

# GMSTBO 2,5 HV/ 2-GR-7,25 THR - PCB header



2199760

<https://www.phoenixcontact.com/us/products/2199760>

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.



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: 2, number of rows: 1, number of positions: 2, number of connections: 2, 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: packed in cardboard, Product with pin output on right side

## Your advantages

- Suitable for reflow soldering processes

## Commercial data

Item number	2199760
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	AC08
Product key	ACHADB
GTIN	4046356495325
Weight per piece (including packing)	2.559 g
Weight per piece (excluding packing)	2.559 g
Customs tariff number	85366930
Country of origin	PL

# GMSTBO 2,5 HV/ 2-GR-7,25 THR - PCB header



2199760

<https://www.phoenixcontact.com/us/products/2199760>

## Technical data

### Product properties

Product type	PCB headers
Product family	GMSTBO 2,5 HV
Type	Standard
Number of positions	2
Pitch	7.25 mm
Number of connections	2
Number of rows	1
Number of potentials	2
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

# GMSTBO 2,5 HV/ 2-GR-7,25 THR - PCB header

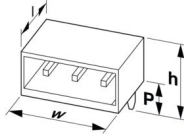


2199760

<https://www.phoenixcontact.com/us/products/2199760>

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]	14.95 mm
Height [h]	16.84 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

2199760

<https://www.phoenixcontact.com/us/products/2199760>

## 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

# GMSTBO 2,5 HV/ 2-GR-7,25 THR - PCB header



2199760

<https://www.phoenixcontact.com/us/products/2199760>

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

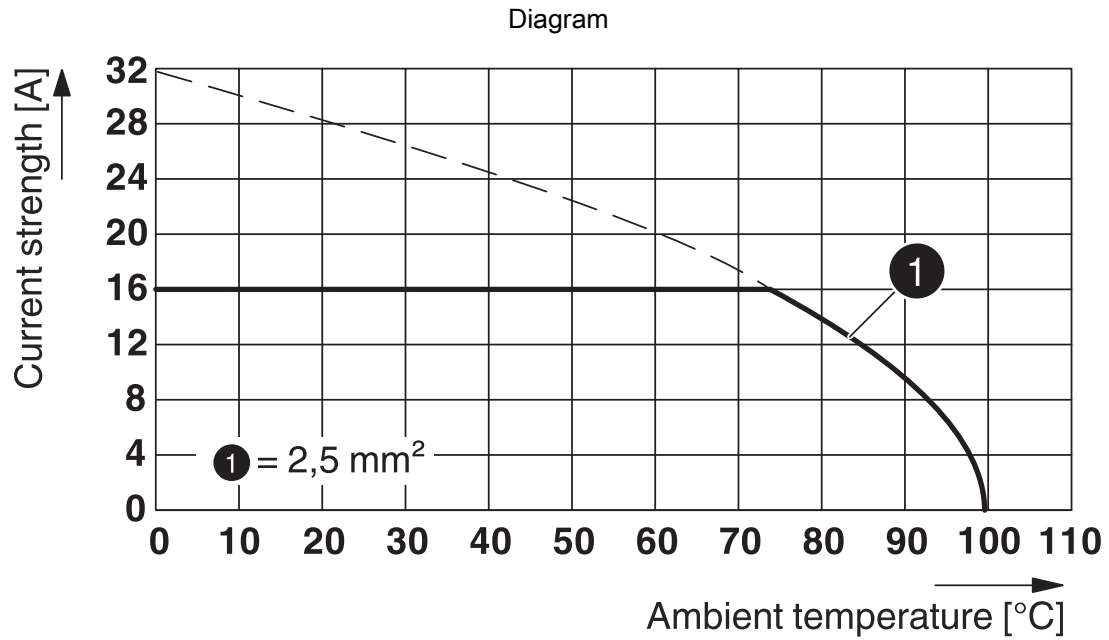
## Ambient conditions

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

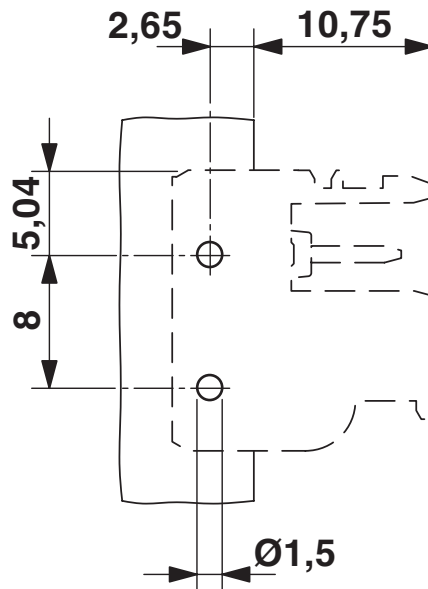
Type of packaging	packed in cardboard
-------------------	---------------------

## Drawings



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

Drilling plan/solder pad geometry



# GMSTBO 2,5 HV/ 2-GR-7,25 THR - PCB header





2199760

<https://www.phoenixcontact.com/us/products/2199760>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2199760>

 <b>cULus Recognized</b> 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> Approval ID: 40037875				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine	630 V	16 A	-	-

# GMSTBO 2,5 HV/ 2-GR-7,25 THR - PCB header



2199760

<https://www.phoenixcontact.com/us/products/2199760>

## Classifications

### ECLASS

ECLASS-13.0	27460201
ECLASS-15.0	27460201

### ETIM

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

### UNSPSC

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

# GMSTBO 2,5 HV/ 2-GR-7,25 THR - PCB header



2199760

<https://www.phoenixcontact.com/us/products/2199760>

## 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%
-------------------------------------	----------------------------

Phoenix Contact 2026 © - 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)