

Feed-through header - MSTBA 2,5/20-G-RN - 1944961

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PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 20, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm, Article with engagement nose




The figure shows a 10-position version of the product

Your advantages

- ✓ Maximum flexibility when it comes to device design – one header for connectors with different connection technologies
- ✓ Well-known mounting principle allows worldwide use
- ✓ Closed contour for optimum stability of the plug-in connection
- ✓ Intuitive locking mechanism prevents accidental disconnection



Key Commercial Data

Packing unit	50 pc
GTIN	 4 017918 891183
GTIN	4017918891183

Technical data

Item properties

Brief article description	Feed-through header
Plug-in system	CLASSIC COMBICON
Type of contact	Male connector
Range of articles	MSTBA 2,5/...-G-RN
Pitch	5 mm
Number of positions	20
Mounting type	Wave soldering
Pin layout	Linear pinning
Locking	Engagement nose
Number of levels	1
Number of connections	20

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Item properties

Number of potentials	20
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Electrical parameters

Nominal current	12 A
Nom. voltage	320 V
Rated voltage	250 V
Rated voltage (III/2)	320 V
Rated voltage (II/2)	400 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
Metal surface contact area (top layer)	Tin (3 - 5 µm Sn)
Metal surface contact area (middle layer)	Nickel (1.3 - 3 µm Ni),
Metal surface soldering area (top layer)	Tin (3 - 5 µm Sn)
Metal surface soldering area (middle layer)	Nickel (1.3 - 3 µm Ni)

Material data - housing

Housing color	green (6021)
Insulating material	PBT
Insulating material group	IIIa
CTI according to IEC 60112	225
Flammability rating according to UL 94	V0

Dimensions for the product

Length [l]	12 mm
Width [w]	105.82 mm
Height [h]	12.1 mm
Pitch	5 mm
Height (without solder pin)	8.6 mm
Solder pin [P]	3.5 mm
Pin spacing	5.08 mm
Pin dimensions	1 x 1 mm

Dimensions for PCB design

Hole diameter	1.4 mm
Pin spacing	5.08 mm

Packaging information

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Packaging information

Type of packaging	packed in cardboard
Pieces per package	50
Denomination packing units	Pcs.

Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 70 °C
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (operation)	-40 °C ... 100 °C (dependent on the derating curve)

Air clearances and creepage distances

Clearances and creepage distances	IEC 60664-1:2007-04
Specification	IEC 60664-1:2007-04
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)	4 mm
Minimum creepage distance value (III/2)	3.2 mm
Minimum creepage distance value (II/2)	4 mm

Mechanical tests (A)

Test specification	IEC 61984
Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	6 N
Polarization when inserted requirement >20 N	Test passed
Contact holder in insert requirements >20 N	Test passed

Durability tests (B)

Specification	IEC 60512-9-1:2010-03
Contact resistance R ₁	1 mΩ
Insertion/withdrawal cycles	25
Contact resistance R ₂	1 mΩ
Impulse withstand voltage at sea level	4.8 kV
Power-frequency withstand voltage	2.21 kV
Insulation resistance, neighboring positions	> 0.2 TΩ

Thermal tests (C)

Specification	IEC 60512-5-1:2002-02
Number of positions	18
Conductor cross section	2.5 mm ²
Test current	12 A
Upper limiting temperature requirements <100 °C	Test passed

Climatic tests (D)

Specification	ISO 6988:1985-02
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Climatic tests (D)

Cold stress	-40 °C/2 h
Thermal stress	100 °C/168 h
Corrosive stress	0.2 dm ³ SO ₂ on 300 dm ³ /40 °C/1 cycle
Impulse withstand voltage at sea level	4.8 kV
Power-frequency withstand voltage	2.21 kV

Environmental and durability tests (E)

Specification	IEC 61984:2008-10
Result, degree of protection, IP code	Finger safety with IP20 test finger

Vibration test

Specification	IEC 60068-2-6:2007-12
Result	Test passed
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

Standards and Regulations

Connection in acc. with standard	EN-VDE
	CUL
Flammability rating according to UL 94	V0

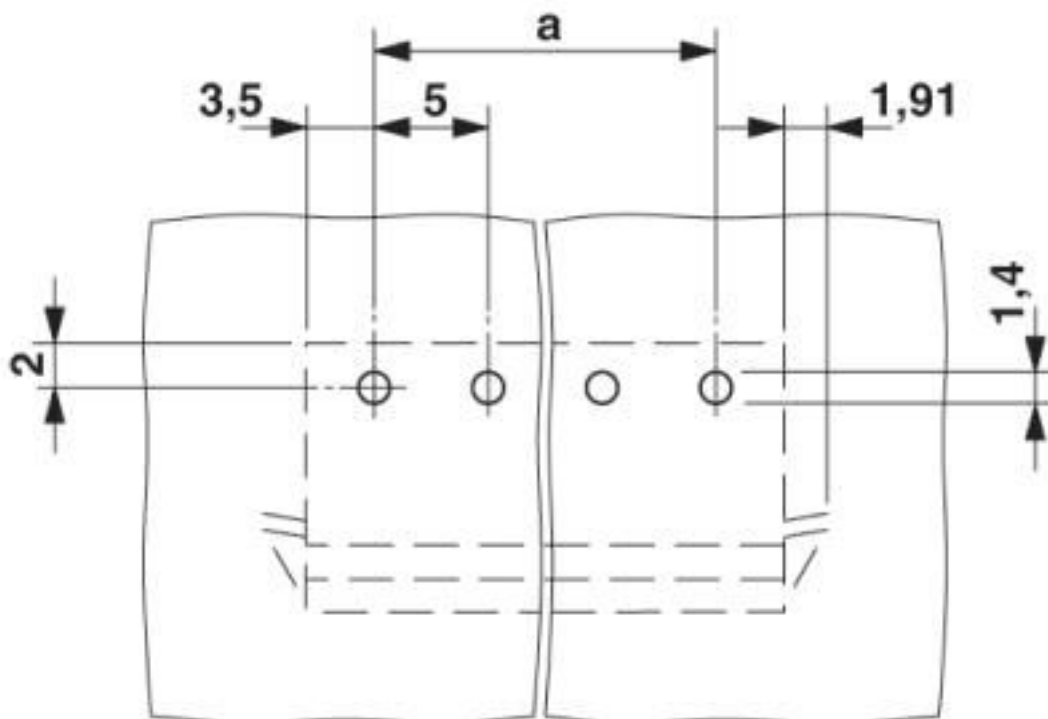
Environmental Product Compliance

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

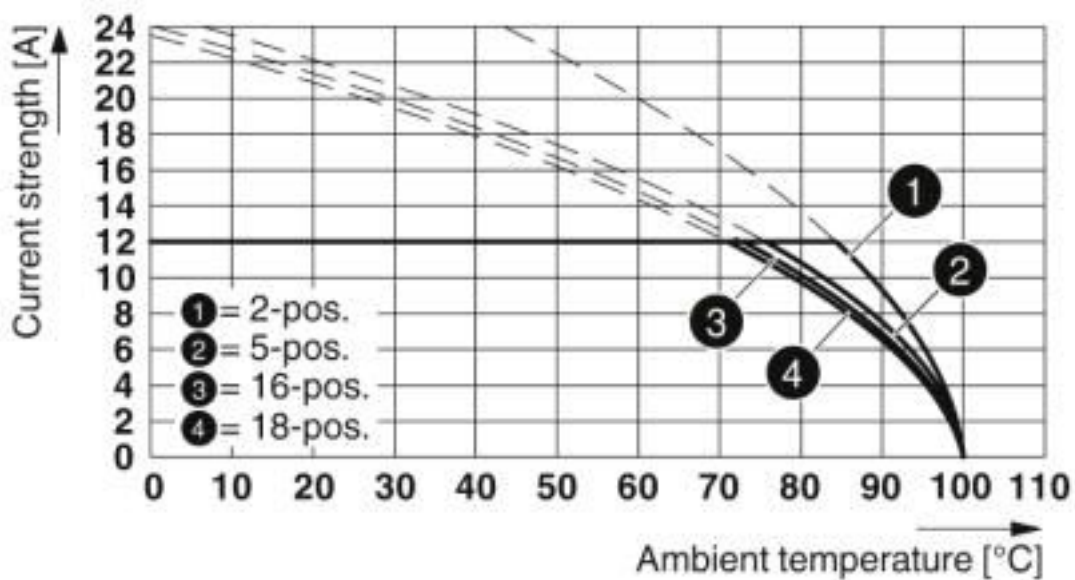
Drawings

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Drilling diagram



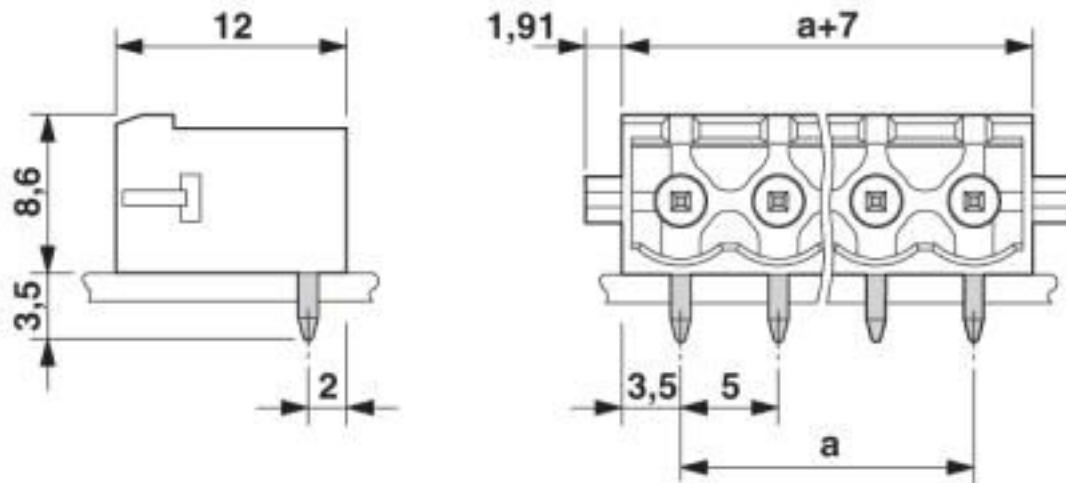
Diagram



Type: FKC 2,5/...-ST-RF with MSTBA 2,5/...-G-RN

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Dimensional drawing



Classifications

eCl@ss

eCl@ss 10.0.1	27440402
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 3.0	EC001121
ETIM 4.0	EC002637
ETIM 5.0	EC002637
ETIM 6.0	EC002637
ETIM 7.0	EC002637

UNSPSC

UNSPSC 6.01	30211810
UNSPSC 7.0901	39121409
UNSPSC 11	39121409
UNSPSC 12.01	39121409
UNSPSC 13.2	39121409
UNSPSC 18.0	39121409
UNSPSC 19.0	39121409
UNSPSC 20.0	39121409

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Classifications

UNSPSC

UNSPSC 21.0	39121409
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Approvals

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IECEE CB Scheme / EAC / cULus Recognized / VDE Zeichengenehmigung

Ex Approvals

Approval details

IECEE CB Scheme		http://www.iecee.org/	DE1-60988-B1B2
Nominal voltage UN		250 V	
Nominal current IN		12 A	

EAC		B.01687
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cULus Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	E60425-19931011
Nominal voltage UN		B 300 V	D 300 V
Nominal current IN		15 A	10 A

VDE Zeichengenehmigung		http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx	40050648
Nominal voltage UN		250 V	
Nominal current IN		12 A	

Accessories

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Accessories

Coding element

Coding section - CR-MSTB - 1734401

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



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