

# FRONT 4-H-7,62 BK - PCB terminal block



1702051  
<https://www.phoenixcontact.com/us/products/1702051>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Printed circuit board terminal, nominal current: 32 A, rated voltage (III/2): 630 V, nominal cross section: 4 mm<sup>2</sup>, number of potentials: 1, number of rows: 1, number of positions per row: 1, product range: FRONT 4-H, pitch: 7.62 mm, connection method: Front screw connection, mounting: Wave soldering, conductor/PCB connection direction: 0 °, color: black, Pin layout: Linear pinning, Solder pin [P]: 5 mm, number of solder pins per potential: 2, type of packaging: packed in cardboard. The article can be aligned to create different nos. of positions!

## Your advantages

- Well-known connection principle allows worldwide use
- Low temperature rise, thanks to maximum contact force
- Allows connection of two conductors
- Operation and conductor connection from one direction enable integration into front of device

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1702051       |
| Packing unit                         | 50 pc         |
| Minimum order quantity               | 50 pc         |
| Sales key                            | AA14          |
| Product key                          | AANFAA        |
| GTIN                                 | 4017918590765 |
| Weight per piece (including packing) | 9.127 g       |
| Weight per piece (excluding packing) | 7.52 g        |
| Customs tariff number                | 85369010      |
| Country of origin                    | BG            |

# FRONT 4-H-7,62 BK - PCB terminal block



1702051

<https://www.phoenixcontact.com/us/products/1702051>

## Technical data

### Product properties

|                           |                                  |
|---------------------------|----------------------------------|
| Product type              | Printed circuit board terminal   |
| Product family            | FRONT 4-H                        |
| Product line              | COMBICON Terminals L             |
| Type                      | PC terminal block can be aligned |
| Number of positions       | 1                                |
| Pitch                     | 7.62 mm                          |
| Number of connections     | 1                                |
| Number of rows            | 1                                |
| Number of potentials      | 1                                |
| Pin layout                | Linear pinning                   |
| Solder pins per potential | 2                                |

### Electrical properties

#### Properties

|                             |        |
|-----------------------------|--------|
| Nominal current $I_N$       | 32 A   |
| Nominal voltage $U_N$       | 630 V  |
| Rated voltage (III/3)       | 500 V  |
| Rated surge voltage (III/3) | 6 kV   |
| Rated voltage (III/2)       | 630 V  |
| Rated surge voltage (III/2) | 6 kV   |
| Rated voltage (II/2)        | 1000 V |
| Rated surge voltage (II/2)  | 6 kV   |

### Connection data

#### Connection technology

|                       |                                  |
|-----------------------|----------------------------------|
| Type                  | PC terminal block can be aligned |
| Nominal cross section | 4 mm <sup>2</sup>                |

#### Conductor connection

|                                                                                     |                                             |
|-------------------------------------------------------------------------------------|---------------------------------------------|
| Connection method                                                                   | Front screw connection                      |
| Conductor cross-section rigid                                                       | 0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>   |
| Conductor cross-section flexible                                                    | 0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>   |
| Conductor cross-section AWG                                                         | 20 ... 10                                   |
| Conductor cross-section flexible, with ferrule without plastic sleeve               | 0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>   |
| Conductor cross-section, flexible, with ferrule, with plastic sleeve                | 0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>   |
| 2 conductors with same cross section, solid                                         | 0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| 2 conductors with same cross section, flexible                                      | 0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve | 0.25 mm <sup>2</sup> ... 1 mm <sup>2</sup>  |

# FRONT 4-H-7,62 BK - PCB terminal block



1702051

<https://www.phoenixcontact.com/us/products/1702051>

|                                                                                           |                                           |
|-------------------------------------------------------------------------------------------|-------------------------------------------|
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm <sup>2</sup> ... 1 mm <sup>2</sup> |
| Stripping length                                                                          | 14 mm                                     |
| Tightening torque                                                                         | 0.5 Nm ... 0.6 Nm                         |

## Mounting

|               |                |
|---------------|----------------|
| Mounting type | Wave soldering |
| Pin layout    | Linear pinning |

## Material specifications

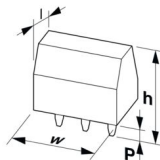
### Material data - contact

|                                          |                                                                                  |
|------------------------------------------|----------------------------------------------------------------------------------|
| 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 (5 - 7 µm Sn)                                                                |
| Metal surface soldering area (top layer) | Tin (5 - 7 µm Sn)                                                                |

### Material data - housing

|                                                                   |              |
|-------------------------------------------------------------------|--------------|
| Color (Housing)                                                   | black (9005) |
| 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

|                       |                                                                                      |
|-----------------------|--------------------------------------------------------------------------------------|
| Dimensional drawing   |  |
| Pitch                 | 7.62 mm                                                                              |
| Height [h]            | 33.4 mm                                                                              |
| Length [l]            | 26 mm                                                                                |
| Installed height      | 28.4 mm                                                                              |
| Solder pin length [P] | 5 mm                                                                                 |
| Pin dimensions        | 1 x 0.8 mm                                                                           |

### PCB design

|               |        |
|---------------|--------|
| Hole diameter | 1.3 mm |
|---------------|--------|

# FRONT 4-H-7,62 BK - PCB terminal block



1702051

<https://www.phoenixcontact.com/us/products/1702051>

## Mechanical tests

### Test for conductor damage and slackening

|               |                       |
|---------------|-----------------------|
| Specification | IEC 60998-2-1:1990-04 |
| Result        | Test passed           |

### Pull-out test

|                                                                             |                                         |
|-----------------------------------------------------------------------------|-----------------------------------------|
| Specification                                                               | IEC 60998-2-1:1990-04                   |
| Conductor cross-section/conductor type/tractive force setpoint/actual value | 0.5 mm <sup>2</sup> / solid / > 30 N    |
|                                                                             | 0.5 mm <sup>2</sup> / flexible / > 30 N |
|                                                                             | 6 mm <sup>2</sup> / solid / > 80 N      |
|                                                                             | 4 mm <sup>2</sup> / flexible / > 60 N   |

### Torque test

|               |                       |
|---------------|-----------------------|
| Specification | IEC 60998-2-1:1990-04 |
|---------------|-----------------------|

## Electrical tests

### Temperature-rise test

|                                   |                                |
|-----------------------------------|--------------------------------|
| Specification                     | IEC 60998-2-1:1990-04          |
| Requirement temperature-rise test | Increase in temperature ≤ 45 K |

### Insulation resistance

|                                              |                       |
|----------------------------------------------|-----------------------|
| Specification                                | IEC 60998-2-1:1990-04 |
| Insulation resistance, neighboring positions | 10 <sup>9</sup> Ω     |

### Air clearances and creepage distances |

|                                                        |                     |
|--------------------------------------------------------|---------------------|
| Specification                                          | IEC 60664-1:2007-04 |
| Insulating material group                              | I                   |
| Comparative tracking index (IEC 60112)                 | CTI 600             |
| Rated insulation voltage (III/3)                       | 500 V               |
| Rated surge voltage (III/3)                            | 6 kV                |
| minimum clearance value - non-homogenous field (III/3) | 5.5 mm              |
| minimum creepage distance (III/3)                      | 6.3 mm              |
| Rated insulation voltage (III/2)                       | 630 V               |
| Rated surge voltage (III/2)                            | 6 kV                |
| minimum clearance value - non-homogenous field (III/2) | 5.5 mm              |
| minimum creepage distance (III/2)                      | 5.5 mm              |
| Rated insulation voltage (II/2)                        | 1000 V              |
| Rated surge voltage (II/2)                             | 6 kV                |
| minimum clearance value - non-homogenous field (II/2)  | 5.5 mm              |
| minimum creepage distance (II/2)                       | 5.5 mm              |

## Environmental and real-life conditions

### Vibration test

|               |                       |
|---------------|-----------------------|
| Specification | IEC 60068-2-6:1995-03 |
|---------------|-----------------------|

# FRONT 4-H-7,62 BK - PCB terminal block



1702051

<https://www.phoenixcontact.com/us/products/1702051>

|                        |                             |
|------------------------|-----------------------------|
| Frequency              | 10 - 150 - 10 Hz            |
| Sweep speed            | 1 octave/min                |
| Amplitude              | 0.35 mm (10 Hz ... 60.1 Hz) |
| Acceleration           | 5g (60.1 Hz ... 150 Hz)     |
| Test duration per axis | 2.5 h                       |
| Test directions        | X-, Y- and Z-axis           |

## Glow-wire test

|                  |                       |
|------------------|-----------------------|
| Specification    | IEC 60998-2-1:1990-04 |
| Temperature      | 850 °C                |
| Time of exposure | 5 s                   |

## Ambient conditions

|                                         |                                                                               |
|-----------------------------------------|-------------------------------------------------------------------------------|
| Ambient temperature (operation)         | -40 °C ... 100 °C (Depending on the current carrying capacity/derating curve) |
| Ambient temperature (storage/transport) | -40 °C ... 70 °C                                                              |
| Relative humidity (storage/transport)   | 30 % ... 70 %                                                                 |
| Ambient temperature (assembly)          | -5 °C ... 100 °C                                                              |

## Packaging specifications

|                   |                     |
|-------------------|---------------------|
| Type of packaging | packed in cardboard |
|-------------------|---------------------|

# FRONT 4-H-7,62 BK - PCB terminal block

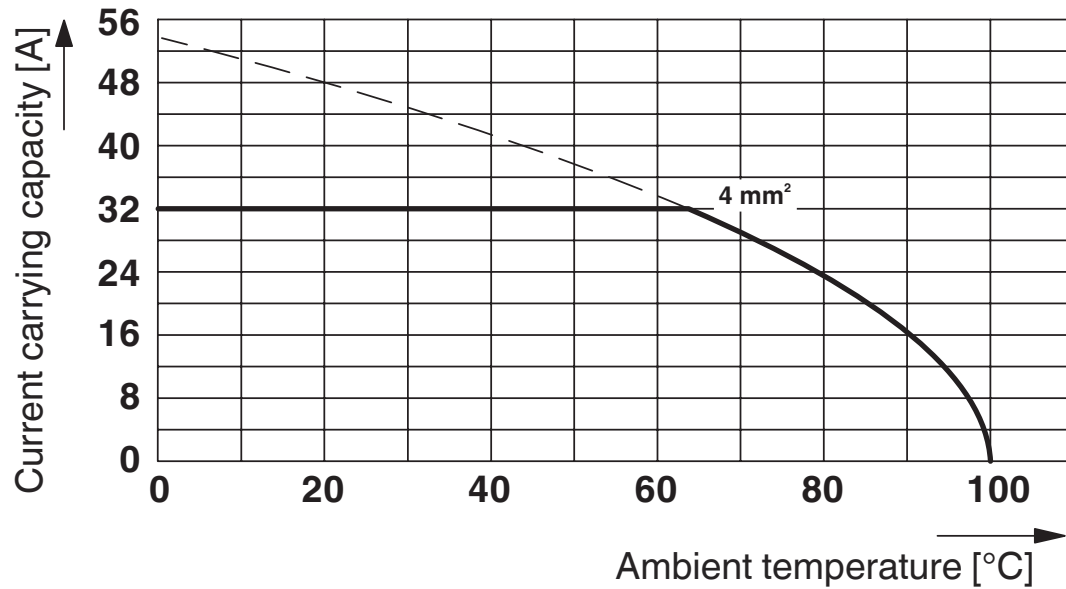


1702051

<https://www.phoenixcontact.com/us/products/1702051>

## Drawings

Diagram



Type: FRONT 4-H-7,62

Test following DIN EN 60512-5-2:2003-01

Reduction factor = 1

No. of positions: 5

# FRONT 4-H-7,62 BK - PCB terminal block



1702051

<https://www.phoenixcontact.com/us/products/1702051>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1702051>

|  <b>CSA</b><br>Approval ID: 13631 |                       |                       |                   |                             |
|--------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                    | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| B                                                                                                                  |                       |                       |                   |                             |
|                                                                                                                    | 300 V                 | 30 A                  | 22 - 10           | -                           |
| D                                                                                                                  |                       |                       |                   |                             |
|                                                                                                                    | 300 V                 | 10 A                  | 22 - 10           | -                           |

|  <b>cULus Recognized</b><br>Approval ID: E60425-19860303 |                       |                       |                   |                             |
|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                                           | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| B                                                                                                                                         |                       |                       |                   |                             |
|                                                                                                                                           | 300 V                 | 30 A                  | 24 - 10           | -                           |
| D                                                                                                                                         |                       |                       |                   |                             |
|                                                                                                                                           | 300 V                 | 10 A                  | 24 - 10           | -                           |

|  <b>DNV GL</b><br>Approval ID: TAE00001EV |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
|------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|

# FRONT 4-H-7,62 BK - PCB terminal block



1702051

<https://www.phoenixcontact.com/us/products/1702051>

## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27460101 |
| ECLASS-15.0 | 27460101 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC002643 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39121400 |
|-------------|----------|

# FRONT 4-H-7,62 BK - PCB terminal block



1702051  
<https://www.phoenixcontact.com/us/products/1702051>

## Environmental product compliance

|                                         |                                          |
|-----------------------------------------|------------------------------------------|
| EU RoHS                                 |                                          |
| Fulfills EU RoHS substance requirements | Yes, No exemptions                       |
| China RoHS                              |                                          |
| Environment friendly use period (EFUP)  | EFUP-E                                   |
|                                         | No hazardous substances above the limits |
| EU REACH SVHC                           |                                          |
| REACH candidate substance (CAS No.)     | No substance above 0.1 wt%               |
| EF3.0 Climate Change                    |                                          |
| CO2e kg                                 | 0.101 kg CO2e                            |

Phoenix Contact 2025 © - all rights reserved  
<https://www.phoenixcontact.com>

Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)