#### 5452602

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PCB terminal block, nominal current: 13.5 A, rated voltage (III/2): 200 V, nominal cross section: 1.5 mm<sup>2</sup>, number of potentials: 2, number of rows: 1, number of positions per row: 2, product range: BC-X9, pitch: 3.5 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]: 3.5 mm, number of solder pins per potential: 1, type of packaging: packed in cardboard

## Commercial data

Item number	5452602
Packing unit	100 pc
Minimum order quantity	100 pc
Sales key	AA12
Product key	AALFPG
GTIN	4046356849791
Weight per piece (including packing)	1.088 g
Weight per piece (excluding packing)	0.9 g
Customs tariff number	85369010
Country of origin	CN



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## Technical data

## Product properties

Product type	Printed circuit board terminal
Product family	BC-X9
Product line	COMBICON Terminals S
Туре	PC termination block
Number of positions	2
Pitch	3.5 mm
Number of connections	2
Number of rows	1
Number of potentials	2
Pin layout	Linear pinning
Solder pins per potential	1

## **Electrical properties**

Nominal current I <sub>N</sub>	13.5 A
Nominal voltage U <sub>N</sub>	200 V
Degree of pollution	3
Rated voltage (III/3)	160 V
Rated surge voltage (III/3)	2.5 kV
Rated voltage (III/2)	200 V
Rated surge voltage (III/2)	2.5 kV
Rated voltage (II/2)	400 V
Rated surge voltage (II/2)	2.5 kV

## Connection data

Connection technology	
Туре	PC termination block
Nominal cross section	1.5 mm <sup>2</sup>
Conductor connection	
Connection method	Screw connection with tension sleeve
Conductor cross section rigid	0.14 mm <sup>2</sup> 1.5 mm <sup>2</sup>
Conductor cross section flexible	0.14 mm <sup>2</sup> 1.5 mm <sup>2</sup>
Conductor cross section AWG	26 16
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> 0.5 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm² 0.5 mm²
2 conductors with same cross section, solid	0.14 mm² 0.5 mm²
2 conductors with same cross section, flexible	0.14 mm <sup>2</sup> 0.34 mm <sup>2</sup>
Stripping length	5 mm
Tightening torque	0.22 Nm 0.25 Nm

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## Mounting

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

#### Material specifications

Material	data -	contact
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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

0	
Color (Housing)	black (9005)
Insulating material	PA
Insulating material group	1
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

#### Notes

Note on application	For safe conductor connection, always adhere to a defined tightening torgue. Particularly in the case of PCB terminal blocks
	with two or three positions, the individual solder pin for each contact point cannot compensate for this. That is why the
	terminal blocks must be supported during conductor connection
	(held with one hand, support on the housing).

### Dimensions

Dimensional drawing	h P
Pitch	3.5 mm
Width [w]	7.5 mm
Height [h]	12 mm



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Length [I]	7.3 mm
Installed height	8.5 mm
Solder pin length [P]	3.5 mm
Pin dimensions	0.5 x 0.9 mm
PCB design	
Hole diameter	1.1 mm

#### Electrical tests

Air clearances and creepage distances |

Specification	IEC 60664-1:2007-04
Insulating material group	1
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	160 V
Rated surge voltage (III/3)	2.5 kV
minimum clearance value - non-homogenous field (III/3)	1.5 mm
minimum creepage distance (III/3)	2 mm
Rated insulation voltage (III/2)	200 V
Rated surge voltage (III/2)	2.5 kV
minimum clearance value - non-homogenous field (III/2)	1.5 mm
minimum creepage distance (III/2)	1.5 mm
Rated insulation voltage (II/2)	400 V
Rated surge voltage (II/2)	2.5 kV
minimum clearance value - non-homogenous field (II/2)	1.5 mm
minimum creepage distance (II/2)	2 mm

## Environmental and real-life conditions

# 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

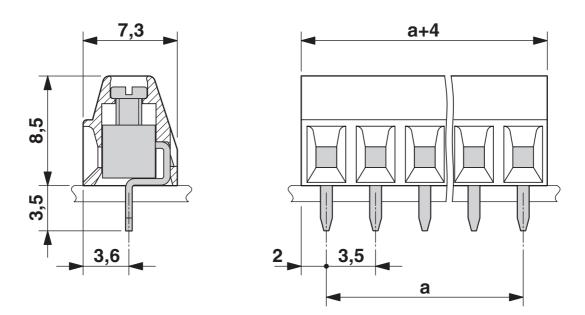
Type of packaging	packed in cardboard

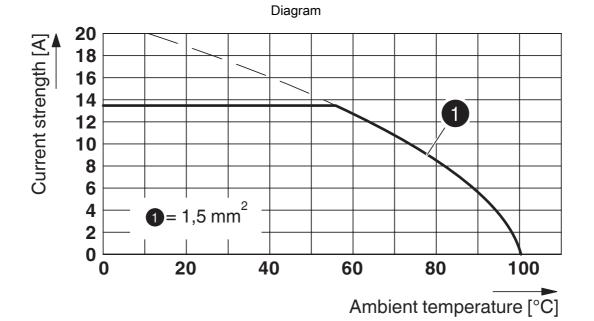


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## Drawings

Dimensional drawing



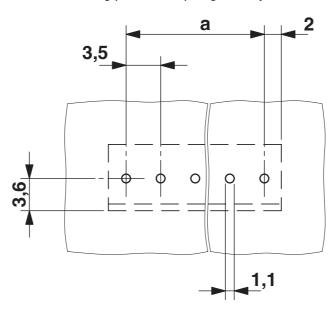


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Drilling plan/solder pad geometry



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## Approvals

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cULus Recognized Approval ID: E60425-20071007				
	Nominal voltage U <sub>N</sub>	Nominal current I <sub>N</sub>	Cross section AWG	Cross section mm <sup>2</sup>
Use group B				
	300 V	10 A	30 - 16	-
Use group D				
	300 V	10 A	30 - 16	-

VDE Zeichengenehmigung Approval ID: 40042618				
	Nominal voltage U <sub>N</sub>	Nominal current I <sub>N</sub>	Cross section AWG	Cross section mm <sup>2</sup>
	200 V	17.5 A	-	0.14 - 1.5



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## Classifications

### ECLASS

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

## ETIM

	ETIM 8.0	EC002643
UN	NSPSC	
	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)

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## Accessories

SZS 0,4X2,5 VDE - Screwdriver

1205037 https://www.phoenixcontact.com/us/products/1205037



Screwdriver, slot-headed, VDE insulated, size: 0.4 x 2.5 x 80 mm, 2-component grip, with non-slip grip

#### SK 3,81/2,8:FORTL.ZAHLEN - Marker card

0804109

https://www.phoenixcontact.com/us/products/0804109



Marker card, Sheet, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 . .. 20, etc. up to 91 ... (99)100, mounting type: adhesive, for terminal block width: 3.81 mm, lettering field size: 3.81 x 2.8 mm, Number of individual labels: 14

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B-STIFT - Marker pen

#### 1051993

https://www.phoenixcontact.com/us/products/1051993



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5  $\rm mm$ 

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