

## PCB terminal block - PTDA 1,5/ 9-3,5 - 1725003

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The figure shows a 10-position version of the product

PCB terminal block, nominal current: 17.5 A, rated voltage (III/2): 240 V, nominal cross section: 1.5 mm<sup>2</sup>, pitch: 3.5 mm, number of positions: 9, connection method: Push-in spring connection, mounting: Wave soldering, conductor/PCB connection direction: 45 °, color: green, Pin layout: Linear double pinning, Solder pin [P]: 3.5 mm

### Your advantages

- ✓ Time saving push-in connection, tools not required
- ✓ Defined contact force ensures that contact remains stable over the long term
- ✓ Potentials can be easily looped through – ideal for BUS applications
- ✓ Quick and convenient testing using integrated test option
- ✓ Rounded type for individual device design
- ✓ Two solder pins reduce the mechanical strain on the soldering spots

RoHS



### Key Commercial Data

|              |                                                                                      |
|--------------|--------------------------------------------------------------------------------------|
| Packing unit | 50 pc                                                                                |
| GTIN         |  |
| GTIN         | 4046356129022                                                                        |

### Technical data

#### Item properties

|                           |                           |
|---------------------------|---------------------------|
| Brief article description | PCB terminal block        |
| Range of articles         | PTDA 1,5/                 |
| Pitch                     | 3.5 mm                    |
| Number of positions       | 9                         |
| Connection method         | Push-in spring connection |
| Mounting type             | Wave soldering            |
| Pin layout                | Linear double pinning     |
| Number of levels          | 1                         |
| Number of connections     | 18                        |

# PCB terminal block - PTDA 1,5/ 9-3,5 - 1725003

## Technical data

### Item properties

|                      |   |
|----------------------|---|
| Number of potentials | 9 |
|----------------------|---|

### Electrical parameters

|                             |        |
|-----------------------------|--------|
| Nominal current             | 17.5 A |
| Nom. voltage                | 240 V  |
| Rated voltage               | 200 V  |
| Rated voltage (III/2)       | 240 V  |
| Rated voltage (II/2)        | 400 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                                                             | 0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| Conductor cross section flexible                                                          | 0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| Conductor cross section AWG / kcmil                                                       | 24 ... 16                                   |
| Conductor cross section flexible, with ferrule without plastic sleeve                     | 0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| Conductor cross section, flexible, with ferrule, with plastic sleeve                      | 0.5 mm <sup>2</sup> ... 0.5 mm <sup>2</sup> |
| 2 conductors with same cross section, solid                                               | 0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| 2 conductors with same cross section, flexible                                            | 0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve       | 0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm <sup>2</sup> ... 0.5 mm <sup>2</sup> |
| Stripping length                                                                          | 10 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                  | Tin-plated                                                                        |
| Metal surface terminal point (top layer) | Tin (4 - 8 µm Sn)                                                                 |
| Metal surface soldering 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       |

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## Technical data

### Dimensions for the product

|                             |            |
|-----------------------------|------------|
| Length [ l ]                | 16 mm      |
| Width [ w ]                 | 32.9 mm    |
| Height [ h ]                | 19.5 mm    |
| Pitch                       | 3.5 mm     |
| Height (without solder pin) | 16 mm      |
| Solder pin [P]              | 3.5 mm     |
| Pin spacing                 | 3.5 mm     |
| Pin dimensions              | 1 x 0.4 mm |

### Dimensions for PCB design

|               |        |
|---------------|--------|
| Hole diameter | 1.3 mm |
| Pin spacing   | 3.5 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 ... 105 °C (dependent on the derating curve) |

### Termination and connection method

|                                          |                       |
|------------------------------------------|-----------------------|
| Connection test                          | IEC 60998-2-2:2002-12 |
| Test result                              | Test passed           |
| Test for conductor damage and slackening | IEC 60998-2-2:2002-12 |
|                                          | Test passed           |

### Pull-out test

|                                                          |                             |
|----------------------------------------------------------|-----------------------------|
| Pull-out test                                            | IEC 60998-2-2:2002-12       |
|                                                          | Test passed                 |
| Conductor cross section / conductor type / tensile force | 0.2 mm² / solid / > 10 N    |
|                                                          | 0.2 mm² / flexible / > 10 N |
|                                                          | 1.5 mm² / solid / > 40 N    |
|                                                          | 1.5 mm² / flexible / > 40 N |

### Mechanical tests according to standard

|                    |                          |
|--------------------|--------------------------|
| Test specification | IEC 60998-2-2 (in parts) |
|--------------------|--------------------------|

### Electrical tests

|                             |         |
|-----------------------------|---------|
| Rated current               | 17.5 A  |
| Conductor cross section     | 1.5 mm² |
| Rated voltage (III/2)       | 240 V   |
| Rated surge voltage (III/2) | 2.5 kV  |

## PCB terminal block - PTDA 1,5/ 9-3,5 - 1725003

### Technical data

#### 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)         | 2.5 mm              |
| Minimum creepage distance value (III/2)         | 1.25 mm             |
| Minimum creepage distance value (II/2)          | 2 mm                |

#### Temperature-rise test

|                                   |                                                                                                                                |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Specification                     | IEC 60947-7-4:2019-01                                                                                                          |
| Result                            | Test passed                                                                                                                    |
| Requirement temperature-rise test | The sum of ambient temperature and temperature rise of the PCB terminal block shall not exceed the upper limiting temperature. |

#### Current carrying capacity / derating curves

|                     |                                               |
|---------------------|-----------------------------------------------|
| Caption             | Type: PTDA 1,5/...-3,5                        |
| Specification       | IEC 60947-7-4:2019-01                         |
| Number of positions | 4                                             |
| Reduction factor    | 1                                             |
| Note                | Representation based on IEC 60512-5-2:2002-02 |

#### Vibration test

|                        |                        |
|------------------------|------------------------|
| Specification          | IEC 60068-2-6:1995-03  |
| Result                 | Test passed            |
| Frequency              | 10 - 150 - 10 Hz       |
| Sweep speed            | 1 octave/min           |
| Amplitude              | 0.35 mm (10 - 60.1 Hz) |
| Acceleration           | 5 g (60.1 - 150 Hz)    |
| Test duration per axis | 2.5 h                  |

#### Resistance to ageing, humidity and penetration of solids

|                    |                     |
|--------------------|---------------------|
| Test result        | Test passed         |
| Test specification | IEC 60998-1:2002-12 |
| Dry heat           | 168 h/100°C         |
| Humid heat         | 48 h/30 °C/92 %     |

#### Insulation resistance

|                                              |                     |
|----------------------------------------------|---------------------|
| Specification                                | IEC 60998-1:2002-12 |
| Result                                       | Test passed         |
| Insulation resistance, neighboring positions | 10 GΩ               |

#### Glow-wire test

|               |                     |
|---------------|---------------------|
| Specification | IEC 60998-1:2002-12 |
|---------------|---------------------|

## PCB terminal block - PTDA 1,5/ 9-3,5 - 1725003

### Technical data

#### Glow-wire test

|                  |             |
|------------------|-------------|
| Result           | Test passed |
| Temperature      | 850 °C      |
| Time of exposure | 5 s         |

#### Mechanical strength/tumbling barrel test

|                       |                     |
|-----------------------|---------------------|
| Specification         | IEC 60998-1:2002-12 |
| Height of fall        | 50 cm               |
| Number of drop cycles | 50                  |
| Rotation speed        | 5 rpm               |

#### Standards and Regulations

|                                        |        |
|----------------------------------------|--------|
| Connection in acc. with standard       | EN-VDE |
|                                        | CUL    |
| Flammability rating according to UL 94 | V0     |

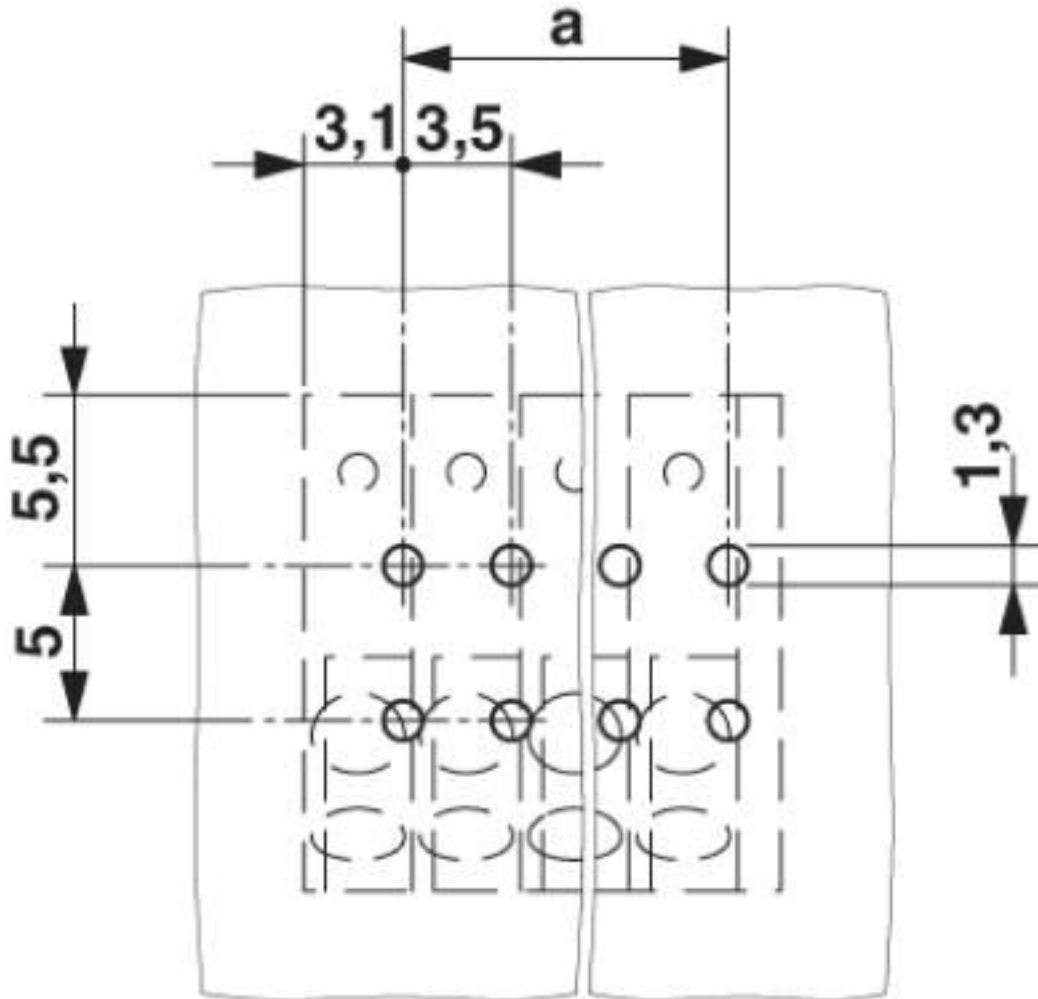
#### Environmental Product Compliance

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

### Drawings

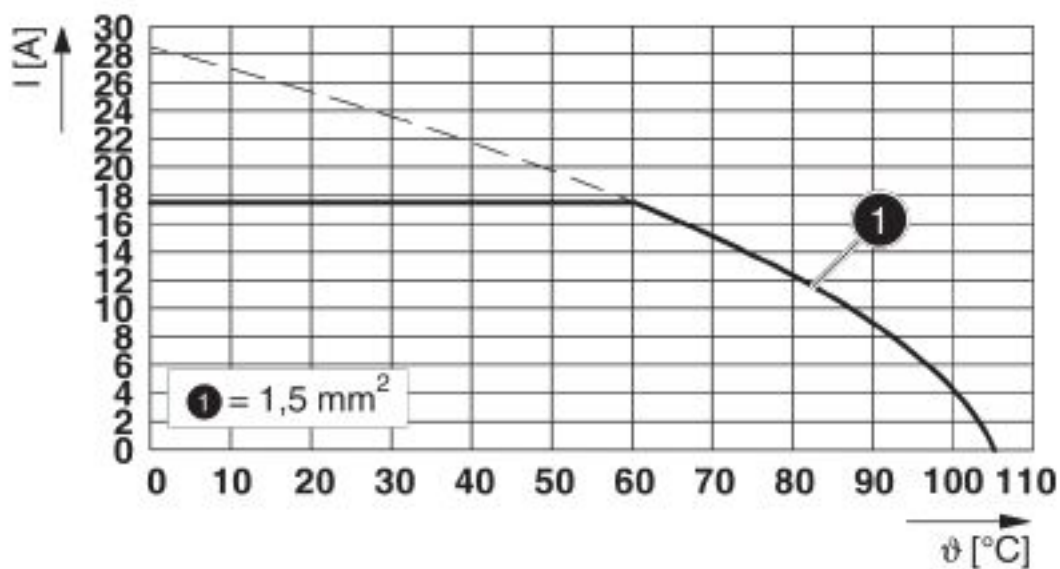
## PCB terminal block - PTDA 1,5/ 9-3,5 - 1725003

Drilling diagram



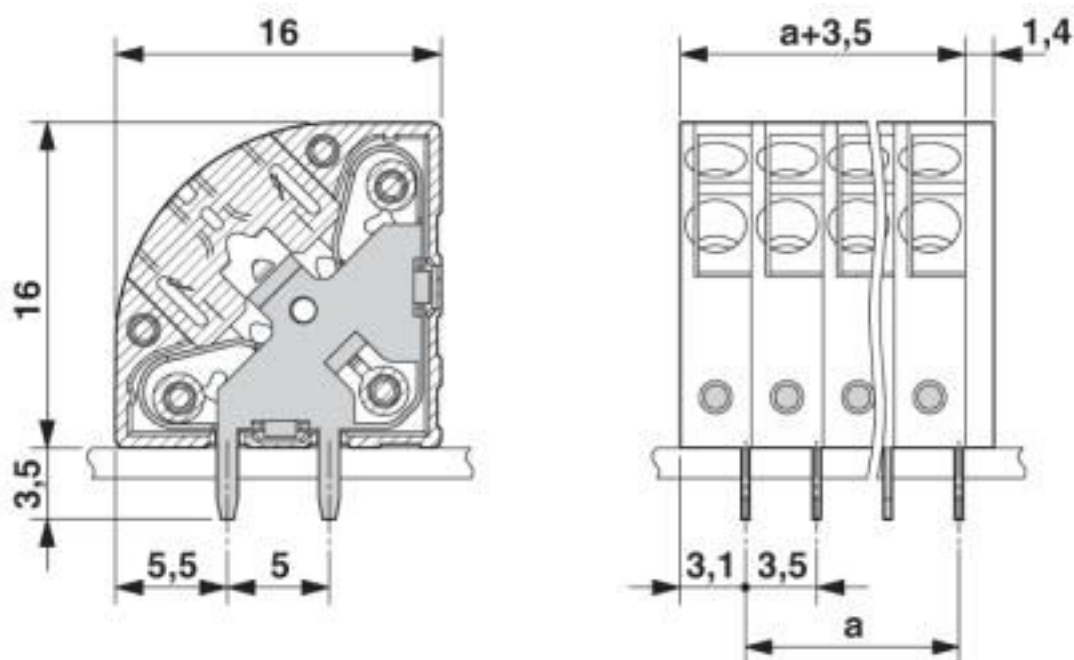
## PCB terminal block - PTDA 1,5/ 9-3,5 - 1725003

Diagram



Type: PTDA 1,5/...-3,5

Dimensional drawing



### Classifications

eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27440401 |
| eCl@ss 4.0    | 27260700 |

## PCB terminal block - PTDA 1,5/ 9-3,5 - 1725003

### Classifications

#### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.1 | 27141100 |
| eCl@ss 5.0 | 27141100 |
| eCl@ss 5.1 | 27261100 |
| eCl@ss 6.0 | 27261100 |
| eCl@ss 7.0 | 27440401 |
| eCl@ss 8.0 | 27440401 |
| eCl@ss 9.0 | 27440401 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC001121 |
| ETIM 4.0 | EC002643 |
| ETIM 5.0 | EC002643 |
| ETIM 6.0 | EC002643 |
| ETIM 7.0 | EC002643 |

#### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211801 |
| UNSPSC 7.0901 | 39121432 |
| UNSPSC 11     | 34131203 |
| UNSPSC 12.01  | 39121432 |
| UNSPSC 13.2   | 39121432 |
| UNSPSC 18.0   | 39121432 |
| UNSPSC 19.0   | 39121432 |
| UNSPSC 20.0   | 39121432 |
| UNSPSC 21.0   | 39121432 |

### Approvals

#### Approvals

##### Approvals

CCA / IEC EE CB Scheme / VDE Gutachten mit Fertigungsüberwachung / EAC / cULus Recognized

##### Ex Approvals

#### Approval details

|                    |           |
|--------------------|-----------|
| CCA                | DE1 34029 |
| Nominal voltage UN | 130 V     |

## PCB terminal block - PTDA 1,5/ 9-3,5 - 1725003

### Approvals

|                                |         |
|--------------------------------|---------|
|                                |         |
| Nominal current I <sub>N</sub> | 17.5 A  |
| mm <sup>2</sup> /AWG/kcmil     | 0.2-1.5 |

|                                |                     |                                                           |           |
|--------------------------------|---------------------|-----------------------------------------------------------|-----------|
| IECEE CB Scheme                | <b>CB</b><br>scheme | <a href="http://www.iecee.org/">http://www.iecee.org/</a> | DE1-46805 |
|                                |                     |                                                           |           |
| Nominal voltage U <sub>N</sub> | 130 V               |                                                           |           |
| Nominal current I <sub>N</sub> | 17.5 A              |                                                           |           |
| mm <sup>2</sup> /AWG/kcmil     | 0.2-1.5             |                                                           |           |

|                                            |                                                                                   |                                                                                                                                                                                                                |          |
|--------------------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 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> | 40030462 |
|                                            |                                                                                   |                                                                                                                                                                                                                |          |
| Nominal voltage U <sub>N</sub>             | 130 V                                                                             |                                                                                                                                                                                                                |          |
| Nominal current I <sub>N</sub>             | 17.5 A                                                                            |                                                                                                                                                                                                                |          |
| mm <sup>2</sup> /AWG/kcmil                 | 0.2-1.5                                                                           |                                                                                                                                                                                                                |          |

|     |            |  |         |
|-----|------------|--|---------|
| EAC | <b>EAC</b> |  | B.01687 |
|-----|------------|--|---------|

|                                |              |                                                                                                                                                       |                 |
|--------------------------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| cULus Recognized               | <b>cULus</b> | <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> | E60425-20030211 |
|                                | B            | C                                                                                                                                                     | D               |
| Nominal voltage U <sub>N</sub> | 300 V        | 150 V                                                                                                                                                 | 300 V           |
| Nominal current I <sub>N</sub> | 12 A         | 12 A                                                                                                                                                  | 10 A            |
| mm <sup>2</sup> /AWG/kcmil     | 24-16        | 24-16                                                                                                                                                 | 24-16           |

### Accessories

#### Accessories

#### Screwdriver tools

Screwdriver - SZF 0-0,4X2,5 - 1204504



Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.4 x 2.5 x 75 mm, 2-component grip, with non-slip grip

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