PLH 16/ 4-10-ZF - PCB terminal block

1770487

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PCB terminal block, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm^2, number of potentials: 4, number of rows: 1, number of positions per row: 4, product range: PLH 16/, pitch: 10 mm, connection method: Push-lock spring connection, mounting: Wave soldering, conductor/PCB connection direction: 0 °, Pin layout: Zigzag pinning M, Solder pin [P]: 4.5 mm, number of solder pins per potential: 2, 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
- Unrestricted 600-V-UL approval thanks to compact zig-zag pinning

Commercial data

Item number	1770487
Packing unit	25 pc
Note	Made to order (non-returnable)
Sales key	AA15
Product key	AAOTBA
Catalog page	Page 473 (C-1-2013)
GTIN	4046356458221
Weight per piece (including packing)	30.644 g
Weight per piece (excluding packing)	30.604 g
Customs tariff number	85369010
Country of origin	SK

Technical data

Product properties

Product type	Printed circuit board terminal
Product family	PLH 16/
Product line	COMBICON Terminals XL
Number of positions	4
Pitch	10 mm
Number of connections	4
Number of rows	1
Number of potentials	4
Pin layout	Zigzag pinning M
Solder pins per potential	2

Data management status

Article revision	03

Electrical properties

Nominal current I_N	76 A
Nominal voltage U_N	1000 V
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 mm²

Conductor connection

Connection method	Push-lock spring connection
Conductor cross section rigid	0.75 mm² ... 16 mm²
Conductor cross section flexible	0.75 mm² ... 25 mm²
Conductor cross section AWG	18 ... 4
Conductor cross section flexible, with ferrule without plastic sleeve	0.75 mm² ... 16 mm²
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.75 mm² ... 10 mm²
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.75 mm² ... 4 mm²
Stripping length	18 mm

Mounting

Mounting type	Wave soldering
Pin layout	Zigzag pinning M

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)

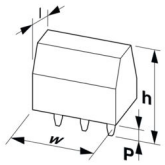
Material data - housing

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	10 mm
Width [w]	41.4 mm
Height [h]	33.5 mm
Length [l]	25 mm
Installed height	29 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

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	0.75 mm² / solid / > 30 N
	0.75 mm² / flexible / > 30 N
	16 mm² / stranded / > 100 N
	16 mm² / flexible / > 100 N
	10 mm² / 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

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
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)
Acceleration	5g (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis

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

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

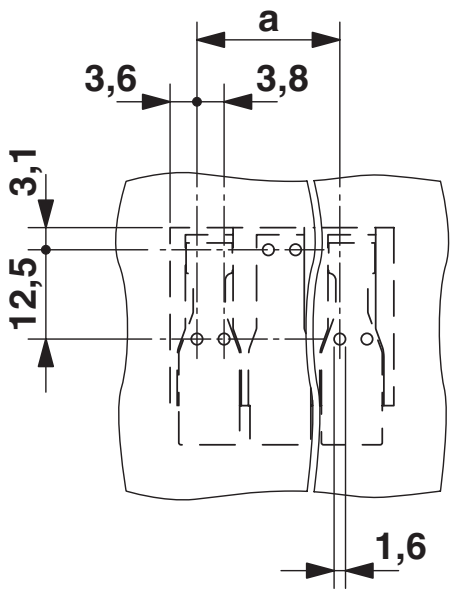
Packaging specifications

Type of packaging	packed in cardboard
Outer packaging type	Carton

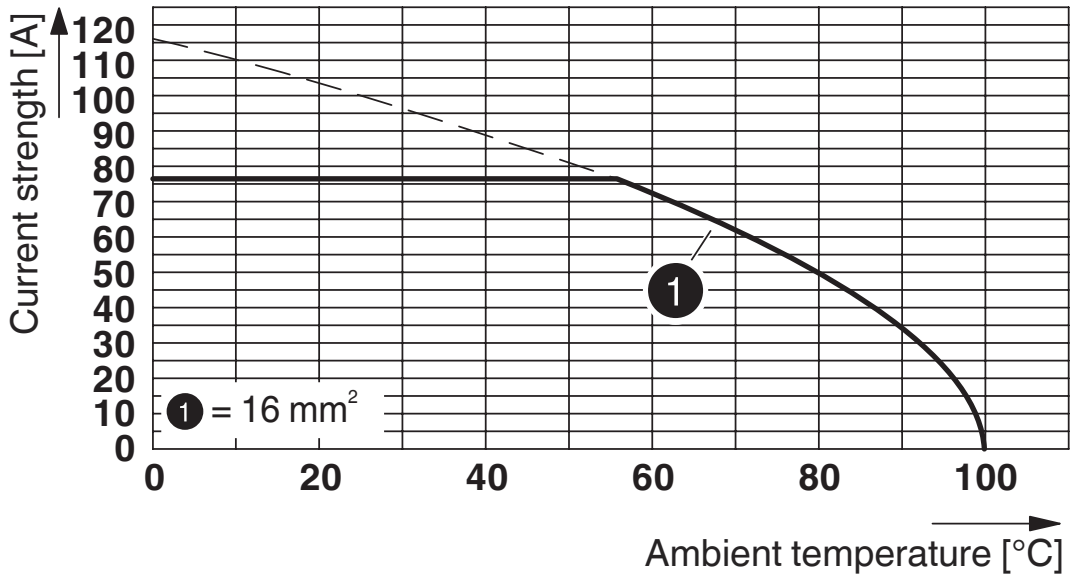
Drawings

Functional drawing

Drilling plan/solder pad geometry



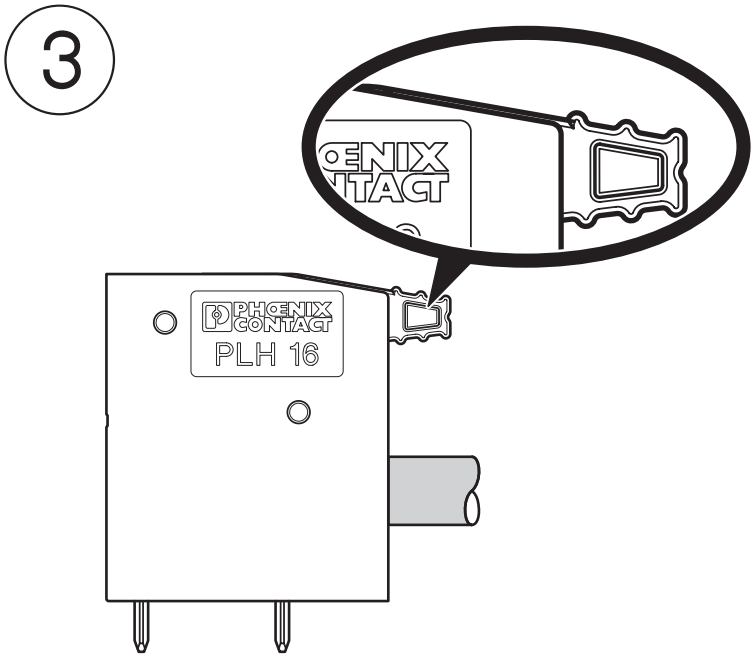
Diagram



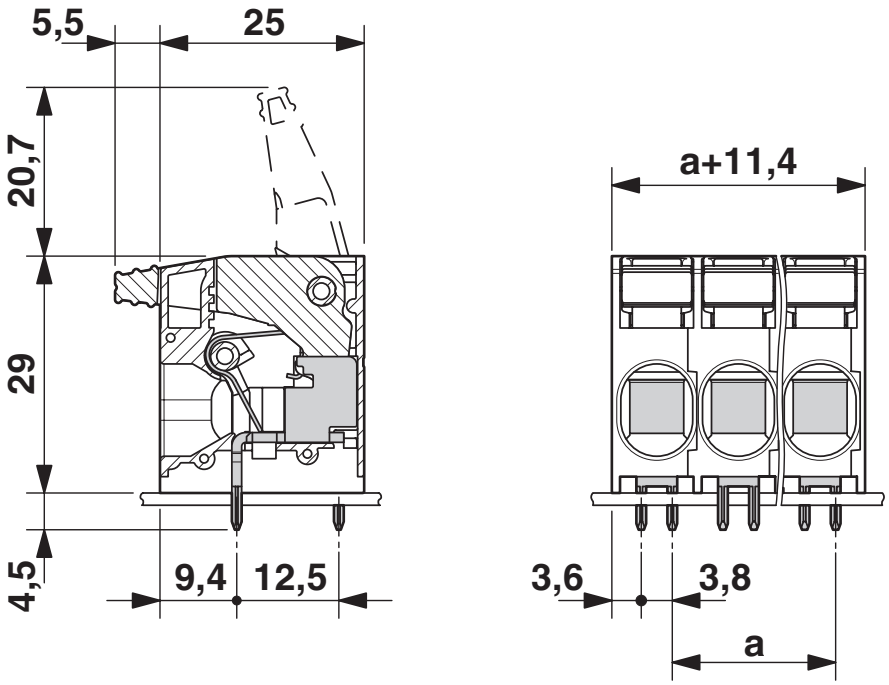
Type: PLH 16/...-10-ZF

Tested in accordance with DIN EN 60512-5-2:2003-01
No. of positions: 5
Conductor cross section: 16 mm² (exclusively for solid conductors)

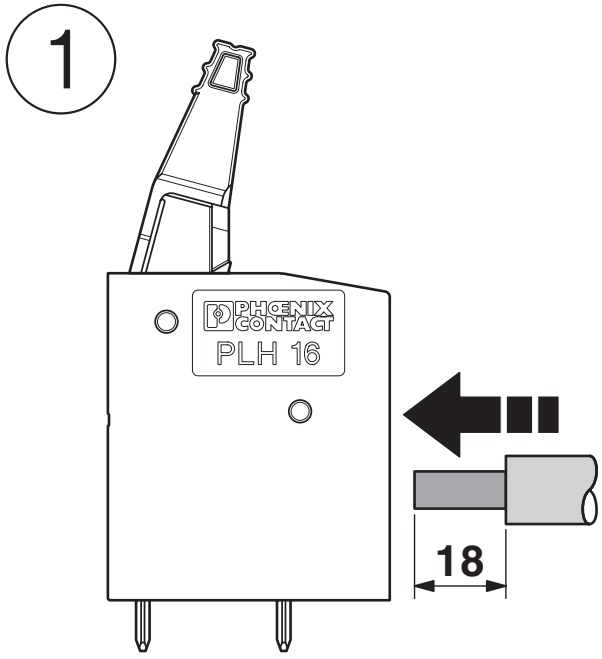
Functional drawing



Dimensional drawing

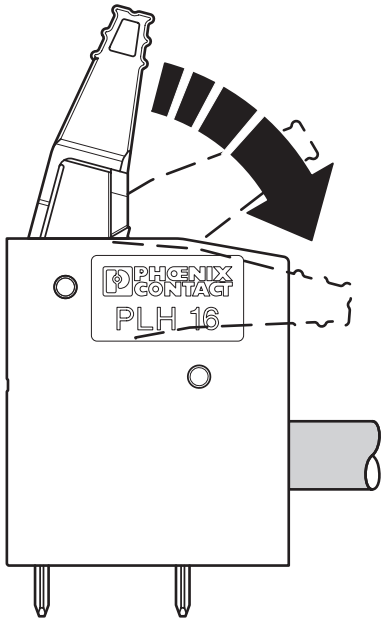


Functional drawing



Functional drawing

2



Classifications

ECLASS

ECLASS-11.0	27460101
ECLASS-13.0	27460101

ETIM

ETIM 8.0	EC002643

UNSPSC

UNSPSC 21.0	39121400

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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