

MSTBO 2,5/ 4-G1L THR BK - PCB header

2709749

<https://www.phoenixcontact.com/us/products/2709749>



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 mm², color: black, nominal current: 16 A, rated voltage (III/2): 320 V, contact connection type: Pin, number of rows: 1, number of positions: 4, product range: MSTBO 2,5/..-G1L-THR, pitch: 5 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.5 mm, number of solder pins per potential: 1, plug-in system: COMBICON MSTB 2,5, locking: without, type of packaging: Box packaging, Product with pin output on left side

Your advantages

- Versions available for wave and THR soldering process

Commercial data

Item number	2709749
Packing unit	100 pc
Minimum order quantity	100 pc
Product key	ACHADB
GTIN	4046356041553
Weight per piece (including packing)	3.361 g
Weight per piece (excluding packing)	3.04 g
Country of origin	PL

MSTBO 2,5/ 4-G1L THR BK - PCB header



2709749

<https://www.phoenixcontact.com/us/products/2709749>

Technical data

Product properties

Product type	PCB headers
Product family	MSTBO 2,5/...-G1L-THR
Type	Header perpendicular to the PCB
Number of positions	4
Pitch	5 mm
Number of rows	1
Mounting flange	without
Pin layout	Linear pinning
Solder pins per potential	1

Electrical properties

Nominal current I_N	16 A
Nominal voltage U_N	320 V
Degree of pollution	3
Contact resistance	1.57 mΩ
Rated voltage (III/3)	250 V
Rated surge voltage (III/3)	4 kV
Rated voltage (III/2)	320 V
Rated surge voltage (III/2)	4 kV
Rated voltage (II/2)	630 V
Rated surge voltage (II/2)	4 kV

Mounting

Mounting type	THR soldering
Pin layout	Linear pinning

Material specifications

Material data - contact

Contact material	Cu alloy
Surface characteristics	tin-plated

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

MSTBO 2,5/ 4-G1L THR BK - PCB header



2709749

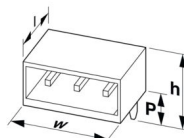
<https://www.phoenixcontact.com/us/products/2709749>

Temperature for the ball pressure test according to EN 60695-10-2

125 °C

Dimensions

Dimensional drawing



Pitch

5 mm

Width [w]

19.95 mm

Height [h]

16.5 mm

Length [l]

15.35 mm

Solder pin length [P]

2.5 mm

Pin dimensions

1 x 1 mm

PCB design

Pin spacing

5.00 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

Insertion and withdrawal forces

Result

Test passed

No. of cycles

25

Insertion strength per pos. approx.

7 N

MSTBO 2,5/ 4-G1L THR BK - PCB header



2709749

<https://www.phoenixcontact.com/us/products/2709749>

Withdraw strength per pos. approx.	6 N
------------------------------------	-----

Electrical tests

Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	4

Insulation resistance

Specification	IEC 60512-3-1:2002-02
Insulation resistance, neighboring positions	$10^{12} \Omega$

Air clearances and creepage distances |

Specification	IEC 60664-1:1992-10 + A1:2000-02 + A2:2002-05
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	250 V
Rated surge voltage (III/3)	4 kV
minimum clearance value - non-homogenous field (III/3)	3 mm
minimum creepage distance (III/3)	3.2 mm
Rated insulation voltage (III/2)	320 V
Rated surge voltage (III/2)	4 kV
minimum clearance value - non-homogenous field (III/2)	3 mm
minimum creepage distance (III/2)	1.6 mm
Rated insulation voltage (II/2)	630 V
Rated surge voltage (II/2)	4 kV
minimum clearance value - non-homogenous field (II/2)	3 mm
minimum creepage distance (II/2)	3.2 mm

Environmental and real-life conditions

Vibration test

Specification	IEC 60068-2-6:1995-03
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

Durability test

Specification	IEC 60512-5:1992-08
Impulse withstand voltage at sea level	4.8 kV
Contact resistance R_1	1.57 m Ω
Contact resistance R_2	1.65 m Ω
Insertion/withdrawal cycles	25

Climatic test

MSTBO 2,5/ 4-G1L THR BK - PCB header



2709749

<https://www.phoenixcontact.com/us/products/2709749>

Specification	ISO 6988:1985-02
Corrosive stress	KFW 0.2 S/1 cycle
Thermal stress	100 °C/168 h
Power-frequency withstand voltage	2.25 kV

Ambient conditions

Ambient temperature (operation)	-40 °C ... 105 °C (dependent on the derating curve)
Ambient temperature (storage/transport)	-40 °C ... 55 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

Packaging specifications

Type of packaging	Box packaging
-------------------	---------------

MSTBO 2,5/ 4-G1L THR BK - PCB header

2709749

<https://www.phoenixcontact.com/us/products/2709749>



Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2709749>

 cULus Recognized Approval ID: E60425-20050718				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B				
	300 V	16 A	-	-
Use group D				
	300 V	10 A	-	-

MSTBO 2,5/ 4-G1L THR BK - PCB header



2709749

<https://www.phoenixcontact.com/us/products/2709749>

Classifications

ECLASS

ECLASS-11.0	27460201
ECLASS-12.0	27460201
ECLASS-13.0	27460201

ETIM

ETIM 9.0	EC002637
----------	----------

UNSPSC

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

MSTBO 2,5/ 4-G1L THR BK - PCB header



2709749

<https://www.phoenixcontact.com/us/products/2709749>

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%

MSTBO 2,5/ 4-G1L THR BK - PCB header



2709749

<https://www.phoenixcontact.com/us/products/2709749>

Accessories

CR MSTBO-G1 - Coding section

2199618

<https://www.phoenixcontact.com/us/products/2199618>

Coding section, inserted into the recess in the header or the inverted plug, red insulating material



MSTB-BF - Accessories

1759981

<https://www.phoenixcontact.com/us/products/1759981>

Mounting flange, for fixing both ends of the header onto the PCB, green insulating material, with M 2 x 14 screws and nuts.



MSTBO 2,5/ 4-G1L THR BK - PCB header

2709749

<https://www.phoenixcontact.com/us/products/2709749>



MSTB-BL - Accessories

1755477

<https://www.phoenixcontact.com/us/products/1755477>



Keying cap, for forming sections, plugs onto header pin, green insulating material

Phoenix Contact 2024 © - 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