GKDS-EX - PCB terminal block

1709203

https://www.phoenixcontact.com/us/products/1709203

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Printed circuit board terminal, nominal current: 20 A, nominal cross section: 2.5 mm^2, number of potentials: 1, number of rows: 1, number of positions per row: 1, product range: GKDS-EX, 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: black, 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! Every group of terminal blocks is to be provided with a GRZ 2,5V-EX (1706112) flange plate on both sides. If there are more than 10 terminal blocks, at least one additional flange plate must be mounted for each further group of ten. When the pitch spacer GRZ 2,5-EX (1724628) is used, the max. working voltage is increased to 420 V.

Your advantages

- Well-known connection principle allows worldwide use
- Low temperature rise, thanks to maximum contact force
- Satisfies the more stringent safety requirements of “Ex e” protection according to IEC 60079-7 for potentially explosive areas
- 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	1709203
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	AA13
Product key	AAMFGA
GTIN	4017918023638
Weight per piece (including packing)	4.317 g
Weight per piece (excluding packing)	3.991 g
Customs tariff number	85369010
Country of origin	DE

Technical data

Product properties

Product type	Printed circuit board terminal
Product family	GKDS-EX
Product line	COMBICON Terminals M
Type	PC terminal block can be aligned
Number of positions	1
Pitch	7.5 mm
Number of connections	1
Number of rows	1
Number of potentials	1
Pin layout	Linear pinning
Solder pins per potential	2

Electrical properties

Properties

Nominal current I_N	20 A
Nominal voltage U_N	275 V
Rated current / conductor cross-section	20 A/2.5 mm²

Connection data

Connection technology

Type	PC terminal block can be aligned
Nominal cross section	2.5 mm²

Conductor connection

Connection method	Screw connection with tension sleeve
Conductor cross-section rigid	0.2 mm² ... 4 mm²
Conductor cross-section flexible	0.2 mm² ... 2.5 mm²
Conductor cross-section AWG	24 ... 12
Conductor cross-section flexible, with ferrule without plastic sleeve	0.25 mm² ... 2.5 mm²
Conductor cross-section, flexible, with ferrule, with plastic sleeve	0.25 mm² ... 2.5 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 without plastic sleeve	0.25 mm² ... 0.5 mm²
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm² ... 1 mm²
Stripping length	9 mm
Drive form screw head	Slotted (L)
Tightening torque	0.5 Nm ... 0.6 Nm

Mounting

Mounting type	Wave soldering
Pin layout	Linear pinning

Material specifications

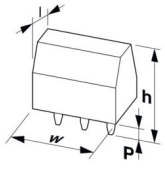
Material data - contact

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)	black (9005)
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	7.5 mm
Width [w]	7.5 mm
Height [h]	19.5 mm
Length [l]	19 mm
Installed height	20 mm
Solder pin length [P]	5 mm
Pin dimensions	1.1 x 0.8 mm

PCB design

Hole diameter	1.4 mm

Electrical tests

Air clearances and creepage distances |

Insulating material group	I

Environmental and real-life conditions

Ambient conditions

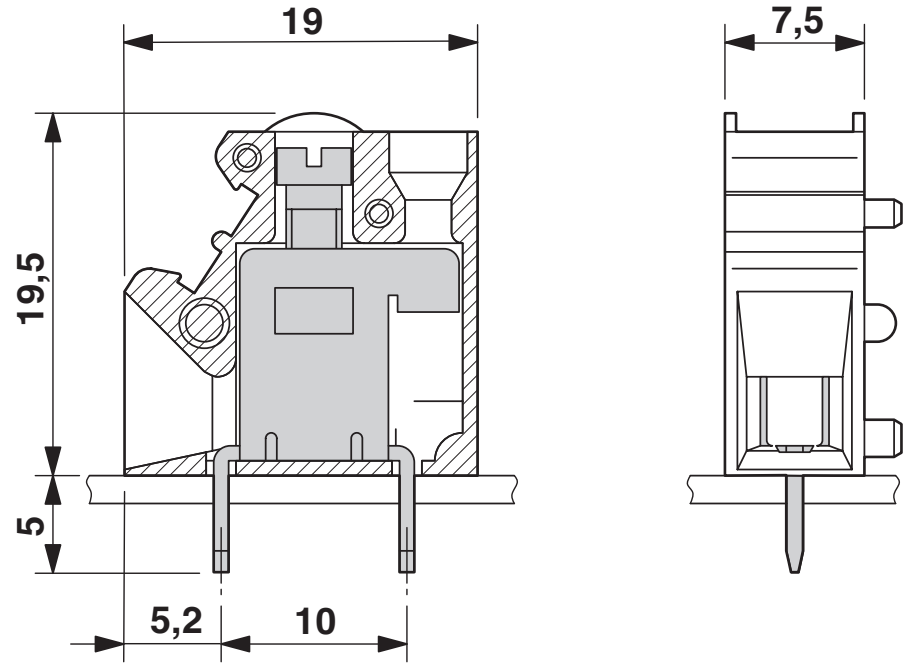
Ambient temperature (operation)	-25 °C ... 80 °C
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

Packaging specifications

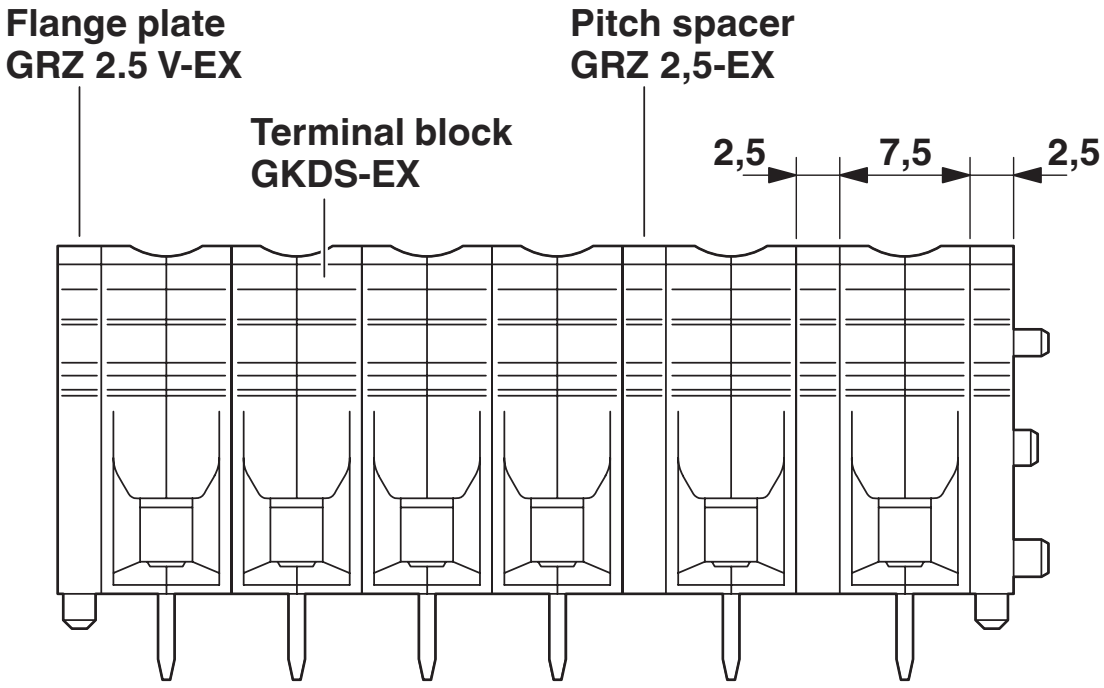
Type of packaging	packed in cardboard

Drawings

Dimensional drawing

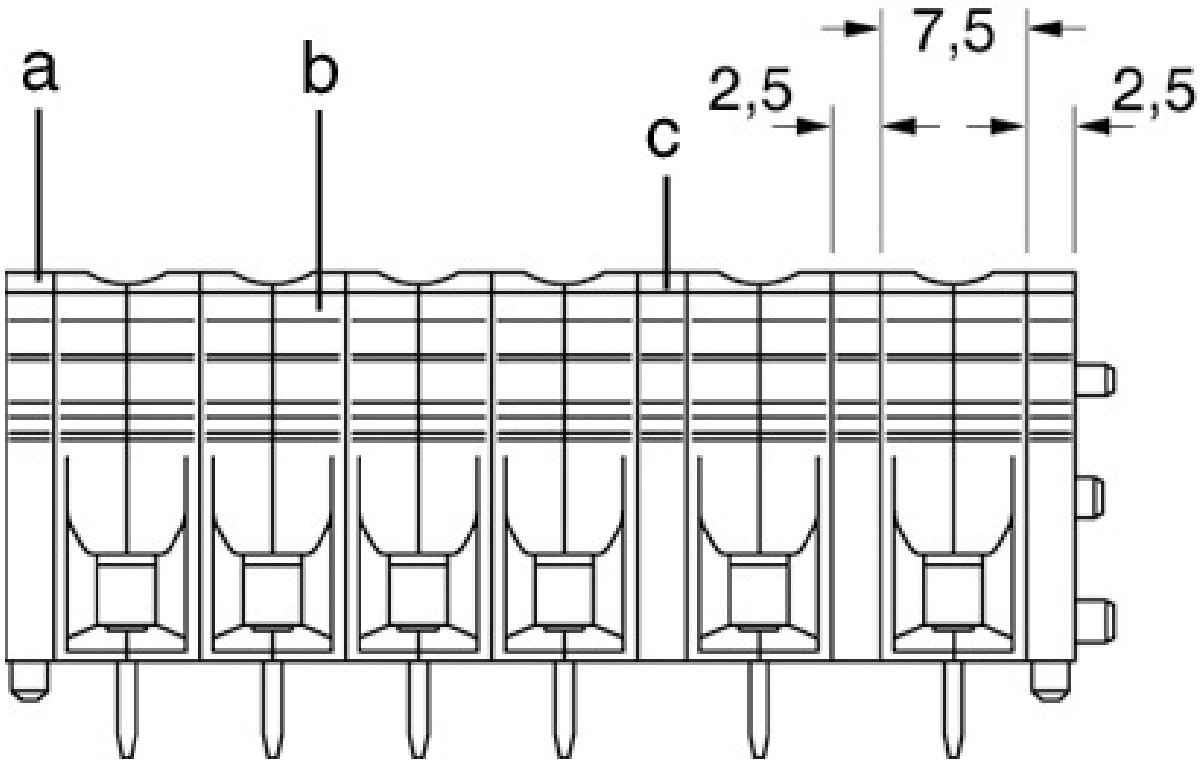


Dimensional drawing



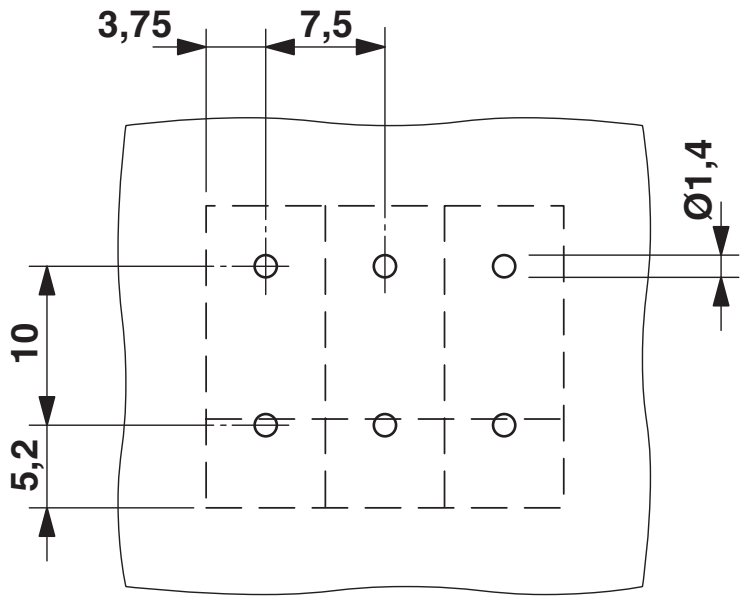
Installation instructions

Schematic diagram



a = Flange plate, GRZ 2,5 V-EX
b = Terminal block GKDS-EX
c = Pitch spacer GRZ 2,5-EX

Drilling plan/solder pad geometry



Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1709203

ATEX
Approval ID: SEV 15 ATEX 0178 U

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	275 V	20 A	-	0.2 - 2.5
Only rigid conductors	275 V	26 A	-	- 4
with pitch spacer	420 V	20 A	-	0.2 - 2.5

cUL Recognized
Approval ID: FILE E 192998

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B				
	160 V	15 A	30 - 14	30 - 14
with pitch spacer	250 V	-	30 - 14	30 - 14
C				
	50 V	15 A	30 - 14	30 - 14
D				
	160 V	10 A	30 - 14	30 - 14
with pitch spacer	250 V	-	30 - 14	30 - 14

IECEx
Approval ID: IECEx SEV 15.0026U

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	275 V	20 A	-	0.2 - 2.5
Only rigid conductors	275 V	26 A	-	- 4
with pitch spacer	420 V	20 A	-	0.2 - 2.5

UL Recognized
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	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B				
	160 V	15 A	30 - 14	-
with pitch spacer	250 V	-	30 - 14	-
C				
	50 V	15 A	30 - 14	-
D				

	160 V	10 A	30 - 14	-
with pitch spacer	250 V	-	30 - 14	-

Classifications

ECLASS

ECLASS-13.0	27460101
ECLASS-15.0	27460101

ETIM

ETIM 9.0	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%

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