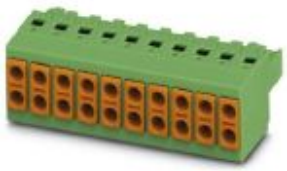
Printed-circuit board connector - TVFKC 1,5/ 4-ST - 1713855

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PCB connector, nominal current: 10 A, rated voltage (III/2): 320 V, nominal cross section: 1.5 mm², number of positions: 4, pitch: 5 mm, connection method: Push-in spring connection, color: green, contact surface: Tin



The figure shows a 10-position version of the product

Your advantages

- Time saving push-in connection, tools not required
- Potentials can be easily looped through – ideal for BUS applications
- Intuitive use through colour coded actuation lever
- Can be combined with the MSTB 2,5 range
- Quick and convenient testing using integrated test option

Key Commercial Data

Packing unit	50 pc
GTIN	4 046356 093491
GTIN	4046356093491

Technical data

Item properties

Brief article description	Printed-circuit board connector
Plug-in system	CLASSIC COMBICON
Type of contact	Female connector
Range of articles	TVFKC 1,5/..-ST
Pitch	5 mm
Number of positions	4
Connection method	Push-in spring connection
Locking	without
Number of levels	1
Number of connections	8

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

Technical data

Item properties

Number of potentials	4

Electrical parameters

Nominal current	10 A
Nom. voltage	320 V
Rated voltage	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

Connection capacity

Connection method	Push-in spring connection
pluggable	Yes
Conductor cross section solid	0.2 mm² ... 1.5 mm²
Conductor cross section flexible	0.2 mm² ... 1.5 mm²
Conductor cross section AWG / kcmil	24 ... 16
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm² ... 1.5 mm² (only together with CRIMPFOX 6)
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm² ... 1.5 mm² (only together with CRIMPFOX 6)
Cylindrical gauge a x b / diameter	2.4 mm x 1.5 mm / 1.9 mm
Stripping length	8 mm

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	hot-dip tin-plated
Metal surface terminal point (top layer)	Tin (4 - 8 µm Sn)
Metal surface contact area (top layer)	Tin (4 - 8 µm Sn)

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

Material data – actuating element

Color of the actuating lever	orange (2003)
Insulating material	PA

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Technical data

Material data – actuating element

CTI according to IEC 60112	600
Flammability rating according to UL 94	V0

Dimensions for the product

Length [l]	23.3 mm
Width [w]	20 mm
Height [h]	15 mm
Pitch	5 mm
Height (without solder pin)	15 mm

Packaging information

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

General product information

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)

Termination and connection method

Test result	Test passed
Test – repeated connection and release	IEC 60999-1:1999-11
	Test passed
Test for conductor damage and slackening	IEC 60999-1:1999-11
	Test passed

Pull-out test

Pull-out test	IEC 60999-1:1999-11
	Test passed
Conductor cross section / conductor type / tensile force	0.2 mm² / solid / > 10 N
	0.2 mm² / flexible / > 10 N
	1.5 mm² / solid / > 40 N
	1.5 mm² / flexible / > 40 N

Mechanical tests according to standard

Test specification	IEC 61984
Visual inspection	IEC 60512-1:2001-01
Dimension check	IEC 60512-1:2001-01
Resistance of inscriptions	IEC 60068-2-70:1995-12

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Technical data

Mechanical tests according to standard

Insertion and withdrawal force	IEC 60512-7:1993-08
No. of cycles	25
Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	6 N
Polarization and coding	IEC 60512-7:1993-08 (Polarization)
Contact holder in insert	IEC 60512-8:1993-01
Test force per pos.	24 N

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)	3.2 mm
Minimum creepage distance value (III/2)	3 mm
Minimum creepage distance value (II/2)	3.2 mm

Electrical tests - Function

Specification	IEC 60999-1:1999-11

Temperature cycles

Specification	IEC 60999-1:1999-11
Test current (minimum cross section)	4 A
Test current (maximum cross section)	10 A
Temperature cycles	192

Current carrying capacity / derating curves

Caption	Type: TVFKC 1,5/...-ST with MSTBO 2,5/...-G1(L/R)
Reduction factor	0.8
Note	Representation based on IEC 60512-5-2:2002-02
	For number of positions, see diagram

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 60512-5:1992-08
Contact resistance R_1	1.8 mΩ
Insertion/withdrawal cycles	50

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Technical data

Durability tests (B)

Contact resistance R_2	2.5 mΩ
Impulse withstand voltage at sea level	4.8 kV
Power-frequency withstand voltage	2.21 kV
Insulation resistance, neighboring positions	> 10 TΩ

Thermal tests (C)

Specification	IEC 60512-5-1:2002-02
Number of positions	4
Conductor cross section	1.5 mm²
Test current	10 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
Corrosive stress	KFW 0.2 S/1 cycle
Impulse withstand voltage at sea level	4.8 kV
Power-frequency withstand voltage	2.21 kV

Environmental and durability tests (E)

Result, degree of protection, IP code	Finger safety with IP20 test finger

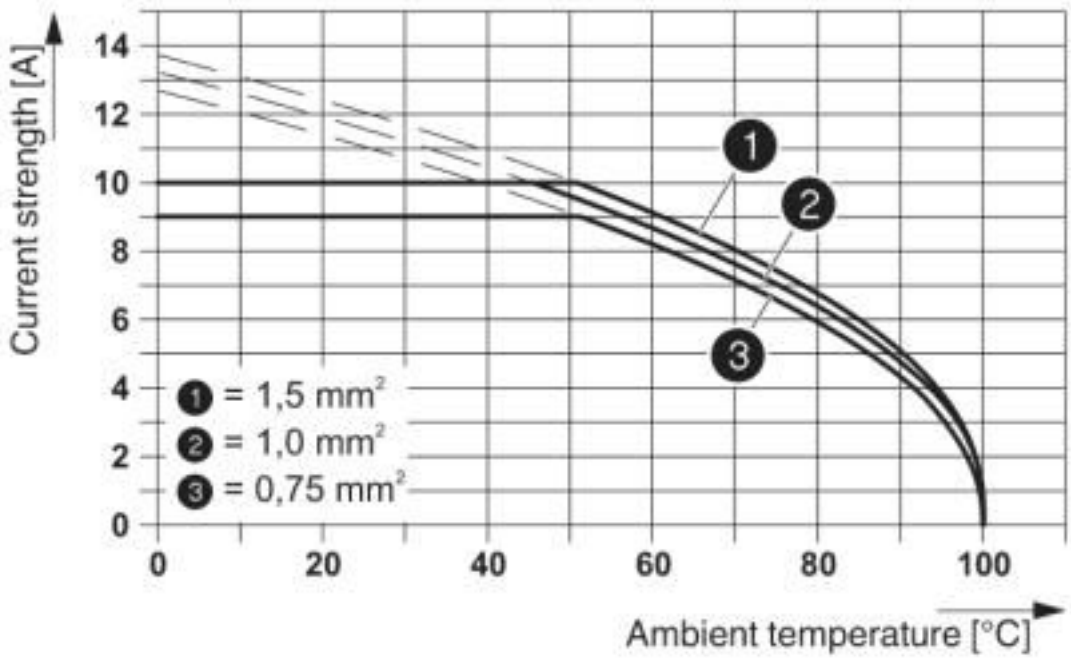
Environmental Product Compliance

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

Drawings

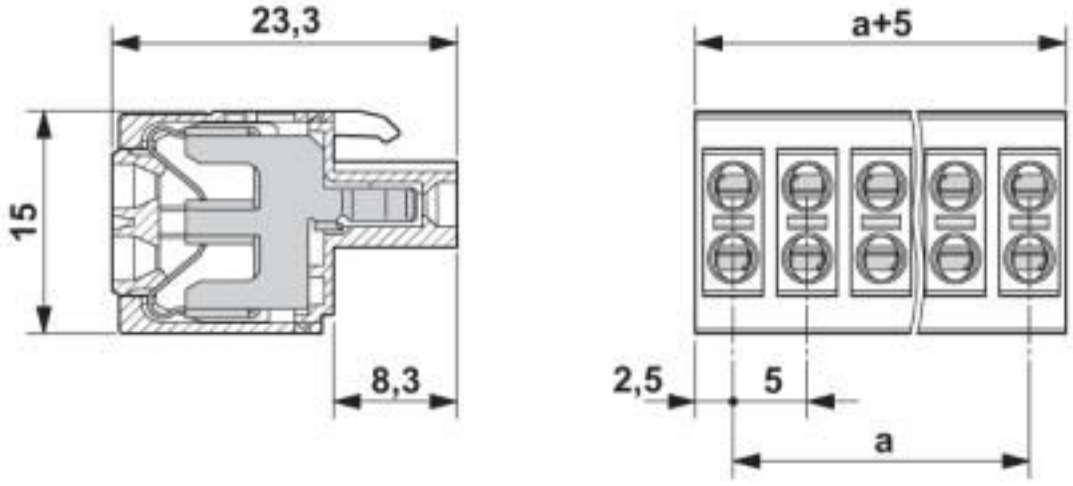
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Diagram



Type: TVFKC 1,5/...-ST with MSTBO 2,5/...-G1(L/R)

Dimensional drawing



Classifications

eCl@ss

eCl@ss 10.0.1	27440309
eCl@ss 4.0	27260700
eCl@ss 4.1	27260700
eCl@ss 5.0	27260700

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

Classifications

eCl@ss

eCl@ss 5.1	27260700
eCl@ss 6.0	27260700
eCl@ss 7.0	27440309
eCl@ss 8.0	27440309
eCl@ss 9.0	27440309

ETIM

ETIM 3.0	EC001121
ETIM 4.0	EC002638
ETIM 5.0	EC002638
ETIM 6.0	EC002638
ETIM 7.0	EC002638

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

EAC / cULus Recognized

Ex Approvals

Approval details

EAC	EAC	B.01687

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

Approvals

cULus Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	E60425-19931012

	B	D
Nominal voltage UN	300 V	300 V
Nominal current IN	8 A	8 A
mm²/AWG/kcmil	24-16	24-16

Accessories

Accessories

Coding element

Coding profile - CP-MSTB - 1734634



Coding profile, is inserted into the slot on the plug or inverted header, red insulating material

Crimping tool

Crimping pliers - CRIMPFOX 6 - 1212034



Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 0.25 mm² ... 6.0 mm², lateral entry, trapezoidal crimp

Screwdriver tools

Screwdriver - SZF 0-0,4X2,5 - 1204504



Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.4 x 2.5 x 75 mm, 2-component grip, with non-slip grip

Additional products

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

Accessories

Feed-through header - MSTBW 2,5/ 4-G - 1736098



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 4, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm

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Feed-through header - MDSTB 2,5/ 4-G1 - 1736690



PCB headers, nominal current: 10 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 4, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm, In combination with MVSTB or FKCV plug components, both an MVSTBW (or FKCVW) and an MVSTBR plug (or FKCVR) must be used. Combination with TMSTBP plug components is not possible!

Feed-through header - MDSTBV 2,5/ 4-G1 - 1736739



PCB headers, nominal current: 10 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 4, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 mm, In combination with MVSTB or FKCV plug components, both an MVSTBW (or FKCVW) and an MVSTBR plug (or FKCVR) must be used. Combination with TMSTBP plug components is not possible!

Feed-through header - MSTBV 2,5/ 4-G - 1753479



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 4, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 mm

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Feed-through header - MSTB 2,5/ 4-G - 1754478



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 4, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm

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

Accessories

Printed-circuit board connector - MSTBVA 2,5/ 4-G - 1755532



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 4, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 mm

Printed-circuit board connector - MSTBA 2,5/ 4-G - 1757491



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 4, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm

Feed-through header - MSTB 2,5/ 4-G-LA - 1768202



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 4, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.2 mm

Printed-circuit board connector - SMSTB 2,5/ 4-G - 1769256



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 4, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm

Feed-through header - SMSTBA 2,5/ 4-G - 1769829



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 4, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm

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

Accessories

Feed-through header - MSTBA 2,5/ 4-G-LA - 1770504



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 4, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.2 mm

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Feed-through header - MDSTBVA 2,5/ 4-G - 1845808



PCB headers, nominal current: 10 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 4, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 mm, The article can be aligned to create different nos. of positions! In combination with MVSTB or FKCV plug components, both an MVSTBW (or FKCVW) and an MVSTBR plug (or FKCVR) must be used. Combination with TMSTBP plug components is not possible!

Feed-through header - MDSTBV 2,5/ 4-G - 1845950



PCB headers, nominal current: 10 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 4, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm, Can be aligned! Mounting flange: Order No. 1836477, 1836480. In combination with MVSTB or FKCV plug components, both an MVSTBW (or FKCVW) and an MVSTBR plug (or FKCVR) must be used. Combination with TMSTBP plug components is not possible!

Feed-through header - MDSTB 2,5/ 4-G - 1846386



PCB headers, nominal current: 10 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 4, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.2 mm, Can be aligned! Mounting flange: Order No. 1736771, 1736768. In combination with MVSTB or FKCV plug components, both an MVSTBW (or FKCVW) and an MVSTBR plug (or FKCVR) must be used. Combination with TMSTBP plug components is not possible!

Feed-through header - MDSTBA 2,5/ 4-G - 1846535



PCB headers, nominal current: 10 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 4, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.2 mm, The article can be aligned to create different nos. of positions! In combination with MVSTB or FKCV plug components, both an MVSTBW (or FKCVW) and an MVSTBR plug (or FKCVR) must be used. Combination with TMSTBP plug components is not possible!

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

Accessories

Feed-through header - MDSTBW 2,5/ 4-G - 1846836



PCB headers, nominal current: 10 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 4, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.8 mm, The article can be aligned to create different nos. of positions! In combination with MVSTB or FKCV plug components, both an MVSTBW (or FKCVW) and an MVSTBR plug (or FKCVR) must be used. Combination with TMSTBP plug components is not possible!

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



PCB headers, number of positions: 4, pitch: 5 mm, color: green, contact surface: Tin, pin layout: Linear pinning, solder pin [P]: 3.5 mm, Article with lateral pin exit

Feed-through header - MSTBO 2,5/ 4-G1R - 1861073



PCB headers, number of positions: 4, pitch: 5 mm, color: green, contact surface: Tin, pin layout: Linear pinning, solder pin [P]: 3.5 mm, Article with lateral pin exit

Feed-through header - MSTBO 2,5/ 4-G1L THRR44 BK - 2697194



PCB headers, number of positions: 4, pitch: 5 mm, color: black, contact surface: Tin, pin layout: Linear pinning, solder pin [P]: 2.5 mm

Feed-through header - MSTBO 2,5/ 4-G1R THRR44 BK - 2697204



PCB headers, number of positions: 4, pitch: 5 mm, color: black, contact surface: Tin, pin layout: Linear pinning, solder pin [P]: 3.5 mm, Article with lateral pin exit

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

Accessories

Feed-through header - MSTBO 2,5/ 4-G1L KMGY - 2907774



PCB headers, number of positions: 4, pitch: 5 mm, color: light gray, contact surface: Tin, pin layout: Linear pinning, solder pin [P]: 3.5 mm

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Feed-through header - MSTBO 2,5/ 4-G1R KMGY - 2907787



PCB headers, number of positions: 4, pitch: 5 mm, color: light gray, contact surface: Tin, pin layout: Linear pinning, solder pin [P]: 3.5 mm, Article with lateral pin exit

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