

# GMSTBO 2,5 HV/3-GL-7,25 THRR44 - PCB header



2200263

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PCB headers, nominal cross section: 2.5 mm<sup>2</sup>, color: black, nominal current: 16 A, rated voltage (III/2): 630 V, contact surface: Sn, contact connection type: Pin, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: GMSTBO 2,5 HV, pitch: 7.25 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.1 mm, number of solder pins per potential: 1, plug-in system: COMBICON MSTB 2,5 advanced, Pin connector pattern alignment: Orthogonal, locking: without, mounting method: without, type of packaging: 44 mm wide tape, Product with pin output on left side

## Your advantages

- Suitable for reflow soldering processes

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 2200263       |
| Packing unit                         | 70 pc         |
| Minimum order quantity               | 70 pc         |
| Sales key                            | AC08          |
| Product key                          | ACHADB        |
| GTIN                                 | 4046356545303 |
| Weight per piece (including packing) | 9.929 g       |
| Weight per piece (excluding packing) | 9.929 g       |
| Customs tariff number                | 85366930      |
| Country of origin                    | PL            |

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## Technical data

### Product properties

|                           |                |
|---------------------------|----------------|
| Product type              | PCB headers    |
| Product family            | GMSTBO 2,5 HV  |
| Type                      | Standard       |
| Number of positions       | 3              |
| Pitch                     | 7.25 mm        |
| Number of connections     | 3              |
| Number of rows            | 1              |
| Number of potentials      | 3              |
| Mounting type             | without        |
| Pin layout                | Linear pinning |
| Solder pins per potential | 1              |

### Electrical properties

#### Properties

|                             |                |
|-----------------------------|----------------|
| Nominal current $I_N$       | 16 A           |
| Nominal voltage $U_N$       | 400 V          |
| Contact resistance          | 1.3 m $\Omega$ |
| Rated voltage (III/3)       | 400 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)        | 630 V          |
| Rated surge voltage (II/2)  | 6 kV           |

### Mounting

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

#### Processing notes

|                                  |                       |
|----------------------------------|-----------------------|
| Process                          | Reflow/wave soldering |
| Moisture Sensitive Level         | MSL 1                 |
| Classification temperature $T_c$ | 260 °C                |
| Solder cycles in the reflow      | 3                     |

### Material specifications

#### Material data - contact

|                         |            |
|-------------------------|------------|
| Contact material        | Cu alloy   |
| Surface characteristics | Tin-plated |

#### Material data - housing

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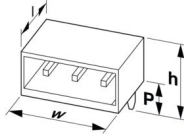


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|  |              |
|--|--------------|
| Color (Housing)                        | black (9005) |
| Insulating material                    | LCP          |
| Insulating material group              | IIIa         |
| CTI according to IEC 60112             | 175          |
| Flammability rating according to UL 94 | V0           |

## Dimensions

|                       |  |
|-----------------------|--|
| Dimensional drawing   |  |
| Pitch                 | 7.25 mm  |
| Width [w]             | 19.95 mm   |
| Height [h]            | 23.37 mm   |
| Length [l]            | 15.65 mm   |
| Installed height      | 21.27 mm   |
| Solder pin length [P] | 2.1 mm   |
| Pin dimensions        | 1 x 1 mm   |

## PCB design

|               |         |
|---------------|---------|
| Pin spacing   | 7.25 mm |
| Hole diameter | 1.5 mm  |

## Mechanical tests

### Visual inspection

|               |                       |
|---------------|-----------------------|
| Specification | IEC 60512-1-1:2002-02 |
| Result        | Test passed           |

### Dimension check

|               |                       |
|---------------|-----------------------|
| Specification | IEC 60512-1-2:2002-02 |
| Result        | Test passed           |

### Resistance of inscriptions

|               |                        |
|---------------|------------------------|
| Specification | IEC 60068-2-70:1995-12 |
| Result        | Test passed            |

### Polarization and coding

|               |                        |
|---------------|------------------------|
| Specification | IEC 60512-13-5:2006-02 |
| Result        | Test passed            |

### Contact holder in insert

|   |                        |
|---|------------------------|
| Specification                               | IEC 60512-15-1:2008-05 |
| Contact holder in insert Requirements >20 N | Test passed            |

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## Insertion and withdrawal forces

|                                     |                        |
|-------------------------------------|------------------------|
| Specification                       | IEC 60512-13-2:2006-02 |
| Result                              | Test passed            |
| No. of cycles                       | 25                     |
| Insertion strength per pos. approx. | 5 N                    |
| Withdraw strength per pos. approx.  | 3.5 N                  |

## Electrical tests

## Thermal test | Test group C

|                            |                       |
|----------------------------|-----------------------|
| Specification              | IEC 60512-5-1:2002-02 |
| Tested number of positions | 3                     |

## Insulation resistance

|  |                       |
|--|-----------------------|
| Specification                                | IEC 60512-3-1:2002-02 |
| Insulation resistance, neighboring positions | > 10 TΩ               |

## Air clearances and creepage distances |

|                                  |       |
|----------------------------------|-------|
| Insulating material group        | IIIa  |
| Rated insulation voltage (III/3) | 400 V |
| Rated surge voltage (III/3)      | 6 kV  |
| Rated insulation voltage (III/2) | 630 V |
| Rated surge voltage (III/2)      | 6 kV  |
| Rated insulation voltage (II/2)  | 630 V |
| Rated surge voltage (II/2)       | 6 kV  |

## Environmental and real-life conditions

## Durability test

|  |                       |
|--|-----------------------|
| Specification                                | IEC 60512-9-1:2010-03 |
| Impulse withstand voltage at sea level       | 7.3 kV                |
| Contact resistance R <sub>1</sub>            | 1.3 mΩ                |
| Contact resistance R <sub>2</sub>            | 1.5 mΩ                |
| Insertion/withdrawal cycles                  | 25                    |
| Insulation resistance, neighboring positions | > 10 TΩ               |

## Climatic test

|                                   |   |
|-----------------------------------|---|
| Specification                     | ISO 6988:1985-02  |
| Corrosive stress                  | 0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/1 cycle |
| Thermal stress                    | 100 °C/168 h  |
| Power-frequency withstand voltage | 3.31 kV   |

## Vibration test

|               |                       |
|---------------|-----------------------|
| Specification | IEC 60068-2-6:2007-12 |
| Frequency     | 10 - 150 - 10 Hz      |
| Sweep speed   | 1 octave/min          |

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

## Ambient conditions

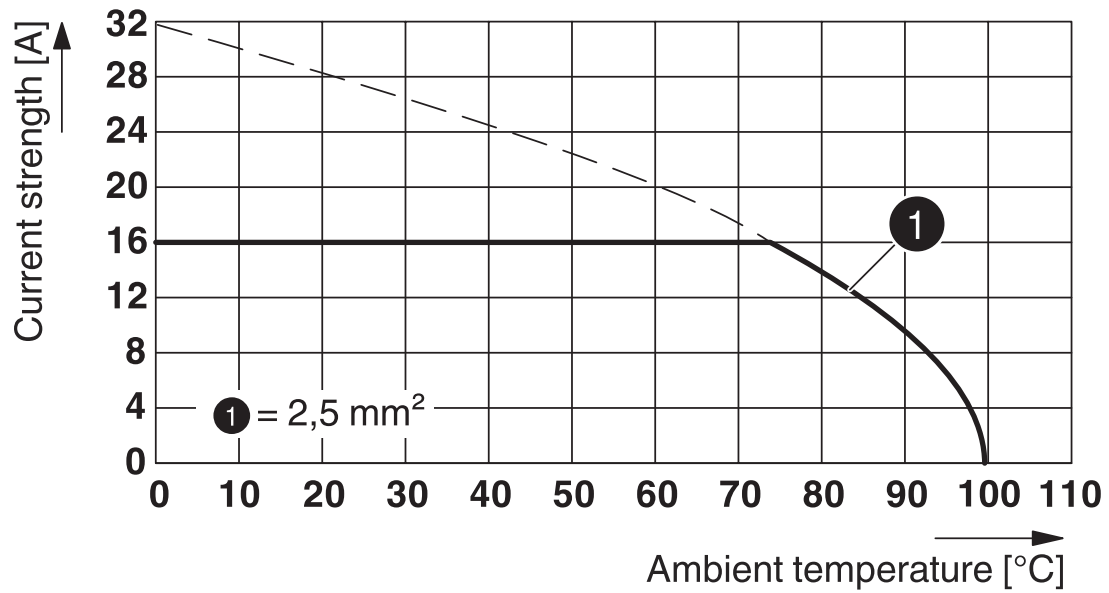
|   |   |
|---|---|
| Ambient temperature (storage/transport) | -40 °C ... 70 °C                                    |
| Relative humidity (storage/transport)   | 30 % ... 70 %                                       |
| Ambient temperature (assembly)          | -5 °C ... 100 °C                        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

## Packaging specifications

|                             |                                  |
|-----------------------------|----------------------------------|
| Type of packaging           | 44 mm wide tape                  |
| [W] tape width              | 44 mm                            |
| [W2] coil overall dimension | 50.4 mm                          |
| [A] coil diameter           | 330 mm                           |
| Outer packaging type        | Transparent-Bag                  |
| ESD level                   | (D) electrostatically conductive |

## Drawings

Diagram



Type: GMSTBT 2,5 HV/...-ST-7,25 GY7035 with GMSTBO 2,5 HV/...-GR(L)-7,25 THR

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2200263>

|  <b>cULus Recognized</b><br>Approval ID: E60425-19931013 |                       |                       |                   |                             |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
|   | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| B   | 300 V                 | 16 A                  | -                 | -                           |
| C   | 150 V                 | 16 A                  | -                 | -                           |
| D   | 300 V                 | 10 A                  | -                 | -                           |

|  <b>VDE report with production monitoring</b><br>Approval ID: 40037875 |                       |                       |                   |                             |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
|   | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine   | 630 V                 | 16 A                  | -                 | -                           |

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27460201 |
| ECLASS-15.0 | 27460201 |

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | EC002637 |
|-----------|----------|

### UNSPSC

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

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## 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% |
|-------------------------------------|----------------------------|

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