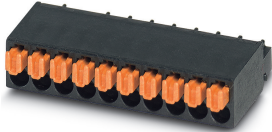


## Printed-circuit board connector - FMC 0,5/ 3-ST-2,54 - 1821106

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The figure shows a 10-position version of the product

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, type of contact: Female connector, number of potentials: 3, Number of rows: 1, Number of positions per row: 3, number of connections: 3, product range: FMC 0,5/...-ST, pitch: 2.54 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, plug-in system: MICRO COMBICON - FMC 0,5, Locking: without, mounting: without, 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 use through colour coded actuation lever
- ✓ Optimized for tight installation situations: operation and conductor connection from one direction



### Key Commercial Data

|                                      |                                                                                                         |
|--------------------------------------|---------------------------------------------------------------------------------------------------------|
| Packing unit                         | 1 pc                                                                                                    |
| Minimum order quantity               | 200 pc                                                                                                  |
| GTIN                                 | <br>4 046356 789165 |
| GTIN                                 | 4046356789165                                                                                           |
| Weight per Piece (excluding packing) | 0.600 g                                                                                                 |
| Custom tariff number                 | 85366990                                                                                                |
| Country of origin                    | Poland                                                                                                  |

### Technical data

#### Item properties

|                           |                                 |
|---------------------------|---------------------------------|
| Brief article description | Printed-circuit board connector |
| Connector system          | MICRO COMBICON - FMC 0,5        |

# Printed-circuit board connector - FMC 0,5/ 3-ST-2,54 - 1821106

## Technical data

### Item properties

|                       |                  |
|-----------------------|------------------|
| Type of contact       | Female connector |
| Range of articles     | FMC 0,5/...-ST   |
| Pitch                 | 2.54 mm          |
| Number of positions   | 3                |
| Locking               | without          |
| Number of levels      | 1                |
| Number of connections | 3                |
| Number of potentials  | 3                |

### Electrical parameters

|                             |        |
|-----------------------------|--------|
| Nominal current             | 6 A    |
| Nom. voltage                | 160 V  |
| Rated voltage (III/3)       | 32 V   |
| Rated voltage (III/2)       | 160 V  |
| Rated voltage (II/2)        | 160 V  |
| Rated surge voltage (III/3) | 2.5 kV |
| Rated surge voltage (III/2) | 2.5 kV |
| Rated surge voltage (II/2)  | 2.5 kV |

### Connection capacity

|                                                                       |                           |
|-----------------------------------------------------------------------|---------------------------|
| Connection method                                                     | Push-in spring connection |
| Conductor cross section solid                                         | 0.14 mm² ... 0.5 mm²      |
| Conductor cross section flexible                                      | 0.14 mm² ... 0.5 mm²      |
| Conductor cross section AWG / kcmil                                   | 26 ... 20                 |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.25 mm² ... 0.34 mm²     |
| Conductor cross section, flexible, with ferrule, with plastic sleeve  | 0.14 mm² ... 0.25 mm²     |
| Stripping length                                                      | 7 mm                      |

### 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                     | partially gold-plated                                                             |
| Metal surface terminal point (top layer)    | Tin (5 - 7 µm Sn)                                                                 |
| Metal surface terminal point (middle layer) | Nickel (2 - 3 µm Ni)                                                              |
| Metal surface contact area (top layer)      | Gold (0.25 Au)                                                                    |
| Metal surface contact area (middle layer)   | Nickel (2 - 3 µm Ni)                                                              |

### Material data - housing

|               |              |
|---------------|--------------|
| Housing color | black (9005) |
|---------------|--------------|

# Printed-circuit board connector - FMC 0,5/ 3-ST-2,54 - 1821106

## Technical data

### Material data - housing

|                                        |      |
|----------------------------------------|------|
| Insulating material                    | LCP  |
| Insulating material group              | IIIa |
| CTI according to IEC 60112             | 175  |
| Flammability rating according to UL 94 | V0   |

### Material data – actuating element

|                                        |     |
|----------------------------------------|-----|
| Insulating material                    | LCP |
| CTI according to IEC 60112             | 175 |
| Flammability rating according to UL 94 | V0  |

### Dimensions for the product

|                             |                                                                                            |
|-----------------------------|--------------------------------------------------------------------------------------------|
| Caption                     | Schematische Abbildung - weitere Details siehe Produktfamilienzeichnung im Download Center |
| Length [ l ]                | 14 mm                                                                                      |
| Width [ w ]                 | 8.12 mm                                                                                    |
| Height [ h ]                | 5.35 mm                                                                                    |
| Pitch                       | 2.54 mm                                                                                    |
| Height (without solder pin) | 5.35 mm                                                                                    |

### Packaging information

|                            |                     |
|----------------------------|---------------------|
| Type of packaging          | packed in cardboard |
| Pieces per package         | 200                 |
| Denomination packing units | Pcs.                |
| Outer packaging type       | Carton              |

### Ambient conditions

|                                         |                                                     |
|-----------------------------------------|-----------------------------------------------------|
| Ambient temperature (storage/transport) | -40 °C ... 70 °C                                    |
| Ambient temperature (assembly)          | -5 °C ... 100 °C                                    |
| Ambient temperature (operation)         | -40 °C ... 100 °C (dependent on the derating curve) |

### Termination and connection method

|                                          |                                                                                                                                               |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Conductor connection test                | The stripped-off ends of the largest conductor can be completely inserted in the opening of the terminal point without using excessive force. |
| Test result                              | Test passed                                                                                                                                   |
| Test – repeated connection and release   | IEC 60999-1:1999-11                                                                                                                           |
|                                          | Test passed                                                                                                                                   |
| Test for conductor damage and slackening | IEC 60999-1:1999-11                                                                                                                           |
|                                          | Test passed                                                                                                                                   |

### Pull-out test

|               |                     |
|---------------|---------------------|
| Pull-out test | IEC 60999-1:1999-11 |
|---------------|---------------------|

# Printed-circuit board connector - FMC 0,5/ 3-ST-2,54 - 1821106

## Technical data

### Pull-out test

|                                                          |                                          |
|----------------------------------------------------------|------------------------------------------|
| Conductor cross section / conductor type / tensile force | 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  |

### Mechanical tests according to standard

|                                     |                        |
|-------------------------------------|------------------------|
| Test specification                  | IEC 61984              |
| Visual inspection                   | IEC 60512-1-1:2002-02  |
| Dimension check                     | IEC 60512-1-2:2002-02  |
| Resistance of inscriptions          | IEC 60068-2-70:1995-12 |
| Insertion and withdrawal force      | IEC 60512-13-2:2006-02 |
| No. of cycles                       | 100                    |
| Insertion strength per pos. approx. | 2 N                    |
| Withdraw strength per pos. approx.  | 2 N                    |
| Polarization and coding             | IEC 60512-13-5:2006-02 |
| Contact holder in insert            | IEC 60512-15-1:2008-05 |
| Test force per pos.                 | 20 N                   |

### Air clearances and creepage distances

|                                                 |                     |
|-------------------------------------------------|---------------------|
| Clearances and creepage distances               | IEC 60664-1:2007-04 |
| Specification                                   | IEC 60664-1:2007-04 |
| Minimum clearance - inhomogeneous field (III/3) | 0.8 mm              |
| Minimum clearance - inhomogeneous field (III/2) | 1.5 mm              |
| Minimum clearance - inhomogeneous field (II/2)  | 0.5 mm              |
| Minimum creepage distance value (III/3)         | 1.3 mm              |
| Minimum creepage distance value (III/2)         | 1.6 mm              |
| Minimum creepage distance value (II/2)          | 1.6 mm              |

### Electrical tests - Function

|               |                     |
|---------------|---------------------|
| Specification | IEC 60999-1:1999-11 |
|---------------|---------------------|

### Temperature cycles

|               |                     |
|---------------|---------------------|
| Specification | IEC 60999-1:1999-11 |
|---------------|---------------------|

### Current carrying capacity / derating curves

|         |                                                              |
|---------|--------------------------------------------------------------|
| Caption | Type: FMC 0,5/...-ST-2,54 with MC 0,5/...-G-2,54 P20 THR R.. |
|---------|--------------------------------------------------------------|

### Mechanical tests (A)

|                                     |           |
|-------------------------------------|-----------|
| Test specification                  | IEC 61984 |
| Insertion strength per pos. approx. | 2 N       |
| Withdraw strength per pos. approx.  | 2 N       |

## Printed-circuit board connector - FMC 0,5/ 3-ST-2,54 - 1821106

### Technical data

#### Mechanical tests (A)

|                                              |             |
|----------------------------------------------|-------------|
| Polarization when inserted requirement >20 N | Test passed |
| Contact holder in insert requirements >20 N  | Test passed |

#### Durability tests (B)

|                                        |                       |
|----------------------------------------|-----------------------|
| Specification                          | IEC 60512-9-1:2010-03 |
| Contact resistance R <sub>1</sub>      | 2.7 mΩ                |
| Insertion/withdrawal cycles            | 100                   |
| Contact resistance R <sub>2</sub>      | 2.6 mΩ                |
| Impulse withstand voltage at sea level | 2.95 kV               |

#### Thermal tests (C)

|                                                 |                       |
|-------------------------------------------------|-----------------------|
| Specification                                   | IEC 60512-5-1:2002-02 |
| Number of positions                             | 16                    |
| Upper limiting temperature requirements <100 °C | Test passed           |

#### Climatic tests (D)

|                                        |                                                                            |
|----------------------------------------|----------------------------------------------------------------------------|
| Specification                          | DIN 50018:2013-05                                                          |
| Cold stress                            | -40 °C/2 h                                                                 |
| Thermal stress                         | 100 °C/168 h                                                               |
| Corrosive stress                       | 1.0 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/3 cycles |
| Impulse withstand voltage at sea level | 2.95 kV                                                                    |
| Power-frequency withstand voltage      | 1.39 kV                                                                    |

#### Environmental and durability tests (E)

|                                       |                                            |
|---------------------------------------|--------------------------------------------|
| Specification                         | IEC 61984:2008-10                          |
| Result, degree of protection, IP code | Back of hand safety with IP10 access probe |

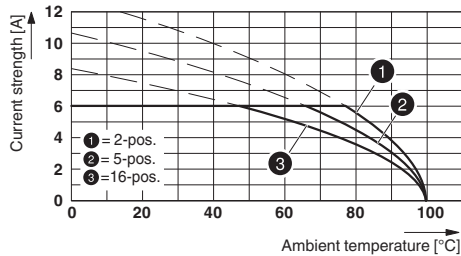
#### Environmental Product Compliance

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

### Drawings

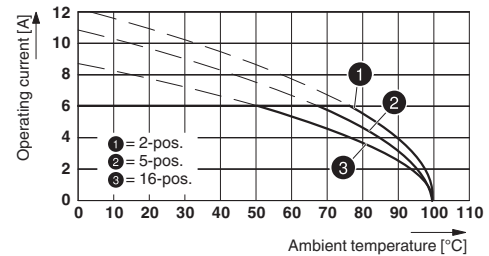
## Printed-circuit board connector - FMC 0,5/ 3-ST-2,54 - 1821106

Diagram



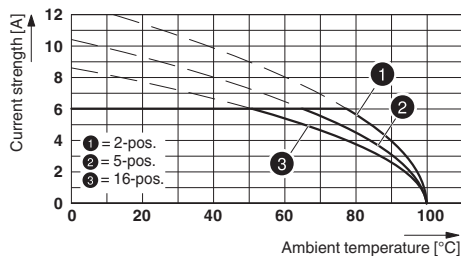
Type: FMC 0,5/...-ST-2,54 with MC 0,5/...-G-2,54 P20 THR R..

Diagram



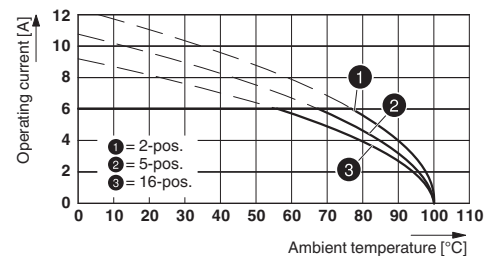
Type: FMC 0,5/...-ST-2,54 with MC 0,5/...-G-2,54 SMD R..

Diagram



Type: FMC 0,5/...-ST-2,54 with MCV 0,5/...-G-2,54 P20 THR R..

Diagram



Type: FMC 0,5/...-ST-2,54 with MCV 0,5/...-G-2,54 SMD R..

## Classifications

eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27440309 |
| eCl@ss 11.0   | 27460202 |
| eCl@ss 4.0    | 27260700 |
| eCl@ss 4.1    | 27260700 |
| eCl@ss 5.0    | 27260700 |
| eCl@ss 5.1    | 27260700 |
| eCl@ss 6.0    | 27260700 |
| eCl@ss 7.0    | 27440309 |
| eCl@ss 9.0    | 27440309 |

ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC001121 |
| ETIM 4.0 | EC002643 |
| ETIM 6.0 | EC002638 |
| ETIM 7.0 | EC002638 |

# Printed-circuit board connector - FMC 0,5/ 3-ST-2,54 - 1821106

## Classifications

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211801 |
| UNSPSC 7.0901 | 39121432 |
| UNSPSC 11     | 39121432 |
| UNSPSC 12.01  | 39121432 |
| UNSPSC 13.2   | 39121409 |
| UNSPSC 18.0   | 39121409 |
| UNSPSC 19.0   | 39121409 |
| UNSPSC 20.0   | 39121409 |
| UNSPSC 21.0   | 39121409 |

## Approvals

### Approvals

#### Approvals

VDE Gutachten mit Fertigungsüberwachung / IECCE CB Scheme / EAC / cULus Recognized

#### Ex Approvals

### Approval details

|                                            |                                                                                     |                                                                                                                                                                                                                |          |
|--------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| VDE Gutachten mit<br>Fertigungsüberwachung |  | <a href="http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx">http://www2.vde.com/de/Institut/Online-Service/<br/>VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a> | 40042258 |
| Nominal voltage UN                         | 160 V                                                                               |                                                                                                                                                                                                                |          |
| Nominal current IN                         | 6 A                                                                                 |                                                                                                                                                                                                                |          |
| mm²/AWG/kcmil                              | 0.14-.5                                                                             |                                                                                                                                                                                                                |          |

|                    |                                                                                     |                                                           |           |
|--------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------|
| IECEE CB Scheme    |  | <a href="http://www.iecee.org/">http://www.iecee.org/</a> | DE1-63595 |
| Nominal voltage UN | 160 V                                                                               |                                                           |           |
| Nominal current IN | 6 A                                                                                 |                                                           |           |
| mm²/AWG/kcmil      | 0.14-.5                                                                             |                                                           |           |

## Printed-circuit board connector - FMC 0,5/ 3-ST-2,54 - 1821106

### Approvals

|     |                                                                                   |         |
|-----|-----------------------------------------------------------------------------------|---------|
| EAC |  | B.01687 |
|-----|-----------------------------------------------------------------------------------|---------|

|                    |                                                                                   |                                                                                                                                                       |                 |
|--------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| cULus Recognized   |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | E60425-19920306 |
|                    | B                                                                                 | C                                                                                                                                                     |                 |
| Nominal voltage UN | 150 V                                                                             | 50 V                                                                                                                                                  |                 |
| Nominal current IN | 6 A                                                                               | 6 A                                                                                                                                                   |                 |
| mm²/AWG/kcmil      | 26-20                                                                             | 26-20                                                                                                                                                 |                 |

### Accessories

#### Accessories

##### Cable end sleeve

Ferrule - A 0,25- 7 - 3202478



Ferrule, length: 7 mm, color: silver

Ferrule - A 0,34- 7 - 3009202



Ferrule, length: 7 mm, color: silver

### Crimping tool

Crimping pliers - CRIMPFOX 6 - 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 mm² ... 6.0 mm², lateral entry, trapezoidal crimp

## Printed-circuit board connector - FMC 0,5/ 3-ST-2,54 - 1821106

### Accessories

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#### Labeled terminal marker

Marker card - SK 2,54/2,8:FORTL.ZAHLEN - 0804853



Marker card, Card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 99, mounting type: adhesive, for terminal block width: 2.54 mm, lettering field size: 2.54 x 2.8 mm

#### Screwdriver tools

Screwdriver - SZS 0,4X2,0 - 1205202



Micro screwdriver, bladed, size: 0.4 x 2.0 x 60 mm, 2-component grip, with non-slip grip and twist cap

#### Additional products

Printed-circuit board connector - MC 0,5/ 3-G-2,54 P20 THR R24 - 1821258



PCB header, nominal cross section: 0.5 mm<sup>2</sup>, color: black, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Gold, type of contact: Male connector, number of potentials: 3, Number of rows: 1, Number of positions per row: 3, number of connections: 3, product range: MC 0,5/...-G-THR, pitch: 2.54 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2 mm, plug-in system: MICRO COMBICON - FMC 0,5, Pin connector pattern alignment: Standard, Locking: without, mounting: without, type of packaging: 24 mm wide tape, Sample values available under SAMPLE MC...

Printed-circuit board connector - MCV 0,5/ 3-G-2,54 P20 THR R24 - 1821407



PCB header, nominal cross section: 0.5 mm<sup>2</sup>, color: black, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Gold, type of contact: Male connector, number of potentials: 3, Number of rows: 1, Number of positions per row: 3, number of connections: 3, product range: MCV 0,5/...-G-THR, pitch: 2.54 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2 mm, plug-in system: MICRO COMBICON - FMC 0,5, Pin connector pattern alignment: Standard, Locking: without, mounting: without, type of packaging: 24 mm wide tape, Sample values available under SAMPLE MC...

## Printed-circuit board connector - FMC 0,5/ 3-ST-2,54 - 1821106

### Accessories

#### Printed-circuit board connector - MCV 0,5/ 3-G-2,54 SMD R24 - 1821559



PCB header, nominal cross section: 0.5 mm<sup>2</sup>, color: black, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Gold, type of contact: Male connector, number of potentials: 3, Number of rows: 1, Number of positions per row: 3, number of connections: 3, product range: MCV 0,5/...-G-SMD, pitch: 2.54 mm, mounting: SMD soldering, pin layout: Linear pad geometry, plug-in system: MICRO COMBICON - FMC 0,5, Pin connector pattern alignment: Standard, Locking: without, mounting: without, type of packaging: 24 mm wide tape, Sample values available under SAMPLE MC...

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#### Printed-circuit board connector - MC 0,5/ 3-G-2,54 SMD R24 - 1821708



PCB header, nominal cross section: 0.5 mm<sup>2</sup>, color: black, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Gold, type of contact: Male connector, number of potentials: 3, Number of rows: 1, Number of positions per row: 3, number of connections: 3, product range: MC 0,5/...-G-SMD, pitch: 2.54 mm, mounting: SMD soldering, pin layout: Linear pad geometry, plug-in system: MICRO COMBICON - FMC 0,5, Pin connector pattern alignment: Standard, Locking: without, mounting: without, type of packaging: 24 mm wide tape, Sample values available under SAMPLE MC...