

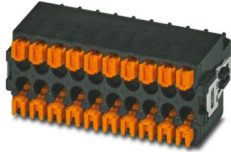
# DFMC 0,5/ 3-ST-2,54-RF - PCB connector



1715735

<https://www.phoenixcontact.com/us/products/1715735>

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PCB connector, nominal cross section: 0.5 mm<sup>2</sup>, color: black, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Gold, contact connection type: Socket, number of potentials: 6, number of rows: 2, number of positions: 3, number of connections: 6, product range: DFMC 0,5/..-ST-RF, pitch: 2.54 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON DFMC 0,5, locking: Snap-in locking, mounting: Self-locking flange, type of packaging: packed in cardboard

## Your advantages

- Gold-plated contacts ensure transfer quality remains stable over the long term
- Time saving push-in connection, tools not required
- Defined contact force ensures that contact remains stable over the long term
- Intuitive operation due to color-coded actuating push button
- Optimized for tight installation situations: operation and conductor connection from one direction
- Intuitive locking mechanism prevents accidental disconnection

## Commercial data

Item number	1715735
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	AA01
Product key	AAAFDB
GTIN	4055626446646
Weight per piece (including packing)	2.112 g
Weight per piece (excluding packing)	2.1 g
Customs tariff number	85366990
Country of origin	PL

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## Technical data

### Product properties

Product line	COMBICON Connectors XS
Product type	PCB connector
Product family	DFMC 0,5/..-ST-RF
Number of positions	3
Pitch	2.54 mm
Number of connections	6
Number of rows	2
Number of potentials	6

### Electrical properties

Nominal current $I_N$	6 A
Nominal voltage $U_N$	160 V
Degree of pollution	3
Contact resistance	2.7 m $\Omega$
Rated voltage (III/3)	32 V
Rated surge voltage (III/3)	2.5 kV
Rated voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
Rated voltage (II/2)	160 V
Rated surge voltage (II/2)	2.5 kV

### Connection data

#### Connection technology

Type	Standard
Connector system	COMBICON DFMC 0,5
Nominal cross section	0.5 mm <sup>2</sup>
Contact connection type	Socket

#### Interlock

Locking type	Snap-in locking
Mounting flange	Self-locking flange

#### Conductor connection

Connection method	Push-in spring connection
Conductor/PCB connection direction	0 °
Conductor cross section rigid	0.14 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>
Conductor cross section flexible	0.14 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>
Conductor cross section AWG	26 ... 20
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 0.34 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.14 mm <sup>2</sup> ... 0.25 mm <sup>2</sup>

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Cylindrical gauge a x b / diameter	- / 1.2 mm
Stripping length	7 mm

## 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	Selective coating
Metal surface terminal point (top layer)	Tin (5 - 7 $\mu\text{m}$ Sn)
Metal surface terminal point (middle layer)	Nickel (1 - 3 $\mu\text{m}$ Ni)
Metal surface contact area (top layer)	Gold (0.25 Au)
Metal surface contact area (middle layer)	Nickel (2 - 3 $\mu\text{m}$ Ni)

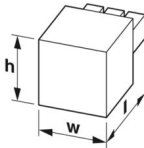
### Material data - housing

Color (Housing)	black (9005)
Insulating material	LCP
Insulating material group	IIIa
CTI according to IEC 60112	175
Flammability rating according to UL 94	V0

### Material data – actuating element

Color (Actuating element)	orange (2003)
Insulating material	LCP
Insulating material group	IIIa
CTI according to IEC 60112	175
Flammability rating according to UL 94	V0

## Dimensions

Dimensional drawing	
Pitch	2.54 mm
Width [w]	10.12 mm
Height [h]	10.5 mm
Length [l]	14.4 mm

## Mechanical tests

### Conductor connection

Specification	IEC 60999-1:1999-11
Result	Test passed

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1715735

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## Test for conductor damage and slackening

Specification	IEC 60999-1:1999-11
Result	Test passed

## Repeated connection and disconnection

Specification	IEC 60999-1:1999-11
Result	Test passed

## Pull-out test

Specification	IEC 60999-1:1999-11
Conductor cross section/conductor type/tractive force setpoint/actual value	0.14 mm <sup>2</sup> / solid / > 10 N
	0.14 mm <sup>2</sup> / flexible / > 10 N
	0.5 mm <sup>2</sup> / solid / > 20 N
	0.5 mm <sup>2</sup> / flexible / > 20 N

## Insertion and withdrawal forces

Result	Test passed
No. of cycles	100
Insertion strength per pos. approx.	2 N
Withdraw strength per pos. approx.	1 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

## Environmental and real-life conditions

### Vibration test

Specification	IEC 60068-2-6:2007-12
Frequency	10 - 500 - 10 Hz
Sweep speed	1 octave/min
Amplitude	0.35 mm (10 Hz ... 60.1 Hz)
Sweep speed	5g (60.1 Hz ... 500 Hz)
Test duration per axis	2 h

### Durability test

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1715735

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Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	2.95 kV
Contact resistance R <sub>1</sub>	2.7 mΩ
Contact resistance R <sub>2</sub>	2.9 mΩ
Contact resistance R <sub>2</sub> 2nd level	3.1 mΩ
Insertion/withdrawal cycles	100
Insulation resistance, neighboring positions	> 5 MΩ

## Climatic test

Specification	DIN 50018:2013-05
Corrosive stress	1.0 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/3 cycles
Thermal stress	100 °C/168 h
Power-frequency withstand voltage	1.39 kV

## 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

## Electrical tests

### Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	16

### Insulation resistance

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

### Temperature cycles

Specification	IEC 60999-1:1999-11
Result	Test passed

### Air clearances and creepage distances |

Specification	IEC 60664-1:2007-04
Insulating material group	IIIa
Comparative tracking index (IEC 60112)	CTI 175
Rated insulation voltage (III/3)	32 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)	1.3 mm
Rated insulation voltage (III/2)	160 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)	1.6 mm
Rated insulation voltage (II/2)	160 V

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Rated surge voltage (II/2)	2.5 kV
minimum clearance value - non-homogenous field (II/2)	1.5 mm
minimum creepage distance (II/2)	1.6 mm

## Packaging specifications

Type of packaging	packed in cardboard
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## Classifications

### ECLASS

ECLASS-11.0	27460202
ECLASS-12.0	27460202
ECLASS-13.0	27460202

### ETIM

ETIM 9.0	EC002638
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### UNSPSC

UNSPSC 21.0	39121400
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## Environmental product compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

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