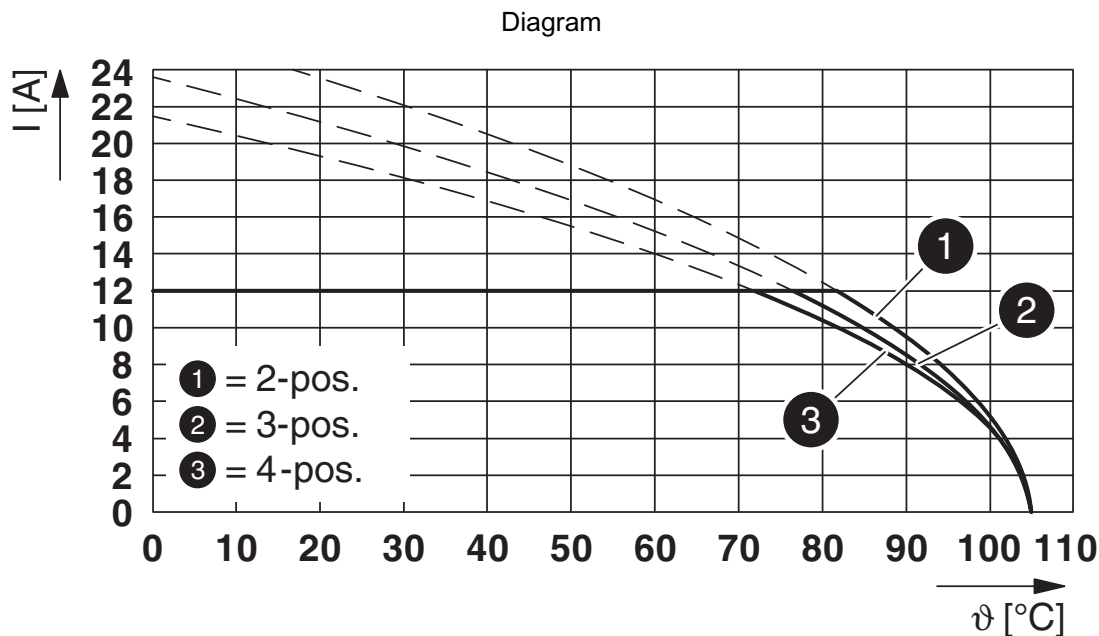
Type: FKCN 2,5/...-ST with MDSTBV 2,5/...-G

# FKCN 2,5/18-ST - PCB connector

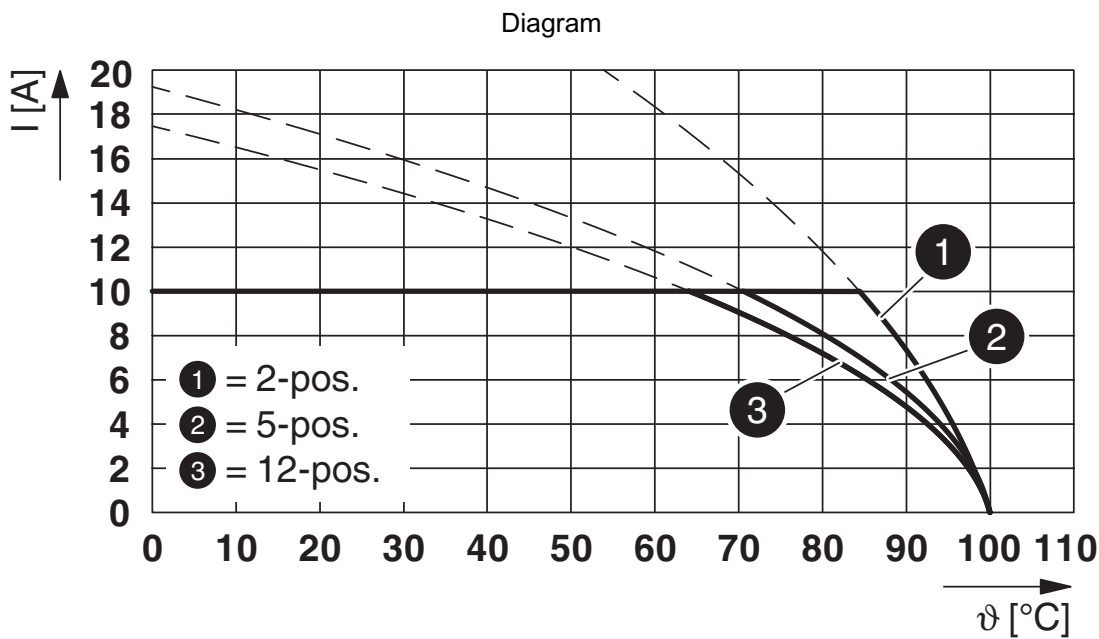


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Type: FKCN 2,5/...-ST with MSTBO 2,5/...-G1L



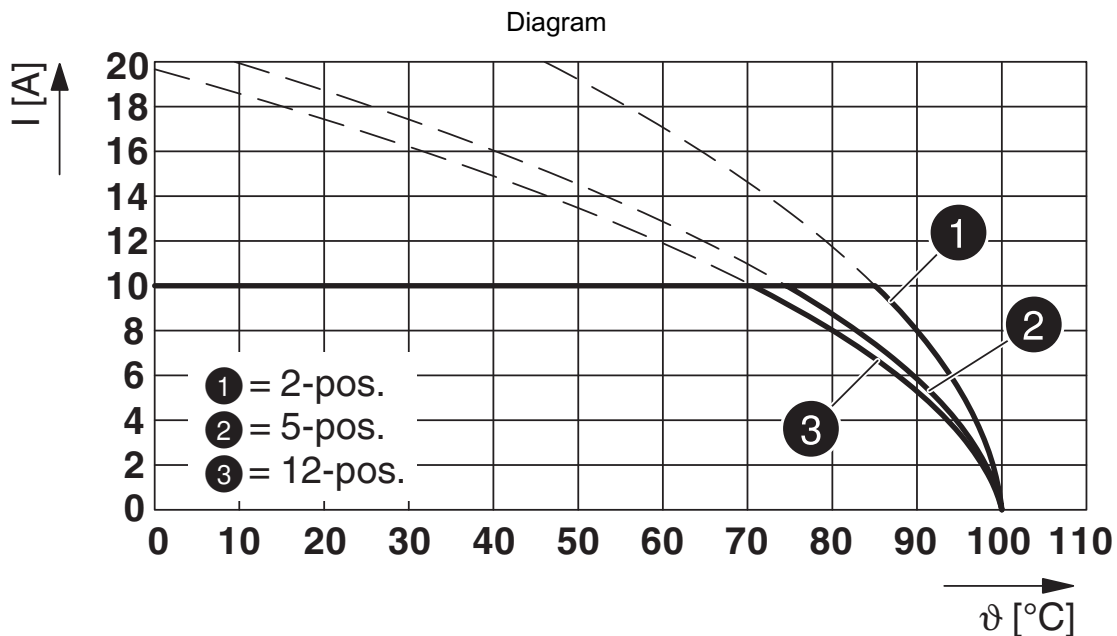
Type: FKCN 2,5/...-ST with MDSTBW 2,5/...-G

# FKCN 2,5/18-ST - PCB connector

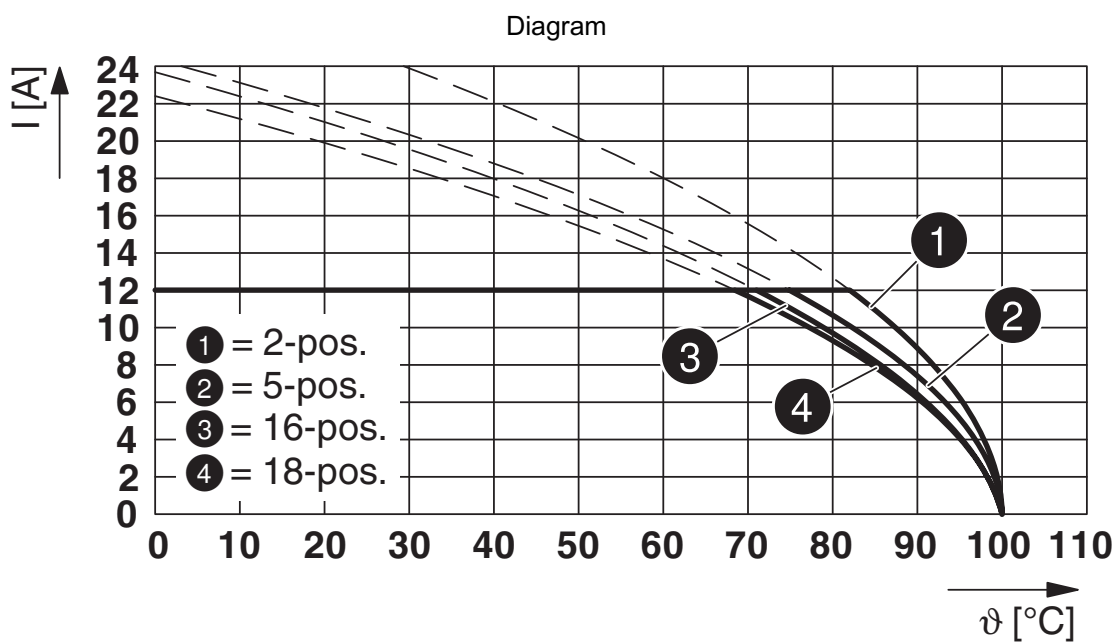


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Type: FKCN 2,5/...-ST with MDSTBA 2,5/...-G



Type: FKCN 2,5/...-ST with MSTB 2,5/...-G

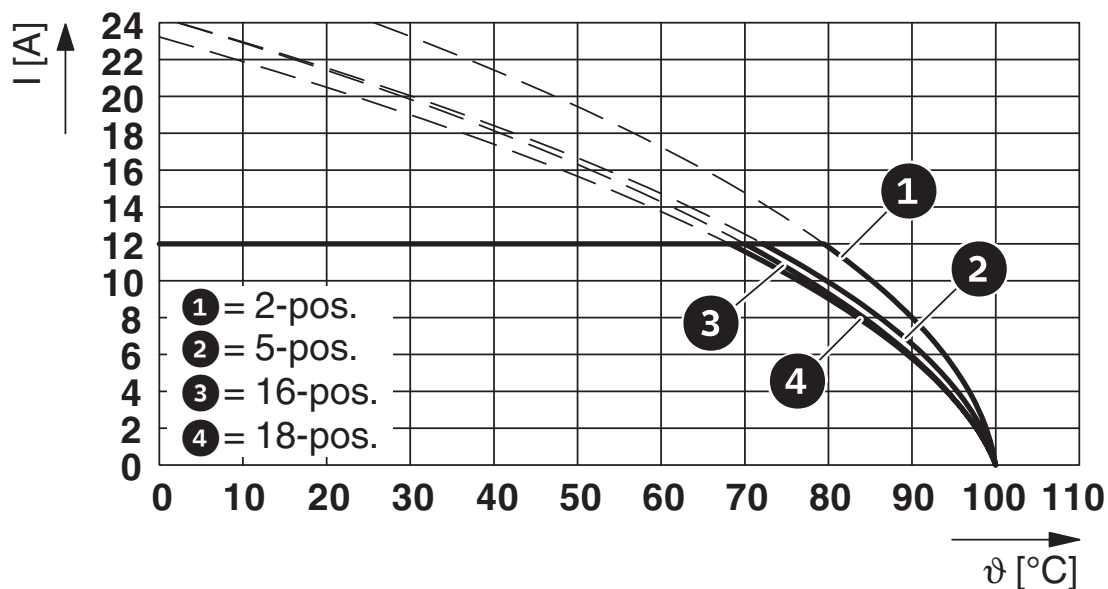
# FKCN 2,5/18-ST - PCB connector



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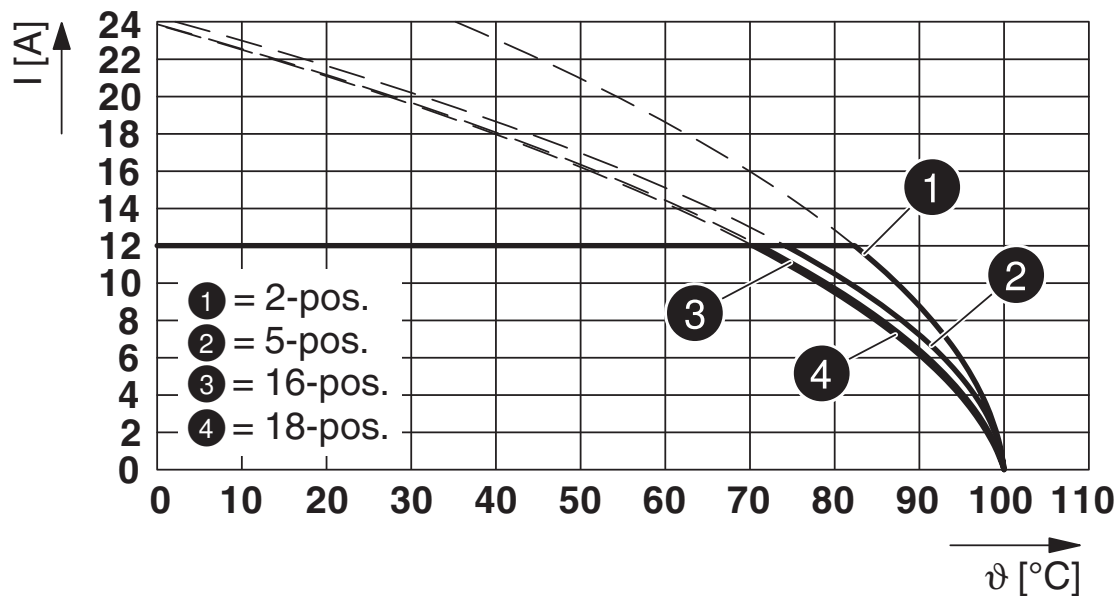
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Diagram



Type: FKCN 2,5/...-ST with MSTBA 2,5/...-G

Diagram

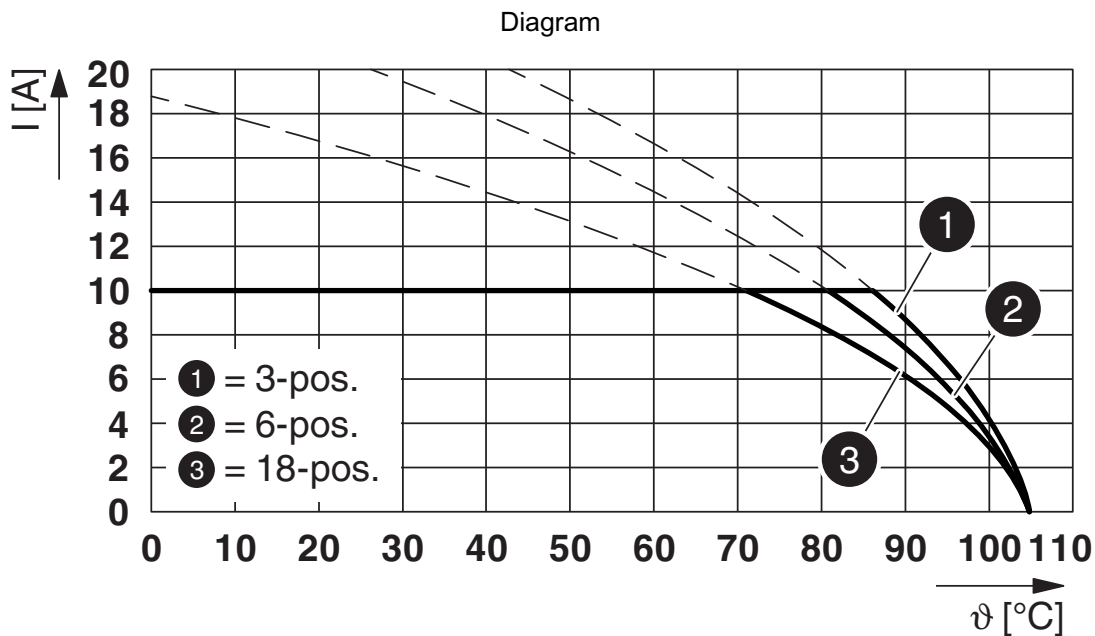


Type: FKCN 2,5/...-ST with SMSTBA 2,5/...-G

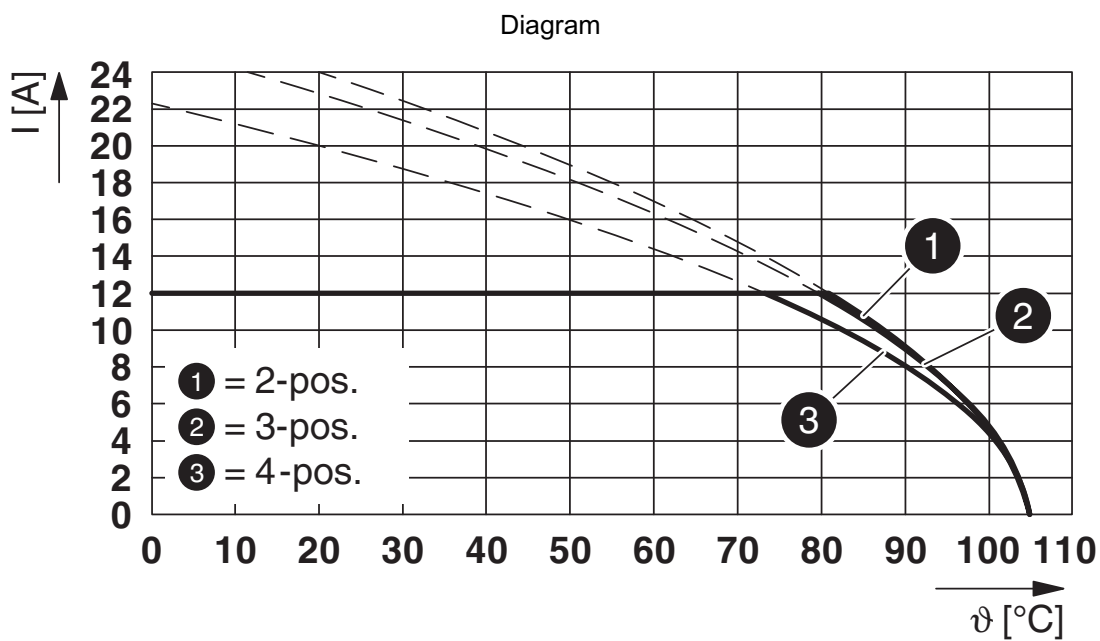
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Type: FKCN 2,5/...-ST with MDSTBV 2,5/...-G1



Type: FKCN 2,5/...-ST with MSTBO 2,5/...-G1R

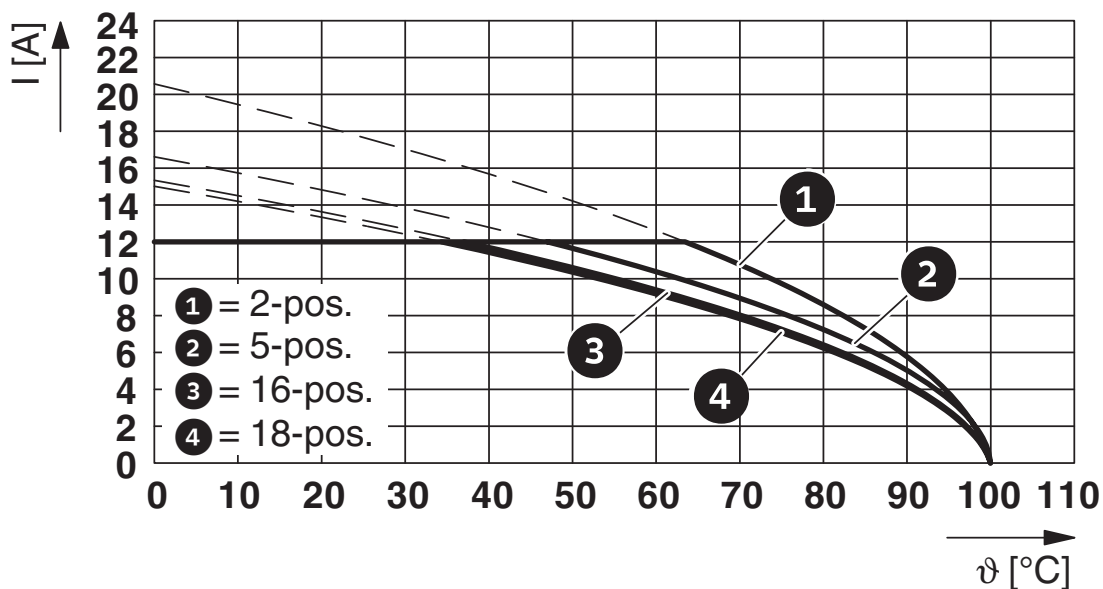
# FKCN 2,5/18-ST - PCB connector



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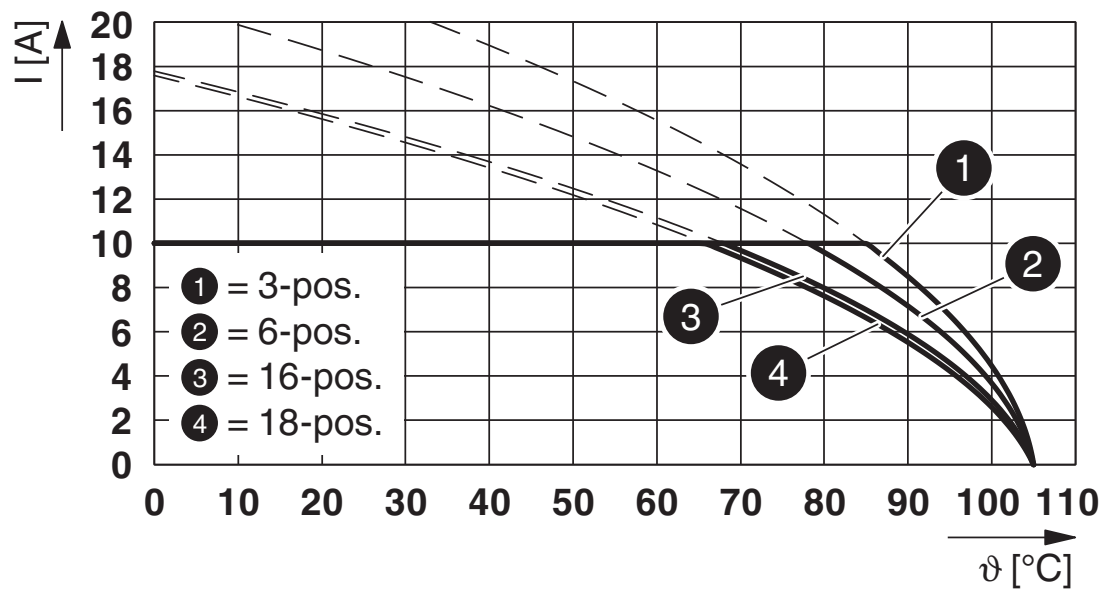
<https://www.phoenixcontact.com/de/produkte/1732894>

Diagram



Type: FKCN 2,5/...-ST with MSTBVA 2,5/...-G

Diagram



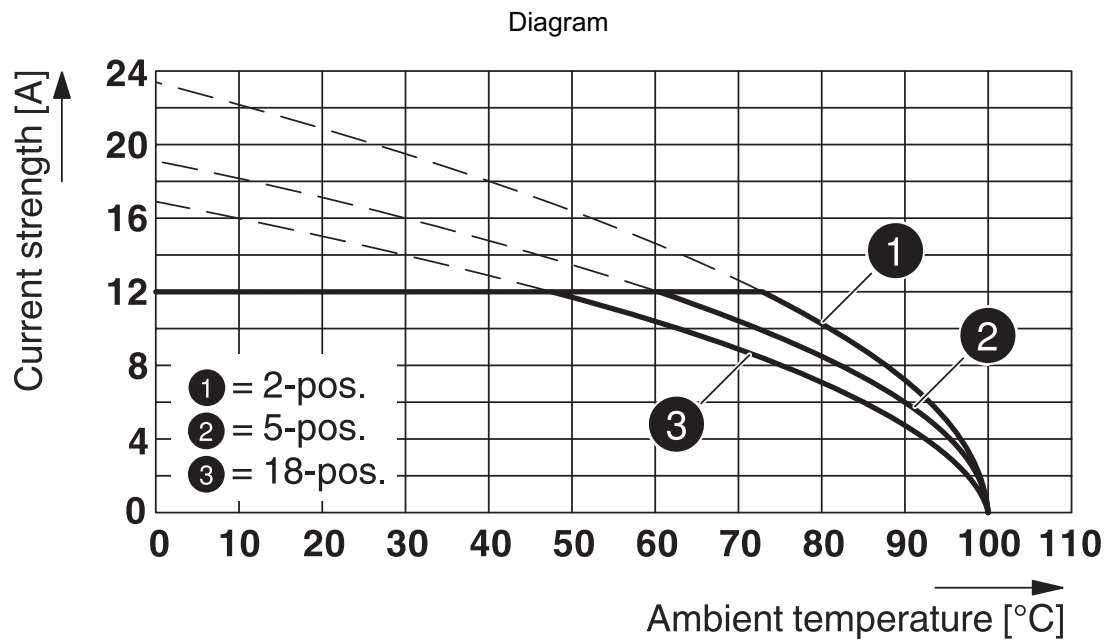
Type: FKCN 2,5/...-ST with MDSTB 2,5/...-G1

# FKCN 2,5/18-ST - PCB connector



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Type: FKCN 2,5/...-ST with CCDN 2,5/...-G1 P26 THR

# FKCN 2,5/18-ST - PCB connector




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## Approvals

	<b>IECEE CB Scheme</b> Approval ID: DE1-58427				
	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$	
	400 V	12 A	-	0.2 - 2.5	

	<b>EAC</b> Approval ID: B.01687				
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	<b>VDE report with production monitoring</b> Approval ID: 40041908				
	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$	
	400 V	12 A	-	0.2 - 2.5	

# FKCN 2,5/18-ST - PCB connector



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## Classifications

### ECLASS

ECLASS-9.0	27440309
ECLASS-10.0.1	27440309
ECLASS-11.0	27460202

### ETIM

ETIM 8.0	EC002638
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### UNSPSC

UNSPSC 21.0	39121400
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# FKCN 2,5/18-ST - PCB connector



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## Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

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## Accessories

### CP-MSTB - Coding profile

1734634

<https://www.phoenixcontact.com/de/produkte/1734634>

Coding profile, is inserted into the slot on the plug or inverted header, red insulating material



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### CRIMPFOX 6 - Crimping pliers

1212034

<https://www.phoenixcontact.com/de/produkte/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



# FKCN 2,5/18-ST - PCB connector

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## SZS 0,6X3,5 - Screwdriver

1205053

<https://www.phoenixcontact.com/de/produkte/1205053>



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

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## CCDN 2,5/18-G1 P26 THR - PCB header

1734436

<https://www.phoenixcontact.com/de/produkte/1734436>



PCB headers, nominal cross section: 2.5 mm<sup>2</sup>, color: black, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Male connector, number of potentials: 36, number of rows: 2, number of positions: 18, number of connections: 36, product range: CCDN 2,5/..-G1-THR, pitch: 5 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm, number of solder pins per potential: 1, plug-in system: COMBICON MSTB 2,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard

# FKCN 2,5/18-ST - PCB connector

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## MSTBW 2,5/18-G - PCB header

1735950

<https://www.phoenixcontact.com/de/produkte/1735950>



PCB headers, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Male connector, number of potentials: 18, number of rows: 1, number of positions: 18, number of connections: 18, product range: MSTBW 2,5/..-G, pitch: 5 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm, number of solder pins per potential: 1, plug-in system: COMBICON MSTB 2,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard

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PHOENIX CONTACT Deutschland GmbH

Flachsmarktstraße 8

D-32825 Blomberg

+49 52 35/3-1 20 00

[info@phoenixcontact.de](mailto:info@phoenixcontact.de)