

1716687

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Feed-through connector, nominal cross section: 6 mm², color: green, nominal current: 32 A, rated voltage (III/2): 1000 V, contact surface: Sn, contact connection type: Pin, number of potentials: 9, number of rows: 1, number of positions: 9, number of connections: 9, product range: DFK-PC 5/..-STF, pitch: 7.62 mm, connection method: Screw connection with tension sleeve, screw head form: Z1L Slotted Pozidriv, conductor/PCB connection direction: 0 °, plug-in system: COMBICON PC 5, Pin connector pattern alignment: Standard, locking: Screw locking mechanism, mounting method: Screw flange, type of packaging: packed in cardboard

## Your advantages

- · Well-known connection principle allows worldwide use
- · Low temperature rise, thanks to maximum contact force
- · Allows connection of two conductors
- · Flange system enables secure fixing to the housing panel by means of tool-free snap-in locking or screws
- · Shroud for professional EMC shield connection on the front of the device
- · Screwable flange for superior mechanical stability

#### Commercial data

Item number	1716687
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	AADWEB
Product key	AADWEB
Catalog page	Page 549 (C-1-2013)
GTIN	4046356137300
Weight per piece (including packing)	52.8 g
Weight per piece (excluding packing)	45.29 g
Customs tariff number	85366990
Country of origin	PL



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## Technical data

### Product properties

Product type	Feed-through connector
Product family	DFK-PC 5/STF
Product line	COMBICON Connectors L
Туре	Feed-through header
Number of positions	9
Pitch	7.62 mm
Number of connections	9
Number of rows	1
Number of potentials	9
Mounting flange	Screw flange

### Electrical properties

#### **Properties**

Nominal current $I_N$ 32 ANominal voltage $U_N$ 1000 VContact resistance0.5 mΩRated voltage (III/3)630 VRated surge voltage (III/3)8 kVRated voltage (III/2)1000 VRated voltage (III/2)8 kVRated voltage (III/2)1000 VRated voltage (III/2)6 kV	•	
Contact resistance       0.5 mΩ         Rated voltage (III/3)       630 V         Rated surge voltage (III/3)       8 kV         Rated voltage (III/2)       1000 V         Rated surge voltage (III/2)       8 kV         Rated voltage (III/2)       1000 V	Nominal current I <sub>N</sub>	32 A
Rated voltage (III/3)  Rated surge voltage (III/3)  Rated voltage (III/2)  Rated surge voltage (III/2)  Rated surge voltage (III/2)  Rated voltage (III/2)  1000 V	Nominal voltage U <sub>N</sub>	1000 V
Rated surge voltage (III/3)  Rated voltage (III/2)  Rated surge voltage (III/2)  Rated voltage (III/2)  8 kV  Rated voltage (III/2)  1000 V	Contact resistance	$0.5~\text{m}\Omega$
Rated voltage (III/2)  Rated surge voltage (III/2)  Rated voltage (III/2)  1000 V  1000 V	Rated voltage (III/3)	630 V
Rated surge voltage (III/2) 8 kV Rated voltage (II/2) 1000 V	Rated surge voltage (III/3)	8 kV
Rated voltage (II/2) 1000 V	Rated voltage (III/2)	1000 V
	Rated surge voltage (III/2)	8 kV
Rated surge voltage (II/2) 6 kV	Rated voltage (II/2)	1000 V
	Rated surge voltage (II/2)	6 kV

### Connection data

### Connection technology

Туре	Feed-through header
Connector system	COMBICON PC 5
Nominal cross section	6 mm²
Contact connection type	Pin

#### Interlock

Locking type	Screw locking mechanism
Mounting flange	Screw flange

#### Conductor connection

Connection method	Screw connection with tension sleeve
Connection direction of the conductor to plug-in direction	0 °
Conductor cross section rigid	0.2 mm² 10 mm²
Conductor cross section flexible	0.2 mm² 6 mm²
Conductor cross section AWG	24 10



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Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm² 6 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 2.5 mm²
2 conductors with same cross section, flexible	0.2 mm² 4 mm²
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	0.25 mm² 1.5 mm²
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.25 mm <sup>2</sup> 2.5 mm <sup>2</sup>
Cylindrical gauge a x b / diameter	3.6 mm x 3.1 mm / 3.4 mm
Stripping length	10 mm
Drive form screw head	Slotted Pozidriv (Z1L)
Tightening torque	0.7 Nm 0.8 Nm

### 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	hot-dip tin-plated
Metal surface terminal point (top layer)	Tin (4 - 8 μm Sn)
Metal surface contact area (top layer)	Tin (4 - 8 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

### 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

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Dimensional drawing	h



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Pitch	7.62 mm	
Width [w]	103.2 mm	
Height [h]	26.24 mm	
Length [I]	48.95 mm	
Installed height	26.24 mm	
Mechanical tests  Test for conductor damage and slackening		
Specification	IEC 60999-1:1999-11	
Result	Test passed	

Pul	l-out	test

Pull-out test	
Specification	IEC 60999-1:1999-11
Conductor cross section/conductor type/tractive force setpoint/actual value	0.2 mm² / solid / > 10 N
	0.2 mm² / flexible / > 10 N
	10 mm² / solid / > 90 N
	6 mm² / flexible / > 80 N

#### Insertion and withdrawal forces

Result	Test passed
No. of cycles	50
Insertion strength per pos. approx.	5 N
Withdraw strength per pos. approx.	4 N

### Resistance of inscriptions

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

### Polarization and coding

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

#### Visual inspection

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

#### Dimension check

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

### Electrical tests

Thermal	test l	Test	aroun	C

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



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Corrosive stress

Thermal stress

Ambient conditions

Power-frequency withstand voltage

Specification	IEC 60512-3-1:2002-02
Insulation resistance, neighboring positions	> 5 MΩ
clearances and creepage distances	
Specification	IEC 60664-1:2007-04
Insulating material group	l l
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	630 V
Rated surge voltage (III/3)	8 kV
minimum clearance value - non-homogenous field (III/3)	8 mm
minimum creepage distance (III/3)	8 mm
Rated insulation voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
minimum clearance value - non-homogenous field (III/2)	8 mm
minimum creepage distance (III/2)	8 mm
Rated insulation voltage (II/2)	1000 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
ronmental and real-life conditions	
ronmental and real-life conditions	
ronmental and real-life conditions  pration test  Specification	IEC 60068-2-6:2007-12
ronmental and real-life conditions  oration test  Specification  Frequency	10 - 150 - 10 Hz
ronmental and real-life conditions  pration test Specification Frequency Sweep speed	10 - 150 - 10 Hz 1 octave/min
ronmental and real-life conditions  pration test Specification Frequency Sweep speed Amplitude	10 - 150 - 10 Hz 1 octave/min 0.35 mm (10 Hz 60.1 Hz)
ronmental and real-life conditions  pration test Specification Frequency Sweep speed Amplitude Acceleration	10 - 150 - 10 Hz 1 octave/min 0.35 mm (10 Hz 60.1 Hz) 5g (60.1 Hz 150 Hz)
ronmental and real-life conditions  pration test Specification Frequency Sweep speed Amplitude Acceleration Test duration per axis	10 - 150 - 10 Hz 1 octave/min 0.35 mm (10 Hz 60.1 Hz) 5g (60.1 Hz 150 Hz) 2.5 h
ronmental and real-life conditions  pration test Specification Frequency Sweep speed Amplitude Acceleration Test duration per axis	10 - 150 - 10 Hz 1 octave/min 0.35 mm (10 Hz 60.1 Hz) 5g (60.1 Hz 150 Hz)
ronmental and real-life conditions  pration test Specification Frequency Sweep speed Amplitude Acceleration Test duration per axis Test directions	10 - 150 - 10 Hz 1 octave/min 0.35 mm (10 Hz 60.1 Hz) 5g (60.1 Hz 150 Hz) 2.5 h
ronmental and real-life conditions  pration test Specification Frequency Sweep speed Amplitude Acceleration Test duration per axis Test directions rability test	10 - 150 - 10 Hz 1 octave/min 0.35 mm (10 Hz 60.1 Hz) 5g (60.1 Hz 150 Hz) 2.5 h
ronmental and real-life conditions  pration test Specification Frequency Sweep speed Amplitude Acceleration Test duration per axis Test directions rability test Specification	10 - 150 - 10 Hz  1 octave/min  0.35 mm (10 Hz 60.1 Hz)  5g (60.1 Hz 150 Hz)  2.5 h  X-, Y- and Z-axis
ronmental and real-life conditions  pration test  Specification  Frequency  Sweep speed  Amplitude  Acceleration  Test duration per axis  Test directions  rability test  Specification  Impulse withstand voltage at sea level	10 - 150 - 10 Hz  1 octave/min  0.35 mm (10 Hz 60.1 Hz)  5g (60.1 Hz 150 Hz)  2.5 h  X-, Y- and Z-axis
ronmental and real-life conditions  pration test  Specification  Frequency  Sweep speed  Amplitude  Acceleration  Test duration per axis  Test directions  rability test  Specification  Impulse withstand voltage at sea level  Contact resistance R <sub>1</sub>	10 - 150 - 10 Hz  1 octave/min  0.35 mm (10 Hz 60.1 Hz)  5g (60.1 Hz 150 Hz)  2.5 h  X-, Y- and Z-axis  IEC 60512-9-1:2010-03  9.8 kV
	10 - 150 - 10 Hz  1 octave/min  0.35 mm (10 Hz 60.1 Hz)  5g (60.1 Hz 150 Hz)  2.5 h  X-, Y- and Z-axis  IEC 60512-9-1:2010-03  9.8 kV  0.5 mΩ
ronmental and real-life conditions  pration test  Specification  Frequency  Sweep speed  Amplitude  Acceleration  Test duration per axis  Test directions  prability test  Specification  Impulse withstand voltage at sea level  Contact resistance R <sub>1</sub> Contact resistance R <sub>2</sub>	10 - 150 - 10 Hz  1 octave/min  0.35 mm (10 Hz 60.1 Hz)  5g (60.1 Hz 150 Hz)  2.5 h  X-, Y- and Z-axis  IEC 60512-9-1:2010-03  9.8 kV  0.5 mΩ  0.6 mΩ
ronmental and real-life conditions  pration test  Specification  Frequency  Sweep speed  Amplitude  Acceleration  Test duration per axis  Test directions  prability test  Specification  Impulse withstand voltage at sea level  Contact resistance R <sub>1</sub> Contact resistance R <sub>2</sub> Insertion/withdrawal cycles  Insulation resistance, neighboring positions	10 - 150 - 10 Hz  1 octave/min  0.35 mm (10 Hz 60.1 Hz)  5g (60.1 Hz 150 Hz)  2.5 h  X-, Y- and Z-axis  IEC 60512-9-1:2010-03  9.8 kV  0.5 mΩ  0.6 mΩ  50
ronmental and real-life conditions  pration test  Specification  Frequency  Sweep speed  Amplitude  Acceleration  Test duration per axis  Test directions  prability test  Specification  Impulse withstand voltage at sea level  Contact resistance R <sub>1</sub> Contact resistance R <sub>2</sub> Insertion/withdrawal cycles	10 - 150 - 10 Hz  1 octave/min  0.35 mm (10 Hz 60.1 Hz)  5g (60.1 Hz 150 Hz)  2.5 h  X-, Y- and Z-axis  IEC 60512-9-1:2010-03  9.8 kV  0.5 mΩ  0.6 mΩ  50

 $0.2~\mathrm{dm^3\,SO_2}\,\mathrm{on}~300~\mathrm{dm^3/40~^\circ C/1}$  cycle

100 °C/168 h

4.26 kV



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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

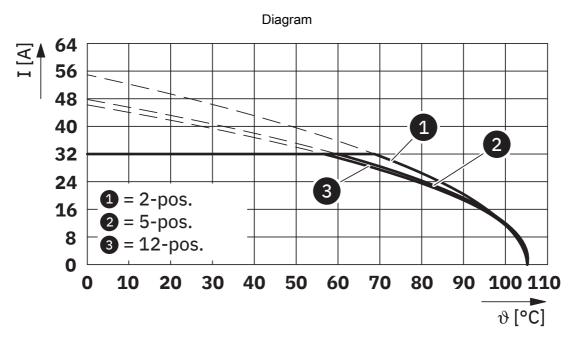
Type of packaging	packed in cardboard



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## Drawings



Type: SPC 5/...-STF-7,62 with DFK-PC 5/...-STF-7,62



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## **Approvals**

To download certificates, visit the product detail page: https://www.phoenixcontact.com/gb/products/1716687

CULus Recognized Approval ID: E60425-19920722					
	Nominal voltage $U_N$	Nominal current I <sub>N</sub>	Cross section AWG	Cross section mm <sup>2</sup>	
Use group B					
	600 V	41 A	24 - 8	-	
Use group C					
	600 V	41 A	24 - 8	-	



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## Classifications

<b>ECLASS</b>
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	ECLASS-13.0	27460202				
Ε٦	ETIM					
	ETIM 9.0	EC002638				
UNSPSC						
	UNSPSC 21.0	39121400				



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## Environmental product compliance

#### EU RoHS

20 1.01.0	7.13.13			
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%			

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