

Data sheet

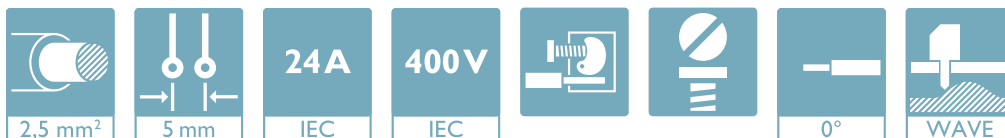
Order No.: 1700008

Type: FRONT 2,5-H/SA 5

PCB terminal block, Front screw connection



1 Main features



- | | | | |
|---------------------------|------------------------|------------------------|---------------------|
| • No. of pos. | 1 | • Nominal current | 24 A |
| • Conductor cross section | 2.5 mm ² | • Nominal voltage | 400 V |
| • Color | green | • Connection direction | 0° |
| • Pitch | 5 mm | • Type of packaging | packed in cardboard |
| • Connection method | Front screw connection | | |

2 Your advantages

- ✓ Well-known connection principle allows worldwide use
- ✓ Low temperature rise, thanks to maximum contact force
- ✓ Allows connection of two conductors
- ✓ 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



Make sure you always use the latest documentation.

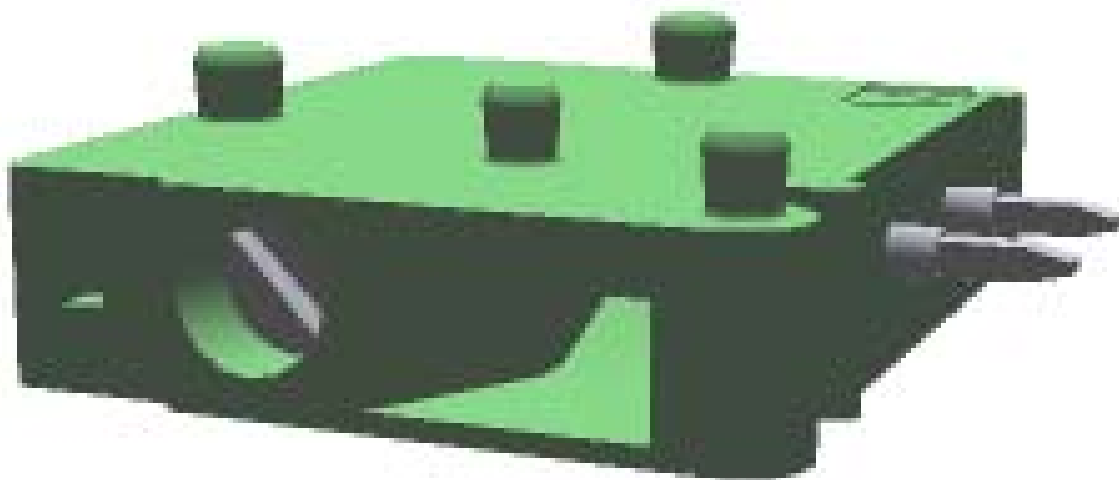
It can be downloaded at: phoenixcontact.net/product/1700008

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1700008 FRONT 2,5-H/SA 5

4 3D model in PDF can be activated (Acrobat Reader only)



1700008 FRONT 2,5-H/SA 5**5 item properties**

Order No.	1700008
Type	FRONT 2,5-H/SA 5
Range of articles	FRONT 2,5-H/SA 5
Pitch	5 mm
Number of positions	1
Connection method	Front screw connection
Drive form screw head	Slotted
Screw thread	M2,5
Tightening torque	0.4 Nm ... 0.5 Nm
Mounting type	Wave soldering
Pin layout	Linear double pinning
Product note	The article can be aligned to create different nos. of positions!

5.1 Connection capacity

Conductor cross section, solid	0.2 mm ² to 2.5 mm ²
Conductor cross section, flexible	0.2 mm ² to 2.5 mm ²
Conductor cross section AWG/kcmil	24 to 14
2 conductors with same cross section, solid	0.2 mm ² to 0.75 mm ²
2 conductors with same cross section, stranded	0.2 mm ² to 0.75 mm ²
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² to 1.5 mm ²
Conductor cross section flexible, with ferrule with plastic sleeve	0.25 mm ² to 1.5 mm ²
2 conductors with same cross section, stranded, with ferrule without plastic sleeve	0.25 mm ² to 0.34 mm ²
Stripping length	9 mm

5.2 Material data

Material of metal parts	
Note	WEEE/RoHS-compliant, whisker-free acc. to IEC 60068-2-82/JEDEC JESD 201
Contact material	Cu alloy
Terminal point surface	Sn 5 µm ... 7 µm
Soldering area surface	Sn 5 µm ... 7 µm
Surface characteristics	Tin-plated
Insulating material data	
Insulating material	PA
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0
Color	green (6021)
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

6 Dimensions**6.1 Dimensions for the product**

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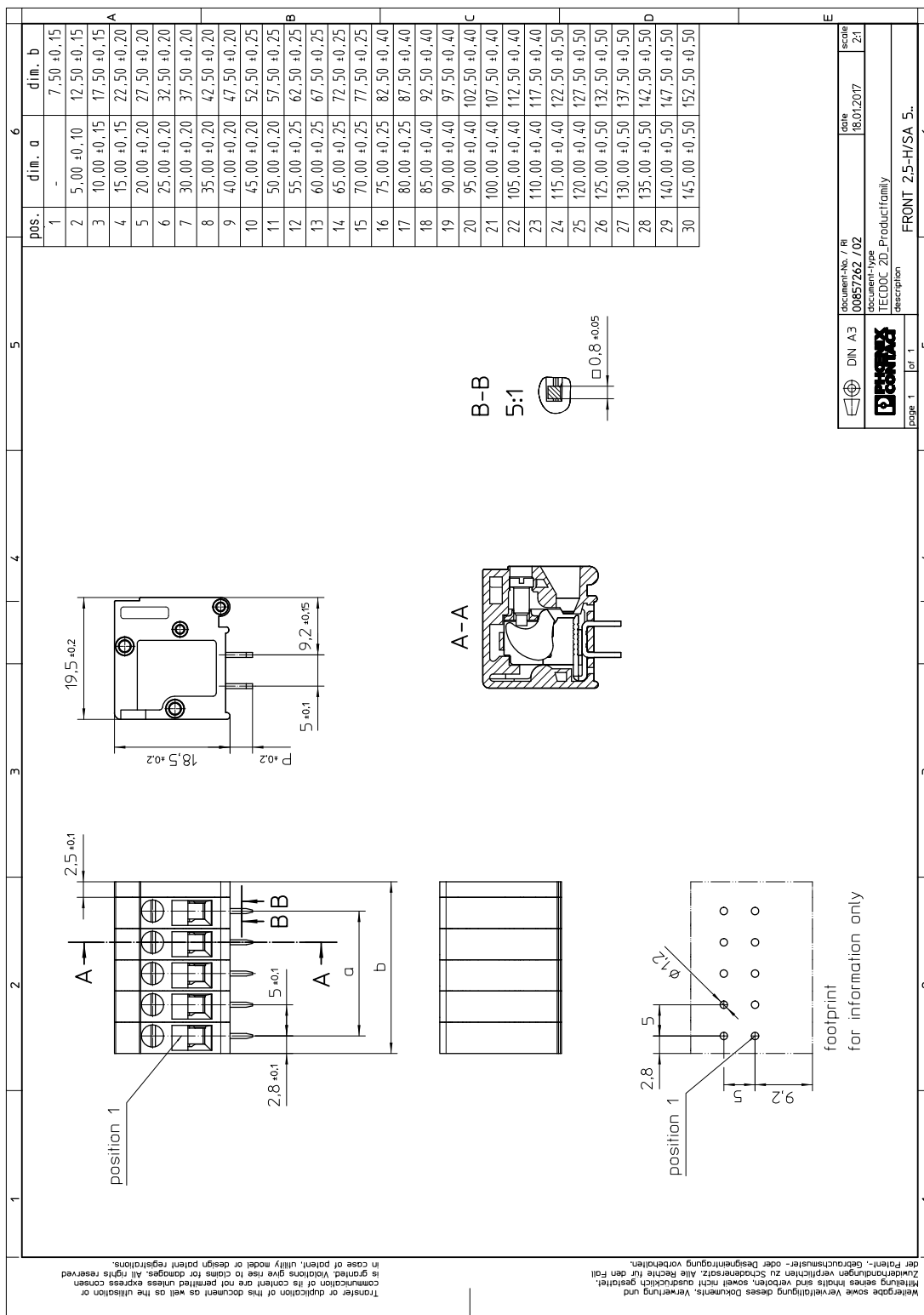
Length	19.5 mm
Width	7.5 mm
Height (without solder pin)	18.5 mm
Total height	22 mm
Solder pin [P]	3.5 mm
Dimension a	

6.2 Dimensions for PCB design

Hole diameter	1.2 mm
Pin dimensions	0,8 x 0,8 mm
Pin spacing	5 mm

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7 Series drawing



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page 1 of 1	description FRONT 2,5-H/SA 5...		6

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8 Packaging information

Type of packaging	packed in cardboard
Pieces per package	50

9 Application**9.1 Temperature limit values**

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

1700008 FRONT 2,5-H/SA 5**10 Mechanical tests****10.1 Termination and connection method**

Termination and connection method: pull-out test	
Specification	IEC 60999-1:1999-11
Check for damage to conductor or loosening	Test passed

10.2 Pull-out test

Termination and connection method: pull-out test	
Specification	IEC 60999-1:1999-11
Result	Test passed
Conductor cross section/conductor type/tractive force actual value	0.2 mm ² / solid / > 10 N
Conductor cross section/conductor type/tractive force actual value	0.2 mm ² / stranded / > 10 N
Conductor cross section/conductor type/tractive force actual value	2.5 mm ² / stranded / > 50 N
Conductor cross section/conductor type/tractive force actual value	2.5 mm ² / solid / > 50 N

1700008 FRONT 2,5-H/SA 5**11 Electrical tests****11.1 Electrical data**

Rated current / conductor cross section	24 A / 2.5 mm ²
Rated insulation voltage (III/2)	400 V
Rated surge voltage (III/2)	4 kV
Contact resistance	0.33 mΩ
Degree of pollution	2

11.2 Short-time withstand current test

Specification	IEC 60947-7-4:2013-08
Result	Test passed
Conductor cross section/short-time current	2.5 mm ² / 156 A

11.3 Aging test (climatic impact and corrosion testing)

Specification	IEC 60947-7-4:2013-08
Result	Test passed
Contact resistance R ₁	0.33 mΩ / 2.5 mm ²
Test sequence 1: low temperature storage	-40 °C / 2 h
Test sequence 2: heat storage	168 h/100°C
Test sequence 3: noxious gas storage (ISO 6988)	KFW 0.2 S/1 cycle
Contact resistance R ₂	0.35 mΩ / 2.5 mm ²
Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 μs)	4.8 kV
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	2.21 kV

11.4 Insulation resistance

Specification	IEC 60512-3-1:2002-02
Result	Test passed
Insulation resistance, neighboring positions	> 0.2 TΩ

11.5 Mechanical connection test for the PCB terminal block

Specification	IEC 60947-7-4:2013-08
Result	Test passed

11.6 Temperature-rise test

Specification	IEC 60947-7-4:2013-08
Result	Test passed

1700008 FRONT 2,5-H/SA 5**12 Current carrying capacity/derating curves**

Specification	IEC 60512-5-2:2002-02
Reduction factor	1
Number of positions	4

Type: FRONT 2,5-H/SA 5/...

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1700008 FRONT 2,5-H/SA 5**13 Environmental and durability tests****13.1 Assessment of fire risk (glow wire test)**


Specification	IEC 60695-2-10:2013-04		
Result	Test passed		
Temperature	850 °C		
Time of exposure	5 s		


13.2 Vibration test

Specification	IEC 60068-2-6:2007-12
Result	Test passed
Frequency	10 - 150 - 10 Hz
Sweep speed	1 octave/min
Amplitude	0.35 mm (10 - 60.1 Hz)
Acceleration	5 g (60.1 - 150 Hz)
Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis
Contact interruption	

14 Approvals

CSA 			
Use group	B	D	
mm ² /AWG/kcmil	24-12	24-12	
Voltage	300 V	300 V	
Current	10 A	10 A	

UL Recognized 			
Use group	B	C	D
mm ² /AWG/kcmil	30-12	30-12	30-12
Voltage	300 V	300 V	300 V
Current	20 A	17 A	20 A

cUL Recognized 			
Use group	B	C	D
mm ² /AWG/kcmil	30-12	30-12	30-12
Voltage	300 V	300 V	300 V
Current	20 A	17 A	20 A

RS 			
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EAC 			
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DNV GL			
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2017-08-31

Product version 05

Document revision 0

1700008 FRONT 2,5-H/SA 5

cULus Recognized 

1700008 FRONT 2,5-H/SA 5**15 Commercial Data**

Order No.	1700008
Type	FRONT 2,5-H/SA 5
Pieces per package	50
Net weight	3.317 g
GTIN	4017918022693
	Information that applies locally, see link on page 1
Country of origin	Information that applies locally, see link on page 1

16 Accessories

Description	Order No.	Type
End cover, necessary at the end of a terminal row, 2.5 mm thick, color: green	1700024	D-FRONT 2,5-H-O.Z.
Pitch spacer, raises the pitch by 2.5 mm, interlocks with terminal block of the same shape, color: green	1700079	RZ 2,5-FRONT 2,5 H
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	1205053	SZS 0,6X3,5
	0804183	SK 5/3,8:FORTL.ZAHLEN
	0803906	SK U/3,8 WH:UNBEDRUCKT
	0805409	SK 5/3,8:UNBEDRUCKT
	0805072	SK 5/3,8:SO
Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm	1051993	B-STIFT



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