

Feed-through header - MSTBV 2,5/ 9-GF - 1776951

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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: 9, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 mm




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
- ✓ Vertical connection enables multi-row arrangement on the PCB



Key Commercial Data

Packing unit	100 pc
Minimum order quantity	100 pc
GTIN	 4 017918 039127
GTIN	4017918039127

Technical data

Item properties

Brief article description	Feed-through header
Plug-in system	CLASSIC COMBICON
Type of contact	Male connector
Range of articles	MSTBV 2,5/..-GF
Pitch	5 mm
Number of positions	9
Mounting type	Wave soldering
Pin layout	Linear pinning
Locking	Threaded flange
Number of levels	1
Number of connections	9

Feed-through header - MSTBV 2,5/ 9-GF - 1776951

Technical data

Item properties

Number of potentials	9
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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]	8.6 mm
Width [w]	55 mm
Height [h]	15.9 mm
Pitch	5 mm
Height (without solder pin)	12 mm
Solder pin [P]	3.9 mm
Pin dimensions	1 x 1 mm

Dimensions for PCB design

Hole diameter	1.4 mm
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Packaging information

Type of packaging	packed in cardboard
Pieces per package	100

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Technical data

Packaging information

Denomination packing units	Pcs.
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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	2.4 mΩ
Insertion/withdrawal cycles	25
Contact resistance R ₂	2.4 mΩ
Impulse withstand voltage at sea level	4.8 kV
Power-frequency withstand voltage	2.21 kV
Insulation resistance, neighboring positions	> 20 GΩ

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
Cold stress	-40 °C/2 h
Thermal stress	100 °C/168 h

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Climatic tests (D)

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

Standards and Regulations

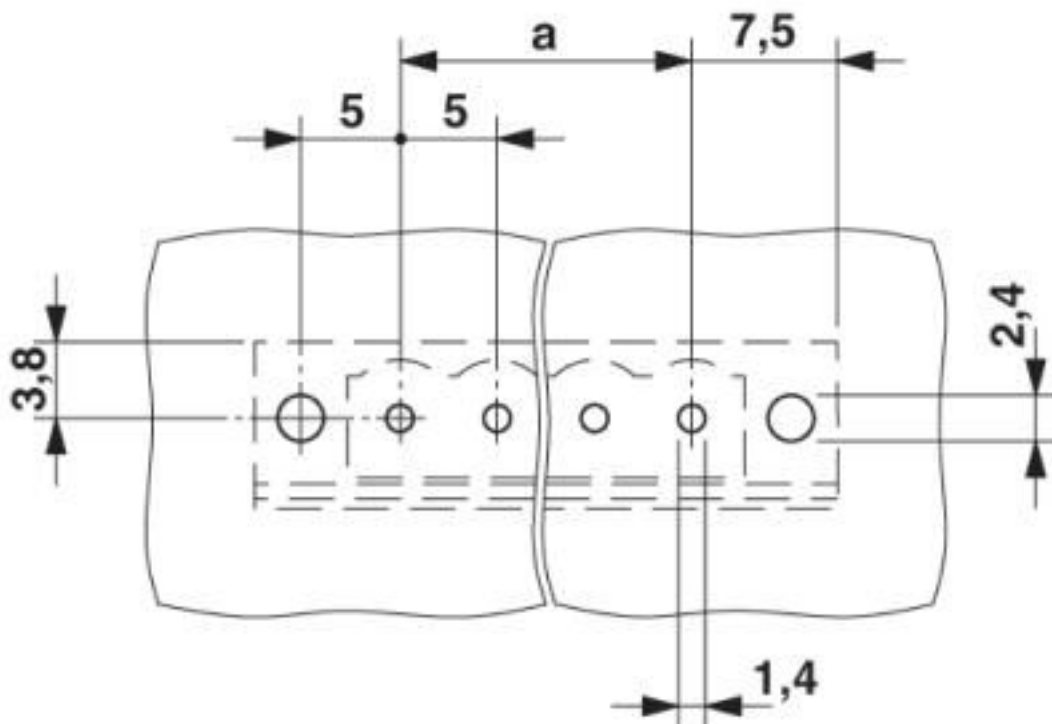
Connection in acc. with standard	EN-VDE
	CSA
Flammability rating according to UL 94	V0

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

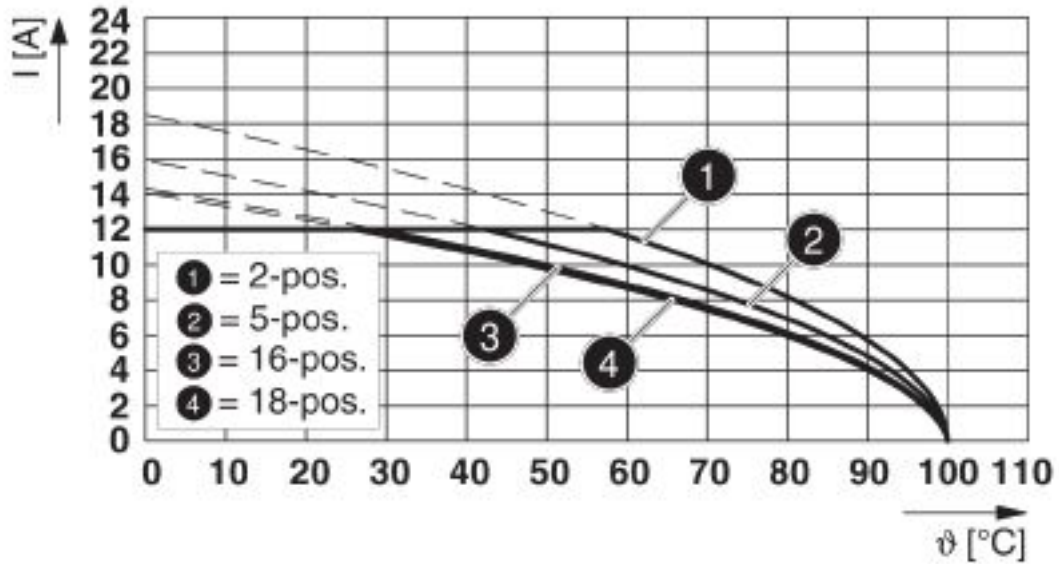
Drawings

Drilling diagram



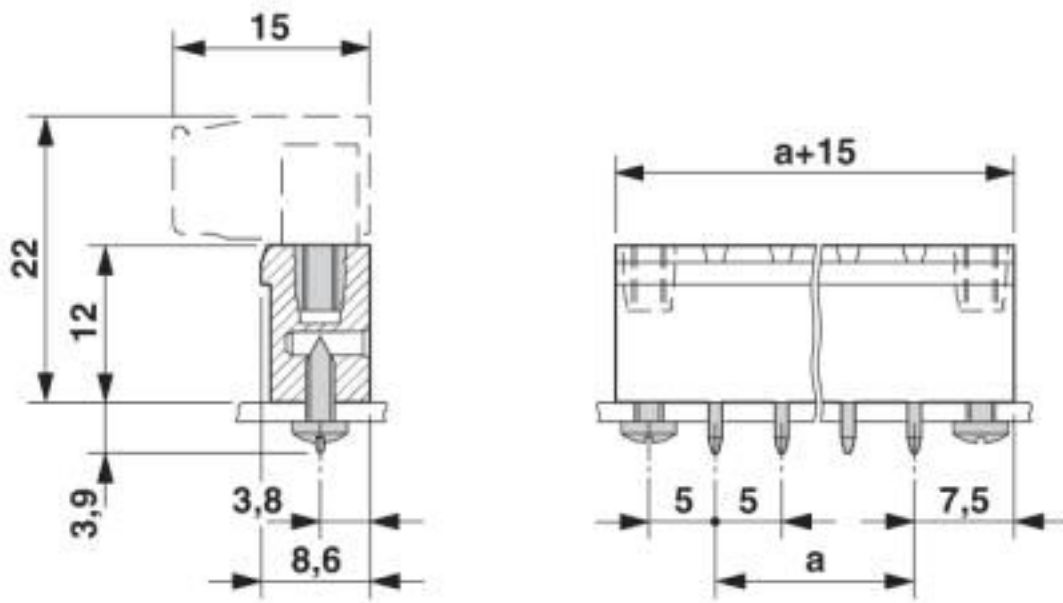
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Diagram



Type: MSTBT 2,5/...-STF with MSTBV 2,5/...-GF

Dimensional drawing



Classifications

eCl@ss

eCl@ss 10.0.1	27440402
eCl@ss 4.0	27260700
eCl@ss 4.1	27260700

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Classifications

eCl@ss

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
UNSPSC 21.0	39121409

Approvals

Approvals

Approvals

DNV GL / CSA / RS / IECCEB CB Scheme / EAC / cULus Recognized / VDE Zeichengenehmigung

Ex Approvals

Approval details

DNV GL		https://approvalfinder.dnvgl.com/	TAE00001EY
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Approvals

CSA		http://www.csagroup.org/services-industries/product-listing/	13631
		B	D
Nominal voltage UN		300 V	300 V
Nominal current IN		12 A	10 A

RS		http://www.rs-head.spb.ru/en/index.php	17.00014.272
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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
		B	D
Nominal voltage UN		300 V	300 V
Nominal current IN		12 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

Accessories

Coding element

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Accessories

Coding section - CR-MSTB - 1734401

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

Labeled terminal marker

Marker card - SK 5/3,8:FORTL.ZAHLEN - 0804183



Marker card, Card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... (99)100, mounting type: adhesive, for terminal block width: 5 mm, lettering field size: 5 x 3.8 mm

Marker pen

Marker pen - B-STIFT - 1051993



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

Terminal marking

Marker card - SK 5/3,8:UNBEDRUCKT - 0805409



Marker card, Card, white, unlabeled, can be labeled with: Marker pen, mounting type: adhesive, for terminal block width: 5 mm, lettering field size: 5 x 3.8 mm

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Accessories

Additional products

Plug - QC 1,5/ 9-STF - 1718180



PCB connector, nominal current: 12 A, rated voltage (III/2): 630 V, nominal cross section: 1.5 mm², number of positions: 9, pitch: 5 mm, connection method: Displacement connection, color: green, contact surface: Tin

Printed-circuit board connector - FKCN 2,5/ 9-STF - 1733039



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 9, pitch: 5 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

Printed-circuit board connector - FRONT-MSTB 2,5/ 9-STF - 1779712



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 9, pitch: 5 mm, connection method: Front screw connection, color: green, contact surface: Tin

Printed-circuit board connector - MSTB 2,5/ 9-STF - 1786909



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 9, pitch: 5 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

Printed-circuit board connector - MVSTBW 2,5/ 9-STF - 1835355



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 9, pitch: 5 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

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Accessories

Printed-circuit board connector - MVSTBR 2,5/ 9-STF - 1835546



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 9, pitch: 5 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

Printed-circuit board connector - FKCT 2,5/ 9-STF - 1909472



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 9, pitch: 5 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

Printed-circuit board connector - FKCVR 2,5/ 9-STF - 1909951



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 9, pitch: 5 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

Printed-circuit board connector - FKCVW 2,5/ 9-STF - 1910270



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 9, pitch: 5 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

Printed-circuit board connector - FKC 2,5/ 9-STF - 1910597



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 9, pitch: 5 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

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Accessories

Printed-circuit board connector - SMSTB 2,5/ 9-STF - 1970948

PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 9, pitch: 5 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin



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