

MSTBO 2,5/ 4-G1R TRAY BK - PCB header



2203073

<https://www.phoenixcontact.com/us/products/2203073>

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: 12 A, rated voltage (III/2): 320 V, contact surface: Sn, contact connection type: Pin, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, product range: MSTBO 2,5/...-G1R, pitch: 5 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm, number of solder pins per potential: 1, Pin connector pattern alignment: Orthogonal, locking: without, type of packaging: Tray, Product with pin output on right side

Your advantages

- Plug-in direction orthogonal to the PCB

Commercial data

Item number	2203073
Packing unit	250 pc
Minimum order quantity	250 pc
Product key	ACHADB
GTIN	4055626316697
Weight per piece (including packing)	6.336 g
Weight per piece (excluding packing)	4 g
Country of origin	IN

MSTBO 2,5/ 4-G1R TRAY BK - PCB header



2203073

<https://www.phoenixcontact.com/us/products/2203073>

Technical data

Product properties

Product type	PCB headers
Product family	MSTBO 2,5/..-G1R
Type	Header perpendicular to the PCB
Number of positions	4
Pitch	5 mm
Number of connections	4
Number of rows	1
Number of potentials	4
Pin layout	Linear pinning
Solder pins per potential	1

Electrical properties

Properties

Nominal current I_N	12 A
Nominal voltage U_N	250 V
Contact resistance	1.6 m Ω
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	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 contact area (top layer)	Tin (Sn)
Metal surface contact area (middle layer)	Nickel (Ni)
Metal surface soldering area (top layer)	Tin (Sn)
Metal surface soldering area (middle layer)	Nickel (Ni)

Material data - housing

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

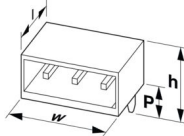
MSTBO 2,5/ 4-G1R TRAY BK - PCB header

2203073

<https://www.phoenixcontact.com/us/products/2203073>

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	5 mm
Width [w]	19.95 mm
Height [h]	16.5 mm
Length [l]	14.65 mm
Solder pin length [P]	3.5 mm
Pin dimensions	1 x 1 mm

PCB design

Hole diameter	1.4 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
---------------	------------------------

MSTBO 2,5/ 4-G1R TRAY BK - PCB header



2203073

<https://www.phoenixcontact.com/us/products/2203073>

Contact holder in insert Requirements >20 N	Test passed
--	-------------

Insertion and withdrawal forces

Specification	IEC 60512-13-2:2006-02
Result	Test passed
No. of cycles	25
Insertion strength per pos. approx.	8 N
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	> 5 MΩ

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)	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)	3 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

Durability test

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	4.8 kV
Contact resistance R ₁	1.6 mΩ
Contact resistance R ₂	1.6 mΩ
Insertion/withdrawal cycles	25
Insulation resistance, neighboring positions	> 5 MΩ

MSTBO 2,5/ 4-G1R TRAY BK - PCB header



2203073

<https://www.phoenixcontact.com/us/products/2203073>

Climatic test

Specification	ISO 6988:1985-02
Corrosive stress	0.2 dm ³ SO ₂ on 300 dm ³ /40 °C/1 cycle
Thermal stress	100 °C/168 h
Power-frequency withstand voltage	2.21 kV

Vibration test

Specification	IEC 60068-2-6:2007-12
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

Ambient conditions

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

Packaging specifications

Type of packaging	Tray
-------------------	------

2203073

<https://www.phoenixcontact.com/us/products/2203073>

Drawings

Diagram



Type: MSTB 2,5/...-ST with MSTBO 2,5/...-G1R

Diagram



Type: MSTBP 2,5/...-ST with MSTBO 2,5/...-G1R

2203073

<https://www.phoenixcontact.com/us/products/2203073>

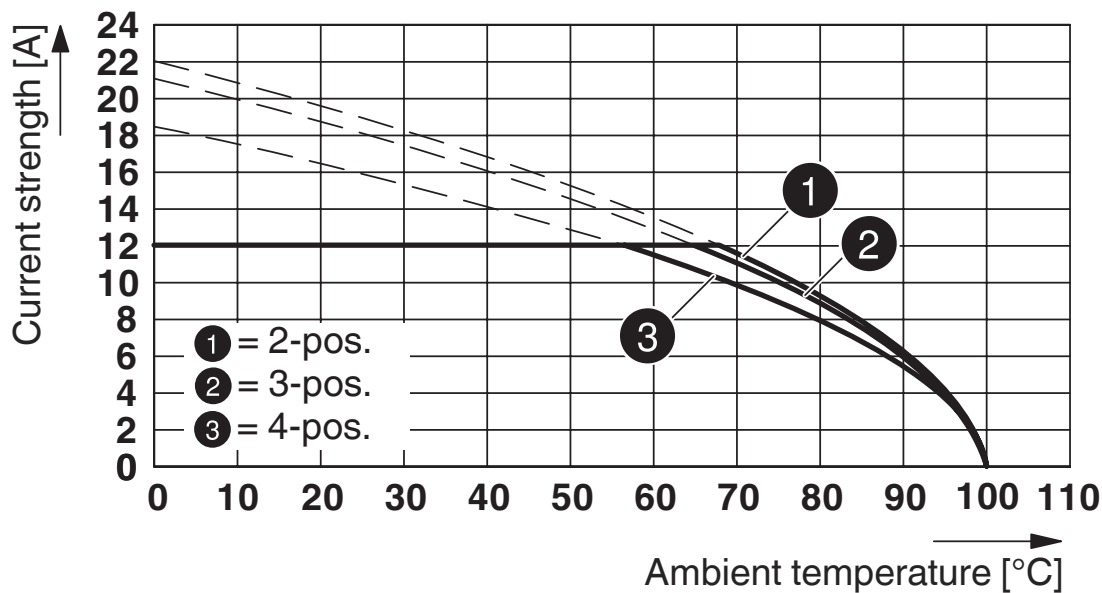


Type: MSTBT 2,5/...-ST with MSTBO 2,5/...-G1R



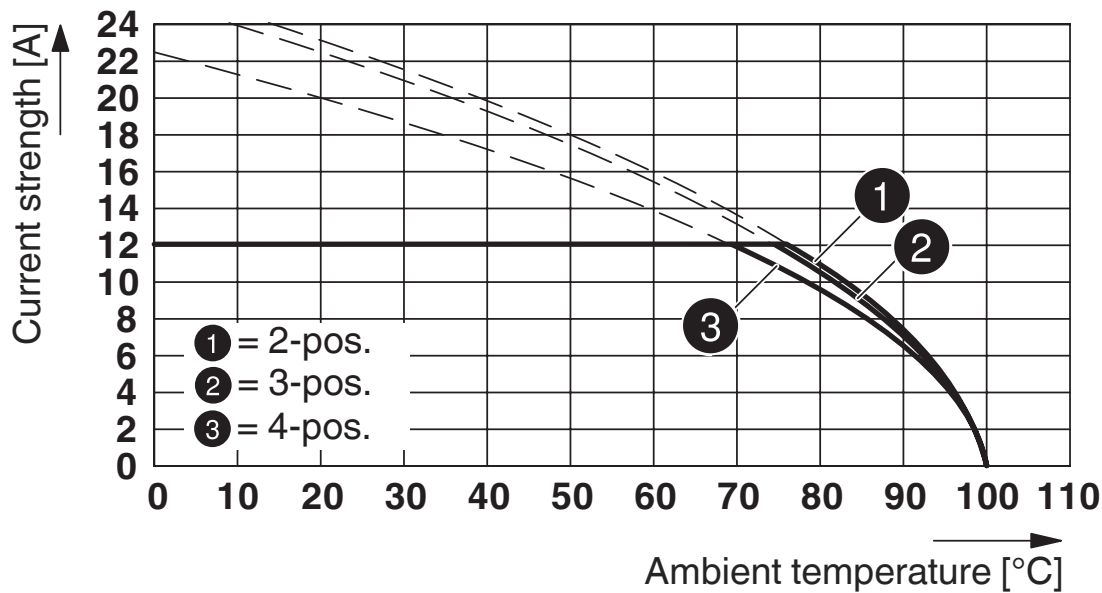
Type: SMSTB 2,5/...-ST with MSTBO 2,5/...-G1R

Diagram



Type: MVSTB(R/W) 2,5/...-ST with MSTBO 2,5/...-G1R

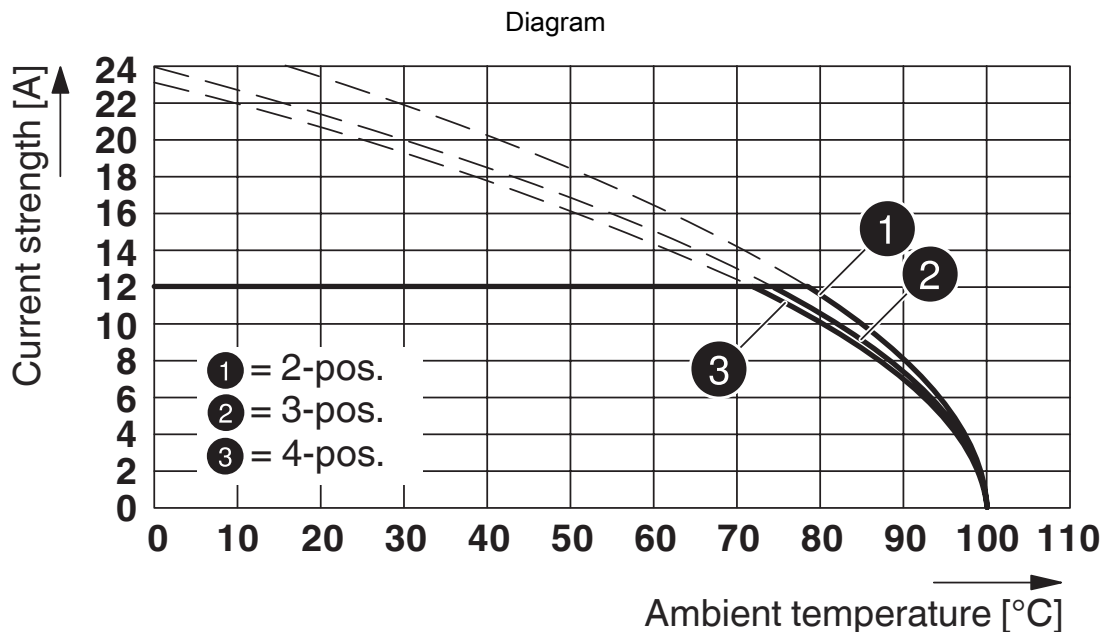
Diagram



Type: FRONT-MSTB 2,5/...-ST with MSTBO 2,5/...-G1R

2203073

<https://www.phoenixcontact.com/us/products/2203073>



Type: MSTBTP 2,5/...-ST with MSTBO 2,5/...-G1R



Type: FKCN 2,5/...-ST with MSTBO 2,5/...-G1R

MSTBO 2,5/ 4-G1R TRAY BK - PCB header



2203073

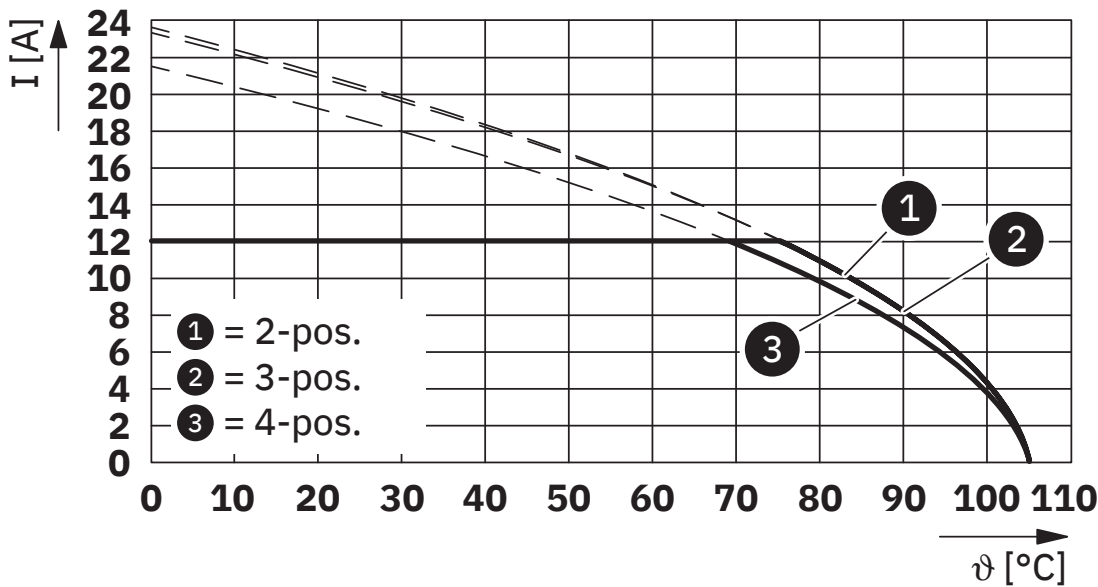
<https://www.phoenixcontact.com/us/products/2203073>

Diagram



Type: FKCT 2,5/...-ST with MSTBO 2,5/...-G1R

Diagram



Type: FKCVR 2,5/...-ST with MSTBO 2,5/...-G1R

MSTBO 2,5/ 4-G1R TRAY BK - PCB header



2203073

<https://www.phoenixcontact.com/us/products/2203073>



Type: FKCS 2,5/...-ST with MSTBO 2,5/...-G1R



Type: TVFKC 1,5/...-ST with MSTBO 2,5/...-G1(L/R)

MSTBO 2,5/ 4-G1R TRAY BK - PCB header



2203073

<https://www.phoenixcontact.com/us/products/2203073>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2203073>

 CSA Approval ID: 2406780				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B	300 V	10 A	-	-
D	300 V	10 A	-	-

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

 VDE Zeichengenehmigung Approval ID: 40050648				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine	250 V	8 A	-	-

MSTBO 2,5/ 4-G1R TRAY BK - PCB header



2203073

<https://www.phoenixcontact.com/us/products/2203073>

Classifications

ECLASS

ECLASS-13.0	27460201
ECLASS-15.0	27460201

ETIM

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

UNSPSC

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

MSTBO 2,5/ 4-G1R TRAY BK - PCB header



2203073

<https://www.phoenixcontact.com/us/products/2203073>

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