

# FK-MPT 0,5/ 2-3,5 - PCB terminal block

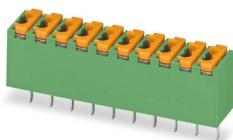
1891069

<https://www.phoenixcontact.com/us/products/1891069>



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PCB terminal block, nominal current: 4 A, rated voltage (III/2): 250 V, nominal cross section: 0.5 mm<sup>2</sup>, number of potentials: 2, number of rows: 1, number of positions per row: 2, product range: FK-MPT 0,5/..-V, pitch: 3.5 mm, connection method: Push-in spring connection, mounting: Wave soldering, conductor/PCB connection direction: 90 °, color: green, Pin layout: Linear pinning, Solder pin [P]: 3.5 mm, number of solder pins per potential: 1, 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
- Intuitive operation due to color-coded actuating push button
- Potentials can be easily looped through – ideal for BUS applications
- Small component size for applications where space is at a premium
- Vertical connection enables multi-row arrangement on the PCB

## Commercial data

Item number	1891069
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	AA11
Product key	AAKBCB
Catalog page	Page 403 (C-1-2013)
GTIN	4017918169589
Weight per piece (including packing)	0.91 g
Weight per piece (excluding packing)	0.897 g
Customs tariff number	85369010
Country of origin	IN

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## Technical data

### Product properties

Product type	Printed circuit board terminal
Product family	FK-MPT 0,5/..-V
Product line	COMBICON Terminals XS
Type	PC termination block
Number of positions	2
Pitch	3.5 mm
Number of connections	4
Number of rows	1
Number of potentials	2
Mounting flange	without
Pin layout	Linear pinning
Solder pins per potential	1

### Electrical properties

Nominal current $I_N$	4 A
Nominal voltage $U_N$	250 V
Degree of pollution	3
Rated voltage (III/3)	160 V
Rated surge voltage (III/3)	2.5 kV
Rated voltage (III/2)	250 V
Rated surge voltage (III/2)	2.5 kV
Rated voltage (II/2)	250 V
Rated surge voltage (II/2)	2.5 kV

### Connection data

#### Conductor connection

Connection method	Push-in spring connection
Conductor cross section rigid	0.12 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>
Conductor cross section AWG	26 ... 20
Stripping length	6.5 mm

### Mounting

Mounting type	Wave soldering
Pin layout	Linear pinning

### Material specifications

#### Material data - contact

Note	WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/JEDEC JESD 201
Contact material	Steel/copper

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Surface characteristics	Tin-plated
Metal surface terminal point (top layer)	Tin (5 - 7 µm Sn)
Metal surface terminal point (middle layer)	Copper (2 - 3 µm Cu)
Metal surface soldering area (top layer)	Tin (5 - 7 µm Sn)
Metal surface soldering area (middle layer)	Copper (2 - 3 µm Cu)

## Material data - housing

Color (Housing)	green (6021)
Insulating material	PBT
Insulating material group	IIIa
CTI according to IEC 60112	225
Flammability rating according to UL 94	V0

## Material data – actuating element

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

## Dimensions

Dimensional drawing	
Pitch	3.5 mm
Width [w]	7.5 mm
Height [h]	13 mm
Length [l]	7 mm
Installed height	9.5 mm
Solder pin length [P]	3.5 mm
Pin dimensions	0.35 x 0.9 mm

## PCB design

Hole diameter	1 mm
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## Mechanical tests

### Test for conductor damage and slackening

Specification	IEC 60999-1:1990-05
Result	Test passed

### Pull-out test

Specification	IEC 60999-1:1990-05
Conductor cross section/conductor type/tractive force	0.14 mm <sup>2</sup> / solid / > 10 N

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setpoint/actual value	0.5 mm <sup>2</sup> / solid / > 30 N
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## Electrical tests

### Temperature-rise test

Specification	IEC 60998-1:1990-04
Requirement temperature-rise test	Increase in temperature ≤ 45 K

### Insulation resistance

Specification	IEC 60512-2:1985-00
Insulation resistance, neighboring positions	10 <sup>12</sup> Ω

### Air clearances and creepage distances |

Specification	IEC 60664-1:2007-04
Insulating material group	IIIa
Comparative tracking index (IEC 60112)	CTI 225
Rated insulation voltage (III/3)	160 V
Rated surge voltage (III/3)	2.5 kV
minimum clearance value - non-homogenous field (III/3)	1.5 mm
minimum creepage distance (III/3)	2.5 mm
Rated insulation voltage (III/2)	250 V
Rated surge voltage (III/2)	2.5 kV
minimum clearance value - non-homogenous field (III/2)	1.5 mm
minimum creepage distance (III/2)	2.5 mm
Rated insulation voltage (II/2)	250 V
Rated surge voltage (II/2)	2.5 kV
minimum clearance value - non-homogenous field (II/2)	1.5 mm
minimum creepage distance (II/2)	2.5 mm

## Environmental and real-life conditions

### Vibration test

Specification	IEC 60068-2-6:1995-03
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

### Ambient conditions

Ambient temperature (operation)	-40 °C ... 100 °C (Depending on the current carrying capacity/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

# FK-MPT 0,5/ 2-3,5 - PCB terminal block

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Type of packaging

packed in cardboard

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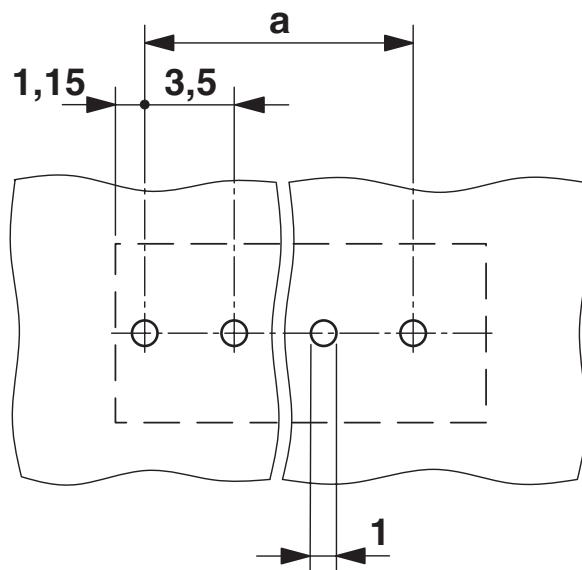


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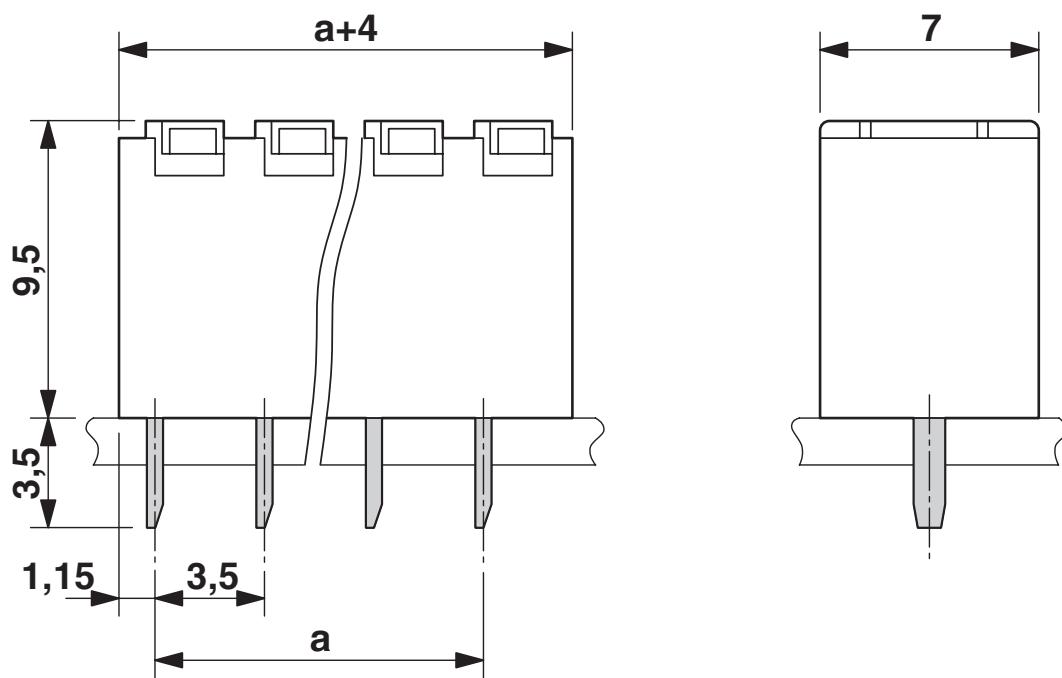
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## Drawings

Drilling plan/solder pad geometry



Dimensional drawing



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## Approvals

ⓘ To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1891069>

cULus Recognized				
Approval ID: E60425-19991118				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
Use group B				
	300 V	4 A	28 - 20	-
Use group D				
	300 V	4 A	28 - 20	-

VDE Zeichengenehmigung				
Approval ID: 40055523				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
	250 V	4 A	-	0.2 - 0.5

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## Classifications

### ECLASS

ECLASS-11.0	27460101
ECLASS-12.0	27460101
ECLASS-13.0	27460101

### ETIM

ETIM 9.0	EC002643
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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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## Accessories

### SZF 0-0,4X2,5 - Screwdriver

1204504

<https://www.phoenixcontact.com/us/products/1204504>



Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.4 x 2.5 x 75 mm, 2-component grip, with non-slip grip

### FK-MPT 0,5/ 2-ICA-3,5 - PCB header

1930328

<https://www.phoenixcontact.com/us/products/1930328>



PCB headers, nominal cross section: 0.5 mm<sup>2</sup>, color: black, nominal current: 3 A, rated voltage (III/2): 250 V, contact surface: Tin, contact connection type: Socket, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, product range: FK-MPT 0,5/..-ICA, pitch: 3.5 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 3.4 mm, number of solder pins per potential: 1, plug-in system: COMBICON FK-MPT - IC, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard, The touch-protected basic strip, serves to accommodate the FK-MPT 0,5 PCB terminal block.

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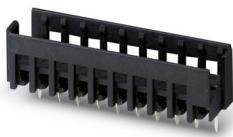
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## FK-MPT 0,5/ 2-ICVA-3,5 - PCB header

1930470

<https://www.phoenixcontact.com/us/products/1930470>



PCB headers, nominal cross section: 0.5 mm<sup>2</sup>, color: black, nominal current: 3 A, rated voltage (III/2): 250 V, contact surface: Tin, contact connection type: Socket, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, product range: FK-MPT 0,5/..-ICVA, pitch: 3.5 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 3.6 mm, number of solder pins per potential: 1, plug-in system: COMBICON FK-MPT - IC, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard, The touch-protected basic strip, serves to accommodate the FK-MPT 0,5 PCB terminal block.

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