

# PC 4/ 7-G-7,62 BK - PCB header



1838255

<https://www.phoenixcontact.com/pc/products/1838255>

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PCB headers, nominal cross section: 4 mm<sup>2</sup>, color: black, nominal current: 20 A, rated voltage (III/2): 630 V, contact surface: Tin, contact connection type: Pin, number of potentials: 7, number of rows: 1, number of positions: 7, number of connections: 7, product range: PC 4/..-G, pitch: 7.62 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 5 mm, number of solder pins per potential: 2, plug-in system: COMBICON PC 4, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard, Mounting flange: Accessory Item No. 1827570

## Your advantages

- Well-known mounting principle allows worldwide use
- Maximum flexibility when it comes to device design – one header for connectors with different connection technologies
- Easy PCB replacement thanks to plug-in modules
- Plug-in direction parallel to the PCB

## Commercial data

Item number	1838255
Packing unit	50 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)
Product key	AADSAA
GTIN	4017918226947
Weight per piece (including packing)	12.486 g
Weight per piece (excluding packing)	12.486 g
Customs tariff number	85366930
Country of origin	DE

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## Technical data

### Product properties

Product type	PCB headers
Product family	PC 4/..-G
Product line	COMBICON Connectors L
Type	Standard
Number of positions	7
Pitch	7.62 mm
Number of connections	7
Number of rows	1
Number of potentials	7
Mounting flange	Flange as accessory
Pin layout	Linear pinning
Solder pins per potential	2

### Electrical properties

Nominal current $I_N$	20 A
Nominal voltage $U_N$	630 V
Degree of pollution	3
Contact resistance	0.5 m $\Omega$
Rated voltage (III/3)	400 V
Rated surge voltage (III/3)	6 kV
Rated voltage (III/2)	630 V
Rated surge voltage (III/2)	6 kV
Rated voltage (II/2)	630 V
Rated surge voltage (II/2)	6 kV

### 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 contact area (top layer)	Tin (5 - 7 $\mu\text{m}$ Sn)
Metal surface contact area (middle layer)	Nickel (2 - 5 $\mu\text{m}$ Ni)
Metal surface soldering area (top layer)	Tin (5 - 7 $\mu\text{m}$ Sn)
Metal surface soldering area (middle layer)	Nickel (2 - 5 $\mu\text{m}$ Ni)

#### Material data - housing

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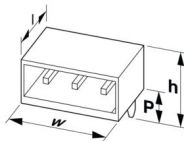
<https://www.phoenixcontact.com/pc/products/1838255>

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

## Notes

Notes on operation	In accordance with IEC 61984, COMBICON connectors have no switching power (COC). During designated use, they must not be plugged in or disconnected when carrying voltage or under load.
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## Dimensions

Dimensional drawing	
Pitch	7.62 mm
Width [w]	53.32 mm
Height [h]	19.25 mm
Length [l]	29 mm
Installed height	14.25 mm
Solder pin length [P]	5 mm
Pin dimensions	1 x 0.8 mm

## PCB design

Hole diameter	1.3 mm
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## Mechanical tests

### Visual inspection

Specification	IEC 60512-1-1:2002-02
Result	Test passed

### Dimension check

Specification	IEC 60512-1-2:2002-02
Result	Test passed

### Resistance of inscriptions

Specification	IEC 60068-2-70:1995-12
Result	Test passed

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## Polarization and coding

Specification	IEC 60512-13-5:2006-02
Result	Test passed

## Contact holder in insert

Specification	IEC 60512-15-1:2008-05
Contact holder in insert Requirements >20 N	Test passed

## Insertion and withdrawal forces

Result	Test passed
No. of cycles	50
Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	5 N

## Electrical tests

### Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	12

### Insulation resistance

Specification	IEC 60512-3-1:2002-02
Insulation resistance, neighboring positions	> 5 MΩ

### 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)	400 V
Rated surge voltage (III/3)	6 kV
minimum clearance value - non-homogenous field (III/3)	5.5 mm
minimum creepage distance (III/3)	5.5 mm
Rated insulation voltage (III/2)	630 V
Rated surge voltage (III/2)	6 kV
minimum clearance value - non-homogenous field (III/2)	5.5 mm
minimum creepage distance (III/2)	5.5 mm
Rated insulation voltage (II/2)	630 V
Rated surge voltage (II/2)	6 kV
minimum clearance value - non-homogenous field (II/2)	5.5 mm
minimum creepage distance (II/2)	5.5 mm

## Environmental and real-life conditions

### Vibration test

Specification	IEC 60068-2-6:2007-12
Frequency	10 - 150 - 10 Hz

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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

## Durability test

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	7.3 kV
Contact resistance $R_1$	0.5 m $\Omega$
Contact resistance $R_2$	0.6 m $\Omega$
Insertion/withdrawal cycles	50

## Climatic test

Specification	ISO 6988:1985-02
Corrosive stress	0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/1 cycle
Thermal stress	100 °C/168 h
Power-frequency withstand voltage	3.31 kV

## Shocks

Specification	IEC 60068-2-27:2008-02
Pulse shape	Half-sine
Acceleration	30g
Shock duration	18 ms
Test directions	X-, Y- and Z-axis (pos. and neg.)

## Ambient conditions

Ambient temperature (operation)	-40 °C ... 100 °C (dependent on the 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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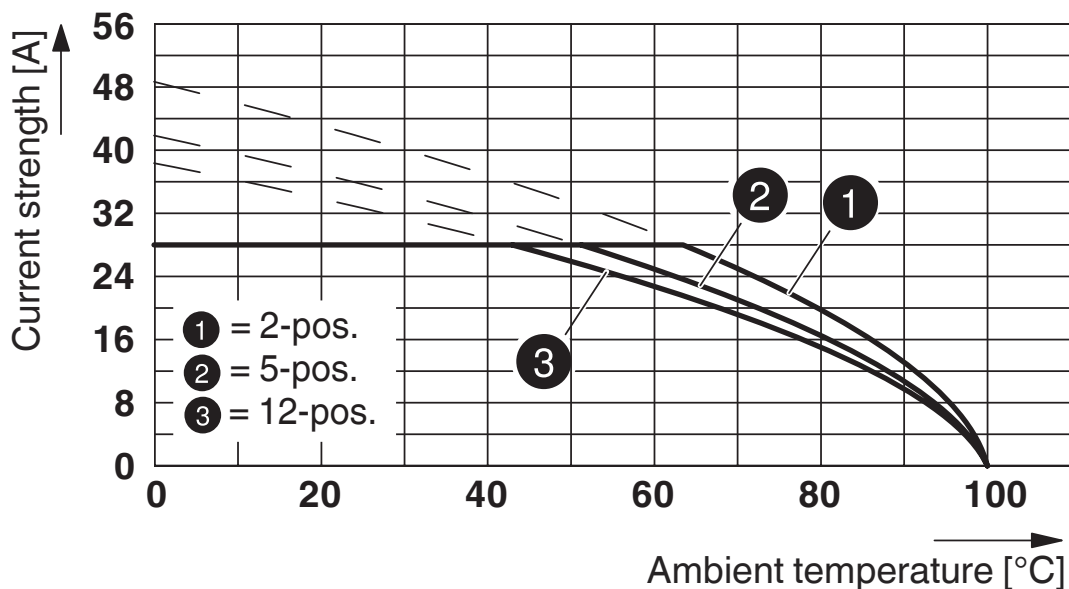
Drawings

Diagram



Type: PC 4/...-ST-7,62 with PC 4/...-G-7,62

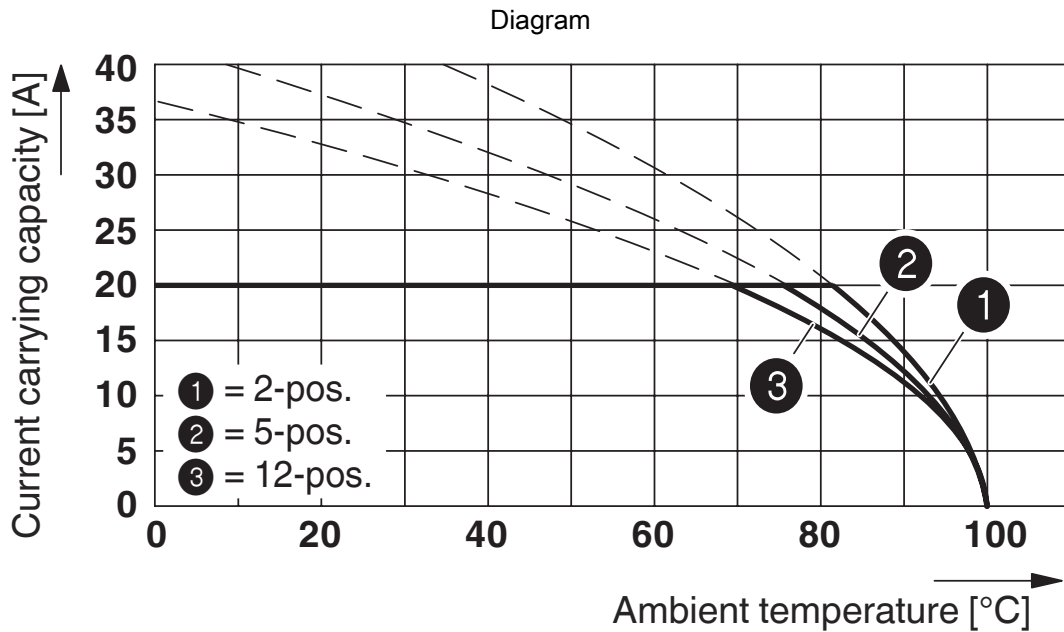
Diagram



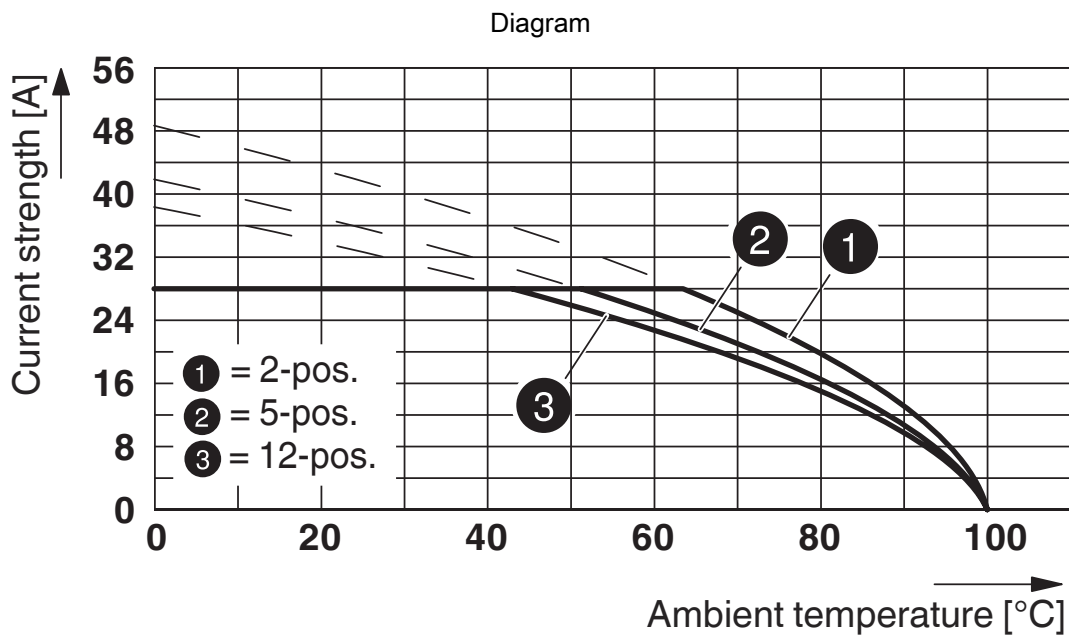
Type: PC 5/...-ST2-7,62 with PC 4/...-G-7,62  
 Conductor cross section: 4 mm<sup>2</sup>

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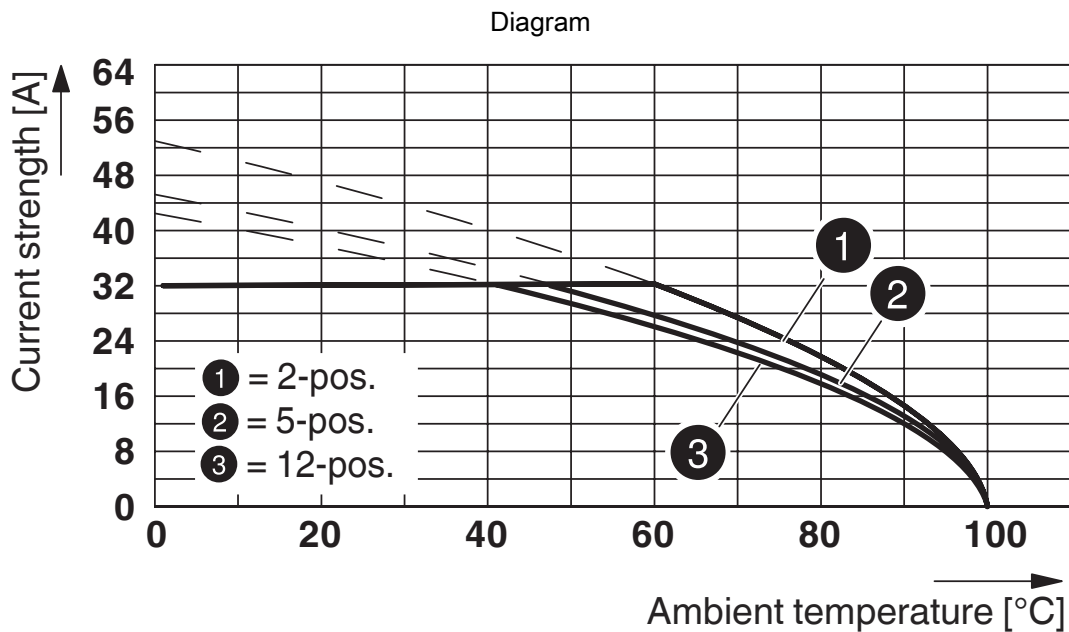
<https://www.phoenixcontact.com/pc/products/1838255>



Type: PC 4/...-STF-7,62 with PC 4/...-G-7,62 and BF-PC 4

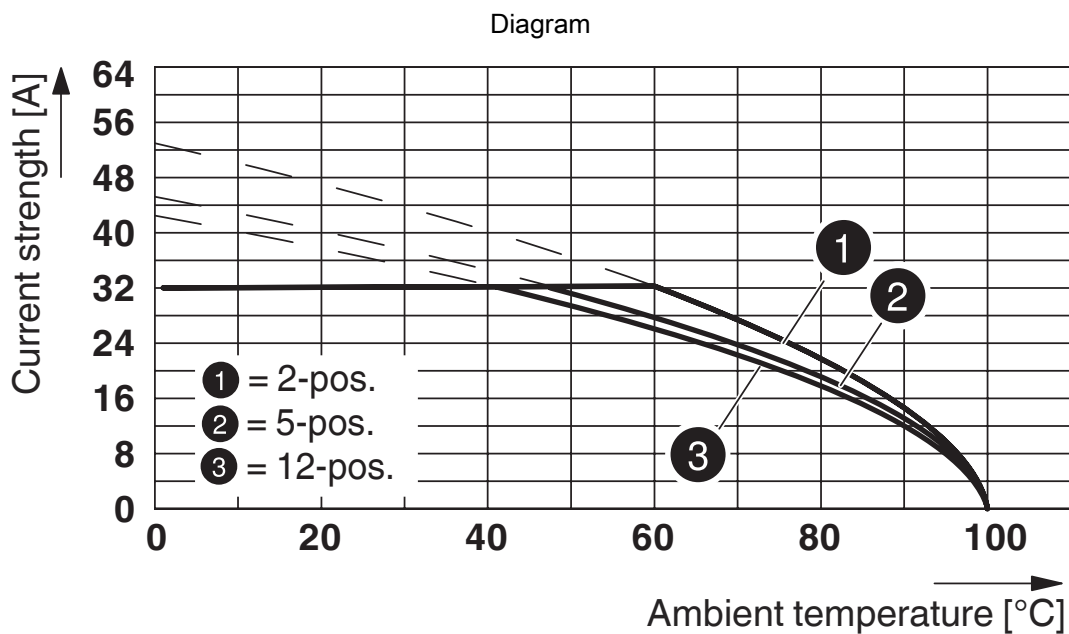


Derating curve for: PC 5/...-ST1-7,62 with PC 4/...-G-7,62  
 Conductor cross section: 4 mm<sup>2</sup>



Type: PC 5/...-ST2-7,62 with PC 4/...-G-7,62

Conductor cross section: 6 mm<sup>2</sup>



Derating curve for: PC 5/...-ST1-7,62 with PC 4/...-G-7,62

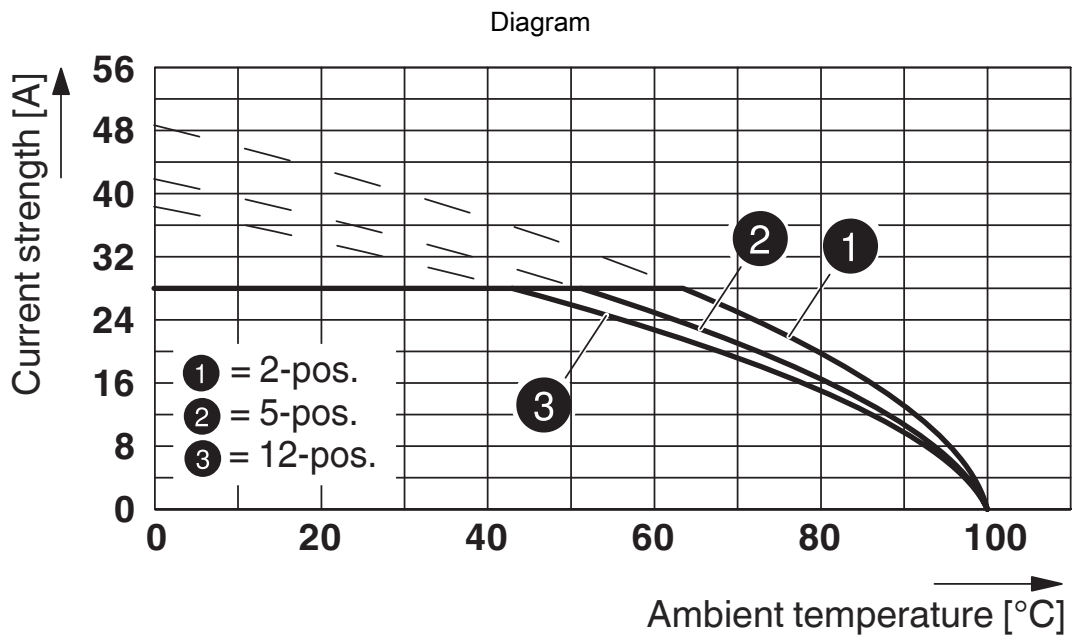
Conductor cross section: 6 mm<sup>2</sup>

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Type: PC 5/...-STF1-7,62 with PC 4/...-G-7,62 and BF-PC 4  
Conductor cross section: 4 mm<sup>2</sup>

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/pc/products/1838255>

 <b>CSA</b> Approval ID: 13631				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
Use group B				
	300 V	20 A	-	-
Use group C				
	300 V	20 A	-	-

 <b>cULus Recognized</b> Approval ID: E60425-19920722				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
Use group B				
	300 V	30 A	-	-
Use group C				
	300 V	30 A	-	-

 <b>DNV GL</b> Approval ID: TAE00001EZ				
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 <b>LR</b> Approval ID: LR21308805TA				
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 <b>BV</b> Approval ID: 35433/B0 BV				
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# PC 4/ 7-G-7,62 BK - PCB header



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## Classifications

### ECLASS

ECLASS-11.0	27460201
ECLASS-12.0	27460201
ECLASS-13.0	27460201

### ETIM

ETIM 8.0	EC002637
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### UNSPSC

UNSPSC 21.0	39121400
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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### 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%
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## Accessories

### BF-PC 4 - Mounting flange

1827570

<https://www.phoenixcontact.com/pc/products/1827570>



Mounting flange, is snapped onto the left and right of the headers, for screw connection with PC 4/...-STF-7.62

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### CP-HCC 4 - Coding profile

1600027

<https://www.phoenixcontact.com/pc/products/1600027>

Coding element, color: red, product range: Coding



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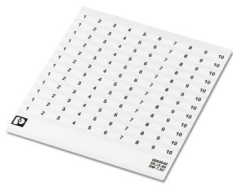
<https://www.phoenixcontact.com/pc/products/1838255>



## SK 7,62/3,8:FORTL.ZAHLEN - Marker card

0804549

<https://www.phoenixcontact.com/pc/products/0804549>



Marker card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 100, mounting type: adhesive, for terminal block width: 7.62 mm, lettering field size: 7.62 x 3.8 mm

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## SK U/3,8 WH:UNBEDRUCKT - Marker card

0803906

<https://www.phoenixcontact.com/pc/products/0803906>



Marker card, Din A4, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, Office printing systems, mounting type: adhesive, for terminal block width: 210 mm, lettering field size: 186 x 3.8 mm, Number of individual labels: 1440

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