

# IFMC 1,5/ 5-ST-3,5-RN - PCB connectors



1844138

<https://www.phoenixcontact.com/us/products/1844138>

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PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Pin, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: IFMC 1,5/..-ST-RN, pitch: 3.5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON MC 1,5, locking: Snap-in locking, mounting: Engagement nose, 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
- Inverted connector with pin contacts for touch-proof device outputs or free-hanging cable/cable connections
- Intuitive locking mechanism prevents accidental disconnection

## Commercial data

Item number	1844138
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	AA02
Product key	AABFIC
GTIN	4046356947480
Weight per piece (including packing)	3.304 g
Weight per piece (excluding packing)	3.29 g
Customs tariff number	85366990
Country of origin	SK

# IFMC 1,5/ 5-ST-3,5-RN - PCB connectors



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## Technical data

### Product properties

Product type	PCB connector
Product family	IFMC 1,5/...-ST-RN
Product line	COMBICON Connectors S
Type	Inverted
Number of positions	5
Pitch	3.5 mm
Number of connections	5
Number of rows	1
Number of potentials	5
Mounting flange	Engagement nose

### Electrical properties

Nominal current $I_N$	8 A
Nominal voltage $U_N$	160 V
Degree of pollution	3
Contact resistance	2.7 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	Inverted
Connector system	COMBICON MC 1,5
Nominal cross section	1.5 mm <sup>2</sup>
Contact connection type	Pin

#### Interlock

Locking type	Snap-in locking
Mounting flange	Engagement nose

#### Conductor connection

Connection method	Push-in spring connection
Conductor/PCB connection direction	0 °
Conductor cross section rigid	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section flexible	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section AWG	24 ... 16
Conductor cross section flexible, with ferrule without plastic	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>

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sleeve	
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 / -
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: 5 mm ... 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: 0.34 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	I

# IFMC 1,5/ 5-ST-3,5-RN - PCB connectors

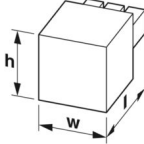


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CTI according to IEC 60112	600
Flammability rating according to UL 94	V0

## Dimensions

Dimensional drawing	
Pitch	3.5 mm
Width [w]	21.1 mm
Height [h]	7.75 mm
Length [l]	24.6 mm

## 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 mm <sup>2</sup> / solid / > 10 N
	0.2 mm <sup>2</sup> / flexible / > 10 N
	1.5 mm <sup>2</sup> / solid / > 40 N
	1.5 mm <sup>2</sup> / flexible / > 40 N

Insertion and withdrawal forces	
Result	Test passed
No. of cycles	25
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

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Result	Test passed
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## 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

### Durability test

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	2.95 kV
Contact resistance $R_1$	2.7 mΩ
Contact resistance $R_2$	2.8 mΩ
Insertion/withdrawal cycles	25
Insulation resistance, neighboring positions	> 5 MΩ

### 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	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	12

### Insulation resistance

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

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

## Air clearances and creepage distances |

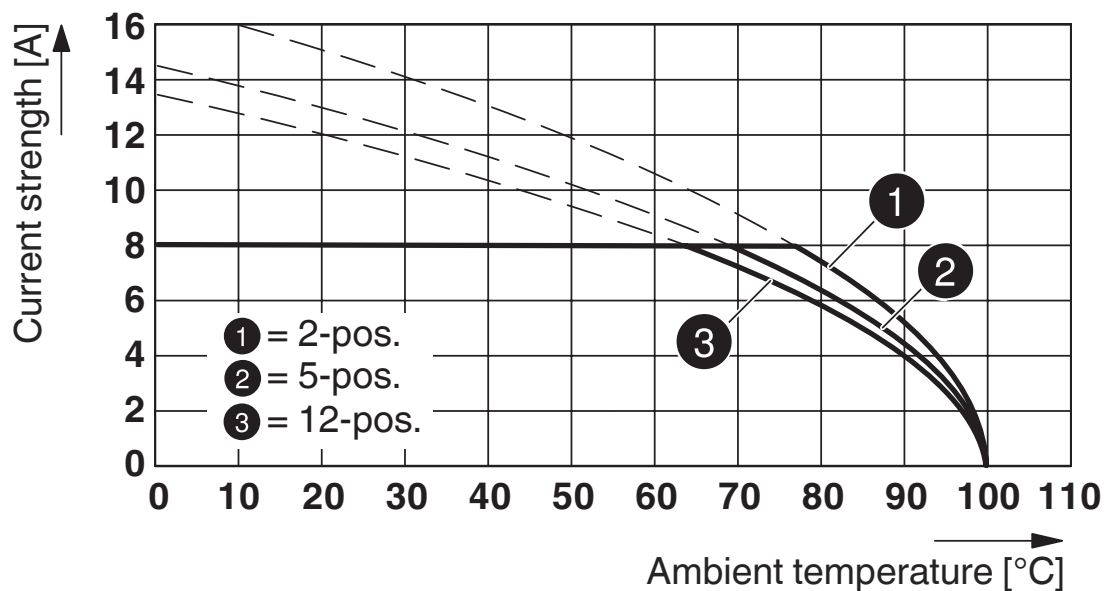
Specification	IEC 60664-1:2007-04
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	160 V
Rated surge voltage (III/3)	2.5 kV
minimum clearance value - non-homogenous field (III/3)	1.5 mm
minimum creepage distance (III/3)	2 mm
Rated insulation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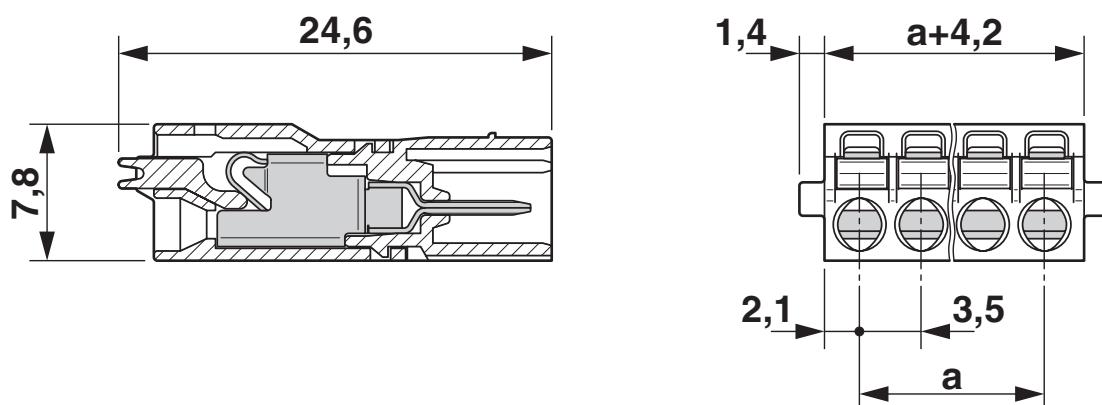
## Drawings

Diagram



Type: FMC 1,5/...-ST-3,5-RF with IFMC 1,5/...-ST-3,5-RN

Dimensional drawing



# IFMC 1,5/ 5-ST-3,5-RN - PCB connectors





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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1844138>

 <b>cULus Recognized</b> Approval ID: E60425-19920306				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
Use group B	150 V	8 A	24 - 16	-
Use group C	50 V	8 A	24 - 16	-

 <b>VDE Zeichengenehmigung</b> Approval ID: 40011723				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	160 V	8 A	-	0.2 - 1.5



# IFMC 1,5/ 5-ST-3,5-RN - PCB connectors



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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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# IFMC 1,5/ 5-ST-3,5-RN - PCB connectors



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## 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%

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## Accessories

### SK U/2,8 WH:UNBEDRUCKT - Marker card

0803883

<https://www.phoenixcontact.com/us/products/0803883>



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 2.8 mm, Number of individual labels: 3600

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### B-STIFT - Marker pen

1051993

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

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## CRIMPFOX 6 - Crimping pliers

1212034

<https://www.phoenixcontact.com/us/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<sup>2</sup> ... 6.0 mm<sup>2</sup>, lateral entry, trapezoidal crimp

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## SZS 0,4X2,5 VDE - Screwdriver

1205037

<https://www.phoenixcontact.com/us/products/1205037>



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

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## A 0,25- 5 - Ferrule

3202465

<https://www.phoenixcontact.com/us/products/3202465>



Ferrule, color: silver

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## A 0,25- 7 - Ferrule

3202478

<https://www.phoenixcontact.com/us/products/3202478>



Ferrule, color: silver

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## A 0,34- 7 - Ferrule

3009202

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Ferrule, color: silver

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## A 0,5 - 8 - Ferrule

3202481

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Ferrule, color: silver

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## A 0,5 -10 - Ferrule

3202494

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Ferrule, color: silver

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## A 0,75- 8 - Ferrule

3202504

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Ferrule, color: silver

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## A 0,75-10 - Ferrule

3200234

<https://www.phoenixcontact.com/us/products/3200234>

Ferrule, color: silver



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## A 1 - 8 - Ferrule

3202517

<https://www.phoenixcontact.com/us/products/3202517>

Ferrule, sleeve length: 8 mm, color: silver





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## A 1 -10 - Ferrule

3200250

<https://www.phoenixcontact.com/us/products/3200250>



Ferrule, color: silver

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## A 1,5 -10 - Ferrule

3200276

<https://www.phoenixcontact.com/us/products/3200276>



Ferrule, sleeve length: 10 mm, color: silver

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## AI 0,14- 8 GY -1000 - Ferrule

3203011

<https://www.phoenixcontact.com/us/products/3203011>



Ferrule, sleeve length: 8 mm, color: gray

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## AI 0,34- 8 TQ - Ferrule

3203066

<https://www.phoenixcontact.com/us/products/3203066>



Ferrule, sleeve length: 8 mm, color: turquoise

# IFMC 1,5/ 5-ST-3,5-RN - PCB connectors



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## AI 0,34-10 TQ - Ferrule

3241129

<https://www.phoenixcontact.com/us/products/3241129>



Ferrule, sleeve length: 10 mm, color: turquoise

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## AI 0,5 - 8 WH - Ferrule

3200014

<https://www.phoenixcontact.com/us/products/3200014>



Ferrule, sleeve length: 8 mm, color: white

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## AI 0,5 -10 WH - Ferrule

3201275

<https://www.phoenixcontact.com/us/products/3201275>

Ferrule, sleeve length: 10 mm, color: white



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## AI 0,75- 8 GY - Ferrule

3200519

<https://www.phoenixcontact.com/us/products/3200519>

Ferrule, sleeve length: 8 mm, color: gray



# IFMC 1,5/ 5-ST-3,5-RN - PCB connectors



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## AI 0,75-10 GY - Ferrule

3201288

<https://www.phoenixcontact.com/us/products/3201288>

Ferrule, sleeve length: 10 mm, color: gray



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## AI 0,25- 8 YE - Ferrule

3203037

<https://www.phoenixcontact.com/us/products/3203037>

Ferrule, sleeve length: 8 mm, color: yellow



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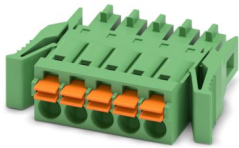
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## FMC 1,5/ 5-ST-3,5-RF - PCB connectors

1952050

<https://www.phoenixcontact.com/us/products/1952050>



PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: FMC 1,5/...-ST-RF, pitch: 3.5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON MC 1,5, locking: Snap-in locking, mounting: Self-locking flange, type of packaging: packed in cardboard

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