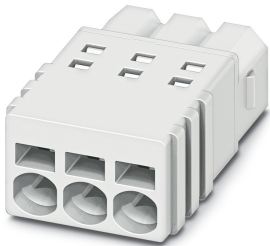


## Printed-circuit board connector - PTSM 0,5/ 6-P-2,5 WH - 1704859

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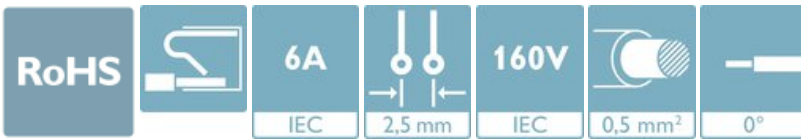


PCB connector, nominal cross section: 0.5 mm<sup>2</sup>, color: white, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Female connector, number of potentials: 6, Number of rows: 1, Number of positions per row: 6, number of connections: 6, product range: PTSM 0,5/..-P WH, pitch: 2.5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON COMPACT PTSM, Locking: without, mounting: without, type of packaging: packed in cardboard

The figure shows a 3-position version

### Your advantages

- ✓ White design: Stable color when welding and during use
- ✓ Time saving push-in connection, tools not required
- ✓ Defined contact force ensures that contact remains stable over the long term
- ✓ High current carrying capacity of 6 A in very compact dimensions



### Key Commercial Data

|                                      |                                                                                                         |
|--------------------------------------|---------------------------------------------------------------------------------------------------------|
| Packing unit                         | 1 pc                                                                                                    |
| Minimum order quantity               | 100 pc                                                                                                  |
| GTIN                                 | <br>4 046356 740845 |
| GTIN                                 | 4046356740845                                                                                           |
| Weight per Piece (excluding packing) | 1.700 g                                                                                                 |
| Custom tariff number                 | 85366990                                                                                                |
| Country of origin                    | Poland                                                                                                  |

### Technical data

#### Item properties

|                           |                       |
|---------------------------|-----------------------|
| Brief article description | PCB connector         |
| Connector system          | COMBICON COMPACT PTSM |
| Type of contact           | Female connector      |

## Printed-circuit board connector - PTSM 0,5/ 6-P-2,5 WH - 1704859

### Technical data

#### Item properties

|                       |                  |
|-----------------------|------------------|
| Range of articles     | PTSM 0,5/..-P WH |
| Pitch                 | 2.5 mm           |
| Number of positions   | 6                |
| Locking               | without          |
| Number of levels      | 1                |
| Number of connections | 6                |
| Number of potentials  | 6                |

#### Electrical parameters

|                             |        |
|-----------------------------|--------|
| Nominal current             | 6 A    |
| Nom. voltage                | 160 V  |
| Rated voltage (III/3)       | 100 V  |
| Rated voltage (III/2)       | 160 V  |
| Rated voltage (II/2)        | 320 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 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>                                                                                       |
| Conductor cross section flexible                                      | 0.2 mm <sup>2</sup> ... 0.5 mm <sup>2</sup> (up to 0.75 mm <sup>2</sup> supported, at a rated insulation voltage of 32 V at III/2) |
| Conductor cross section AWG / kcmil                                   | 24 ... 20                                                                                                                          |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.25 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>                                                                                       |
| Conductor cross section, flexible, with ferrule, with plastic sleeve  | 0.25 mm <sup>2</sup> ... 0.34 mm <sup>2</sup>                                                                                      |
| Cylindrical gauge a x b / diameter                                    | - / 1.2 mm                                                                                                                         |
| Stripping length                                                      | 6 mm                                                                                                                               |

#### Flange specifications

|                 |         |
|-----------------|---------|
| Type of locking | without |
| Mounting flange | without |

#### 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)                                                                 |

# Printed-circuit board connector - PTSM 0,5/ 6-P-2,5 WH - 1704859

## Technical data

### Material data - housing

|                                                                   |              |
|-------------------------------------------------------------------|--------------|
| Housing color                                                     | white (9010) |
| 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

|                             |                                                                                            |
|-----------------------------|--------------------------------------------------------------------------------------------|
| Caption                     | Schematische Abbildung - weitere Details siehe Produktfamilienzeichnung im Download Center |
| Length [ l ]                | 15 mm                                                                                      |
| Width [ w ]                 | 16.1 mm                                                                                    |
| Height [ h ]                | 5 mm                                                                                       |
| Pitch                       | 2.5 mm                                                                                     |
| Height (without solder pin) | 5 mm                                                                                       |

### Packaging information

|                            |                     |
|----------------------------|---------------------|
| Type of packaging          | packed in cardboard |
| Pieces per package         | 100                 |
| 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                   |
| Conductor cross section / conductor type / tensile force | 0.14 mm <sup>2</sup> / solid / > 10 N |

## Printed-circuit board connector - PTSM 0,5/ 6-P-2,5 WH - 1704859

### Technical data

#### Pull-out test

|  |                                          |
|--|------------------------------------------|
|  | 0.2 mm <sup>2</sup> / flexible / > 10 N  |
|  | 0.5 mm <sup>2</sup> / solid / > 20 N     |
|  | 0.75 mm <sup>2</sup> / flexible / > 30 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                       | 10                     |
| Insertion strength per pos. approx. | 5 N                    |
| Withdraw strength per pos. approx.  | 3 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) | 1.5 mm              |
| Minimum clearance - inhomogeneous field (III/2) | 1.5 mm              |
| Minimum clearance - inhomogeneous field (II/2)  | 1.5 mm              |
| Minimum creepage distance value (III/3)         | 1.8 mm              |
| Minimum creepage distance value (III/2)         | 1.5 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: PTSM 0,5/...-P-2,5 WH with PTSM 0,5/...-HTB-2,5-SMD WH R... |
|---------|-------------------------------------------------------------------|

#### Mechanical tests (A)

|                                              |             |
|----------------------------------------------|-------------|
| Test specification                           | IEC 61984   |
| Insertion strength per pos. approx.          | 5 N         |
| Withdraw strength per pos. approx.           | 3 N         |
| Polarization when inserted requirement >20 N | Test passed |

## Printed-circuit board connector - PTSM 0,5/ 6-P-2,5 WH - 1704859

### Technical data

#### Mechanical tests (A)

|                                             |             |
|---------------------------------------------|-------------|
| 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>      | 2.4 mΩ                |
| Insertion/withdrawal cycles            | 10                    |
| Contact resistance R <sub>2</sub>      | 2.3 mΩ                |
| Impulse withstand voltage at sea level | 2.95 kV               |

#### Thermal tests (C)

|                                                 |                       |
|-------------------------------------------------|-----------------------|
| Specification                                   | IEC 60512-5-1:2002-02 |
| Number of positions                             | 8                     |
| 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 | 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 | Finger safety with IP20 test finger |

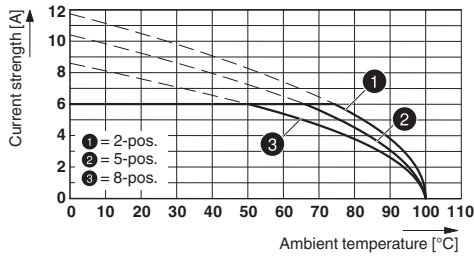
#### Environmental Product Compliance

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

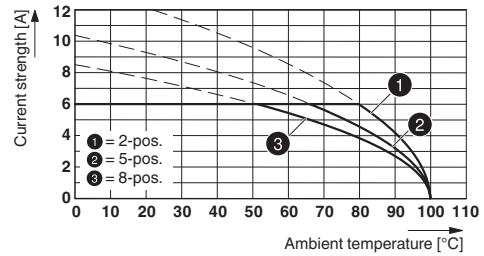
### Drawings

# Printed-circuit board connector - PTSM 0,5/ 6-P-2,5 WH - 1704859

Diagram



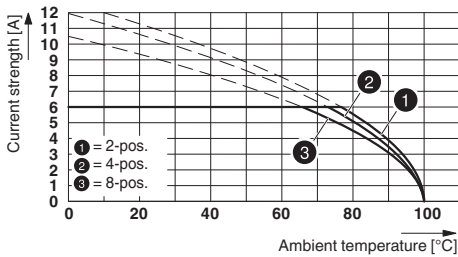
Diagram



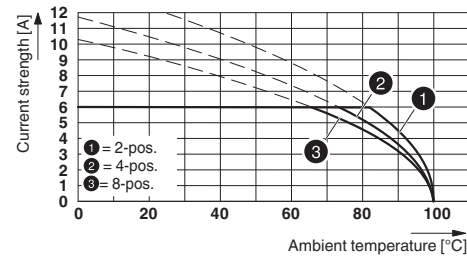
Type: PTSM 0,5/...-P-2,5 WH with PTSM 0,5/...-HTB-2,5-SMD WH R...

Type: PTSM 0,5/...-P-2,5 WH... with PTSM 0,5/...-HV-2,5-SMD WH R...

Diagram



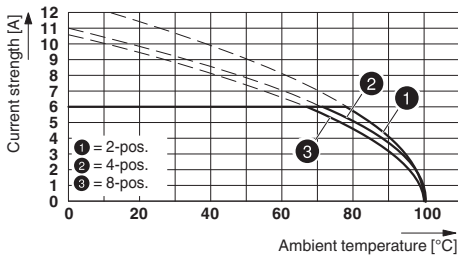
Diagram



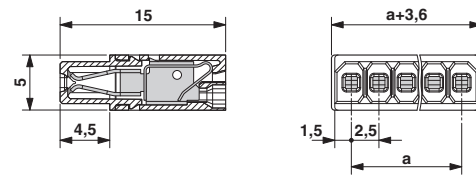
Type: PTSM 0,5/...-P-2,5 WH... with PTSM 0,5/...-HH0-2,5-SMD WH R...

Type: PTSM 0,5/...-P-2,5 WH... with PTSM 0,5/...-HV-2,5-THR WH R...

Diagram



Dimensional drawing



Type: PTSM 0,5/...-P-2,5 WH... with PTSM 0,5/...-HH-2,5-THR WH 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 |

## Printed-circuit board connector - PTSM 0,5/ 6-P-2,5 WH - 1704859

### Classifications

#### eCl@ss

|            |          |
|------------|----------|
| 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 | 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 |

### Approvals

#### Approvals

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Approvals

VDE Zeichengenehmigung / UL Recognized / EAC / cULus Recognized

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Ex Approvals

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Approval details

# Printed-circuit board connector - PTSM 0,5/ 6-P-2,5 WH - 1704859

## Approvals

|                            |         |                                                                                                                                                                                                           |          |
|----------------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| VDE Zeichengenehmigung     |         | <a href="http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx">http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a> | 40048497 |
| Nominal voltage UN         | 160 V   |                                                                                                                                                                                                           |          |
| Nominal current IN         | 6 A     |                                                                                                                                                                                                           |          |
| mm <sup>2</sup> /AWG/kcmil | 0.14-.5 |                                                                                                                                                                                                           |          |

|                            |       |                                                                                                                                                       |                  |
|----------------------------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| UL 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> | E118976-20130619 |
|                            | B     |                                                                                                                                                       |                  |
| Nominal voltage UN         | 150 V |                                                                                                                                                       |                  |
| Nominal current IN         | 5 A   |                                                                                                                                                       |                  |
| mm <sup>2</sup> /AWG/kcmil | 26-18 |                                                                                                                                                       |                  |

|     |  |  |         |
|-----|--|--|---------|
| 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> | E60425-20101209 |
|                            | B     |                                                                                                                                                       |                 |
| Nominal voltage UN         | 150 V |                                                                                                                                                       |                 |
| Nominal current IN         | 5 A   |                                                                                                                                                       |                 |
| mm <sup>2</sup> /AWG/kcmil | 26-20 |                                                                                                                                                       |                 |

## Accessories

### Accessories

#### Cable end sleeve

Ferrule - AI 0,25- 6 BU - 3203040



Ferrule, sleeve length: 6 mm, length: 10.5 mm, color: blue

## Printed-circuit board connector - PTSM 0,5/ 6-P-2,5 WH - 1704859

### Accessories

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#### Ferrule - AI 0,25- 6 YE - 3203024



Ferrule, sleeve length: 6 mm, length: 10.5 mm, color: yellow

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#### Ferrule - AI 0,34- 6 TQ - 3203053



Ferrule, sleeve length: 6 mm, length: 10.5 mm, color: turquoise

---

### 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

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### Additional products

#### Feed-through header - PTSM 0,5/ 6-HH-2,5-SMD WH R44 - 1708015



PCB header, nominal cross section: 0.5 mm<sup>2</sup>, color: white, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 6, Number of rows: 1, Number of positions per row: 6, number of connections: 6, product range: PTSM 0,5/..-HH-SMD WH, pitch: 2.5 mm, mounting: SMD soldering, pin layout: Linear pad geometry, solder pin [P]: 2 mm, plug-in system: COMBICON COMPACT PTSM, Pin connector pattern alignment: Standard, Locking: without, mounting: without, type of packaging: packed in cardboard, Article with anti-rotation pin

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## Printed-circuit board connector - PTSM 0,5/ 6-P-2,5 WH - 1704859

### Accessories

#### Feed-through header - PTSM 0,5/ 6-HH0-2,5-SMD WH R44 - 1814951



PCB header, nominal cross section: 0.5 mm<sup>2</sup>, color: white, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 6, Number of rows: 1, Number of positions per row: 6, number of connections: 6, product range: PTSM 0,5/..-HH-SMD WH, pitch: 2.5 mm, mounting: SMD soldering, pin layout: Linear pad geometry, plug-in system: COMBICON COMPACT PTSM, Pin connector pattern alignment: Standard, Locking: without, mounting: without, type of packaging: 44 mm wide tape

#### Feed-through header - PTSM 0,5/ 6-HV-2,5-SMD WH R44 - 1778735



PCB header, nominal cross section: 0.5 mm<sup>2</sup>, color: white, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 6, Number of rows: 1, Number of positions per row: 6, number of connections: 6, product range: PTSM 0,5/..-HV-SMD WH, pitch: 2.5 mm, mounting: SMD soldering, pin layout: Linear pad geometry, solder pin [P]: 2 mm, plug-in system: COMBICON COMPACT PTSM, Pin connector pattern alignment: Standard, Locking: without, mounting: without, type of packaging: 44 mm wide tape, Article with anti-rotation pin

#### Feed-through header - PTSM 0,5/ 6-HV0-2,5-SMD WH R44 - 1839237



PCB header, nominal cross section: 0.5 mm<sup>2</sup>, color: white, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 6, Number of rows: 1, Number of positions per row: 6, number of connections: 6, product range: PTSM 0,5/..-HV-SMD WH, pitch: 2.5 mm, mounting: SMD soldering, pin layout: Linear pad geometry, plug-in system: COMBICON COMPACT PTSM, Pin connector pattern alignment: Standard, Locking: without, mounting: without, type of packaging: packed in cardboard

#### Feed-through header - PTSM 0,5/ 6-HTB-2,5-SMD WH R44 - 1830168



PCB header, nominal cross section: 0.5 mm<sup>2</sup>, color: white, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 6, Number of rows: 1, Number of positions per row: 6, number of connections: 6, product range: PTSM 0,5/..-HTB-SMD WH, pitch: 2.5 mm, mounting: SMD soldering, pin layout: Linear pad geometry, plug-in system: COMBICON COMPACT PTSM, Pin connector pattern alignment: Standard, Locking: without, mounting: without, type of packaging: 44 mm wide tape

#### Feed-through header - PTSM 0,5/ 6-HH-2,5-THR WH R32 - 1814883



PCB header, nominal cross section: 0.5 mm<sup>2</sup>, color: white, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 6, Number of rows: 1, Number of positions per row: 6, number of connections: 6, product range: PTSM 0,5/..-HH-THR WH, pitch: 2.5 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.1 mm, plug-in system: COMBICON COMPACT PTSM, Pin connector pattern alignment: Standard, Locking: without, mounting: without, type of packaging: 32 mm wide tape

## Printed-circuit board connector - PTSM 0,5/ 6-P-2,5 WH - 1704859

### Accessories

#### Feed-through header - PTSM 0,5/ 6-HV-2,5-THR WH R32 - 1815303



PCB header, nominal cross section: 0.5 mm<sup>2</sup>, color: white, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 6, Number of rows: 1, Number of positions per row: 6, number of connections: 6, product range: PTSM 0,5/..-HV-THR WH, pitch: 2.5 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2 mm, plug-in system: COMBICON COMPACT PTSM, Pin connector pattern alignment: Standard, Locking: without, mounting: without, type of packaging: 32 mm wide tape

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#### Printed-circuit board connector - PTSM 0,5/ 6-PI-2,5 WH - 1709454



PCB connector, nominal cross section: 0.5 mm<sup>2</sup>, color: white, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 6, Number of rows: 1, Number of positions per row: 6, number of connections: 6, product range: PTSM 0,5/..-PI WH, pitch: 2.5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON COMPACT PTSM, Locking: without, mounting: without, type of packaging: packed in cardboard