

## Feed-through header - MSTBO 2,5/ 4-G1L - 1861060

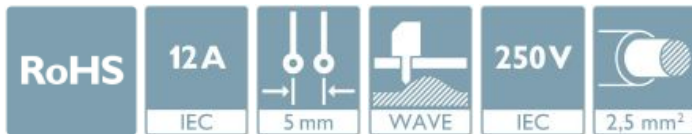
Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



PCB header, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Male connector, Number of potentials: 4, Number of rows: 1, Number of positions per row: 4, number of connections: 4, product range: MSTBO 2,5/..-G1L, pitch: 5 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm, Locking: without, type of packaging: packed in cardboard, Product with pin output on left side

### Your advantages

- ✓ Plug-in direction orthogonal to the PCB



### Key Commercial Data

Packing unit	1 pc
Minimum order quantity	200 pc
GTIN	
GTIN	4017918155636
Weight per Piece (excluding packing)	2.600 g
Custom tariff number	85366930
Country of origin	Germany

### Technical data

#### Item properties

Brief article description	Feed-through header
Type of contact	Male connector
Range of articles	MSTBO 2,5/..-G1L
Pitch	5 mm
Number of positions	4
Mounting type	Wave soldering
Pin layout	Linear pinning

## Feed-through header - MSTBO 2,5/ 4-G1L - 1861060

### Technical data

#### Item properties

Locking	without
Number of levels	1
Number of connections	4
Number of potentials	4

#### Electrical parameters

Nominal current $I_N$	12 A
Nom. voltage	250 V
Rated voltage (III/3)	250 V
Rated voltage (III/2)	320 V
Rated voltage (II/2)	630 V
Rated surge voltage (III/3)	4 kV
Rated surge voltage (III/2)	4 kV
Rated surge voltage (II/2)	4 kV

#### 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

Housing color	green (6021)
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 for the product

Caption	Schematische Abbildung - weitere Details siehe Produktfamilienzeichnung im Download Center
Length [ l ]	14.65 mm
Width [ w ]	19.95 mm
Height [ h ]	16.5 mm
Pitch	5 mm
Solder pin [P]	3.5 mm
Pin dimensions	1 x 1 mm

## Feed-through header - MSTBO 2,5/ 4-G1L - 1861060

### Technical data

#### Dimensions for PCB design

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

#### Packaging information

Type of packaging	packed in cardboard
Pieces per package	200
Denomination packing units	Pcs.
Outer packaging type	Carton

#### Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 55 °C
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (operation)	-40 °C ... 105 °C (dependent on the derating curve)
Relative humidity (storage/transport)	80 %

#### Air clearances and creepage distances

Minimum clearance - inhomogeneous field (III/3)	3 mm
Minimum clearance - inhomogeneous field (III/2)	3 mm
Minimum clearance - inhomogeneous field (II/2)	3 mm
Minimum creepage distance value (III/3)	3.2 mm
Minimum creepage distance value (III/2)	1.6 mm
Minimum creepage distance value (II/2)	3.2 mm

#### Current carrying capacity / derating curves

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

#### Mechanical test group (A)

Test specification	IEC 61984
Visual inspection	IEC 60512-1-1:2002-02
Dimension check	IEC 60512-1-2:2002-02
Resistance of inscriptions	IEC 60068-2-70:1995-12
Insertion and withdrawal force	IEC 60512-13-2:2006-02
No. of cycles	25
Insertion strength per pos. approx.	13 N
Withdraw strength per pos. approx.	7 N
Polarization and coding	IEC 60512-13-5:2006-02
Contact holder in insert	IEC 60512-15-1:2008-05
Test force per pos.	20 N

#### Life cycle test group (B)

Specification	IEC 60512-9-1:2010-03
Contact resistance R <sub>1</sub>	1.5 mΩ

## Feed-through header - MSTBO 2,5/ 4-G1L - 1861060

### Technical data

#### Life cycle test group (B)

Insertion/withdrawal cycles	25
Contact resistance R <sub>2</sub>	1.5 mΩ
Impulse withstand voltage at sea level	4.8 kV

#### Thermal tests (C)

Specification	IEC 60512-5-1:2002-02
Number of positions	4
Upper limiting temperature requirements <100 °C	Test passed

#### Climatic test group (D)

Specification	ISO 6988:1985-02
Cold stress	-40 °C/2 h
Thermal stress	100 °C/168 h
Corrosive stress	0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/1 cycle
Impulse withstand voltage at sea level	4.8 kV
Power-frequency withstand voltage	2.21 kV

#### Degree of protection test group (E)

Specification	IEC 61984:2008-10
Result, degree of protection, IP code	No contact safety (IP00) in acc. with IEC 60529:1989-11 + AMD 1:1999-11 + AMD 2:2013-08

#### Vibration test

Specification	IEC60068-2-6:2007-12
Frequency	10 - 150 - 10 Hz
Sweep speed	1 octave/min
Amplitude	0.35 mm (10 - 60.1 Hz)
Acceleration	5 g (60.1 - 150 Hz)
Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis

#### Standards and Regulations

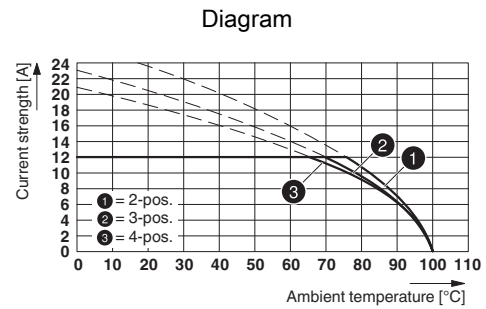
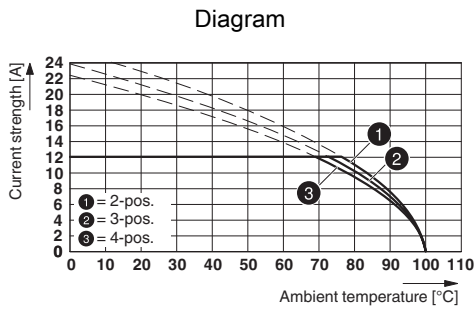
Connection in acc. with standard	EN-VDE
	CSA

#### Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

### Drawings

# Feed-through header - MSTBO 2,5/ 4-G1L - 1861060



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

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

## Classifications

### eCl@ss

eCl@ss 10.0.1	27440402
eCl@ss 11.0	27460201
eCl@ss 4.0	27260700
eCl@ss 4.1	27260700
eCl@ss 5.0	27260700
eCl@ss 5.1	27260700
eCl@ss 6.0	27260700
eCl@ss 7.0	27440402
eCl@ss 8.0	27440402
eCl@ss 9.0	27440402

### ETIM

ETIM 2.0	EC001031
ETIM 3.0	EC001031
ETIM 4.0	EC002637
ETIM 5.0	EC002637
ETIM 6.0	EC002637
ETIM 7.0	EC002637

### UNSPSC

UNSPSC 6.01	31261501
UNSPSC 7.0901	31261501
UNSPSC 11	31261501
UNSPSC 12.01	31261501
UNSPSC 13.2	39121409
UNSPSC 18.0	39121409
UNSPSC 19.0	39121409

# Feed-through header - MSTBO 2,5/ 4-G1L - 1861060

## Classifications

### UNSPSC

UNSPSC 20.0	39121409
UNSPSC 21.0	39121409

## Approvals

### Approvals


#### Approvals

CSA / IECCE CB Scheme / EAC / cULus Recognized / VDE Zeichengenehmigung


#### Ex Approvals

### Approval details

CSA		<a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a>	13631
	B	D	
Nominal voltage UN	300 V	300 V	
Nominal current IN	10 A	10 A	

IECEE CB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	DE1-60988-B1B2
Nominal voltage UN	250 V		
Nominal current IN	8 A		

EAC			B.01687
-----	---	--	---------

cULus Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	E60425-20050718
	B	D	
Nominal voltage UN	300 V	300 V	

## Feed-through header - MSTBO 2,5/ 4-G1L - 1861060

### Approvals

	B	D
Nominal current IN	16 A	10 A

VDE Zeichengenehmigung		<a href="http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx">http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a>	40050648
Nominal voltage UN	250 V		
Nominal current IN	8 A		

### Accessories

#### Accessories

#### Coding element

Coding section - CR MSTBO-G1 - 2199618



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

#### Filler plug

Accessories - MSTB-BL - 1755477



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

#### Flange

Accessories - MSTB-BF - 1759981



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

## Feed-through header - MSTBO 2,5/ 4-G1L - 1861060

### Accessories

#### Necessary add-on products

##### Printed-circuit board connector - MSTBT 2,5/ 4-ST - 1779851

PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 4, Number of rows: 1, Number of positions per row: 4, number of connections: 4, product range: MSTBT 2,5/...-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: 0 °, Locking clip: - Locking clip, Stecksystem: CLASSIC COMBICON, Locking: without, type of packaging: packed in cardboard



##### Printed-circuit board connector - MSTBT 2,5 HC/ 4-ST - 1926251

PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 16 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 4, Number of rows: 1, Number of positions per row: 4, number of connections: 4, product range: MSTBT 2,5 HC/...-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: 0 °, Locking clip: - Locking clip, Stecksystem: POWER COMBICON 2,5, Locking: without, type of packaging: packed in cardboard, The T-shape of the MSTBT plug distributes the height uniformly over the upper and lower sides of the printed circuit board



### Additional products

##### Printed-circuit board connector - TVFKC 1,5/ 4-ST - 1713855

PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 10 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 4, Number of rows: 1, Number of positions per row: 4, number of connections: 8, product range: TVFKC 1,5/...-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, Locking clip: - Locking clip, Stecksystem: CLASSIC COMBICON, Locking: without, type of packaging: packed in cardboard



##### Printed-circuit board connector - TVFKCL 1,5/ 4-ST - 1715947

PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 10 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 4, Number of rows: 1, Number of positions per row: 4, number of connections: 8, product range: TVFKCL 1,5/...-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, Locking clip: - Locking clip, Stecksystem: CLASSIC COMBICON, Locking: without, type of packaging: packed in cardboard





## Feed-through header - MSTBO 2,5/ 4-G1L - 1861060

### Accessories

#### Plug - QC 1,5/ 4-ST - 1717987



PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 630 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 4, Number of rows: 1, Number of positions per row: 4, number of connections: 4, product range: QC 1,5/..-ST, pitch: 5 mm, connection method: Displacement connection, conductor/PCB connection direction: 0 °, Locking clip: - Locking clip, Stecksystem: CLASSIC COMBICON, Locking: without, type of packaging: packed in cardboard

#### Printed-circuit board connector - FKCN 2,5/ 4-ST - 1732768



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 4, Number of rows: 1, Number of positions per row: 4, number of connections: 4, product range: FKCN 2,5/..-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, Locking clip: - Locking clip, Stecksystem: CLASSIC COMBICON, Locking: without, type of packaging: packed in cardboard

#### Printed-circuit board connector - MSTB 2,5/ 4-ST - 1754481



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 4, Number of rows: 1, Number of positions per row: 4, number of connections: 4, product range: MSTB 2,5/..-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: 0 °, Locking clip: - Locking clip, Stecksystem: CLASSIC COMBICON, Locking: without, type of packaging: packed in cardboard

#### Printed-circuit board connector - MSTBP 2,5/ 4-ST - 1765797



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 4, Number of rows: 1, Number of positions per row: 4, number of connections: 4, product range: MSTBP 2,5/..-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: 0 °, Locking clip: - Locking clip, Stecksystem: CLASSIC COMBICON, Locking: without, type of packaging: packed in cardboard

#### Printed-circuit board connector - SMSTB 2,5/ 4-ST - 1768781



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 4, Number of rows: 1, Number of positions per row: 4, number of connections: 4, product range: SMSTB 2,5/..-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: -45 °, Locking clip: - Locking clip, Stecksystem: CLASSIC COMBICON, Locking: without, type of packaging: packed in cardboard

## Feed-through header - MSTBO 2,5/ 4-G1L - 1861060

### Accessories

#### Printed-circuit board connector - FRONT-MSTB 2,5/ 4-ST - 1779437



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 4, Number of rows: 1, Number of positions per row: 4, number of connections: 4, product range: FRONT-MSTB 2,5/..-ST, pitch: 5 mm, connection method: Front screw connection, conductor/PCB connection direction: 0 °, Locking clip: - Locking clip, Stecksystem: CLASSIC COMBICON, Locking: without, type of packaging: packed in cardboard

#### Printed-circuit board connector - MSTBT 2,5/ 4-ST - 1779851



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 4, Number of rows: 1, Number of positions per row: 4, number of connections: 4, product range: MSTBT 2,5/..-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: 0 °, Locking clip: - Locking clip, Stecksystem: CLASSIC COMBICON, Locking: without, type of packaging: packed in cardboard

#### Printed-circuit board connector - MVSTBW 2,5/ 4-STEH - 1784299



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 4, Number of rows: 1, Number of positions per row: 4, number of connections: 4, product range: MVSTBW 2,5/..-STEH, pitch: 5 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: -90 °, Stecksystem: CLASSIC COMBICON, Locking: without, type of packaging: packed in cardboard

#### Printed-circuit board connector - MVSTBR 2,5/ 4-ST - 1792032



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 4, Number of rows: 1, Number of positions per row: 4, number of connections: 4, product range: MVSTBR 2,5/..-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: 90 °, Locking clip: - Locking clip, Stecksystem: CLASSIC COMBICON, Locking: without, type of packaging: packed in cardboard

#### Printed-circuit board connector - MVSTBW 2,5/ 4-ST - 1792540



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 4, Number of rows: 1, Number of positions per row: 4, number of connections: 4, product range: MVSTBW 2,5/..-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: -90 °, Locking clip: - Locking clip, Stecksystem: CLASSIC COMBICON, Locking: without, type of packaging: packed in cardboard

## Feed-through header - MSTBO 2,5/ 4-G1L - 1861060

### Accessories

#### Printed-circuit board connector - FKCT 2,5/ 4-ST - 1909236



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 4, Number of rows: 1, Number of positions per row: 4, number of connections: 4, product range: FKCT 2,5/..-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, Locking clip: - Locking clip, Stecksystem: CLASSIC COMBICON, Locking: without, type of packaging: packed in cardboard

#### Printed-circuit board connector - FKCVR 2,5/ 4-ST - 1909731



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 4, Number of rows: 1, Number of positions per row: 4, number of connections: 4, product range: FKCVR 2,5/..-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 90 °, Locking clip: - Locking clip, Stecksystem: CLASSIC COMBICON, Locking: without, type of packaging: packed in cardboard

#### Printed-circuit board connector - FKCVW 2,5/ 4-ST - 1910050



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 4, Number of rows: 1, Number of positions per row: 4, number of connections: 4, product range: FKCVW 2,5/..-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: -90 °, Locking clip: - Locking clip, Stecksystem: CLASSIC COMBICON, Locking: without, type of packaging: packed in cardboard

#### Printed-circuit board connector - FK 2,5/ 4-ST - 1910377



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 4, Number of rows: 1, Number of positions per row: 4, number of connections: 4, product range: FK 2,5/..-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, Stecksystem: CLASSIC COMBICON, Locking: without, type of packaging: packed in cardboard

#### Printed-circuit board connector - QC 1/ 4-ST-BUS - 1921696



PCB connector, nominal cross section: 1 mm<sup>2</sup>, color: green, nominal current: 10 A, rated voltage (III/2): 630 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 4, Number of rows: 1, Number of positions per row: 4, number of connections: 4, product range: QC 1/..-ST-BUS, pitch: 5 mm, connection method: Displacement connection, conductor/PCB connection direction: 90 °, Locking clip: - Locking clip, Stecksystem: CLASSIC COMBICON, Locking: without, type of packaging: packed in cardboard, The plug allows conductors to be looped through from module to module, without interruption

## Feed-through header - MSTBO 2,5/ 4-G1L - 1861060

### Accessories

#### Printed-circuit board connector - FKCS 2,5/ 4-ST - 1974753



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 4, Number of rows: 1, Number of positions per row: 4, number of connections: 4, product range: FKCS 2,5/..-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, Locking clip: - Locking clip, Stecksystem: CLASSIC COMBICON, Locking: without, type of packaging: packed in cardboard