

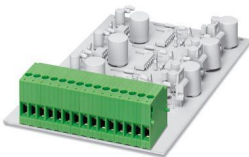
KDS 3 - PCB terminal block

1704004

<https://www.phoenixcontact.com/us/products/1704004>



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PCB terminal block, nominal current: 24 A, rated voltage (III/2): 400 V, nominal cross section: 2.5 mm², number of potentials: 1, number of rows: 1, number of positions per row: 1, product range: KDS 3, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, mounting: Wave soldering, conductor/PCB connection direction: 0 °, color: green, Pin layout: Linear pinning, Solder pin [P]: 3.5 mm, number of solder pins per potential: 2, type of packaging: packed in cardboard. The article can be aligned to create different nos. of positions!

Your advantages

- Well-known connection principle allows worldwide use
- Low temperature rise, thanks to maximum contact force
- Allows connection of two conductors
- Quick and convenient testing using integrated test option
- Two solder pins reduce the mechanical strain on the soldering spots
- The latching on the side enables various numbers of positions to be combined

Commercial data

Item number	1704004
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	AA13
Product key	AAMFFA
GTIN	4017918023157
Weight per piece (including packing)	4.452 g
Weight per piece (excluding packing)	4.381 g
Customs tariff number	85369010
Country of origin	PL

Technical data

Product properties

Product type	Printed circuit board terminal
Product family	KDS 3
Product line	COMBICON Terminals M
Type	PC terminal block can be aligned
Number of positions	1
Pitch	5.08 mm
Number of connections	1
Number of rows	1
Number of potentials	1
Pin layout	Linear pinning
Solder pins per potential	2

Electrical properties

Nominal current I_N	24 A
Nominal voltage U_N	400 V
Degree of pollution	3
Rated voltage (III/3)	320 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	2.5 mm ²

Conductor connection

Connection method	Screw connection with tension sleeve
Conductor cross section rigid	0.2 mm ² ... 4 mm ²
Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section AWG	24 ... 12
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 2.5 mm ²
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm ² ... 1.5 mm ²
2 conductors with same cross section, solid	0.2 mm ² ... 1 mm ²
2 conductors with same cross section, flexible	0.2 mm ² ... 1 mm ²
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	0.25 mm ² ... 0.75 mm ²
2 conductors with the same cross section, flexible, with TWIN	0.5 mm ² ... 1 mm ²

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ferrule with plastic sleeve	
Stripping length	8 mm
Tightening torque	0.5 Nm ... 0.6 Nm

Mounting

Mounting type	Wave soldering
Pin layout	Linear pinning
Drive form screw head	Slotted (L)

Material specifications

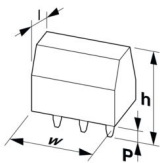
Material data - contact

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 (5 - 7 μm Sn)
Metal surface soldering area (top layer)	Tin (5 - 7 μm Sn)

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

Dimensions

Dimensional drawing	
Pitch	5.08 mm
Width [w]	5.08 mm
Height [h]	28.5 mm
Length [l]	27 mm
Installed height	25 mm
Solder pin length [P]	3.5 mm
Pin dimensions	1.1 x 0.8 mm

PCB design

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Hole diameter	1.4 mm
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Mechanical tests

Test for conductor damage and slackening

Specification	IEC 60998-2-1:1990-04
Result	Test passed

Pull-out test

Specification	IEC 60998-2-1:1990-04
Conductor cross section/conductor type/tractive force setpoint/actual value	0.2 mm ² / solid / > 10 N
	0.2 mm ² / flexible / > 10 N
	4 mm ² / solid / > 60 N
	2.5 mm ² / flexible / > 50 N

Torque test

Specification	IEC 60998-2-1:1990-04
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Electrical tests

Temperature-rise test

Specification	IEC 60998-2-1:1990-04
Requirement temperature-rise test	Increase in temperature ≤ 45 K

Insulation resistance

Specification	IEC 60998-2-1:1990-04
Insulation resistance, neighboring positions	10 ⁹ Ω

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)	400 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
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

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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

Glow-wire test

Specification	IEC 60998-2-1:1990-04
Temperature	850 °C
Time of exposure	5 s

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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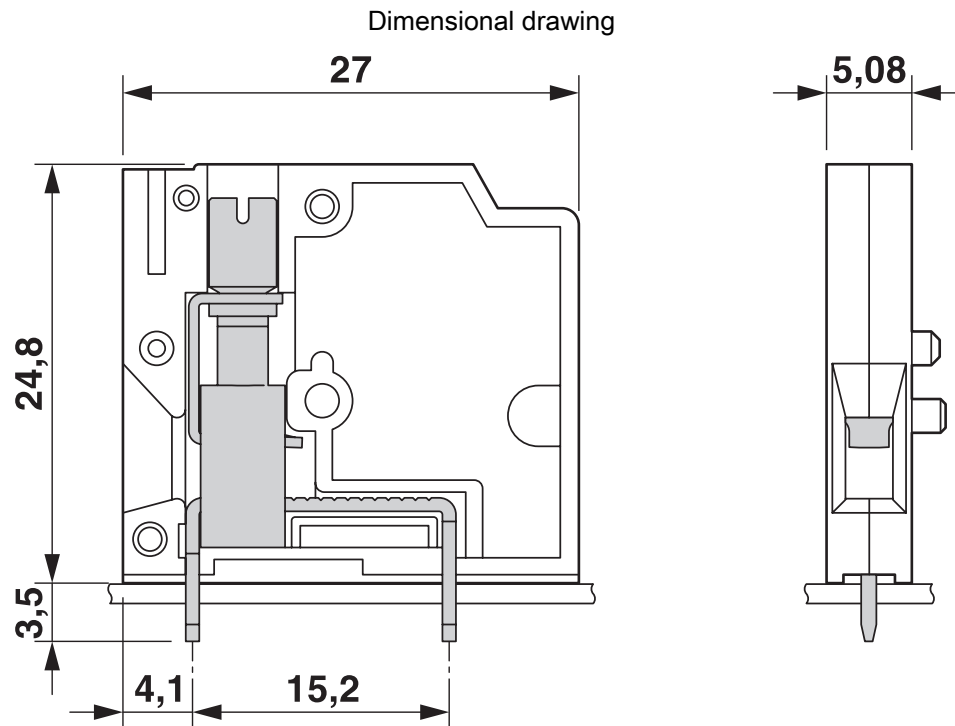
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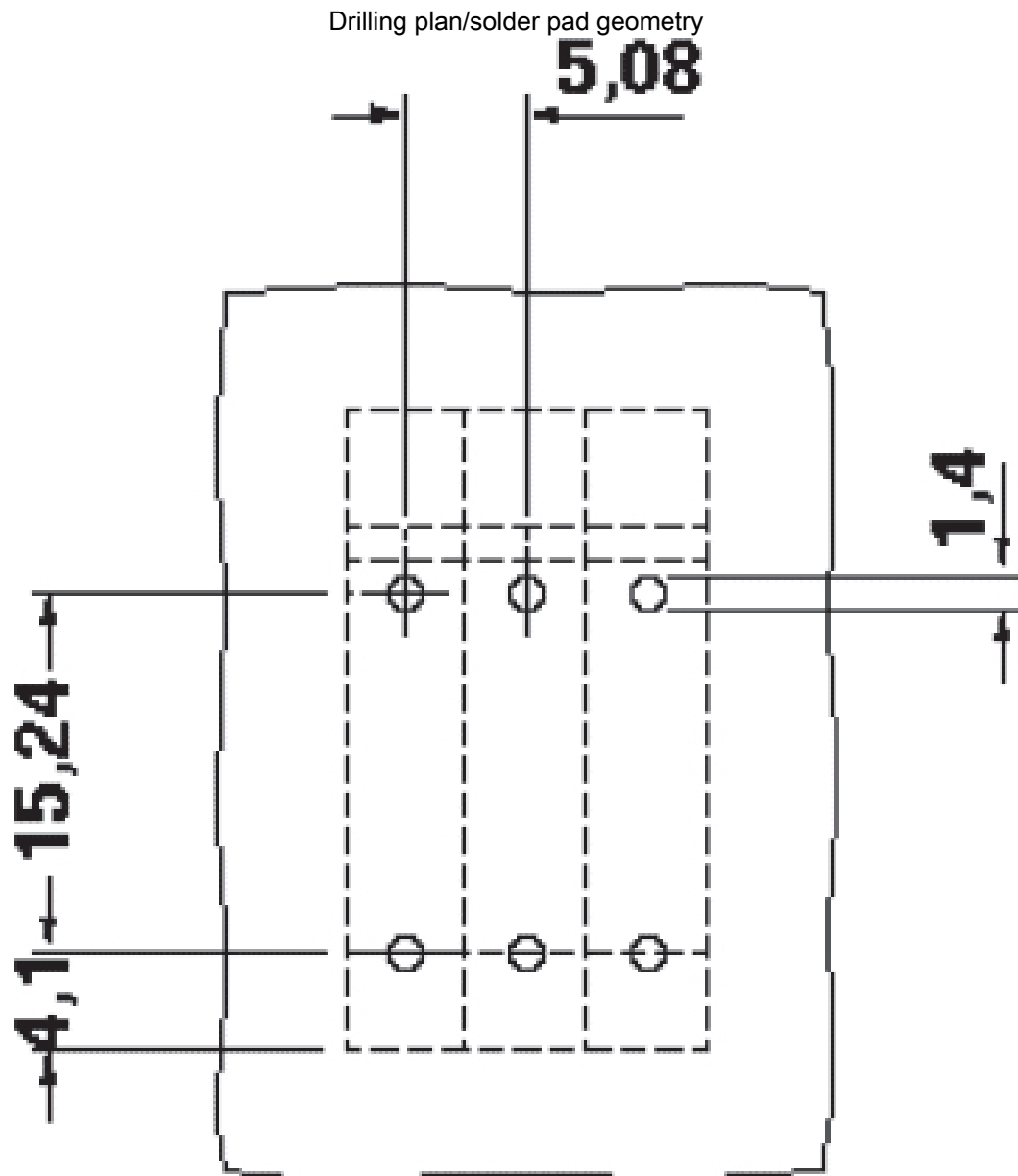
Drawings



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1704004>

 CSA Approval ID: 13631				
	Nominal voltage U _N	Nominal current I _N	Cross section AWG	Cross section mm ²
	300 V	10 A	24 - 12	-

 UL Recognized Approval ID: FILE E 60425				
	Nominal voltage U _N	Nominal current I _N	Cross section AWG	Cross section mm ²
Use group B				
	250 V	15 A	28 - 12	-
Use group D				
	300 V	10 A	28 - 12	-

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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
Exemption	6(c)

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	221af48b-30c3-470c-9fc5-0f8d17612af3

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Accessories

RZ 2,54 - Pitch spacer

1780044

<https://www.phoenixcontact.com/us/products/1780044>



Pitch spacer, raises the pitch by 2.54 mm, interlocks with terminal block of the same shape, color: green

RPS - Reducing plug

0201647

<https://www.phoenixcontact.com/us/products/0201647>



Reducing plug, number of positions: 1, color: gray

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SZG 0,6X3,5 VDE - Screwdriver

1205121

<https://www.phoenixcontact.com/us/products/1205121>



Screwdriver, slot-headed, graded, for test socket screws, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

MPS-MT - Test plug

0201744

<https://www.phoenixcontact.com/us/products/0201744>



Test plug, with solder connection up to 1 mm² conductor cross section, number of positions: 1, color: gray

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BNB-ZB 5,LGS:FORTL.ZAHLEN - Marker pin Zack strip

1400201

<https://www.phoenixcontact.com/us/products/1400201>



Marker pin Zack strip, Strip, white, labeled, printed horizontally: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 491 ... 500, mounting type: plug in, for terminal block width: 5 mm, lettering field size: 4 x 4 mm, Number of individual labels: 10

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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com