

# PLH 16/ 3-15 - PCB terminal block



1770542

<https://www.phoenixcontact.com/us/products/1770542>

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PCB terminal block, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm<sup>2</sup>, number of potentials: 3, number of rows: 1, number of positions per row: 3, product range: PLH 16/, pitch: 15 mm, connection method: Push-lock spring connection, mounting: Wave soldering, conductor/PCB connection direction: 0 °, Pin layout: Linear double pinning, Solder pin [P]: 4.5 mm, number of solder pins per potential: 4, type of packaging: packed in cardboard

## Your advantages

- Tool-free lever principle enables time-saving connection and release of conductors with/without ferrules
- Defined contact force ensures that contact remains stable over the long term
- Time-saving push-in connection when lever is closed
- Quick and convenient testing using integrated test option

## Commercial data

Item number	1770542
Packing unit	25 pc
Minimum order quantity	25 pc
Sales key	AA15
Product key	AAOTBB
Catalog page	Page 473 (C-1-2013)
GTIN	4046356457743
Weight per piece (including packing)	27.356 g
Weight per piece (excluding packing)	24.87 g
Customs tariff number	85369010
Country of origin	SK

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## Technical data

### Product properties

Product line	COMBICON Terminals XL
Product type	Printed circuit board terminal
Product family	PLH 16/
Number of positions	3
Pitch	15 mm
Number of connections	3
Number of rows	1
Number of potentials	3
Pin layout	Linear double pinning
Solder pins per potential	4

### Electrical properties

Nominal current $I_N$	76 A
Nominal voltage $U_N$	1000 V
Degree of pollution	3
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)	8 kV

### Connection data

#### Connection technology

Nominal cross section	16 mm <sup>2</sup>
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#### Conductor connection

Connection method	Push-lock spring connection
Conductor cross section rigid	0.75 mm <sup>2</sup> ... 16 mm <sup>2</sup>
Conductor cross section flexible	0.75 mm <sup>2</sup> ... 25 mm <sup>2</sup>
Conductor cross section AWG	18 ... 4
Conductor cross section flexible, with ferrule without plastic sleeve	0.75 mm <sup>2</sup> ... 16 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.75 mm <sup>2</sup> ... 10 mm <sup>2</sup>
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.75 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Stripping length	18 mm

### Mounting

Mounting type	Wave soldering
Pin layout	Linear double pinning

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## 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 terminal point (top layer)	Tin (10 - 16 µm Sn)
Metal surface soldering area (top layer)	Tin (10 - 16 µm Sn)

### Material data - housing

Color ( )	( )
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	125 °C

### Material data – actuating element

Insulating material	PBT
Insulating material group	IIIa
CTI according to IEC 60112	275
Flammability rating according to UL 94	V0

## Dimensions

Dimensional drawing	
Pitch	15 mm
Width [w]	41.4 mm
Height [h]	29 mm
Length [l]	30.5 mm
Installed height	33.5 mm
Solder pin length [P]	4.5 mm
Pin dimensions	1.2 x 1.2 mm

### PCB design

Pin spacing	12.5 mm
Hole diameter	1.6 mm

## Mechanical tests

### 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	0.75 mm <sup>2</sup> / solid / > 30 N
	0.75 mm <sup>2</sup> / flexible / > 30 N
	16 mm <sup>2</sup> / stranded / > 100 N
	16 mm <sup>2</sup> / flexible / > 100 N
	10 mm <sup>2</sup> / flexible with ferrule / > 90 N

## Electrical tests

### Temperature-rise test

Specification	IEC 60947-7-4:2013-08
Requirement temperature-rise test	The sum of ambient temperature and temperature rise of the PCB terminal block shall not exceed the upper limiting temperature.

### Short-time withstand current

Specification	IEC 60947-7-4:2013-08
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### 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)	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)	8 kV

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minimum clearance value - non-homogenous field (II/2)	5.5 mm
minimum creepage distance (II/2)	5.5 mm

## 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)
Sweep speed	5g (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h

### Glow-wire test

Specification	IEC 60695-2-10:2000-10
Temperature	850 °C
Time of exposure	5 s

### Aging

Specification	IEC 60947-7-4:2013-08
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### 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

Type of packaging	packed in cardboard
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