Feed-through header - MSTB 2,5/12-GF - 1776799

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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: 12, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 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
- Easy PCB replacement thanks to plug-in modules
- Well-known mounting principle allows worldwide use
- Plug-in direction parallel to the PCB
- Screwable flange for superior mechanical stability

Key Commercial Data

Packing unit	50 pc
Minimum order quantity	50 pc
GTIN	4 017918 038960
GTIN	4017918038960

Technical data

Item properties

Brief article description	Feed-through header
Plug-in system	CLASSIC COMBICON
Type of contact	Male connector
Range of articles	MSTB 2,5/..-GF
Pitch	5 mm
Number of positions	12
Drive form screw head	Slotted
Mounting type	Wave soldering
Pin layout	Linear pinning

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Technical data

Item properties

Locking	Threaded flange
Number of levels	1
Number of connections	12
Number of potentials	12

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]	70 mm
Height [h]	12.1 mm
Pitch	5 mm
Height (without solder pin)	8.6 mm
Solder pin [P]	3.5 mm
Pin dimensions	1 x 1 mm

Dimensions for PCB design

Hole diameter	1.4 mm

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Technical data

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	1.4 mΩ
Insertion/withdrawal cycles	25
Contact resistance R_2	1.4 mΩ
Impulse withstand voltage at sea level	4.8 kV
Power-frequency withstand voltage	2.21 kV
Insulation resistance, neighboring positions	> 0.5 TΩ

Thermal tests (C)

Specification	IEC 60512-5-1:2002-02
Number of positions	20
Conductor cross section	2.5 mm²
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
	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

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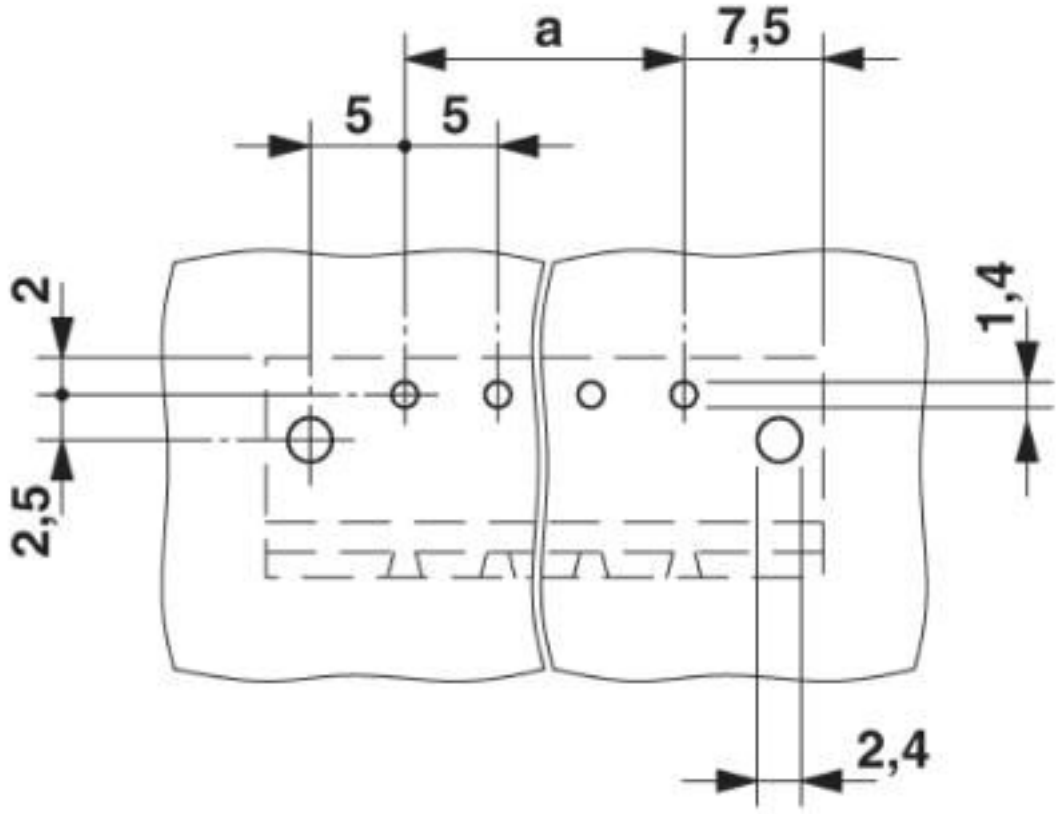
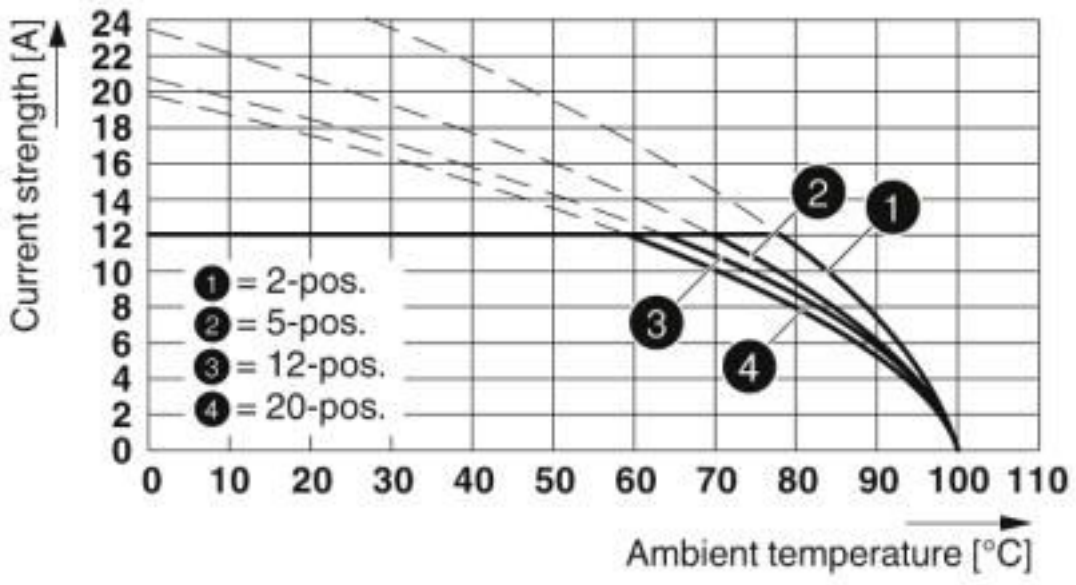
Drilling diagram



Diagram



Type: MSTB 2,5/...-STF with MSTB 2,5/...-GF

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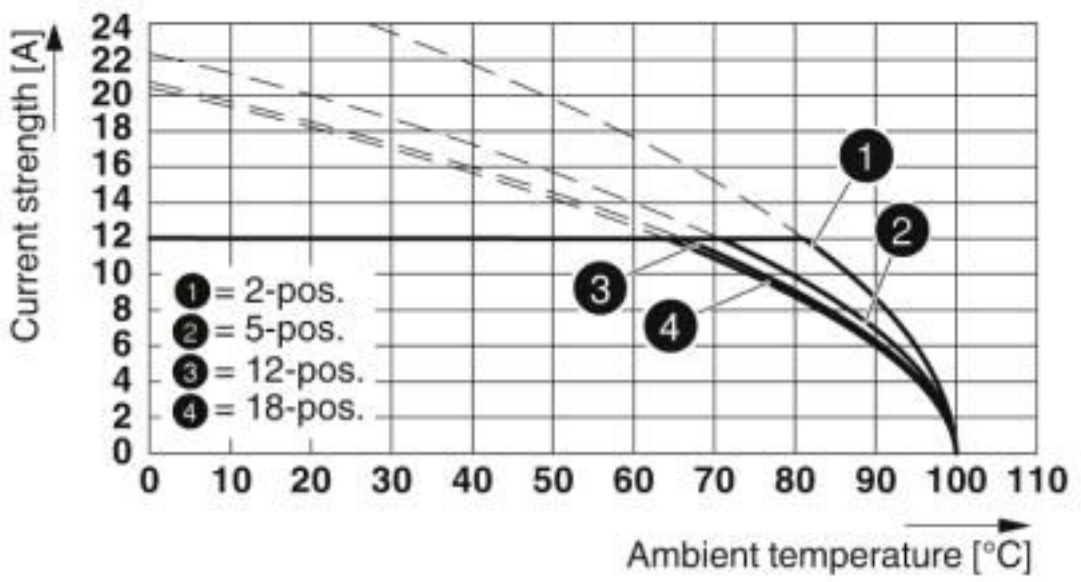
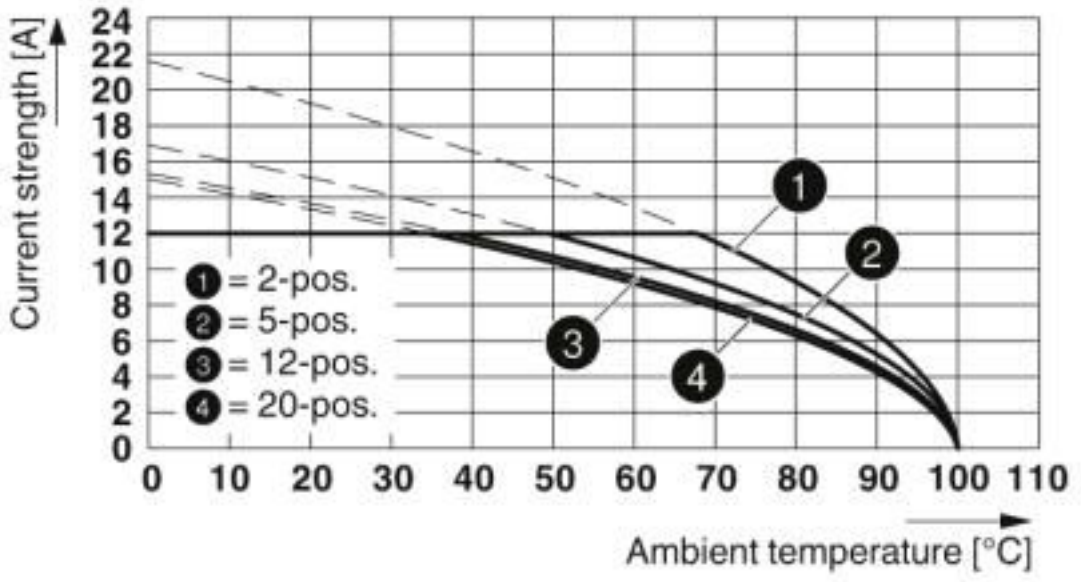
Diagram



Type: FKCT 2,5/...-STF with MSTB 2,5/...-GF

Diagram



Type: MVSTB(R/W) 2,5/...-STF with MSTB 2,5/...-GF

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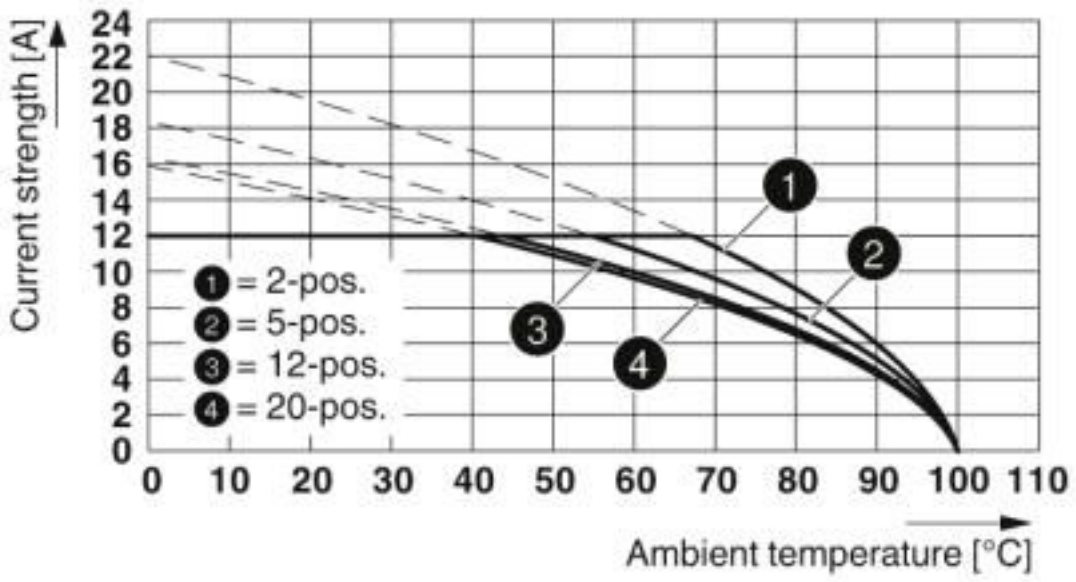
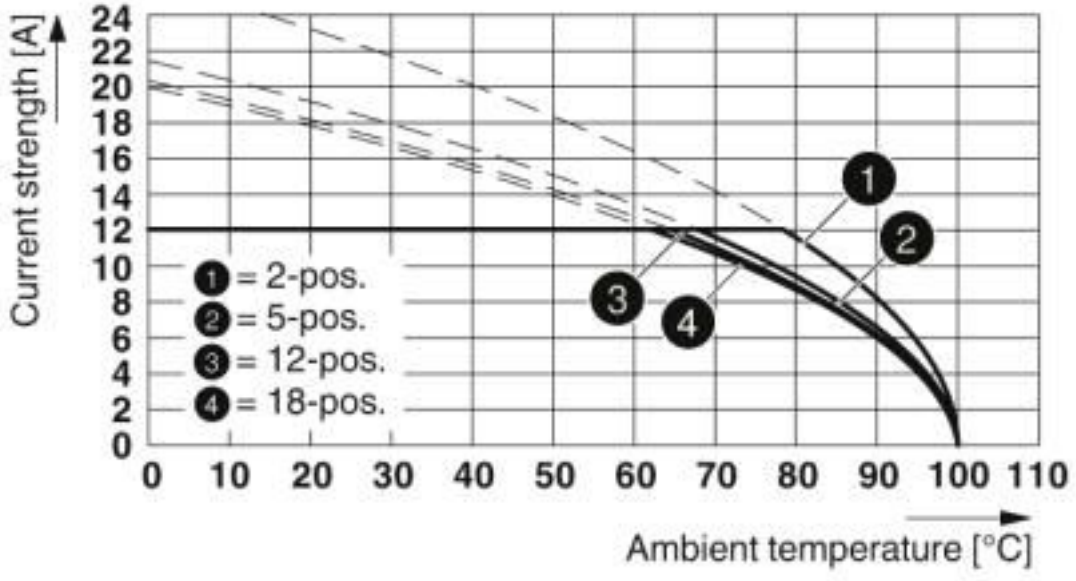
Diagram



Type: SMSTB 2,5/...-STF with MSTBVA 2,5/...-GF

Diagram



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

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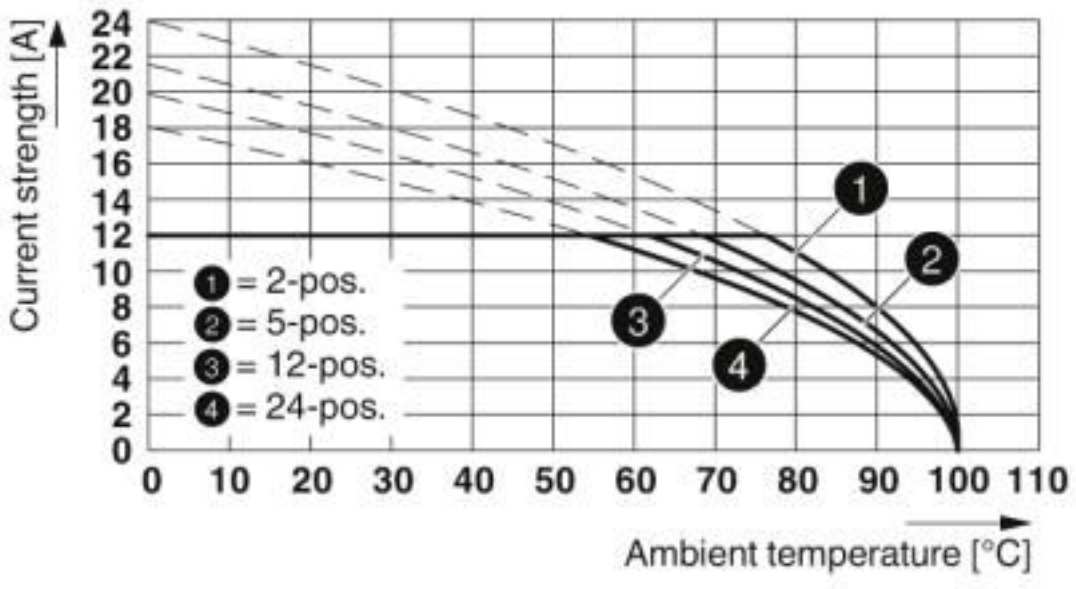
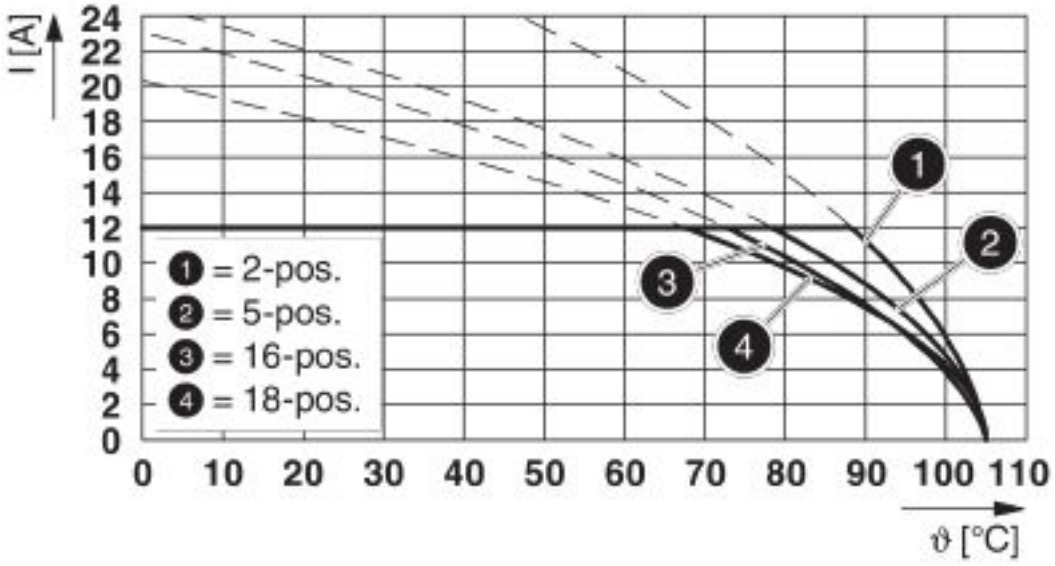
Diagram



Type: FRONT-MSTB 2,5/..-STF with MSTB 2,5/...-GF

Diagram



Type: FKCN 2,5/...-STF with MSTB 2,5/...-GF

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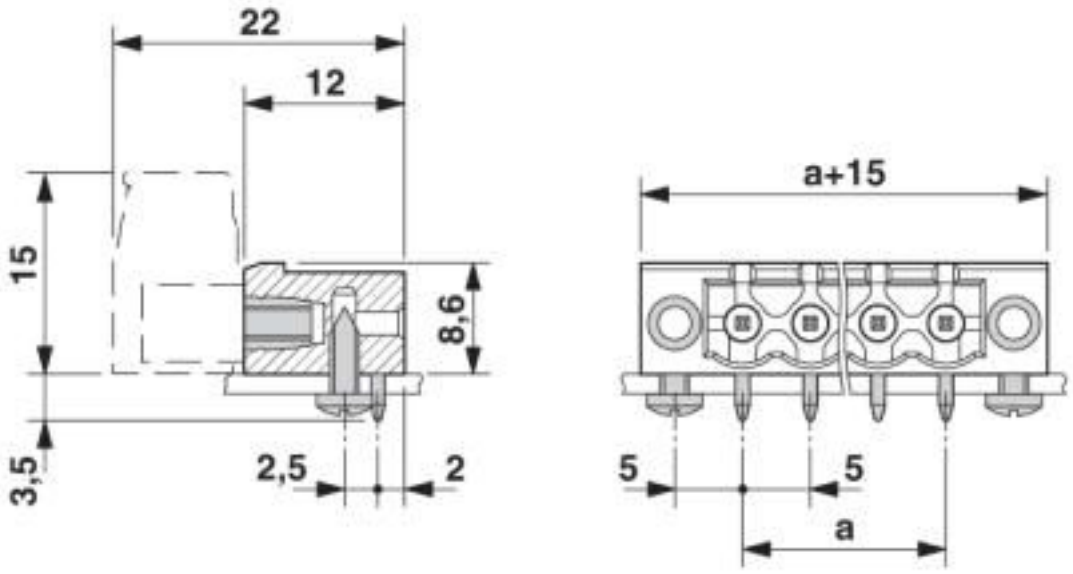
Dimensional drawing



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

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Classifications

UNSPSC

UNSPSC 19.0	39121409
UNSPSC 20.0	39121409
UNSPSC 21.0	39121409

Approvals

Approvals

Approvals

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

Ex Approvals

Approval details

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

CSA	http://www.csagroup.org/services-industries/product-listing/	13631

	B	D
Nominal voltage UN	300 V	300 V
Nominal current IN	10 A	10 A

RS	http://www.rs-head.spb.ru/en/index.php	17.00014.272

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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Approvals

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	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

Accessories

Coding element

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

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Accessories

Additional products

Plug - QC 1,5/12-STF - 1718216

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

Printed-circuit board connector - FKCN 2,5/12-STF - 1733055

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

Printed-circuit board connector - FRONT-MSTB 2,5/12-STF - 1779741

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

Printed-circuit board connector - MSTB 2,5/12-STF - 1786938

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

Printed-circuit board connector - MVSTBW 2,5/12-STF - 1835384

PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 12, 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 2,5/12-STF - 1835575

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

Printed-circuit board connector - FKCT 2,5/11-STF - 1909498

PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 11, pitch: 5 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

Printed-circuit board connector - FKCVR 2,5/12-STF - 1909980

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

Printed-circuit board connector - FKCVW 2,5/12-STF - 1910306

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

Printed-circuit board connector - FKC 2,5/12-STF - 1910623

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

Feed-through header - MSTB 2,5/12-GF - 1776799

Accessories

Printed-circuit board connector - SMSTB 2,5/12-STF - 1970977

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

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