

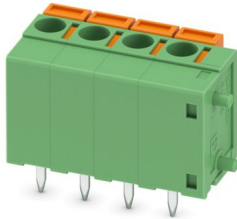
FFKDSA/V1-5,08- 4 - PCB terminal block



1790539

<https://www.phoenixcontact.com/us/products/1790539>

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Printed circuit board terminal, nominal current: 15 A, rated voltage (III/2): 400 V, nominal cross section: 1.5 mm², number of potentials: 4, number of rows: 1, number of positions per row: 4, product range: FFKDS(A)/V1, pitch: 5.08 mm, connection method: Push-in spring connection, mounting: Wave soldering, conductor/PCB connection direction: 90 °, color: green, Pin layout: Linear pinning, Solder pin [P]: 3.4 mm, number of solder pins per potential: 2, type of packaging: packed in cardboard. Item with securing pin at the end terminal block

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
- Operation and conductor connection from one direction enable integration into front of device
- Two solder pins reduce the mechanical strain on the soldering spots
- The latching on the side enables various numbers of positions to be combined
- Vertical connection enables multi-row arrangement on the PCB

Commercial data

Item number	1790539
Packing unit	50 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)
Sales key	AA12
Product key	AALBAK
GTIN	4017918260767
Weight per piece (including packing)	4.714 g
Weight per piece (excluding packing)	4.49 g
Customs tariff number	85369010
Country of origin	GR

Technical data

Product properties

Product type	Printed circuit board terminal
Product family	FFKDS(A)/V1
Product line	COMBICON Terminals S
Type	PC terminal block can be aligned
Number of positions	4
Pitch	5.08 mm
Number of connections	4
Number of rows	1
Number of potentials	4
Pin layout	Linear pinning
Solder pins per potential	2

Electrical properties

Properties

Nominal current I_N	15 A
Nominal voltage U_N	400 V
Rated voltage (III/3)	250 V
Rated surge voltage (III/3)	4 kV
Rated voltage (III/2)	400 V
Rated surge voltage (III/2)	4 kV
Rated voltage (II/2)	630 V
Rated surge voltage (II/2)	4 kV

Connection data

Connection technology

Type	PC terminal block can be aligned
Nominal cross section	1.5 mm ²

Conductor connection

Connection method	Push-in spring connection
Conductor cross-section rigid	0.2 mm ² ... 1.5 mm ²
Conductor cross-section flexible	0.2 mm ² ... 1.5 mm ²
Conductor cross-section AWG	24 ... 16
Conductor cross-section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 1.5 mm ²
Conductor cross-section, flexible, with ferrule, with plastic sleeve	0.25 mm ² ... 1.5 mm ²
Stripping length	10 mm

Mounting

Mounting type	Wave soldering
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Pin layout	Linear 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 (5 - 7 μm Sn)
Metal surface terminal point (middle layer)	Nickel (2 - 3 μm Ni)
Metal surface soldering area (top layer)	Tin (5 - 7 μm Sn)
Metal surface soldering area (middle layer)	Nickel (2 - 3 μm Ni)

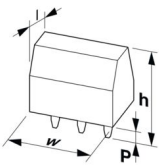
Material data - housing

Color (Housing)	green (6021)
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

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
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

Dimensions

Dimensional drawing	
Pitch	5.08 mm
Width [w]	15.24 mm

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Height [h]	17 mm
Length [l]	12.7 mm
Installed height	13.6 mm
Solder pin length [P]	3.4 mm
Pin dimensions	0.5 x 1 mm

PCB design

Pin spacing	7.62 mm
Hole diameter	1.3 mm

Mechanical tests

Test for conductor damage and slackening

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 ² / solid / > 10 N
	0.2 mm ² / flexible / > 10 N
	1.5 mm ² / solid / > 40 N
	1.5 mm ² / flexible / > 40 N

Electrical tests

Temperature-rise test

Specification	IEC 60947-7-4:2019-01
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 60947-7-4:2019-01
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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 60947-1:2007-06 + A1:2010-12 + A2:2014-09
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	250 V
Rated surge voltage (III/3)	4 kV
minimum clearance value - non-homogenous field (III/3)	3 mm
minimum creepage distance (III/3)	3.2 mm
Rated insulation voltage (III/2)	400 V
Rated surge voltage (III/2)	4 kV

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minimum clearance value - non-homogenous field (III/2)	3 mm
minimum creepage distance (III/2)	3 mm
Rated insulation voltage (II/2)	630 V
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

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 60695-2-10:2013-04
Temperature	850 °C
Time of exposure	5 s

Aging

Specification	IEC 60947-7-4:2019-01
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Ambient conditions

Ambient temperature (operation)	-40 °C ... 105 °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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Drawings

Diagram



Type: FFKDS/V1-5,08

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1790539>

 cULus Recognized Approval ID: E60425-19870330				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B				
	300 V	10 A	24 - 16	-
D				
	300 V	10 A	24 - 16	-

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Classifications

ECLASS

ECLASS-13.0	27460101
ECLASS-15.0	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
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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