

# Printed-circuit board connector - SPC 5/ 3-STF-7,62 - 1996139

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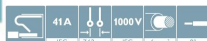
PCB connector, nominal current: 41 A, rated voltage (III/2): 1000 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 3, pitch: 7.62 mm, connection method: Push-in spring connection, color: green, contact surface: Tin




The figure shows a 5-pos. version of the product

## Your advantages

- ✓ Time saving push-in connection, tools not required
- ✓ Defined contact force ensures that contact remains stable over the long term
- ✓ Clamping space opened by means of fixed screwdriver enables convenient conductor connection
- ✓ Integrated double steel spring provides additional safety in the event of temperature and power fluctuations
- ✓ Optimized for tight installation situations: operation and conductor connection from one direction
- ✓ Screwable flange for superior mechanical stability
- ✓ 600 V UL approval in the smallest of dimensions



## Key Commercial Data

|              |   |
|--------------|---|
| Packing unit | 50 pc   |
| GTIN         | <br>4 046356 037877 |
| GTIN         | 4046356037877   |

## Technical data

### Item properties

|                           |                                 |
|---------------------------|---------------------------------|
| Brief article description | Printed-circuit board connector |
| Plug-in system            | POWER COMBICON 5                |
| Type of contact           | Female connector                |
| Range of articles         | SPC 5/...-STF                   |
| Pitch                     | 7.62 mm                         |
| Number of positions       | 3                               |
| Connection method         | Push-in spring connection       |
| Locking                   | Screw flange                    |

# Printed-circuit board connector - SPC 5/ 3-STF-7,62 - 1996139

## Technical data

### Item properties

|                       |   |
|-----------------------|---|
| Number of levels      | 1 |
| Number of connections | 3 |
| Number of potentials  | 3 |

### Electrical parameters

|                             |        |
|-----------------------------|--------|
| Nominal current             | 41 A   |
| Nom. voltage                | 1000 V |
| Rated voltage               | 1000 V |
| Rated voltage (III/2)       | 1000 V |
| Rated voltage (II/2)        | 1000 V |
| Rated surge voltage (III/3) | 8 kV   |
| Rated surge voltage (III/2) | 8 kV   |
| Rated surge voltage (II/2)  | 6 kV   |

### Connection capacity

|   |  |
|---|--|
| Connection method   | Push-in spring connection                    |
| pluggable   | Yes  |
| Conductor cross section solid   | 0.2 mm <sup>2</sup> ... 10 mm <sup>2</sup>   |
| Conductor cross section flexible  | 0.2 mm <sup>2</sup> ... 6 mm <sup>2</sup>    |
| Conductor cross section AWG / kcmil   | 24 ... 8                                     |
| Conductor cross section flexible, with ferrule without plastic sleeve                     | 0.25 mm <sup>2</sup> ... 6 mm <sup>2</sup>   |
| Conductor cross section, flexible, with ferrule, with plastic sleeve                      | 0.25 mm <sup>2</sup> ... 4 mm <sup>2</sup>   |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| Stripping length  | 15 mm  |

### Specifications for ferrules

|  |   |
|--|---|
| Recommended crimping pliers                                  | 1212034 CRIMPFOX 6  |
| Ferrules without insulating collar, according to DIN 46228-1 | Cross section: 0.5 mm <sup>2</sup> ; Length: 10 mm ... 15 mm  |
|  | Cross section: 0.75 mm <sup>2</sup> ; Length: 10 mm ... 15 mm |
|  | Cross section: 1 mm <sup>2</sup> ; Length: 10 mm ... 15 mm    |
|  | Cross section: 1.5 mm <sup>2</sup> ; Length: 10 mm ... 15 mm  |
|  | Cross section: 2.5 mm <sup>2</sup> ; Length: 12 mm ... 15 mm  |
|  | Cross section: 4 mm <sup>2</sup> ; Length: 12 mm ... 15 mm    |
| Recommended crimping pliers                                  | 1212034 CRIMPFOX 6  |
| Ferrules with insulating collar, according to DIN 46228-4    | Cross section: 0.5 mm <sup>2</sup> ; Length: 10 mm ... 15 mm  |
|  | Cross section: 0.75 mm <sup>2</sup> ; Length: 12 mm ... 15 mm |
|  | Cross section: 1 mm <sup>2</sup> ; Length: 12 mm ... 15 mm    |
|  | Cross section: 1.5 mm <sup>2</sup> ; Length: 12 mm ... 15 mm  |
|  | Cross section: 2.5 mm <sup>2</sup> ; Length: 12 mm ... 15 mm  |
|  | Cross section: 4 mm <sup>2</sup> ; Length: 12 mm ... 15 mm    |

### Flange specifications

# Printed-circuit board connector - SPC 5/ 3-STF-7,62 - 1996139

## Technical data

### Flange specifications

|                 |                   |
|-----------------|-------------------|
| Type of locking | Screw locking     |
| Mounting flange | Screw flange      |
| Torque          | 0.3 Nm ... 0.7 Nm |

### 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

|   |              |
|---|--------------|
| Housing color   | 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       |

### Dimensions for the product

|                             |          |
|-----------------------------|----------|
| Length [ l ]                | 38.5 mm  |
| Width [ w ]                 | 38.08 mm |
| Height [ h ]                | 19.8 mm  |
| Pitch                       | 7.62 mm  |
| Height (without solder pin) | 19.8 mm  |

### Packaging information

|                            |                     |
|----------------------------|---------------------|
| Type of packaging          | packed in cardboard |
| Pieces per package         | 50                  |
| Denomination packing units | Pcs.                |

### 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   |

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## Technical data

### Termination and connection method

|  |                     |
|--|---------------------|
|  | 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                     |
|  | Test passed                             |
| Conductor cross section / conductor type / tensile force | 0.2 mm <sup>2</sup> / solid / > 10 N    |
|  | 0.2 mm <sup>2</sup> / flexible / > 10 N |
|  | 6 mm <sup>2</sup> / flexible / > 80 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                       | 50                     |
| Insertion strength per pos. approx. | 5 N                    |
| Withdraw strength per pos. approx.  | 4 N                    |
| Polarization and coding             | IEC 60512-13-5:2006-02 |

### 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) | 8 mm                |
| Minimum clearance - inhomogeneous field (III/2) | 8 mm                |
| Minimum clearance - inhomogeneous field (II/2)  | 5.5 mm              |
| Minimum creepage distance value (III/3)         | 12.5 mm             |
| Minimum creepage distance value (III/2)         | 5 mm                |
| Minimum creepage distance value (II/2)          | 5 mm                |

### Electrical tests - Function

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

### Temperature cycles

|                                      |                     |
|--------------------------------------|---------------------|
| Specification                        | IEC 60999-1:1999-11 |
| Test current (minimum cross section) | 5 A DC              |
| Test current (maximum cross section) | 32 A DC             |
| Temperature cycles                   | 192                 |

### Current carrying capacity / derating curves

|         |  |
|---------|--|
| Caption | Type: SPC 5/...-STF-7,62 with DFK-PC 5/...-STF-7,62<br>Conductor cross section: 10 mm <sup>2</sup> |
|---------|--|

# Printed-circuit board connector - SPC 5/ 3-STF-7,62 - 1996139

## Technical data

### Current carrying capacity / derating curves

|                  |   |
|------------------|---|
| Specification    | IEC 61984:2008-10                             |
| Reduction factor | 0.8   |
| Note             | Representation based on IEC 60512-5-2:2002-02 |
|                  | For number of positions, see diagram          |

### Mechanical tests (A)

|  |             |
|--|-------------|
| Test specification                           | IEC 61984   |
| Insertion strength per pos. approx.          | 5 N         |
| Withdraw strength per pos. approx.           | 4 N         |
| Polarization when inserted requirement >20 N | Test passed |

### Durability tests (B)

|  |                       |
|--|-----------------------|
| Specification                          | IEC 60512-9-1:2010-03 |
| Contact resistance R <sub>1</sub>      | 0.5 mΩ                |
| Insertion/withdrawal cycles            | 50                    |
| Contact resistance R <sub>2</sub>      | 0.6 mΩ                |
| Impulse withstand voltage at sea level | 9.8 kV                |
| Power-frequency withstand voltage      | 4.26 kV               |

### Thermal tests (C)

|   |                       |
|---|-----------------------|
| Specification                                   | IEC 60512-5-1:2002-02 |
| Number of positions                             | 12                    |
| Conductor cross section                         | 6 mm <sup>2</sup>     |
| Test current                                    | 32 A                  |
| Upper limiting temperature requirements <100 °C | Test passed           |

### Climatic tests (D)

|  |   |
|--|---|
| Specification                          | ISO 6988:1985-02  |
| Cold stress                            | -40 °C/2 h  |
| Thermal stress                         | 100 °C/168 h  |
| Corrosive stress                       | 0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/1 cycle |
| Impulse withstand voltage at sea level | 9.8 kV  |
| Power-frequency withstand voltage      | 4.26 kV   |

### Environmental and durability tests (E)

|                                       |                                     |
|---------------------------------------|-------------------------------------|
| Specification                         | IEC 61984:2008-10                   |
| Result, degree of protection, IP code | Finger safety with IP20 test finger |

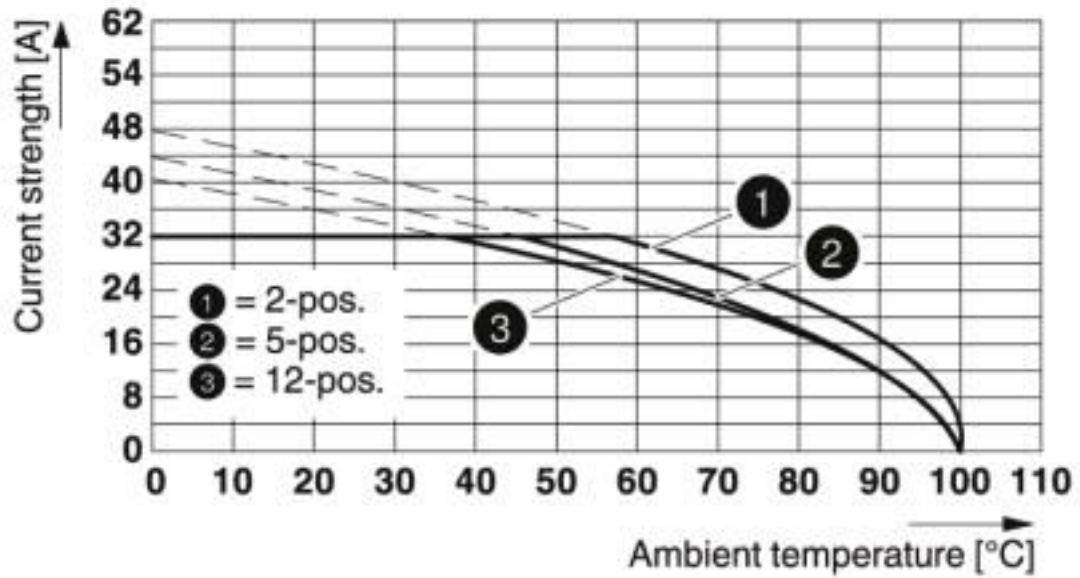
### Environmental Product Compliance

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

## Drawings

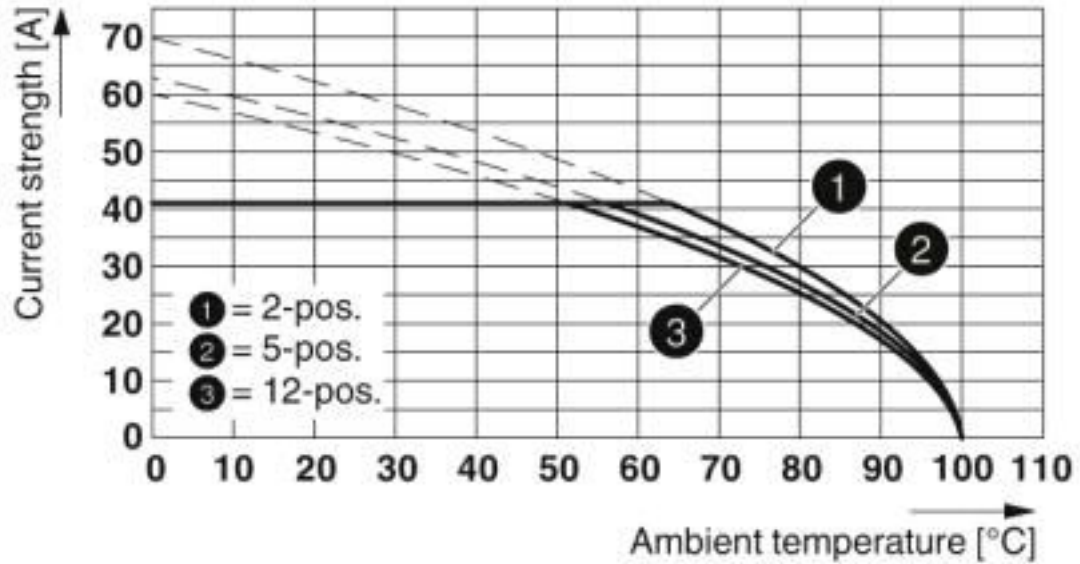
# Printed-circuit board connector - SPC 5/ 3-STF-7,62 - 1996139

Diagram



Derating curve for: SPC 5/...-ST-7,62 with PC 5/...-G-7,62

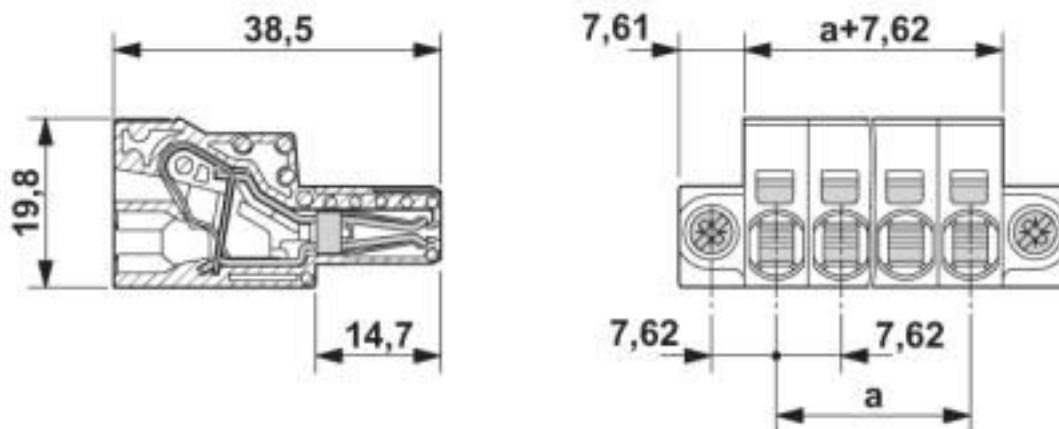
Diagram



Type: SPC 5/...-STF-7,62 with DFK-PC 5/...-STF-7,62  
Conductor cross section: 10 mm<sup>2</sup>

# Printed-circuit board connector - SPC 5/ 3-STF-7,62 - 1996139

Dimensional drawing



## Classifications

### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27440309 |
| 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 8.0    | 27440309 |
| eCl@ss 9.0    | 27440309 |

### ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC001121 |
| ETIM 4.0 | EC002638 |
| ETIM 5.0 | EC002638 |
| ETIM 6.0 | EC002638 |
| ETIM 7.0 | EC002638 |

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211810 |
| UNSPSC 7.0901 | 39121409 |
| UNSPSC 11     | 39121409 |
| UNSPSC 12.01  | 39121409 |
| UNSPSC 13.2   | 39121409 |
| UNSPSC 18.0   | 39121409 |
| UNSPSC 19.0   | 39121409 |
| UNSPSC 20.0   | 39121409 |
| UNSPSC 21.0   | 39121409 |

# Printed-circuit board connector - SPC 5/ 3-STF-7,62 - 1996139

## Approvals

### Approvals

#### Approvals

EAC / cULus Recognized

#### Ex Approvals

### Approval details

|     |  |         |
|-----|--|---------|
| 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> | E60425-19920722 |
|                            | B     | C   |                 |
| Nominal voltage UN         | 600 V | 600 V   |                 |
| Nominal current IN         | 35 A  | 35 A  |                 |
| mm <sup>2</sup> /AWG/kcmil | 24-8  | 24-8  |                 |

## Accessories

### Accessories

#### Cable end sleeve

Ferrule - AI 4 -15 GY - 1200264



Ferrule, sleeve length: 15 mm, length: 23 mm, color: gray

### Coding element

Coding profile - CP-PC RD - 1701967



Coding profile, for plugging into the coding ribs of the plug at a later date, insulating material, color: Red



## Printed-circuit board connector - SPC 5/ 3-STF-7,62 - 1996139

### Accessories

#### 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 mm<sup>2</sup> ... 6.0 mm<sup>2</sup>, lateral entry, trapezoidal crimp

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#### Labeled terminal marker

Marker card - SK 7,62/3,8:FORTL.ZAHLEN - 0804549



Marker card, Card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 100, mounting type: adhesive, for terminal block width: 7.62 mm, lettering field size: 7.62 x 3.8 mm

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Marker card - SK 3,8 REEL P7,62 WH CUS - 0825128



Marker card, Card, can be ordered: by card, white, labeled according to customer specifications, mounting type: adhesive, for terminal block width: 7.62 mm, lettering field size: continuous x 3.8#mm

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#### Screwdriver tools

Screwdriver - SZF 1-0,6X3,5 - 1204517



Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

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#### Terminal marking

Marker card - SK U/3,8 WH:UNBEDRUCKT - 0803906



Marker card, Sheet, 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 3.8 mm, Number of individual labels: 1440

## Printed-circuit board connector - SPC 5/ 3-STF-7,62 - 1996139

### Accessories

Marker strip - SK 3,8 WH:REEL - 0805218



Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: adhesive, for terminal block width: 90000 mm, lettering field size: continuous x 3.8#mm, Number of individual labels: 210000

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### Additional products

Printed-circuit board connector - DFK-PC 5/ 3-GF-SH-7,62 - 1716072



Feed-through header, nominal current: 41 A, rated voltage (III/2): 630 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 3, pitch: 7.62 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 5 mm

Printed-circuit board connector - DFK-PC 5/ 3-GFU-SH-7,62 - 1716182



Feed-through header, nominal current: 41 A, rated voltage (III/2): 630 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 3, pitch: 7.62 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4.26 mm

Printed-circuit board connector - DFK-PCV 5/ 3-GF-7,62 - 1716409



Feed-through header, nominal current: 41 A, rated voltage (III/2): 630 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 3, pitch: 7.62 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 5 mm

Printed-circuit board connector - PC 5/ 3-GF-7,62 - 1720806



PCB headers, nominal current: 41 A, rated voltage (III/2): 630 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 3, pitch: 7.62 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 5 mm

## Printed-circuit board connector - SPC 5/ 3-STF-7,62 - 1996139

### Accessories

Printed-circuit board connector - PCV 5/ 3-GF-7,62 - 1720916



PCB headers, nominal current: 41 A, rated voltage (III/2): 630 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 3, pitch: 7.62 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 5 mm

Printed-circuit board connector - PC 5/ 3-GFU-7,62 - 1721025



PCB headers, nominal current: 41 A, rated voltage (III/2): 630 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 3, pitch: 7.62 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4.2 mm

Printed-circuit board connector - DFK-PC 5/ 3-GF-7,62 - 1727702



Feed-through header, nominal current: 41 A, rated voltage (III/2): 630 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 3, pitch: 7.62 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4.9 mm

Printed-circuit board connector - DFK-PC 5/ 3-GFU-7,62 - 1727922



Feed-through header, nominal current: 41 A, rated voltage (III/2): 630 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 3, pitch: 7.62 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4.26 mm

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