

Feed-through header - SMSTBA 2,5/14-G - 1769926

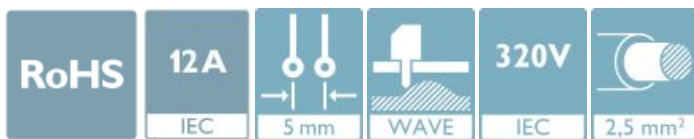
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The figure shows a 10-position version of the product

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
- Angled connection enables multi-row arrangement on the PCB



Key Commercial Data

Packing unit	50 pc
GTIN	 4 017918 035143
GTIN	4017918035143

Technical data

Item properties

Brief article description	Feed-through header
Plug-in system	CLASSIC COMBICON
Type of contact	Male connector
Range of articles	SMSTBA 2,5/..-G
Pitch	5 mm
Number of positions	14
Mounting type	Wave soldering
Pin layout	Linear pinning
Locking	without
Number of levels	1
Number of connections	14
Number of potentials	14

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Item properties

Pin connector pattern alignment	Standard
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Electrical parameters

Nominal current	12 A
Nom. voltage	320 V
Rated voltage (III/3)	320 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
Metal surface contact area (top layer)	Tin (5 - 7 µm Sn)
Metal surface contact area (middle layer)	Nickel (2 - 3 µm Ni)
Metal surface soldering area (top layer)	Tin (5 - 7 µm Sn)
Metal surface soldering area (middle layer)	Nickel (2 - 3 µm Ni)

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

Flange specifications

Type of locking	without
Mounting flange	without

Dimensions for the product

Caption	Schematische Abbildung - weitere Details siehe Produktfamilienzeichnung im Download Center
Length [l]	16.5 mm
Width [w]	72 mm
Height [h]	18.3 mm
Pitch	5 mm
Height (without solder pin)	14.8 mm

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Dimensions for the product

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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Packaging information

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

General product information

Type of note	Notes on operation
Note	In accordance with IEC 61984, COMBICON connectors have no switching power (COC). During designated use, they must not be plugged in or disconnected when carrying voltage or under load.

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)	1.6 mm
Minimum creepage distance value (II/2)	3.2 mm

Mechanical tests (A)

Test specification	IEC 61984
Insertion strength per pos. approx.	11 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	2.3 mΩ
Insertion/withdrawal cycles	25
Contact resistance R ₂	2.4 mΩ
Impulse withstand voltage at sea level	4.8 kV

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Thermal tests (C)

Specification	IEC 60512-5-1:2002-02
Number of positions	24
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
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
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

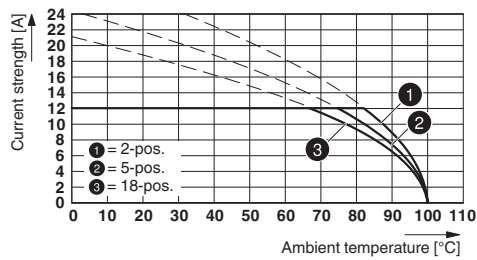
Environmental Product Compliance

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

Drawings

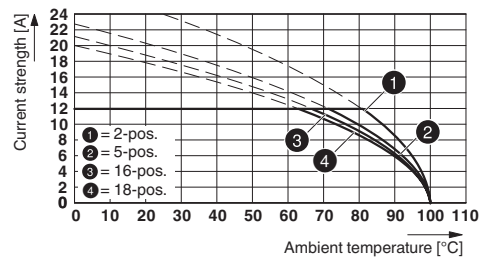
Feed-through header - SMSTBA 2,5/14-G - 1769926

Diagram



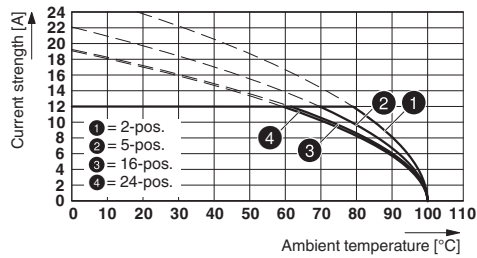
Type: FKCS 2,5/...-ST with SMSTBA 2,5/...-G

Diagram



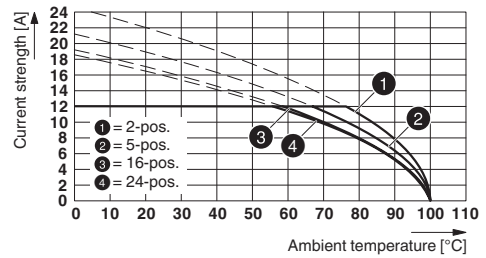
Type: MSTBT 2,5/...-ST with SMSTBA 2,5/...-G

Diagram



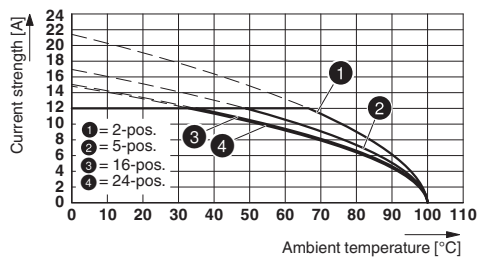
Type: MSTB 2,5/...-ST with SMSTBA 2,5/...-G

Diagram



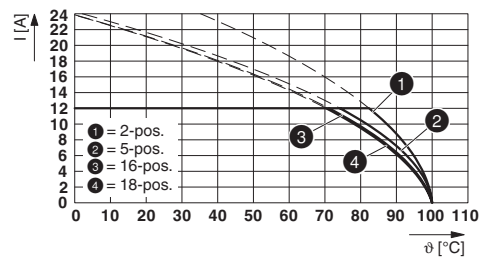
Type: FRONT-MSTB 2,5/...-ST with SMSTBA 2,5/...-G

Diagram



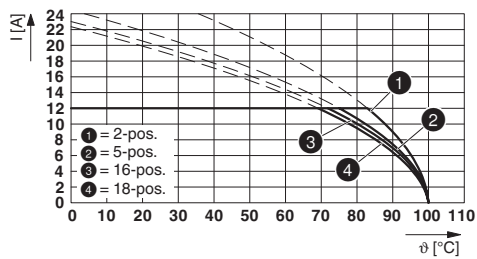
Type: MVSTB(R/W) 2,5/...-ST with SMSTBA 2,5/...-G

Diagram



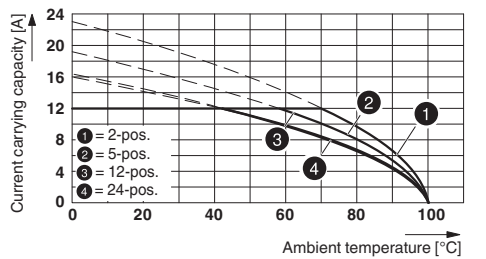
Type: FKCN 2,5/...-ST with SMSTBA 2,5/...-G

Diagram



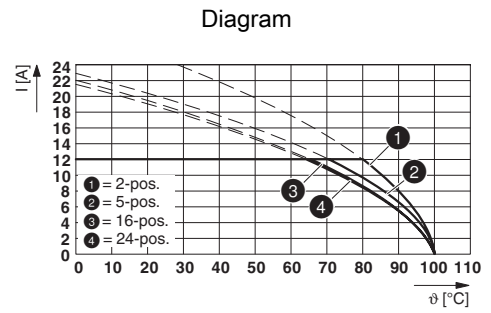
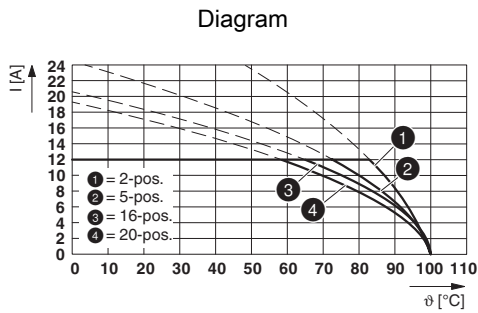
Type: FKCV(W/R) 2,5/...-ST with SMSTBA 2,5/...-G

Diagram



Type: SMSTB 2,5/...-ST with SMSTBA 2,5/...-G

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Type: FKCT 2,5/...-ST with SMSTBA 2,5/...-G

Type: MSTBP 2,5/...-ST with SMSTBA 2,5/...-G

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 9.0	27440402

ETIM

ETIM 3.0	EC001121
ETIM 4.0	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

Feed-through header - SMSTBA 2,5/14-G - 1769926


Approvals


Approvals


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


Ex Approvals


Approval details

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		

CSA		http://www.csagroup.org/services-industries/product-listing/	13631
		B	D
Nominal voltage UN	300 V	300 V	
Nominal current IN	15 A	10 A	

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	15 A	10 A	

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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

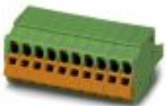
Marker card - SK 5/3,8:FORTL.ZAHLEN - 0804183



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

Additional products

Plug - QC 1,5/14-ST - 1718083



PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 630 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 14, Number of rows: 1, Number of positions per row: 14, number of connections: 14, product range: QC 1,5/..-ST, pitch: 5 mm, connection method: Displacement connection, conductor/PCB connection direction: 0 °, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: without, Assembly: without, type of packaging: packed in cardboard

Printed-circuit board connector - FKCN 2,5/14-ST - 1732852



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 14, Number of rows: 1, Number of positions per row: 14, number of connections: 14, product range: FKCN 2,5/..-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: without, Assembly: without, type of packaging: packed in cardboard

Feed-through header - SMSTBA 2,5/14-G - 1769926

Accessories

Printed-circuit board connector - MSTB 2,5/14-ST - 1754685

PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 14, Number of rows: 1, Number of positions per row: 14, number of connections: 14, product range: MSTB 2,5/...-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, Screw head form: L Slotted, conductor/PCB connection direction: 0 °, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: without, Assembly: without, type of packaging: packed in cardboard



Printed-circuit board connector - MSTB 2,5/14-STZ - 1759376

PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 14, Number of rows: 1, Number of positions per row: 14, number of connections: 14, product range: MSTB 2,5/...-STZ, pitch: 5 mm, connection method: Screw connection with tension sleeve, Screw head form: L Slotted, conductor/PCB connection direction: 0 °, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: without, Assembly: without, type of packaging: packed in cardboard



Printed-circuit board connector - MSTBP 2,5/14-ST - 1765894

PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 14, Number of rows: 1, Number of positions per row: 14, number of connections: 14, product range: MSTBP 2,5/...-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, Screw head form: L Slotted, conductor/PCB connection direction: 0 °, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: without, Assembly: without, type of packaging: packed in cardboard



Printed-circuit board connector - SMSTB 2,5/14-ST - 1768875

PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 14, Number of rows: 1, Number of positions per row: 14, number of connections: 14, product range: SMSTB 2,5/...-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, Screw head form: L Slotted, conductor/PCB connection direction: -45 °, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: without, Assembly: without, type of packaging: packed in cardboard



Printed-circuit board connector - FRONT-MSTB 2,5/14-ST - 1779534

PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 14, Number of rows: 1, Number of positions per row: 14, number of connections: 14, product range: FRONT-MSTB 2,5/...-ST, pitch: 5 mm, connection method: Front screw connection, conductor/PCB connection direction: 0 °, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: without, Assembly: without, type of packaging: packed in cardboard



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Accessories

Printed-circuit board connector - MSTBT 2,5/14-ST - 1779958



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 14, Number of rows: 1, Number of positions per row: 14, number of connections: 14, product range: MSTBT 2,5/..-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, Screw head form: L Slotted, conductor/PCB connection direction: 0 °, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: without, Assembly: without, type of packaging: packed in cardboard

Printed-circuit board connector - MVSTBR 2,5/14-ST - 1792139



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 14, Number of rows: 1, Number of positions per row: 14, number of connections: 14, product range: MVSTBR 2,5/..-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, Screw head form: L Slotted, conductor/PCB connection direction: 90 °, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: without, Assembly: without, type of packaging: packed in cardboard

Printed-circuit board connector - MVSTBW 2,5/14-ST - 1792647



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 14, Number of rows: 1, Number of positions per row: 14, number of connections: 14, product range: MVSTBW 2,5/..-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, Screw head form: L Slotted, conductor/PCB connection direction: -90 °, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: without, Assembly: without, type of packaging: packed in cardboard

Printed-circuit board connector - FKCT 2,5/14-ST - 1909333



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 14, Number of rows: 1, Number of positions per row: 14, number of connections: 14, product range: FKCT 2,5/..-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: without, Assembly: without, type of packaging: packed in cardboard

Printed-circuit board connector - FKCVR 2,5/14-ST - 1909838

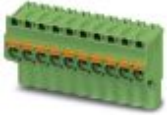


PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 14, Number of rows: 1, Number of positions per row: 14, number of connections: 14, product range: FKCVR 2,5/..-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 90 °, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: without, Assembly: without, type of packaging: packed in cardboard

Feed-through header - SMSTBA 2,5/14-G - 1769926

Accessories

Printed-circuit board connector - FKCVW 2,5/14-ST - 1910157



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 14, Number of rows: 1, Number of positions per row: 14, number of connections: 14, product range: FKCVW 2,5/...-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: -90 °, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: without, Assembly: without, type of packaging: packed in cardboard

Printed-circuit board connector - FKC 2,5/14-ST - 1910474



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 14, Number of rows: 1, Number of positions per row: 14, number of connections: 14, product range: FKC 2,5/...-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: without, Assembly: without, type of packaging: packed in cardboard

Printed-circuit board connector - FKCS 2,5/14-ST - 1974850



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 14, Number of rows: 1, Number of positions per row: 14, number of connections: 14, product range: FKCS 2,5/...-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: without, Assembly: without, type of packaging: packed in cardboard