

## PCB terminal block - PLH 5/ 9-7,5-ZF - 1792177

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PCB terminal block, nominal current: 41 A, rated voltage (III/2): 1000 V, nominal cross section: 6 mm<sup>2</sup>, pitch: 7.5 mm, number of positions: 9, connection method: Push-lock spring connection, mounting: Wave soldering, conductor/PCB connection direction: 0 °, color: green, Pin layout: Linear double pinning, Solder pin [P]: 3.6 mm

The figure shows a 4-pos. version of the product

### Your advantages

- ✓ Tool-free lever principle enables time-saving connection and release of conductors with/without ferrules
- ✓ Defined contact force ensures that contact remains stable over the long term
- ✓ Time-saving push-in connection when lever is closed
- ✓ Unrestricted 600-V-UL approval thanks to compact zig-zag pinning
- ✓ Quick and convenient testing using integrated test option



### Key Commercial Data

|                        |                                                                                      |
|------------------------|--------------------------------------------------------------------------------------|
| Packing unit           | 25 pc                                                                                |
| Minimum order quantity | 25 pc                                                                                |
| GTIN                   |  |
| GTIN                   | 4046356610735                                                                        |

### Technical data

#### Item properties

|                           |                             |
|---------------------------|-----------------------------|
| Brief article description | PCB terminal block          |
| Range of articles         | PLH 5/                      |
| Pitch                     | 7.5 mm                      |
| Number of positions       | 9                           |
| Connection method         | Push-lock spring connection |
| Mounting type             | Wave soldering              |
| Pin layout                | Linear double pinning       |
| Number of levels          | 1                           |
| Number of connections     | 9                           |

# PCB terminal block - PLH 5/ 9-7,5-ZF - 1792177

## Technical data

### Item properties

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

### 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-lock spring connection                 |
| Conductor cross section solid                                                             | 0.2 mm <sup>2</sup> ... 6 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 ... 10                                   |
| Conductor cross section flexible, with ferrule without plastic sleeve                     | 0.2 mm <sup>2</sup> ... 6 mm <sup>2</sup>   |
| Conductor cross section, flexible, with ferrule, with plastic sleeve                      | 0.2 mm <sup>2</sup> ... 6 mm <sup>2</sup>   |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Stripping length                                                                          | 12 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 (10 - 16 µm Sn)                                                               |
| Metal surface soldering area (top layer) | Tin (10 - 16 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 ] | 22.7 mm |
| Width [ w ]  | 68.5 mm |

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## Technical data

### Dimensions for the product

|                             |              |
|-----------------------------|--------------|
| Height [ h ]                | 27.7 mm      |
| Pitch                       | 7.5 mm       |
| Height (without solder pin) | 24.1 mm      |
| Solder pin [P]              | 3.6 mm       |
| Pin spacing                 | 12.5 mm      |
| Pin dimensions              | 1.2 x 1.5 mm |

### Dimensions for PCB design

|               |         |
|---------------|---------|
| Hole diameter | 2 mm    |
| Pin spacing   | 12.5 mm |

### Packaging information

|                            |                     |
|----------------------------|---------------------|
| Type of packaging          | packed in cardboard |
| Pieces per package         | 25                  |
| 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 (Depending on the current carrying capacity/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 |
|                                                          | 6 mm² / solid / > 80 N      |
|                                                          | 6 mm² / flexible / > 80 N   |

### Mechanical tests according to standard

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

### Electrical tests

|                             |        |
|-----------------------------|--------|
| Rated current               | 41 A   |
| Conductor cross section     | 6 mm²  |
| Rated voltage (III/2)       | 1000 V |
| Rated surge voltage (III/2) | 8 kV   |

### Air clearances and creepage distances

## PCB terminal block - PLH 5/ 9-7,5-ZF - 1792177

### 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) | 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                |

#### Temperature-rise test

|                                   |                                     |
|-----------------------------------|-------------------------------------|
| Specification                     | IEC 60998-2-1:2002-12               |
| Result                            | Test passed                         |
| Requirement temperature-rise test | Increase in temperature $\leq 45$ K |

#### Current carrying capacity / derating curves

|                     |                                 |
|---------------------|---------------------------------|
| Caption             | Type: PLH 5/...-7,5(-ZF)        |
| Specification       | Following IEC 60512-5-2:2002-02 |
| Number of positions | 5                               |
| Reduction factor    | 1                               |

#### Vibration test

|                        |                        |
|------------------------|------------------------|
| Specification          | IEC 60068-2-6:2007-12  |
| 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

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

#### Mechanical strength/tumbling barrel test

## PCB terminal block - PLH 5/ 9-7,5-ZF - 1792177

### Technical data

#### 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       | CUL |
| Flammability rating according to UL 94 | V0  |

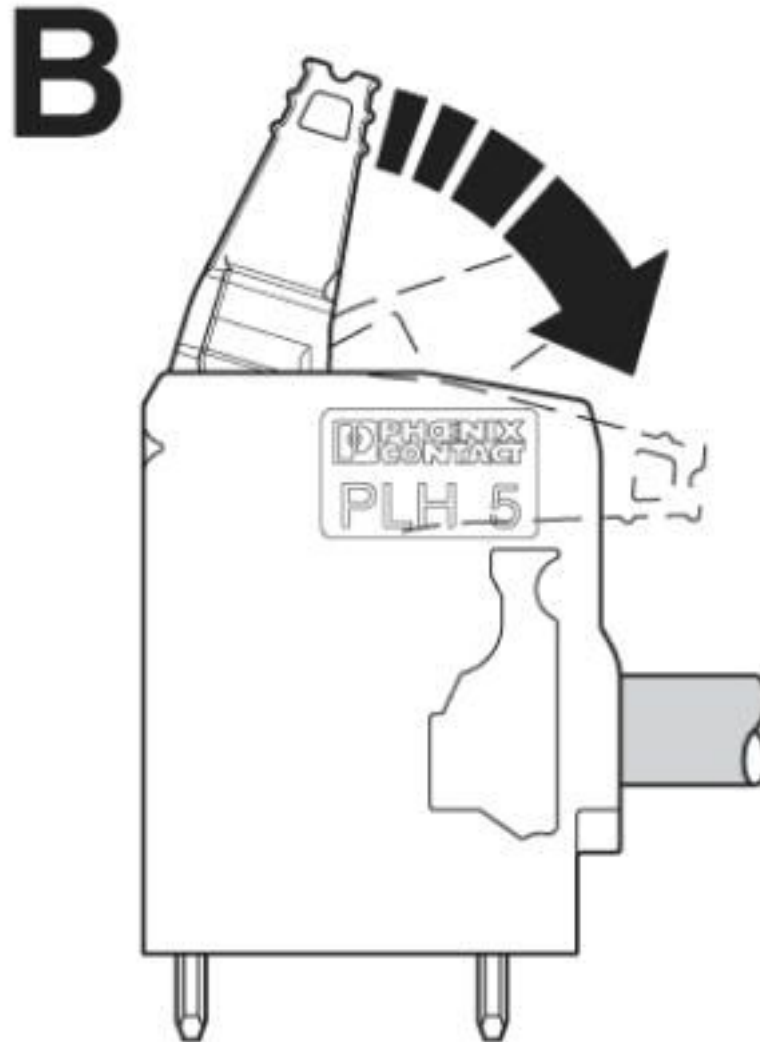
#### Environmental Product Compliance

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

### Drawings

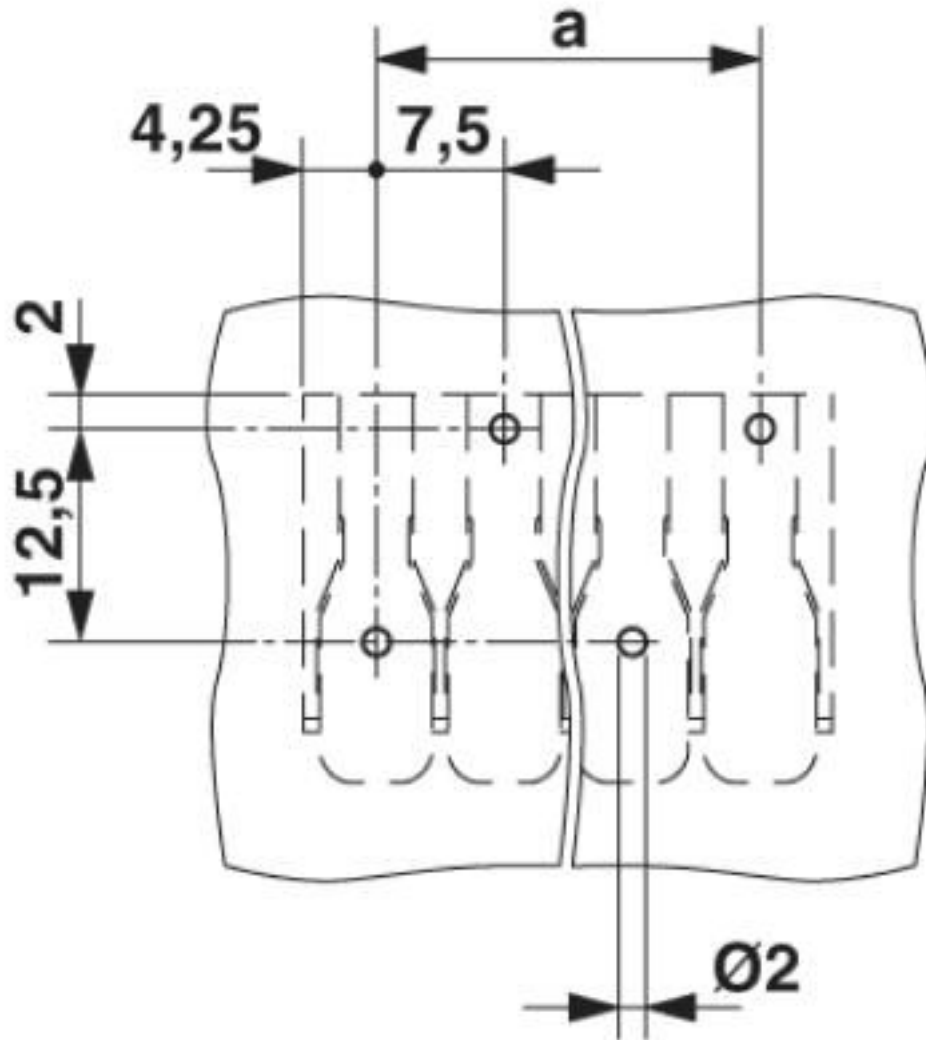
## PCB terminal block - PLH 5/ 9-7,5-ZF - 1792177

Functional drawing



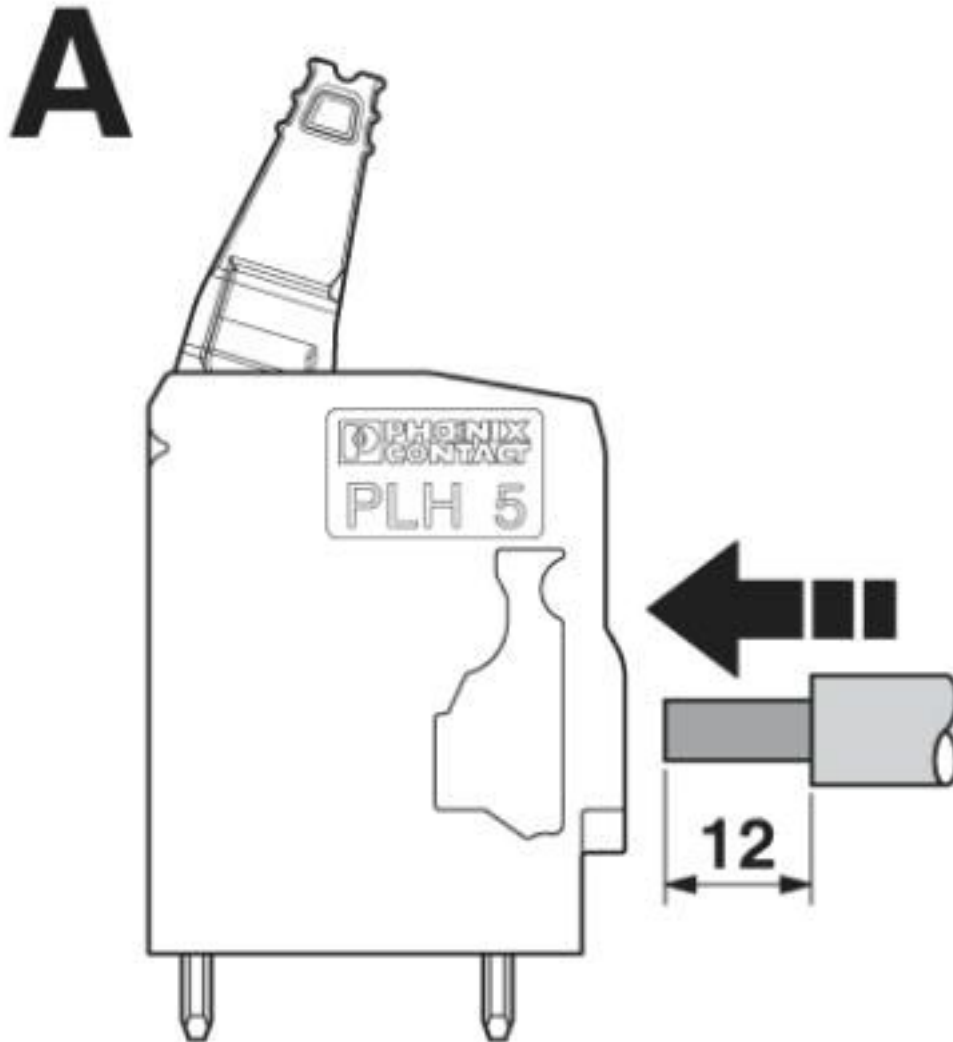
## PCB terminal block - PLH 5/ 9-7,5-ZF - 1792177

Drilling diagram



## PCB terminal block - PLH 5/ 9-7,5-ZF - 1792177

Functional drawing



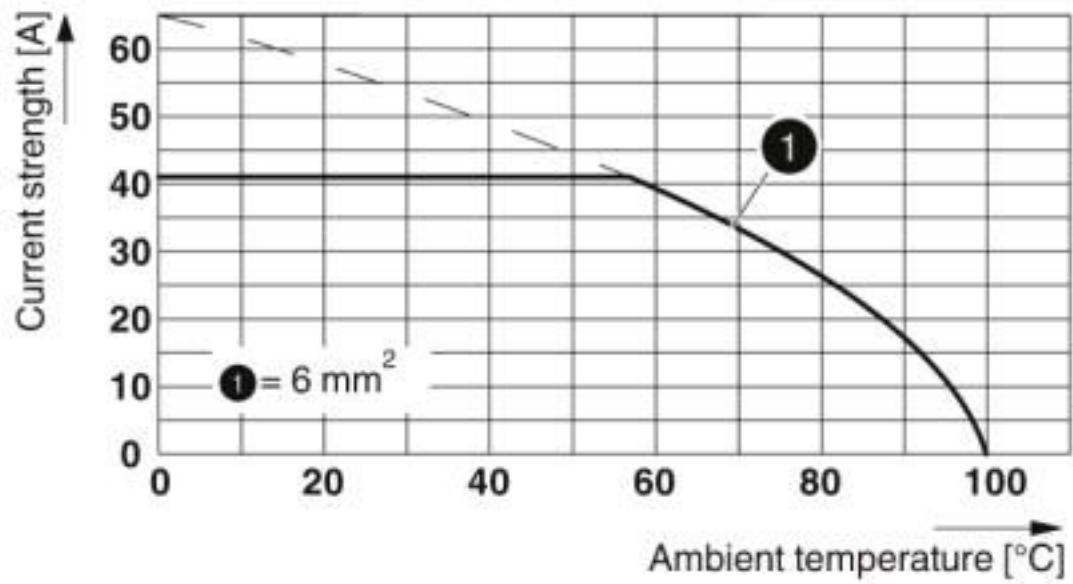
## PCB terminal block - PLH 5/ 9-7,5-ZF - 1792177

Functional drawing



## PCB terminal block - PLH 5/ 9-7,5-ZF - 1792177

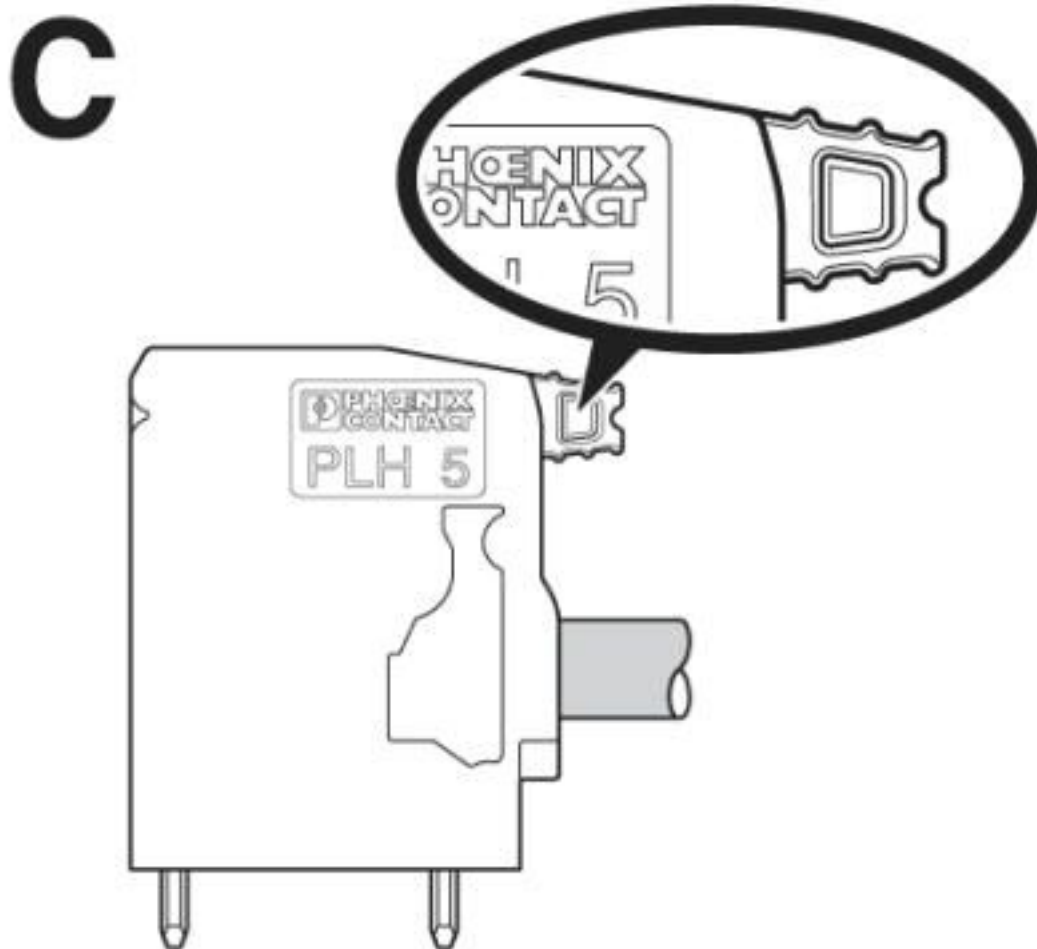
Diagram



Type: PLH 5/...-7,5(-ZF)

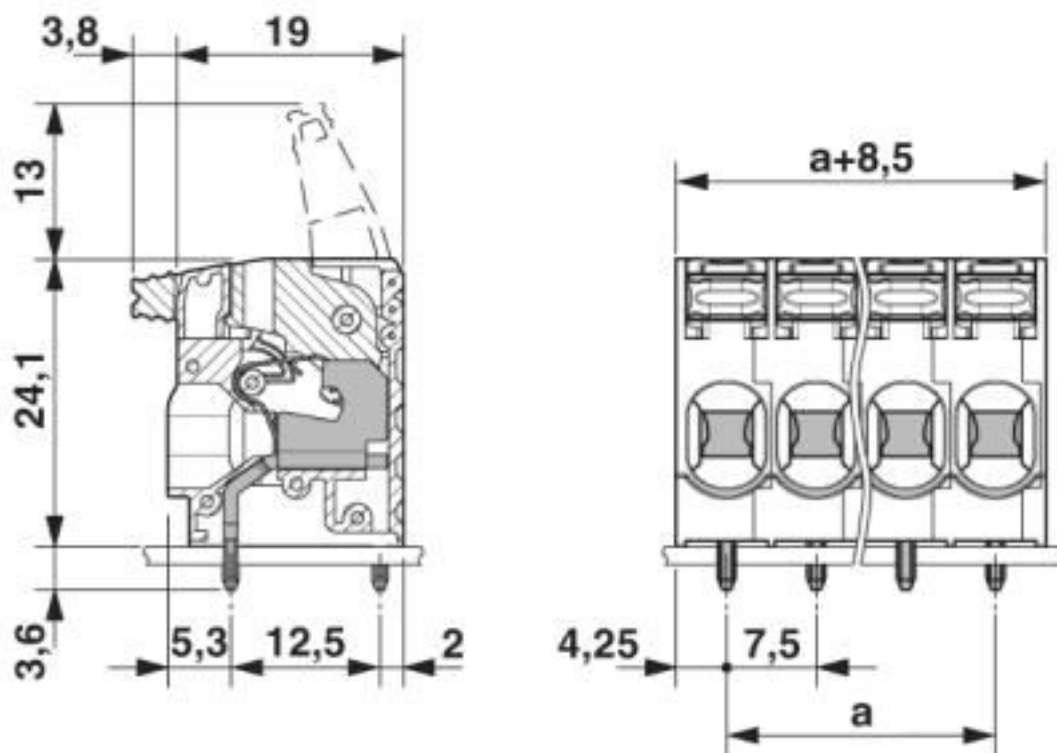
## PCB terminal block - PLH 5/ 9-7,5-ZF - 1792177

Functional drawing



## PCB terminal block - PLH 5/ 9-7,5-ZF - 1792177

Dimensional drawing



### Classifications

#### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27440401 |
| eCl@ss 4.0    | 27260700 |
| eCl@ss 4.1    | 27260700 |
| eCl@ss 5.0    | 27260700 |
| 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 4.0 | EC002637 |
| ETIM 5.0 | EC002643 |
| ETIM 6.0 | EC002643 |
| ETIM 7.0 | EC002643 |

#### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211810 |
| UNSPSC 7.0901 | 39121409 |

## PCB terminal block - PLH 5/ 9-7,5-ZF - 1792177

### Classifications

#### UNSPSC

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

### Approvals

#### Approvals

#### Approvals

VDE Zeichengenehmigung / EAC / cULus Recognized

#### Ex Approvals

#### Approval details

|                        |                                                                                     |                                                                                                                                                                                                           |          |
|------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 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> | 40041250 |
| Nominal voltage UN     | 1000 V                                                                              |                                                                                                                                                                                                           |          |
| Nominal current IN     | 41 A                                                                                |                                                                                                                                                                                                           |          |
| mm²/AWG/kcmil          | 0.2-6                                                                               |                                                                                                                                                                                                           |          |

|     |                                                                                     |         |
|-----|-------------------------------------------------------------------------------------|---------|
| 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> | E60425-20110524 |
|                    | B                                                                                   | C                                                                                                                                                     |                 |
| Nominal voltage UN | 600 V                                                                               | 600 V                                                                                                                                                 |                 |
| Nominal current IN | 27 A                                                                                | 27 A                                                                                                                                                  |                 |
| mm²/AWG/kcmil      | 24-10                                                                               | 24-10                                                                                                                                                 |                 |

## PCB terminal block - PLH 5/ 9-7,5-ZF - 1792177

### Accessories

#### 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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