

FRONT-FMC 1,5/D28-FF-6,35-R - PCB connector



1714761

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PCB connector, nominal cross section: 1.5 mm², color: light gray, nominal current: 6 A, rated voltage (III/2): 320 V, contact surface: Sn, contact connection type: Socket, number of potentials: 56, number of rows: 2, number of positions: 28, number of connections: 56, product range: FRONT-FMC 1,5/..-FF, pitch: 6.35 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, pin layout: Linear pinning, locking clip: - without locking clip, plug-in system: IEC 60603 Connectors - Type D, locking: Screw locking mechanism, mounting method: Screw flange, type of packaging: packed in cardboard

Your advantages

- 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
- Operation and conductor connection from one direction enable integration into front of device
- Screwable flange for superior mechanical stability

Commercial data

Item number	1714761
Packing unit	20 pc
Minimum order quantity	500 pc
Note	Made to order (non-returnable)
Product key	AABFKA
GTIN	4055626387758
Weight per piece (including packing)	42.5 g
Weight per piece (excluding packing)	42.5 g
Country of origin	CN

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Technical data

Product properties

Product type	PCB connector
Product family	FRONT-FMC 1,5/..-FF
Product line	COMBICON Connectors S
Number of positions	28
Pitch	6.35 mm
Number of connections	56
Number of rows	2
Number of potentials	56
Mounting type	Screw flange
Pin layout	Linear pinning

Electrical properties

Properties

Nominal current I_N	6 A
Nominal voltage U_N	320 V
Contact resistance	1.7 mΩ
Rated voltage (III/3)	320 V
Rated surge voltage (III/3)	4 kV
Rated voltage (III/2)	320 V
Rated surge voltage (III/2)	4 kV

Connection data

Connection technology

Connector system	IEC 60603 Connectors - Type D
Nominal cross section	1.5 mm ²
Contact connection type	Socket

Interlock

Locking type	Screw locking mechanism
Mounting type	Screw flange

Conductor connection

Connection method	Push-in spring connection
Conductor/PCB connection direction	0 °
Conductor cross-section rigid	0.5 mm ² ... 1.5 mm ²
Conductor cross-section flexible	0.5 mm ² ... 1.5 mm ²
Conductor cross-section AWG	20 ... 16
Conductor cross-section, flexible, with ferrule, without plastic sleeve	0.5 mm ² ... 1.5 mm ²
Conductor cross-section, flexible, with ferrule, with plastic sleeve	0.5 mm ² ... 1.5 mm ²
Cylindrical gauge a x b / diameter	- / 1.8 mm

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Stripping length	12 mm
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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 µm - 8 µm Sn)
Metal surface contact area (top layer)	Tin (4 µm - 8 µm Sn)

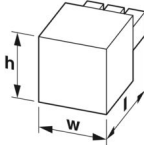
Material data - housing

Color (Housing)	light gray (7035)
Insulating material	PA GF
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0

Material data – actuating element

Color (Actuating element)	orange (2003)
Insulating material	PA GF
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0

Dimensions

Dimensional drawing	
Pitch	6.35 mm
Width [w]	117.23 mm
Height [h]	31 mm
Length [l]	17.27 mm

Mounting

Pin layout	Linear pinning
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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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Mechanical tests

FRONT-FMC 1,5/D28-FF-6,35-R - PCB connector



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Conductor connection

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

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	0.5 mm ² / solid / > 20 N
	0.5 mm ² / flexible / > 20 N
	1.5 mm ² / solid / > 40 N
	1.5 mm ² / flexible / > 40 N

Insertion and withdrawal forces

Specification	IEC 60512-13-2:2006-02
Result	Test passed
No. of cycles	50
Insertion strength per pos. approx.	5 N
Withdraw strength per pos. approx.	3.5 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

Durability test

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	4.8 kV
Contact resistance R ₁	1.7 mΩ

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Contact resistance R_2	1.8 m Ω
Insertion/withdrawal cycles	50

Climatic test

Specification	ISO 6988:1985-02
Corrosive stress	0.2 dm ³ SO ₂ on 300 dm ³ /40 °C/1 cycle
Thermal stress	105 °C/168 h
Power-frequency withstand voltage	2.21 kV

Vibration test

Specification	IEC 60068-2-6:2007-12
Frequency	10 - 150 - 10 Hz
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
Test directions	X-, Y- and Z-axis

Shocks

Specification	IEC 60068-2-27:2008-02
Pulse shape	Semi-sinusoidal
Acceleration	5g
Shock duration	11 ms
Test directions	X-, Y- and Z-axis (pos. and neg.)

Railway application: Shocks

Acceleration	5g
Shock duration	11 ms
Test directions	X-, Y- and Z-axis (pos. and neg.)

Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (operation)	-40 °C ... 105 °C (dependent on the derating curve)

Electrical tests

Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	32

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)	320 V

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Rated surge voltage (III/3)	4 kV
minimum clearance value - non-homogenous field (III/3)	3 mm
minimum creepage distance (III/3)	4 mm
Rated insulation voltage (III/2)	320 V
Rated surge voltage (III/2)	4 kV
minimum clearance value - non-homogenous field (III/2)	3 mm
minimum creepage distance (III/2)	3 mm

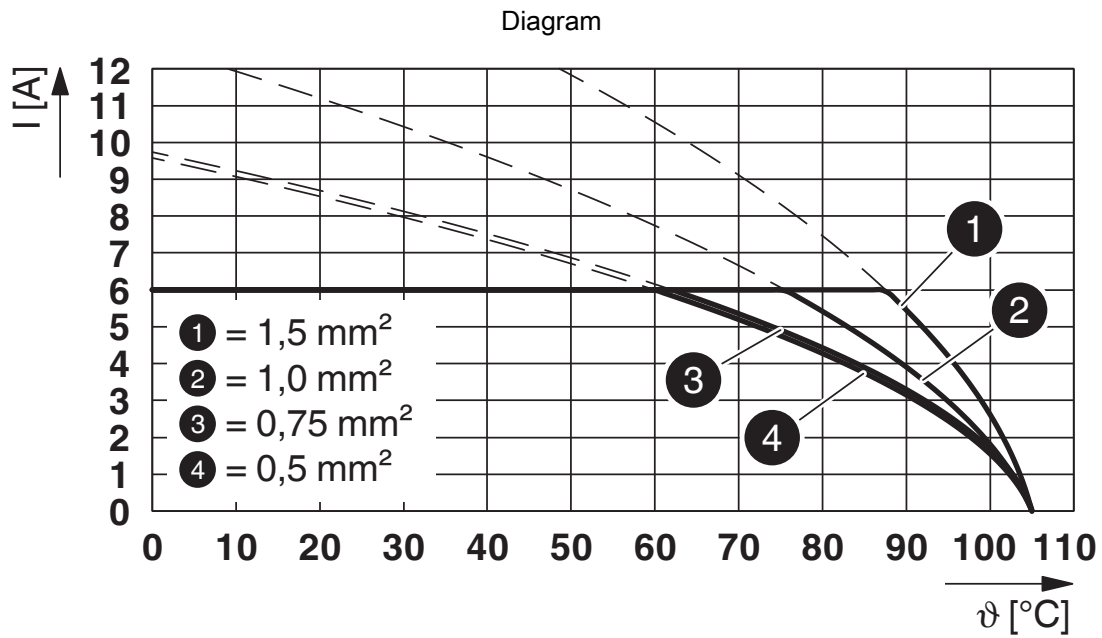
Packaging specifications

Type of packaging	packed in cardboard
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Drawings



Type: FRONT-FMC 1,5/D...-FF-6,35-R with FRONT-FMC 1,5/D...-MF-6,35

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Classifications

ECLASS

ECLASS-13.0	27460202
ECLASS-15.0	27460202

ETIM

ETIM 10.0	EC002638
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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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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com