KDS 4 - PCB terminal block

1780507

https://www.phoenixcontact.com/in/products/1780507

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PCB terminal block, nominal current: 41 A, rated voltage (III/2): 320 V, nominal cross section: 4 mm^2, number of potentials: 1, number of rows: 1, number of positions per row: 1, product range: KDS 4, pitch: 7.5 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]: 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
- Potentials can be easily looped through with additional connection to the PCB
- 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	1780507
Packing unit	50 pc
Minimum order quantity	50 pc
Sales Key	AAN
Product Key	AANFBA
Catalog Page	Page 127 (C-1-2013)
GTIN	4017918040918
Weight per Piece (including packing)	5.29 g
Weight per Piece (excluding packing)	0.53 g
Customs tariff number	85369010
Country of origin	PL

Technical Data

Product properties

Type	PCB terminal block can be aligned in rows+feed-through terminal block
Product line	COMBICON Terminals L
Product type	Printed circuit board terminal
Product family	KDS 4
Number of positions	1
Pitch	7.5 mm
Number of connections	2
Number of rows	1
Number of potentials	1
Pin layout	Linear pinning
Solder pins per potential	2

Electrical properties

Nominal current I_N	41 A
Nominal voltage U_N	320 V
Degree of pollution	3
Rated voltage (III/3)	320 V
Rated surge voltage (III/3)	4 kV
Rated voltage (III/2)	320 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	PCB terminal block can be aligned in rows+feed-through terminal block
Nominal cross section	4 mm²

Conductor connection

Connection method	Screw connection with tension sleeve
Conductor cross section rigid	0.2 mm² ... 6 mm²
Conductor cross section flexible	0.2 mm² ... 4 mm²
Conductor cross section AWG	24 ... 10
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm² ... 4 mm²
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm² ... 4 mm²
2 conductors with same cross section, solid	0.2 mm² ... 1.5 mm²
2 conductors with same cross section, flexible	0.2 mm² ... 1 mm²
2 conductors with same cross section, flexible, with ferrule	0.25 mm² ... 1 mm²

without plastic sleeve	
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm² ... 2.5 mm²
Stripping length	8 mm
Tightening torque	0.6 Nm ... 0.8 Nm

Mounting

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

Processing notes

Process	Wave soldering

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

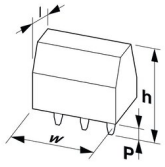
Material data - housing

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

Material data – actuating element

Color ()	()

Dimensions

Dimensional drawing	
Pitch	7.5 mm

Width [w]	7.5 mm
Height [h]	23 mm
Length [l]	20.6 mm
Installed height	18 mm
Solder pin length [P]	5 mm

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 setpoint/actual value	0.2 mm² / solid / > 10 N
	0.2 mm² / flexible / > 10 N
	6 mm² / solid / > 80 N
	4 mm² / flexible / > 60 N

Torque test

Specification	IEC 60999-1:1990-05

Electrical tests

Temperature-rise test

Specification	IEC 60999-1:1990-05
Requirement temperature-rise test	Increase in temperature ≤ 45 K

Insulation resistance

Specification	IEC 60512-2:1985-00
Insulation resistance, neighboring positions	10^{12} 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)	320 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

Specification	IEC 60068-2-6:1982 + AMD 2:1985
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

Ambient conditions

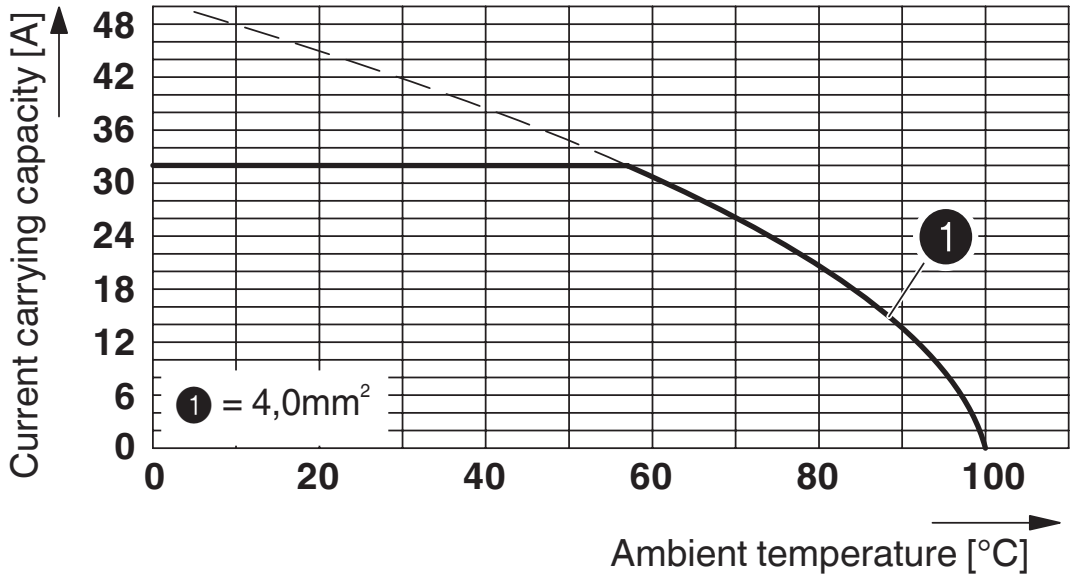
Ambient temperature (operation)	-40 °C ... 100 °C (Depending on the current carrying capacity/derating curve)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

Packaging specifications

Type of packaging	packed in cardboard

Drawings

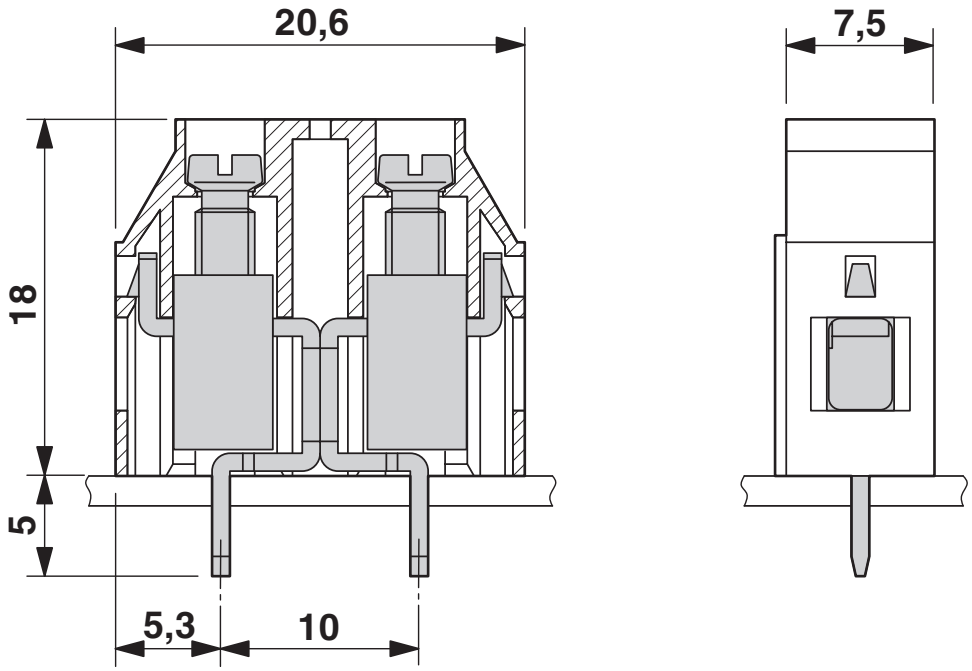
Diagram



Type: KDS 4

Test following DIN EN 60512-5-2:2003-01
Reduction factor = 1
No. of positions: 5

Dimensional drawing



Approvals

CSA
Approval ID: 13631

	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	300 V	30 A	28 - 10	-
	300 V	10 A	28 - 10	-

EAC
Approval ID: B.01687

cULus Recognized
Approval ID: E60425-19770427

	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	300 V	30 A	30 - 10	-
	300 V	10 A	30 - 10	-

DNV GL
Approval ID: TAE00001EV

IECEE CB Scheme
Approval ID: DE1-66542

	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	320 V	41 A	-	0.2 - 6

VDE Zeichengenehmigung
Approval ID: 40055394

	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	320 V	41 A	-	0.2 - 6

Classifications

ECLASS

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

ETIM

ETIM 8.0	EC002643

UNSPSC

UNSPSC 21.0	39121400

Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

Accessories

RZ-KDS 4 - Pitch spacer

1705058

https://www.phoenixcontact.com/in/products/1705058

Pitch spacer, raises the pitch by 2.5 mm, interlocks with terminal block of the same shape, color: green

SZS 0,6X3,5 - Screwdriver

1205053

https://www.phoenixcontact.com/in/products/1205053

Actuation tool, for ST terminal blocks, insulated, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

SK 7,5/5:FORTL.ZAHLEN - Marker card

0804468

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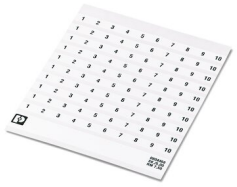

Marker card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 100, mounting type: adhesive, for terminal block width: 7.5 mm, lettering field size: 7.5 x 5 mm

BNB-ZB 7,5,LGS:FORTL.ZAHLEN - Marker pin Zack strip

1400052

https://www.phoenixcontact.com/in/products/1400052

Marker pin Zack strip, Strip, white, labeled, printed horizontally: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 991 ... 1000, mounting type: plug in, for terminal block width: 7.5 mm, lettering field size: 6 x 4 mm, Number of individual labels: 10

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