FMC 1,5/ 8-STF-3,5 - PCB connector

1966156

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PCB connector, nominal cross section: 1.5 mm^2, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Sn, contact connection type: Socket, number of potentials: 8, number of rows: 1, number of positions: 8, number of connections: 8, product range: FMC 1,5/..-STF, pitch: 3.5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON FMC 1,5 - MCDN 1,5, 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	1966156
Packing unit	50 pc
Minimum order quantity	50 pc
Product key	AABFAB
GTIN	4017918943349
Weight per piece (including packing)	5.4 g
Weight per piece (excluding packing)	5.064 g
Customs tariff number	85366990
Country of origin	DE

Technical data

Product properties

Product type	PCB connector
Product family	FMC 1,5/..-STF
Product line	COMBICON Connectors S
Type	Standard
Number of positions	8
Pitch	3.5 mm
Number of connections	8
Number of rows	1
Number of potentials	8
Mounting type	Screw flange

Electrical properties

Properties

Nominal current I_N	8 A
Nominal voltage U_N	160 V
Contact resistance	1.6 mΩ
Rated voltage (III/3)	160 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)	320 V
Rated surge voltage (II/2)	2.5 kV

Connection data

Connection technology

Type	Standard
Connector system	COMBICON FMC 1,5 - MCDN 1,5
Nominal cross section	1.5 mm²
Contact connection type	Socket

Interlock

Locking type	Screw locking mechanism
Mounting type	Screw flange
Tightening torque	0.3 Nm

Conductor connection

Connection method	Push-in spring connection
Conductor/PCB connection direction	0 °
Conductor cross-section rigid	0.2 mm² ... 1.5 mm²
Conductor cross-section flexible	0.2 mm² ... 1.5 mm²

Conductor cross-section AWG	24 ... 16
Conductor cross-section flexible, with ferrule without plastic sleeve	0.25 mm² ... 1.5 mm²
Conductor cross-section, flexible, with ferrule, with plastic sleeve	0.14 mm² ... 0.75 mm²
Cylindrical gauge a x b / diameter	2.4 mm x 1.5 mm / 1.6 mm
Stripping length	10 mm

Specifications for ferrules without insulating collar

recommended crimping tool	1212034 CRIMPFOX 6
ferrules without insulating collar, according to DIN 46228-1	Cross section: 0.25 mm²; Length: 7 mm
	Cross section: 0.34 mm²; Length: 7 mm
	Cross section: 0.5 mm²; Length: 8 mm ... 10 mm
	Cross section: 0.75 mm²; Length: 8 mm ... 10 mm
	Cross section: 1 mm²; Length: 8 mm ... 10 mm
	Cross section: 1.5 mm²; Length: 10 mm

Specifications for ferrules with insulating collar

recommended crimping tool	1212034 CRIMPFOX 6
ferrules with insulating collar, according to DIN 46228-4	Cross section: 0.14 mm²; Length: 8 mm
	Cross section: 0.25 mm²; Length: 8 mm ... 10 mm
	Cross section: 0.34 mm²; Length: 8 mm ... 10 mm
	Cross section: 0.5 mm²; Length: 8 mm ... 10 mm
	Cross section: 0.75 mm²; Length: 10 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	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)

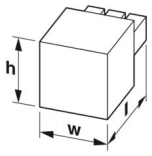
Material data - housing

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

Material data – actuating element

Color (Actuating element)	orange (2003)
Insulating material	PBT
Insulating material group	IIIa
CTI according to IEC 60112	275
Flammability rating according to UL 94	V0

Dimensions

Dimensional drawing	
Pitch	3.5 mm
Width [w]	38.3 mm
Height [h]	7.8 mm
Length [l]	22.9 mm

Mounting

Flange

Tightening torque	0.3 Nm

Mechanical tests

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	0.2 mm² / solid / > 10 N
	0.2 mm² / flexible / > 10 N
	1.5 mm² / solid / > 40 N
	1.5 mm² / flexible / > 40 N

Insertion and withdrawal forces

Specification	IEC 60512-13-2:2006-02
Result	Test passed

No. of cycles	25
Insertion strength per pos. approx.	9 N
Withdraw strength per pos. approx.	7 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 - 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

Durability test

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	2.95 kV
Contact resistance R_1	1.6 mΩ
Contact resistance R_2	1.7 mΩ
Insertion/withdrawal cycles	25

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	100 °C/168 h
Power-frequency withstand voltage	1.39 kV

Shocks

Specification	IEC 60068-2-27:2008-02
Pulse shape	Semi-sinusoidal
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

Electrical tests

Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	20

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 |

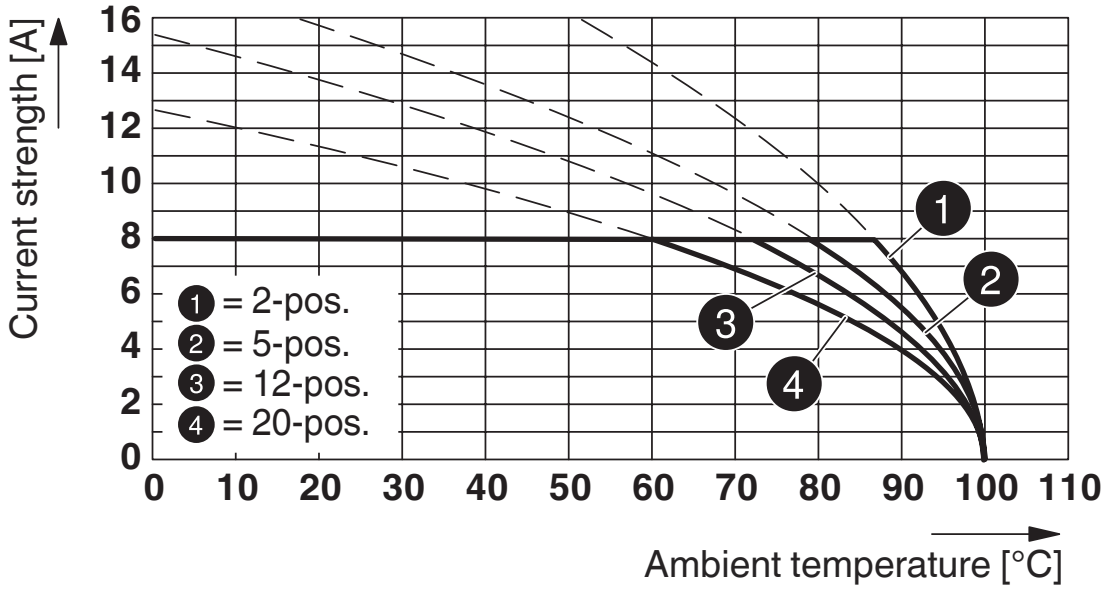
Specification	IEC 60664-1:2007-04
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	160 V
Rated surge voltage (III/3)	2.5 kV
minimum clearance value - non-homogenous field (III/3)	1.5 mm
minimum creepage distance (III/3)	2 mm
Rated insulation 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)	1.5 mm
Rated insulation voltage (II/2)	320 V
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

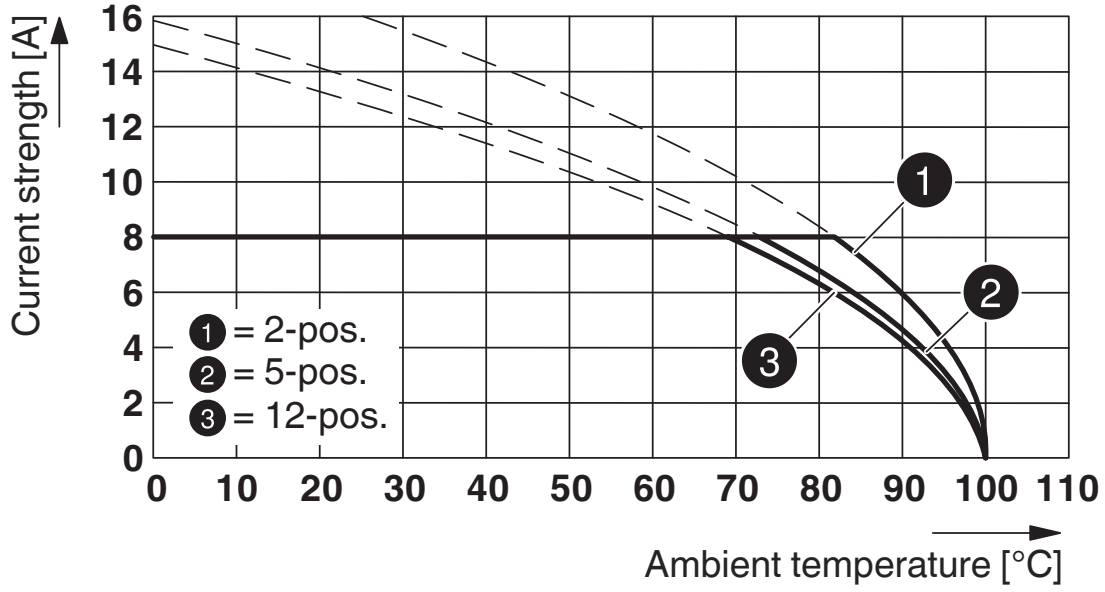
Drawings

Diagram



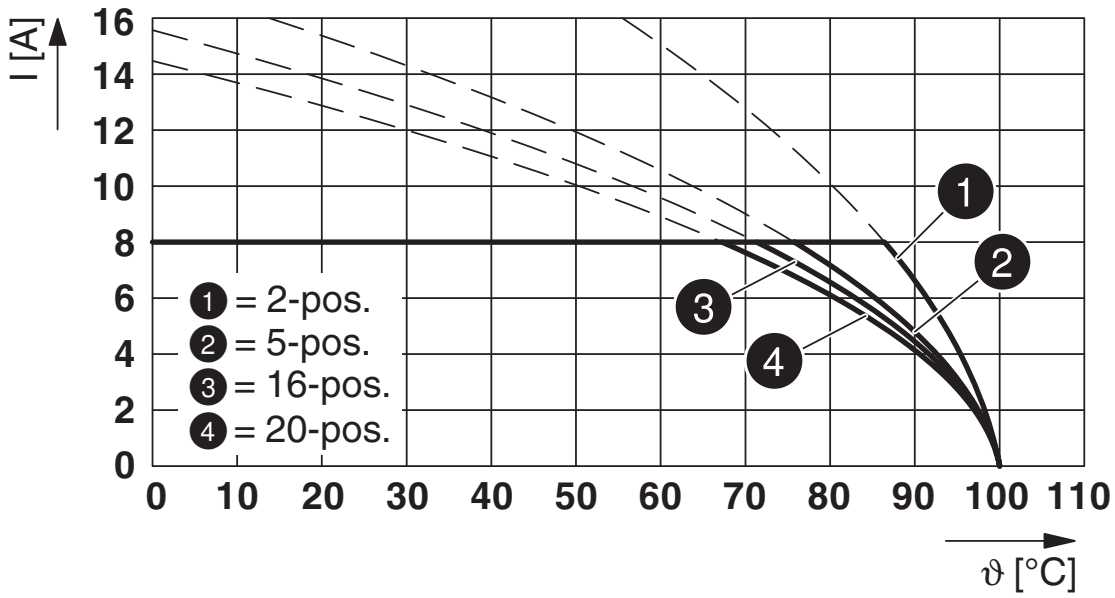
Type: FMC 1,5/...-STF-3,5 with MCV 1,5/...-GF-3,5 P... THR

Diagram



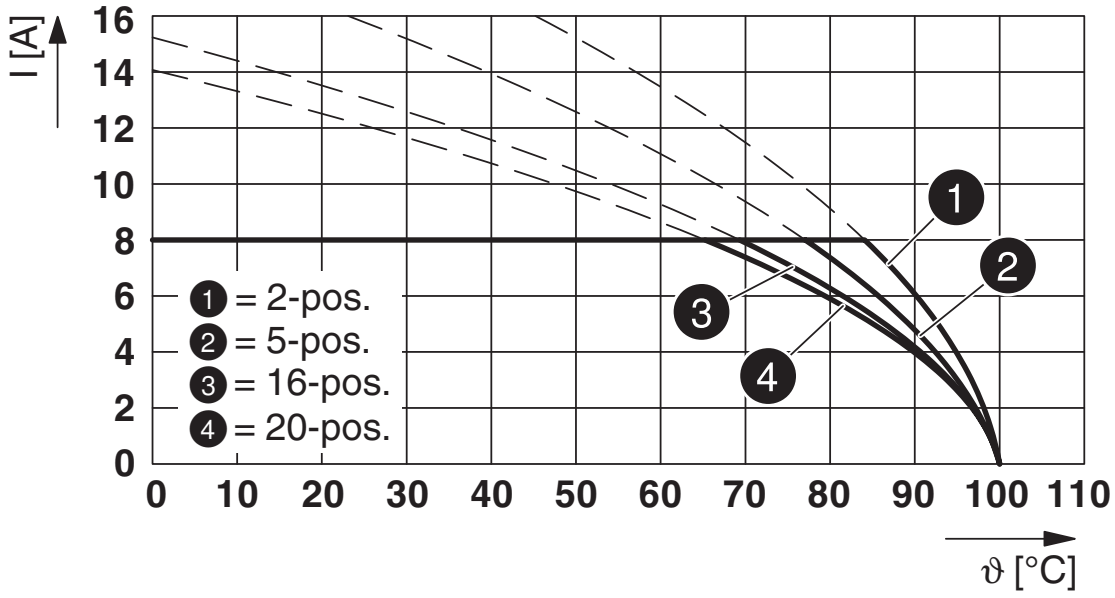
Type: FMC 1,5/...-STF-3,5 with MC 1,5/...-GF-3,5 P.. THR

Diagram



Type: FMC 1,5/...-STF-3,5 with MC 1,5/...-GF-3,5

Diagram



Type: FMC 1,5/...-STF-3,5 with MCV 1,5/...-GF-3,5

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/pc/products/1966156

cULus Recognized
Approval ID: E60425-19920306

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B				
Field wiring	150 V	8 A	24 - 16	-
C				
Factory wiring	50 V	8 A	24 - 16	-

VDE approval of drawings
Approval ID: 40011723

VDE approval of drawings
Approval ID: 40011723

Classifications

ECLASS

ECLASS-13.0	27460202
ECLASS-15.0	27460202

ETIM

ETIM 9.0	EC002638

UNSPSC

UNSPSC 21.0	39121400

Environmental product compliance

EU RoHS

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%

EF3.0 Climate Change

CO2e kg	0.095 kg CO2e

Accessories

SK 3,5/2,8:FORTL.ZAHLEN - Marker card

0804073

https://www.phoenixcontact.com/pc/products/0804073



Marker card, Sheet, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 99, mounting type: adhesive, for terminal block width: 3.5 mm, Number of individual labels: 14, text field height: 2.8 mm, text field width: 3.5 mm

B-STIFT - Marker pen

1051993

https://www.phoenixcontact.com/pc/products/1051993



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

CRIMPFOX 6 - Crimping pliers

1212034

https://www.phoenixcontact.com/pc/products/1212034



Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 0.25 mm^2 ... 6.0 mm^2, lateral entry, trapezoidal crimp

SZS 0,4X2,5 VDE - Screwdriver

1205037

https://www.phoenixcontact.com/pc/products/1205037



Screwdriver, slot-headed, VDE insulated, size: 0.4 x 2.5 x 80 mm, 2-component grip, with non-slip grip

MCV 1,5/ 8-GF-3,5 P20 THRR56 - PCB header

1780781

https://www.phoenixcontact.com/pc/products/1780781

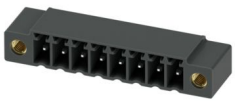


PCB headers, nominal cross section: 1.5 mm^2, color: black, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Sn, contact connection type: Pin, number of potentials: 8, number of rows: 1, number of positions: 8, number of connections: 8, product range: MCV 1,5/..-GF-THR, pitch: 3.5 mm, mounting: THR soldering / wave soldering, pin layout: Linear pinning, solder pin [P]: 2 mm, number of solder pins per potential: 1, plug-in system: COMBICON MC 1,5, Pin connector pattern alignment: Standard, locking: Screw locking mechanism, mounting method: Threaded flange, type of packaging: 56 mm wide tape, For user information and design recommendations for through-hole reflow technology, go to: Downloads

MC 1,5/ 8-GF-3,5 P26 THR - PCB header

1789287

https://www.phoenixcontact.com/pc/products/1789287

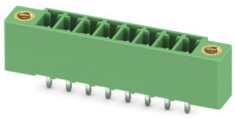


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MCV 1,5/ 8-GF-3,5 - PCB header

1843282

https://www.phoenixcontact.com/pc/products/1843282

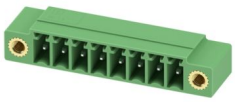


PCB headers, nominal cross section: 1.5 mm^2, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Sn, contact connection type: Pin, number of potentials: 8, number of rows: 1, number of positions: 8, number of connections: 8, product range: MCV 1,5/..-GF, pitch: 3.5 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.4 mm, number of solder pins per potential: 1, plug-in system: COMBICON MC 1,5, Pin connector pattern alignment: Standard, locking: Screw locking mechanism, mounting method: Threaded flange, type of packaging: packed in cardboard

MC 1,5/ 8-GF-3,5 - PCB header

1843855

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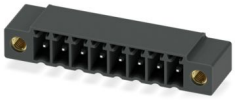


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MC 1,5/ 8-GF-3,5 P20 THR - PCB header

1789504

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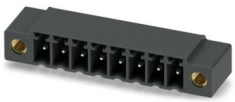


PCB headers, nominal cross section: 1.5 mm^2, color: black, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Sn, contact connection type: Pin, number of potentials: 8, number of rows: 1, number of positions: 8, number of connections: 8, product range: MC 1,5/..-GF-THR, pitch: 3.5 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2 mm, number of solder pins per potential: 1, plug-in system: COMBICON MC 1,5, Pin connector pattern alignment: Standard, locking: Screw locking mechanism, mounting method: Threaded flange, type of packaging: packed in cardboard

MC 1,5/ 8-GF-3,5 P14 THR - PCB header

1789724

https://www.phoenixcontact.com/pc/products/1789724



PCB headers, nominal cross section: 1.5 mm^2, color: black, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Sn, contact connection type: Pin, number of potentials: 8, number of rows: 1, number of positions: 8, number of connections: 8, product range: MC 1,5/..-GF-THR, pitch: 3.5 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 1.4 mm, number of solder pins per potential: 1, plug-in system: COMBICON MC 1,5, Pin connector pattern alignment: Standard, locking: Screw locking mechanism, mounting method: Threaded flange, type of packaging: packed in cardboard

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