

# MSTBO 2,5/ 3-G1L BUGY - PCB header



2853145

<https://www.phoenixcontact.com/us/products/2853145>

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: blue grey, nominal current: 12 A, rated voltage (III/2): 320 V, contact connection type: Pin, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: MSTBO 2,5/..-G1L, pitch: 5 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm, number of solder pins per potential: 1, plug-in system: COMBICON MSTB 2,5, locking: without, type of packaging: packed in cardboard, Product with pin output on left side

## Your advantages

- Plug-in direction orthogonal to the PCB

## Commercial data

Item number	2853145
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	AC08
Product key	ACHADB
GTIN	4017918423742
Weight per piece (including packing)	1.865 g
Weight per piece (excluding packing)	1.58 g
Customs tariff number	85366930
Country of origin	PL

# MSTBO 2,5/ 3-G1L BUGY - PCB header



2853145

<https://www.phoenixcontact.com/us/products/2853145>

## Technical data

### Product properties

Product type	PCB headers
Product family	MSTBO 2,5/..-G1L
Product line	COMBICON Connectors M
Type	Header perpendicular to the PCB
Number of positions	3
Pitch	5 mm
Number of connections	3
Number of rows	1
Number of potentials	3
Mounting flange	no
Pin layout	Linear pinning
Solder pins per potential	1

### Electrical properties

Nominal current $I_N$	12 A
Nominal voltage $U_N$	250 V
Degree of pollution	3
Contact resistance	1.5 m $\Omega$
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

#### Material data - housing

Color (Housing)	blue grey (7031)
Insulating material	PA
Insulating material group	I
CTI according to IEC 60112	600

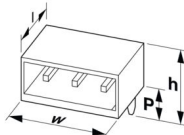
# MSTBO 2,5/ 3-G1L BUGY - PCB header

2853145

<https://www.phoenixcontact.com/us/products/2853145>

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]	14.95 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
Contact holder in insert Requirements >20 N	Test passed

### Insertion and withdrawal forces

Result	Test passed
--------	-------------

# MSTBO 2,5/ 3-G1L BUGY - PCB header



2853145

<https://www.phoenixcontact.com/us/products/2853145>

No. of cycles	25
Insertion strength per pos. approx.	13 N
Withdraw strength per pos. approx.	7 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)	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 60068-2-6:2007-12
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

### Durability test

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	4.8 kV
Contact resistance R <sub>1</sub>	1.5 mΩ
Contact resistance R <sub>2</sub>	1.5 mΩ

# MSTBO 2,5/ 3-G1L BUGY - PCB header



2853145

<https://www.phoenixcontact.com/us/products/2853145>

Insertion/withdrawal cycles	25
Insulation resistance, neighboring positions	> 5 MΩ

## 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	2.21 kV

## Ambient conditions

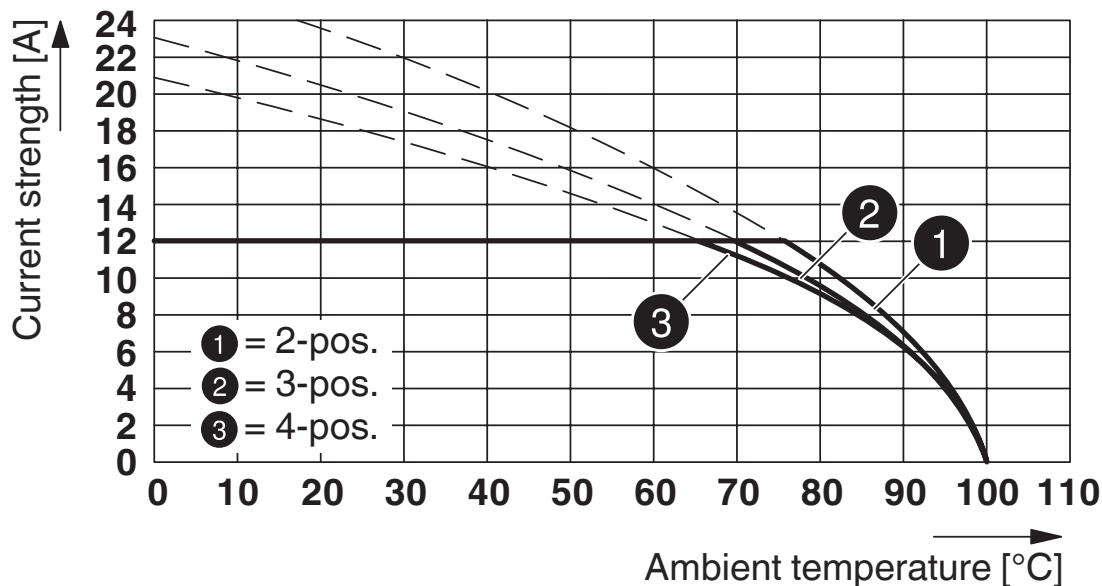
Ambient temperature (operation)	-40 °C ... 105 °C (dependent on the derating curve)
Ambient temperature (storage/transport)	-40 °C ... 55 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

## Packaging specifications

Type of packaging	packed in cardboard
Outer packaging type	Carton

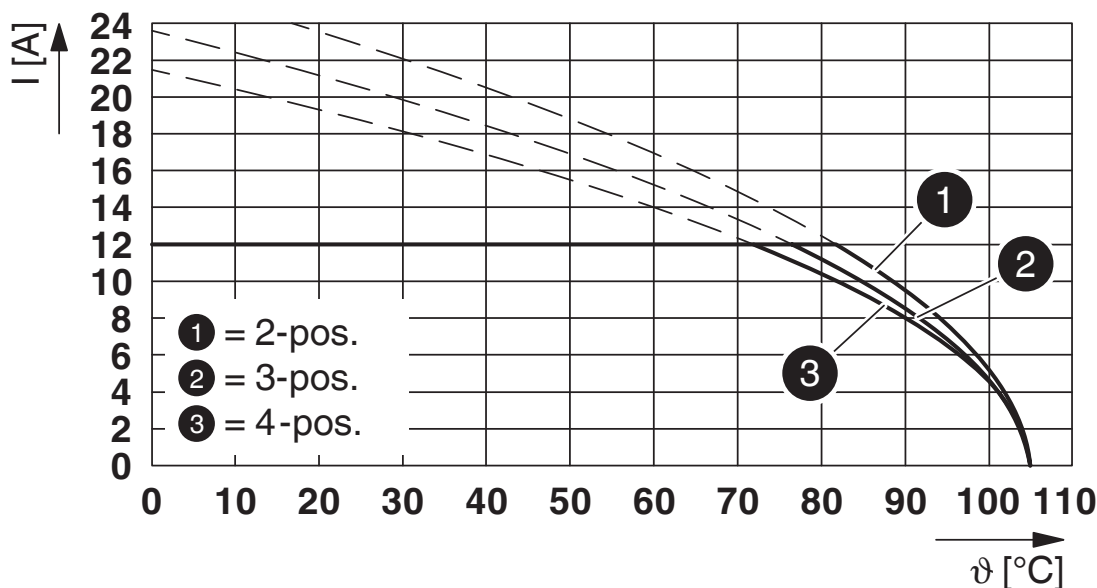
## Drawings

Diagram



Type: MSTB 2,5/...-ST with MSTBO 2,5/...-G1L

Diagram



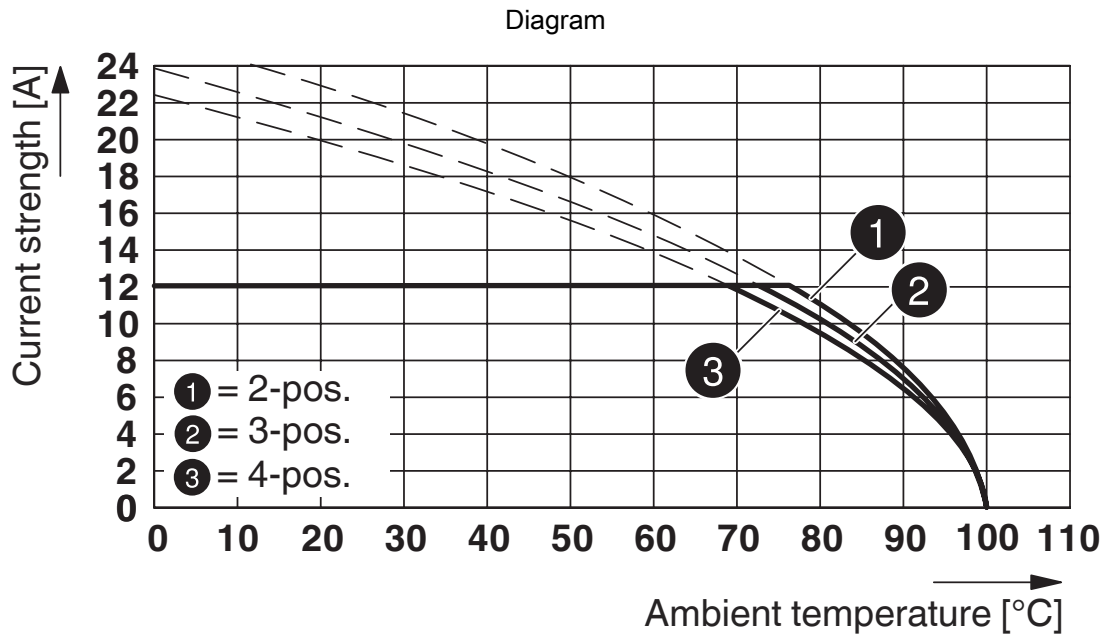
Type: FKCN 2,5/...-ST with MSTBO 2,5/...-G1L

# MSTBO 2,5/ 3-G1L BUGY - PCB header

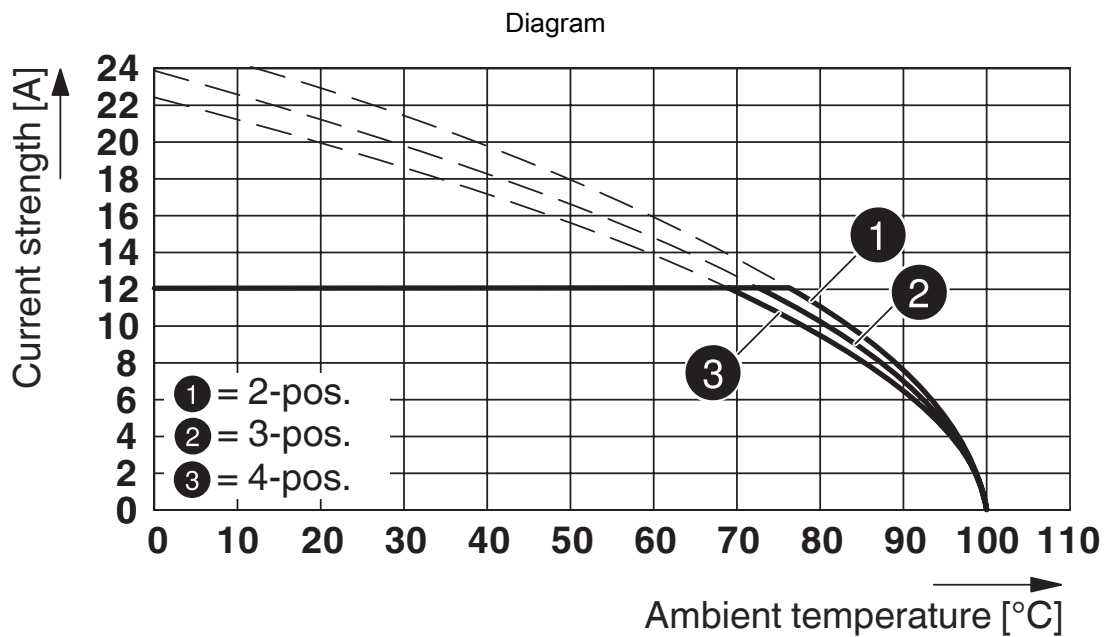


2853145

<https://www.phoenixcontact.com/us/products/2853145>



Type: MSTBTP 2,5/...-ST with MSTBO 2,5/...-G1L



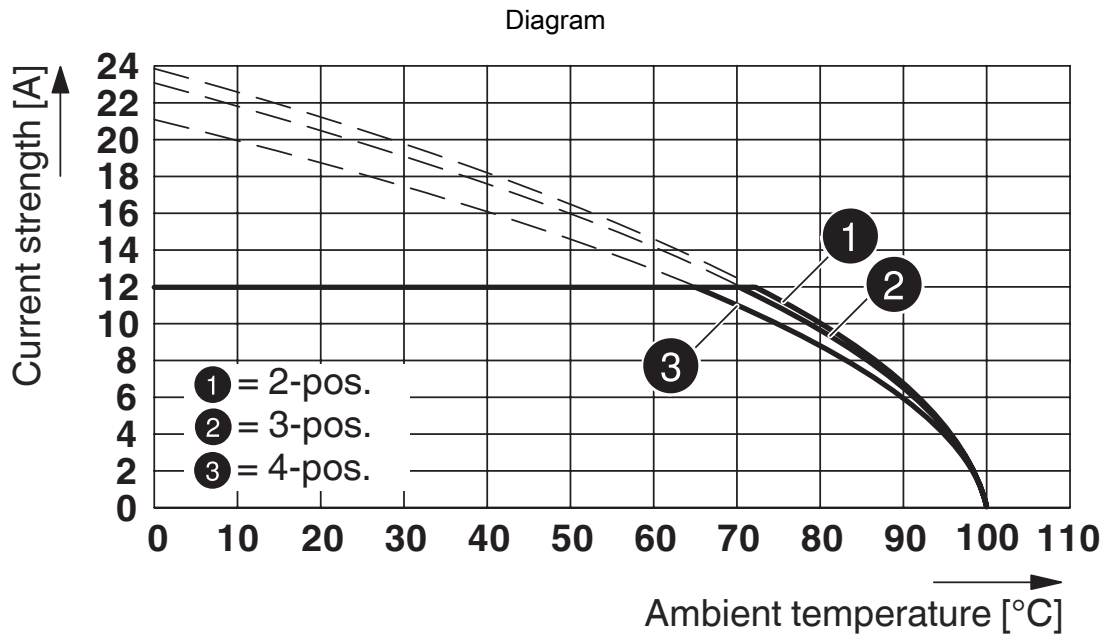
Type: MSTBT 2,5/...-ST with MSTBO 2,5/...-G1L

# MSTBO 2,5/ 3-G1L BUGY - PCB header

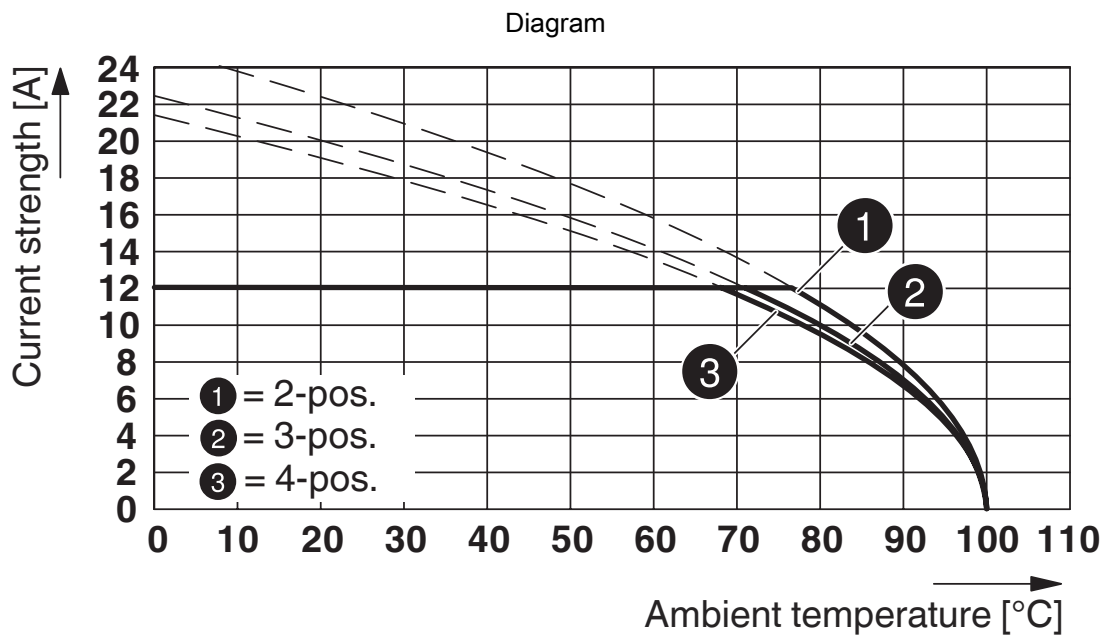


2853145

<https://www.phoenixcontact.com/us/products/2853145>



Type: FRONT-MSTB 2,5/...-ST with MSTBO 2,5/...-G1L



Type: MSTBP 2,5/...-ST with MSTBO 2,5/...-G1L



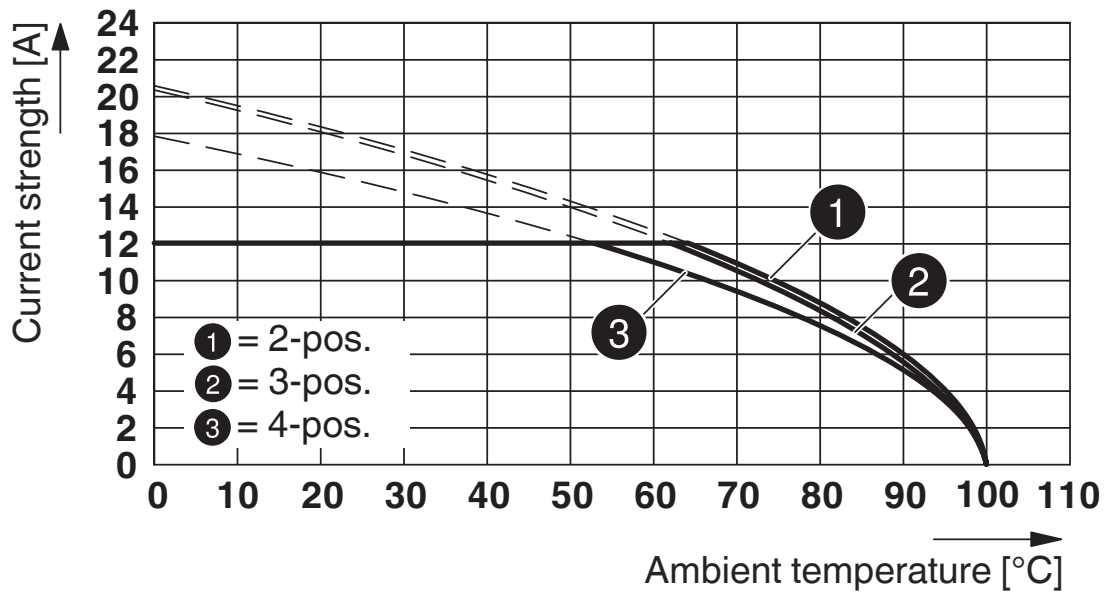
# MSTBO 2,5/ 3-G1L BUGY - PCB header



2853145

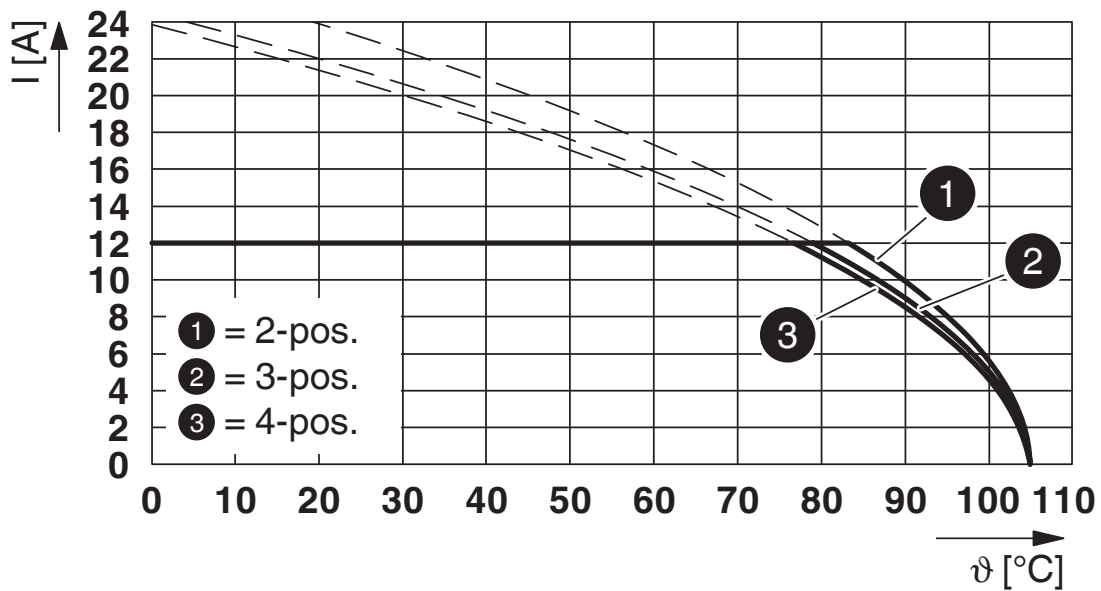
<https://www.phoenixcontact.com/us/products/2853145>

Diagram



Type: MVSTB(R/W) 2,5/...-ST with MSTBO 2,5/...-G1L

Diagram



Type: FKCT 2,5/...-ST with MSTBO 2,5/...-G1L

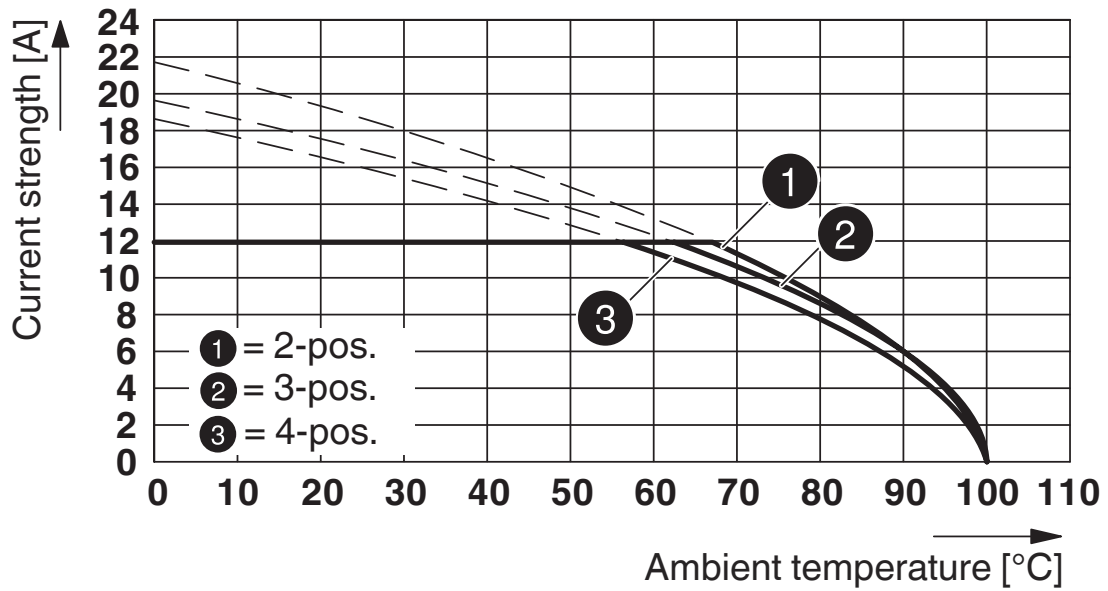
# MSTBO 2,5/ 3-G1L BUGY - PCB header



2853145

<https://www.phoenixcontact.com/us/products/2853145>

Diagram



Type: SMSTB 2,5/...-ST with MSTBO 2,5/...-G1L

# MSTBO 2,5/ 3-G1L BUGY - PCB header





2853145


<https://www.phoenixcontact.com/us/products/2853145>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2853145>

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

 <b>cULus Recognized</b> Approval ID: E60425-20050718				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
Use group B				
	300 V	16 A	-	-
Use group D				
	300 V	10 A	-	-

 <b>VDE Zeichengenehmigung</b> Approval ID: 40050648				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	250 V	8 A	-	-

# MSTBO 2,5/ 3-G1L BUGY - PCB header



2853145

<https://www.phoenixcontact.com/us/products/2853145>

## Classifications

### ECLASS

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

### ETIM

ETIM 8.0	EC002637
----------	----------

### UNSPSC

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

# MSTBO 2,5/ 3-G1L BUGY - PCB header



2853145

<https://www.phoenixcontact.com/us/products/2853145>

## 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/ 3-G1L BUGY - PCB header



2853145

<https://www.phoenixcontact.com/us/products/2853145>

## 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



---

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](mailto:info@phoenixcon.com)