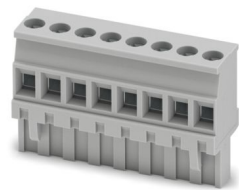


1856113

<https://www.phoenixcontact.com/us/products/1856113>

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PCB connector, nominal cross section: 2.5 mm², color: gray, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Sn, contact connection type: Socket, number of potentials: 8, number of rows: 1, number of positions: 8, number of connections: 8, product range: MVSTBR 2,5/...-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, screw head form: H1L Slotted Phillips recess, conductor/PCB connection direction: 90 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting method: without, type of packaging: packed in cardboard

Your advantages

- Well-known connection principle allows worldwide use
- Low temperature rise, thanks to maximum contact force
- Allows connection of two conductors

Commercial data

Item number	1856113
Packing unit	50 pc
Minimum order quantity	1 pc
Product key	AACAJC
GTIN	4055626027500
Weight per piece (including packing)	16.576 g
Weight per piece (excluding packing)	15.89 g
Country of origin	DE

MVSTBR 2,5/ 8-ST GY H1L - PCB connector



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Technical data

Product properties

Product type	PCB connector
Product family	MVSTBR 2,5/..-ST
Product line	COMBICON Connectors M
Number of positions	8
Pitch	5 mm
Number of connections	8
Number of rows	1
Number of potentials	8
Mounting type	without

Electrical properties

Properties

Nominal current I_N	12 A
Nominal voltage U_N	320 V
Contact resistance	2.5 mΩ
Rated voltage (III/3)	250 V
Rated surge voltage (III/3)	4 kV
Rated voltage (III/2)	320 V
Rated surge voltage (III/2)	4 kV
Rated voltage (II/2)	630 V
Rated surge voltage (II/2)	4 kV

Connection data

Connection technology

Connector system	COMBICON MSTB 2,5
Nominal cross section	2.5 mm ²
Contact connection type	Socket

Interlock

Locking type	without
Mounting type	without

Conductor connection

Connection method	Screw connection with tension sleeve
Conductor/PCB connection direction	90 °
Conductor cross-section rigid	0.2 mm ² ... 2.5 mm ²
Conductor cross-section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross-section AWG	24 ... 12
Conductor cross-section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 2.5 mm ²
Conductor cross-section, flexible, with ferrule, with plastic sleeve	0.25 mm ² ... 2.5 mm ²

MVSTBR 2,5/ 8-ST GY H1L - PCB connector



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2 conductors with same cross section, solid	0.2 mm ² ... 1 mm ²
2 conductors with same cross section, flexible	0.2 mm ² ... 1.5 mm ²
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	0.25 mm ² ... 1 mm ²
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm ² ... 1.5 mm ²
Cylindrical gauge a x b / diameter	2.8 mm x 2.0 mm / 2.4 mm
Stripping length	7 mm
Drive form screw head	Slotted Phillips recess (H1L)
Tightening torque	0.5 Nm ... 0.6 Nm

Specifications for ferrules without insulating collar

recommended crimping tool	1212034 CRIMPFOX 6
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Specifications for ferrules with insulating collar

recommended crimping tool	1212034 CRIMPFOX 6
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Material specifications

Material data - contact

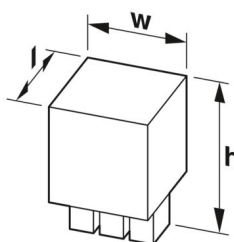
Note	WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/JEDEC JESD 201
Contact material	Cu alloy
Surface characteristics	hot-dip tin-plated
Metal surface terminal point (top layer)	Tin (4 - 8 µm Sn)
Metal surface contact area (top layer)	Tin (4 - 8 µm Sn)

Material data - housing

Color (Housing)	gray (7042)
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

Dimensions

Dimensional drawing



MVSTBR 2,5/ 8-ST GY H1L - PCB connector



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Pitch	5 mm
Width [w]	40 mm
Height [h]	26 mm
Length [l]	12.5 mm

Notes

Notes on operation	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.
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Mechanical tests

Test for conductor damage and slackening

Specification	IEC 60999-1:1999-11
Result	Test passed

Pull-out test

Specification	IEC 60999-1:1999-11
Conductor cross-section/conductor type/tractive force setpoint/actual value	0.2 mm ² / solid / > 10 N
	0.2 mm ² / flexible / > 10 N
	2.5 mm ² / solid / > 50 N
	2.5 mm ² / flexible / > 50 N

Insertion and withdrawal forces

Specification	IEC 60512-13-2:2006-02
Result	Test passed
No. of cycles	25
Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	6 N

Torque test

Specification	IEC 60999-1:1999-11
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Resistance of inscriptions

Specification	IEC 60068-2-70:1995-12
Result	Test passed

Polarization and coding

Specification	IEC 60512-13-5:2006-02
Result	Test passed

Visual inspection

Specification	IEC 60512-1-1:2002-02
Result	Test passed

Dimension check

Specification	IEC 60512-1-2:2002-02
Result	Test passed

Environmental and real-life conditions

Vibration test

Specification	IEC 60068-2-6:2007-12
Frequency	10 - 150 - 10 Hz
Sweep speed	1 octave/min
Amplitude	0.35 mm (10 Hz ... 60.1 Hz)
Acceleration	5g (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis

Durability test

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	4.8 kV
Contact resistance R_1	2.5 mΩ
Contact resistance R_2	2.5 mΩ
Insertion/withdrawal cycles	25
Insulation resistance, neighboring positions	> 5 MΩ

Climatic test

Specification	ISO 6988:1985-02
Corrosive stress	0.2 dm ³ SO ₂ on 300 dm ³ /40 °C/1 cycle
Thermal stress	100 °C/168 h
Power-frequency withstand voltage	2.21 kV

Ambient conditions

Ambient temperature (operation)	-40 °C ... 100 °C (dependent on the derating curve)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

Electrical tests

Thermal test | Test group C

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

Insulation resistance

Specification	IEC 60512-3-1:2002-02
Insulation resistance, neighboring positions	> 5 MΩ

Air clearances and creepage distances |

Specification	IEC 60664-1:2007-04
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	250 V

MVSTBR 2,5/ 8-ST GY H1L - PCB connector



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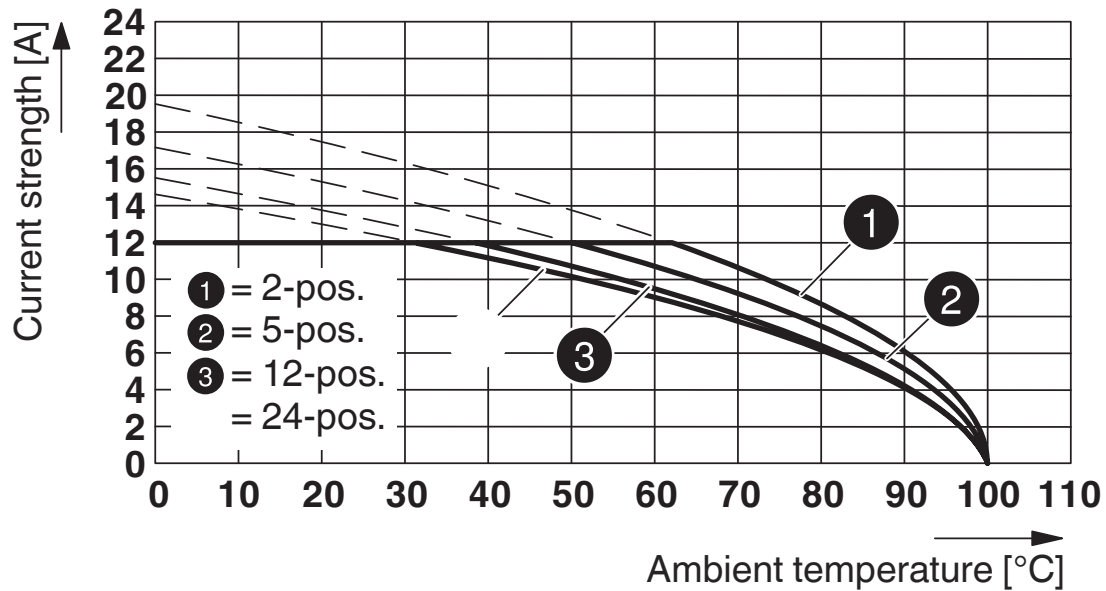
Rated surge voltage (III/3)	4 kV
minimum clearance value - non-homogenous field (III/3)	3 mm
minimum creepage distance (III/3)	3.2 mm
Rated insulation voltage (III/2)	320 V
Rated surge voltage (III/2)	4 kV
minimum clearance value - non-homogenous field (III/2)	3 mm
minimum creepage distance (III/2)	3 mm
Rated insulation voltage (II/2)	630 V
Rated surge voltage (II/2)	4 kV
minimum clearance value - non-homogenous field (II/2)	3 mm
minimum creepage distance (II/2)	3.2 mm

Packaging specifications

Type of packaging	packed in cardboard
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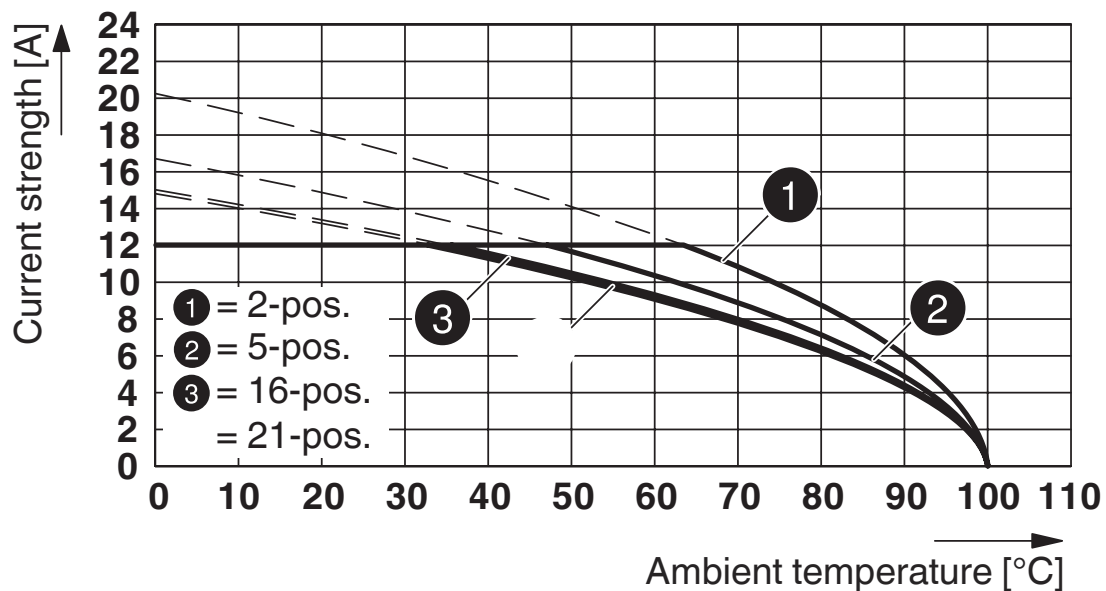
Drawings

Diagram

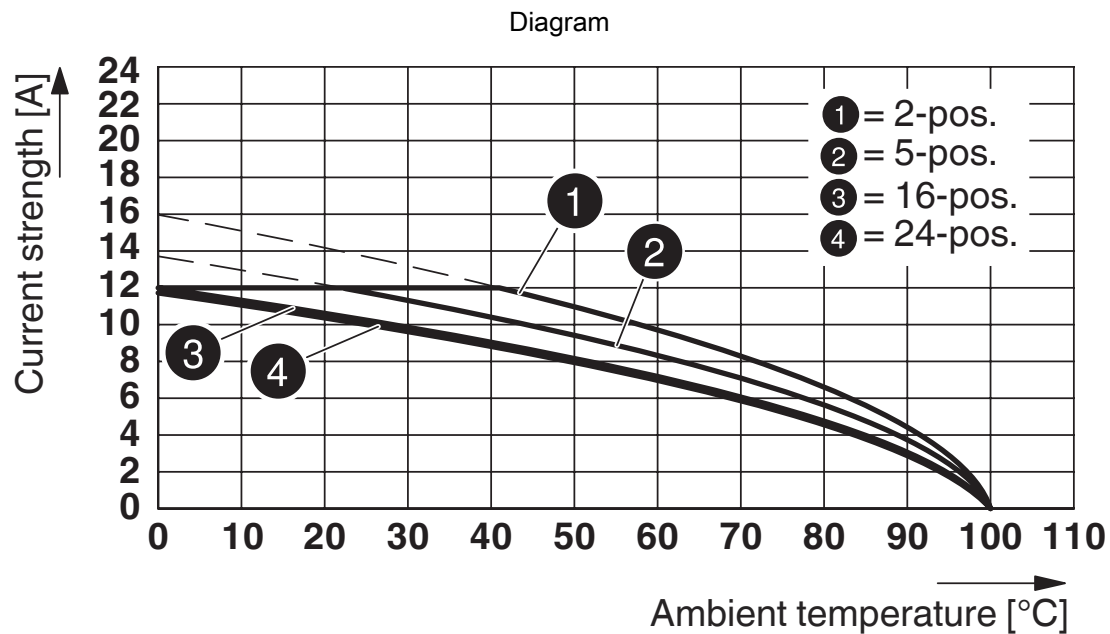


Type: MVSTB(R/W) 2,5/...-ST with MSTB 2,5/...-G

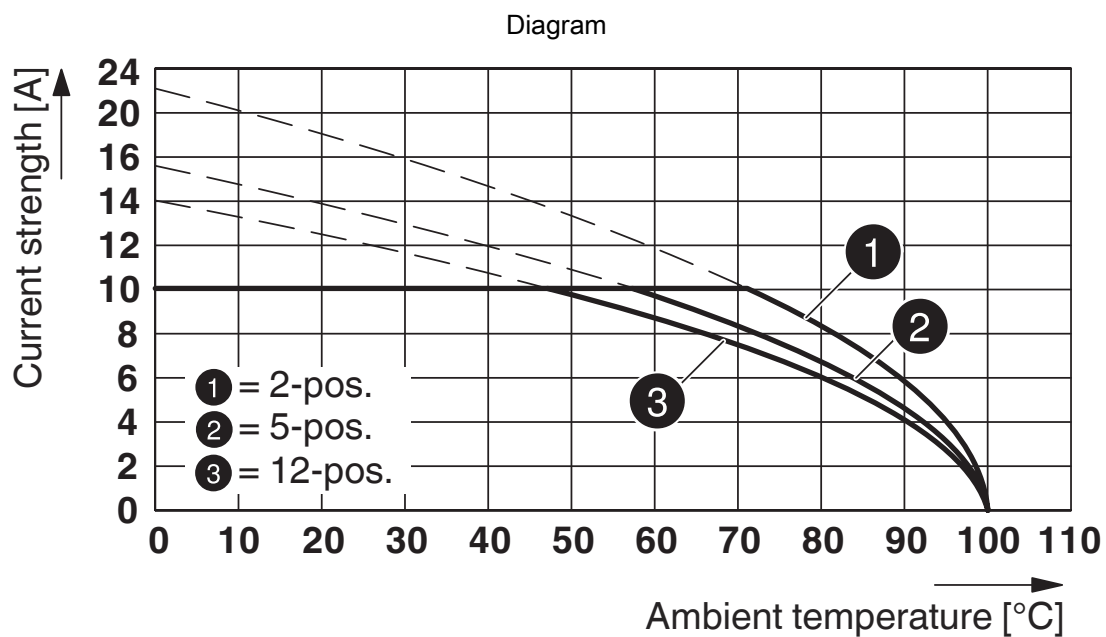
Diagram



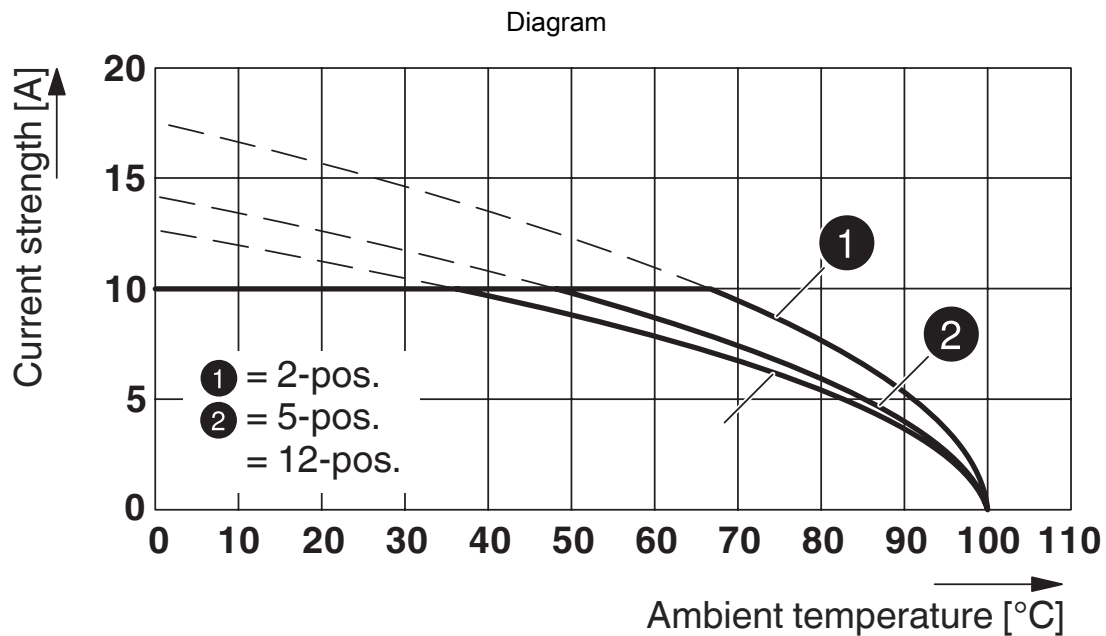
Type: MVSTB(R/W) 2,5/...-ST with MSTBW 2,5/...-G



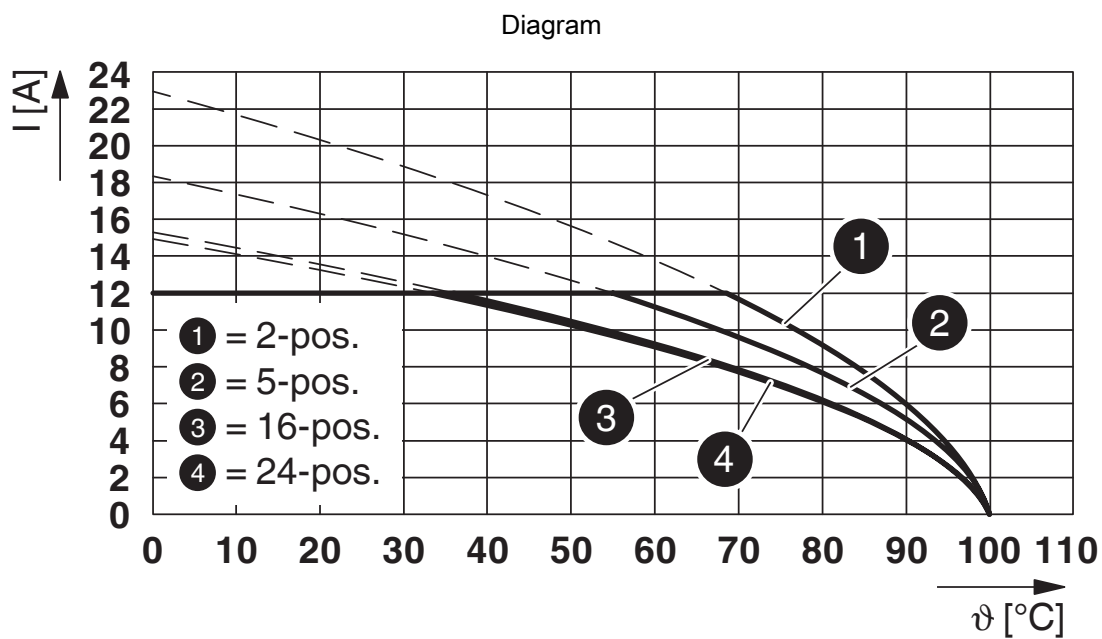
Type: MVSTB(R/W) 2,5/...-ST with MSTBV 2,5 2,5/...-G



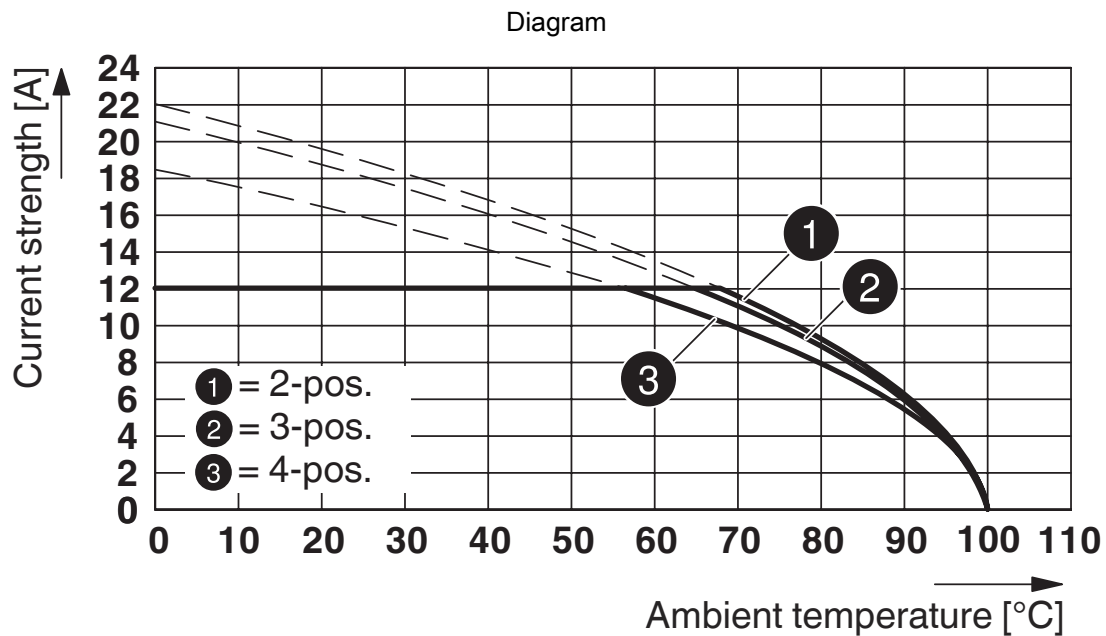
Type: MVSTB(R/W) 2,5/...-ST with MDSTB 2,5/...-G



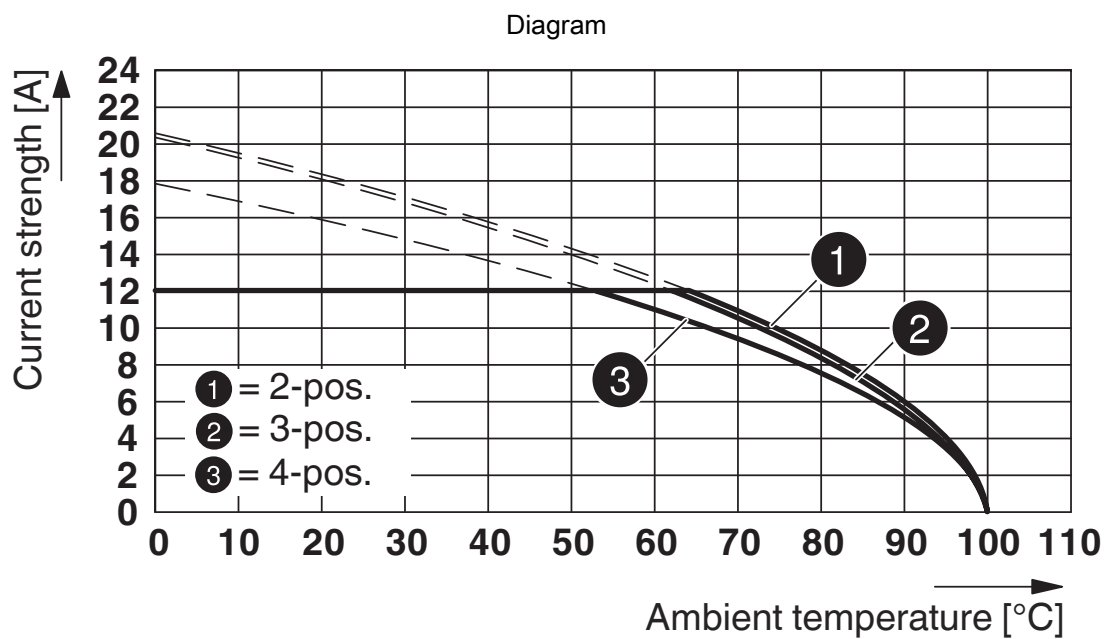
Type: MVSTB(R/W) 2,5/...-ST with MDSTBW 2,5/...-G



Type: MVSTBR 2,5/...-ST with MSTBA 2,5/...-G



Type: MVSTB(R/W) 2,5/...-ST with MSTBO 2,5/...-G1R



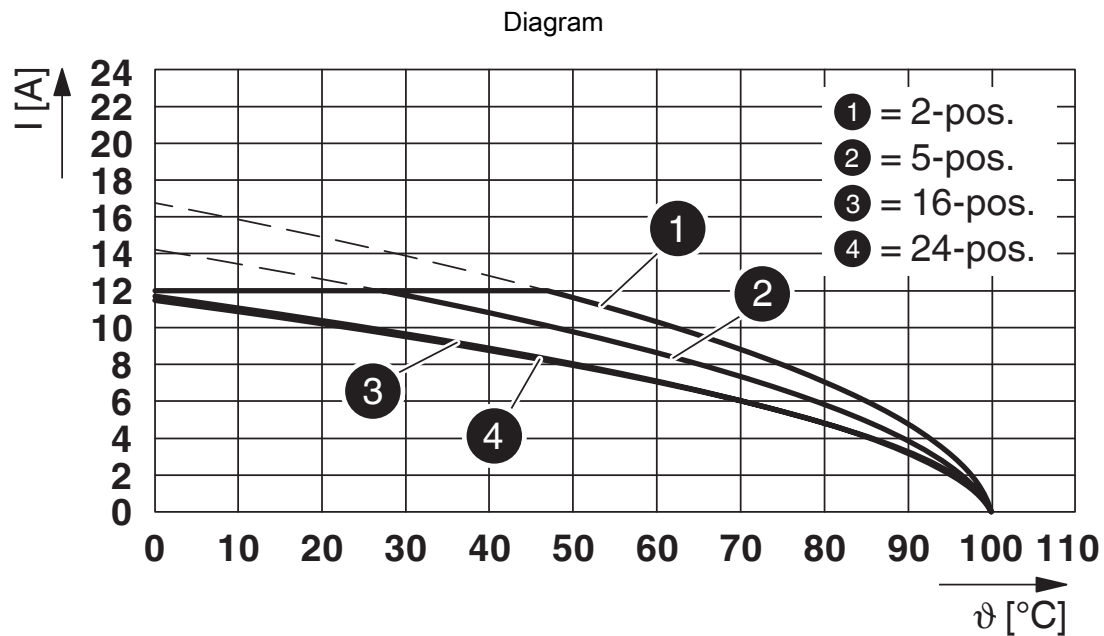
Type: MVSTB(R/W) 2,5/...-ST with MSTBO 2,5/...-G1L

MVSTBR 2,5/ 8-ST GY H1L - PCB connector

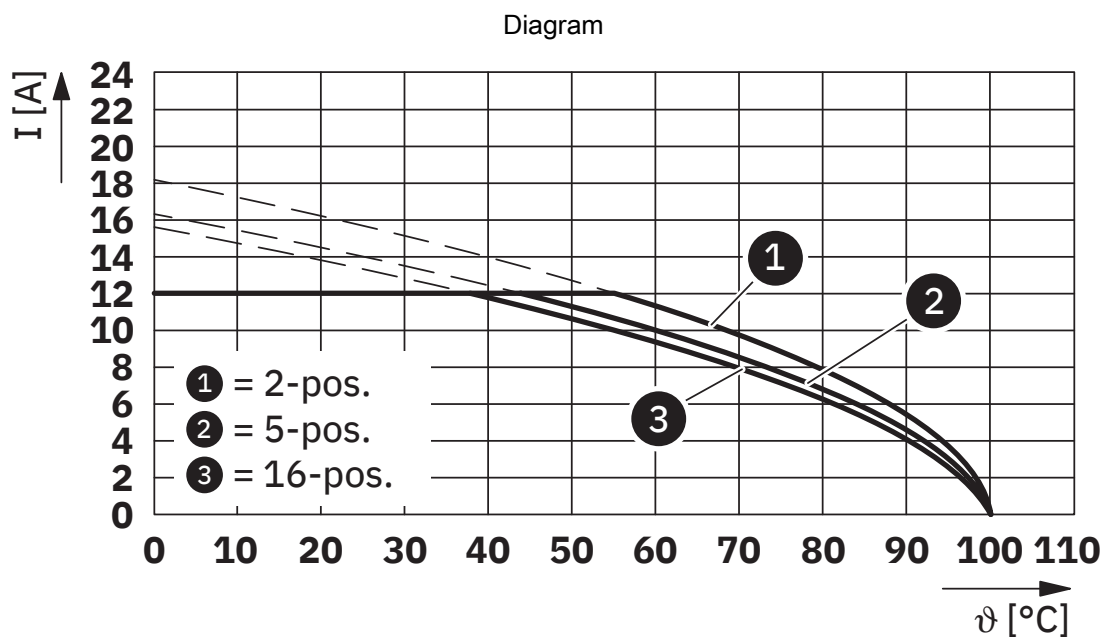


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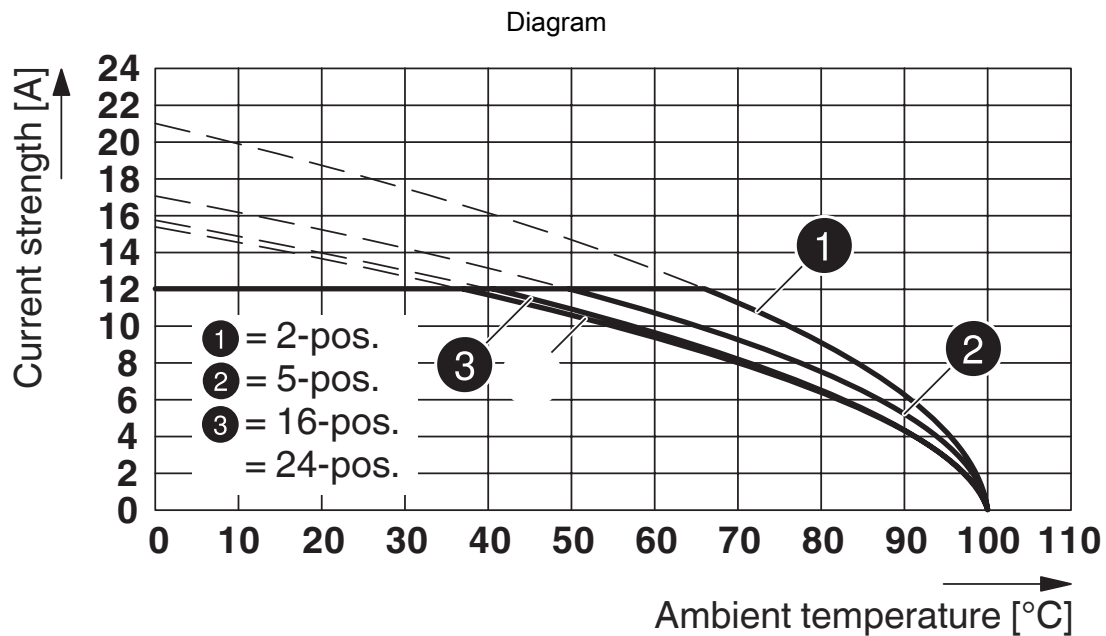
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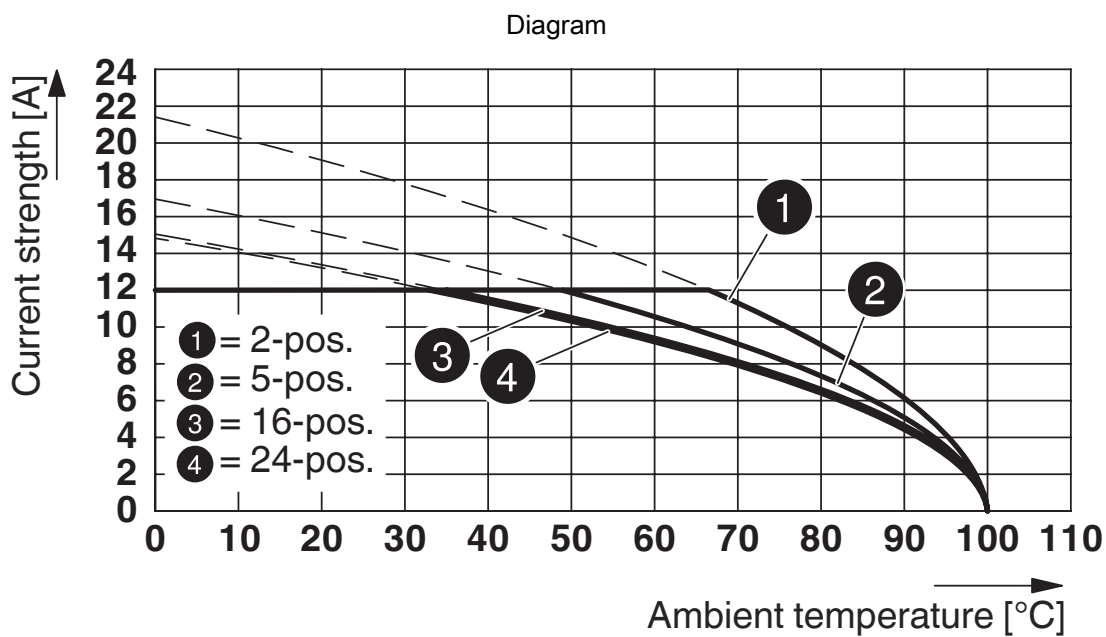
Type: MVSTBR 2,5/...-ST with MSTBVA 2,5/...-G



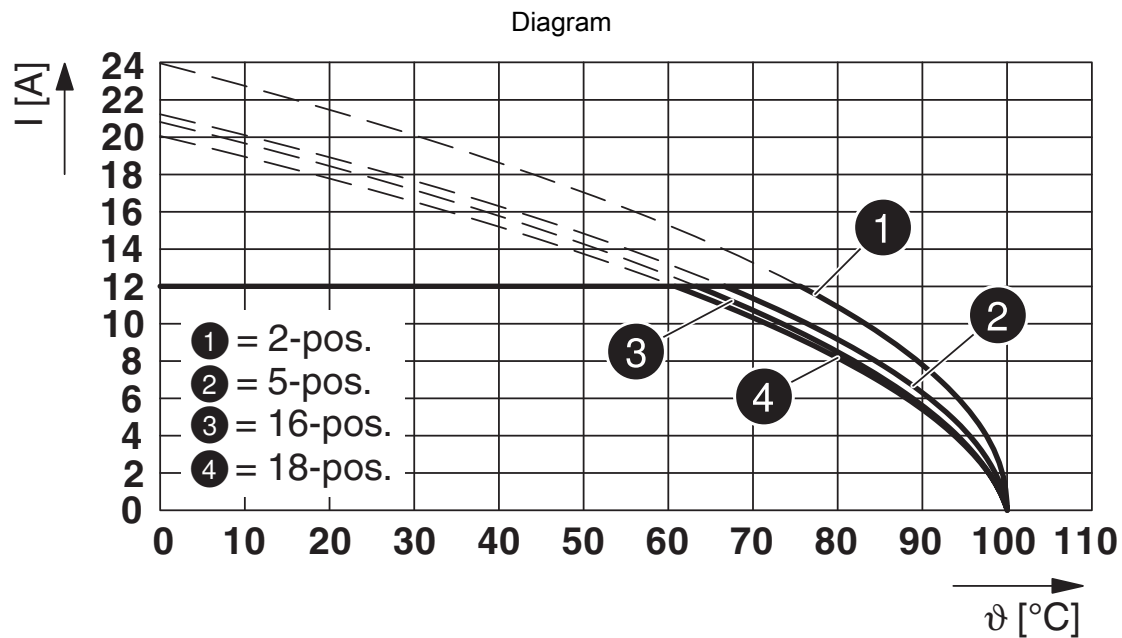
Type: MVSTBR 2,5/...-ST(-5,08) with DFK-MSTB 2,5/...-G(-5,08)



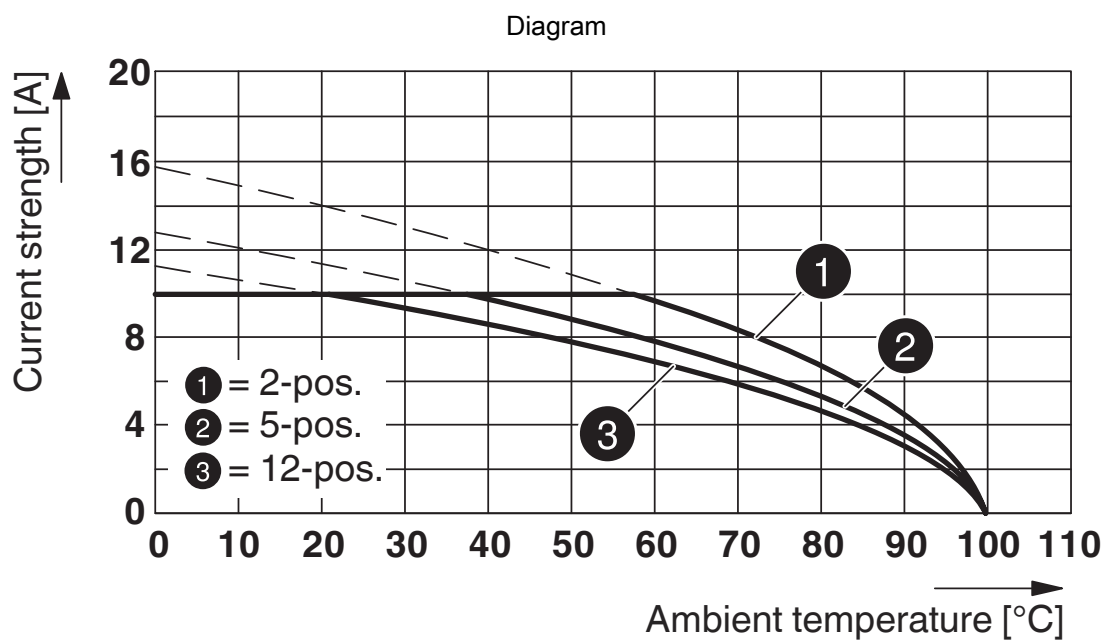
Type: MVSTB(R/W) 2,5/...-ST with SMSTB 2,5/...-G



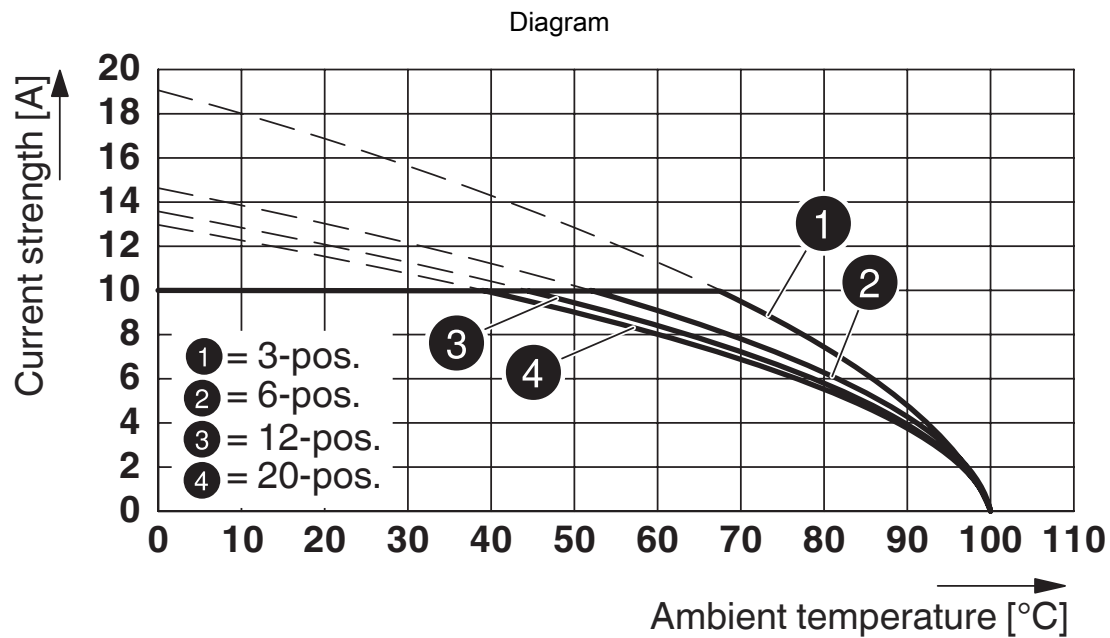
Type: MVSTB(R/W) 2,5/...-ST with SMSTBA 2,5/...-G



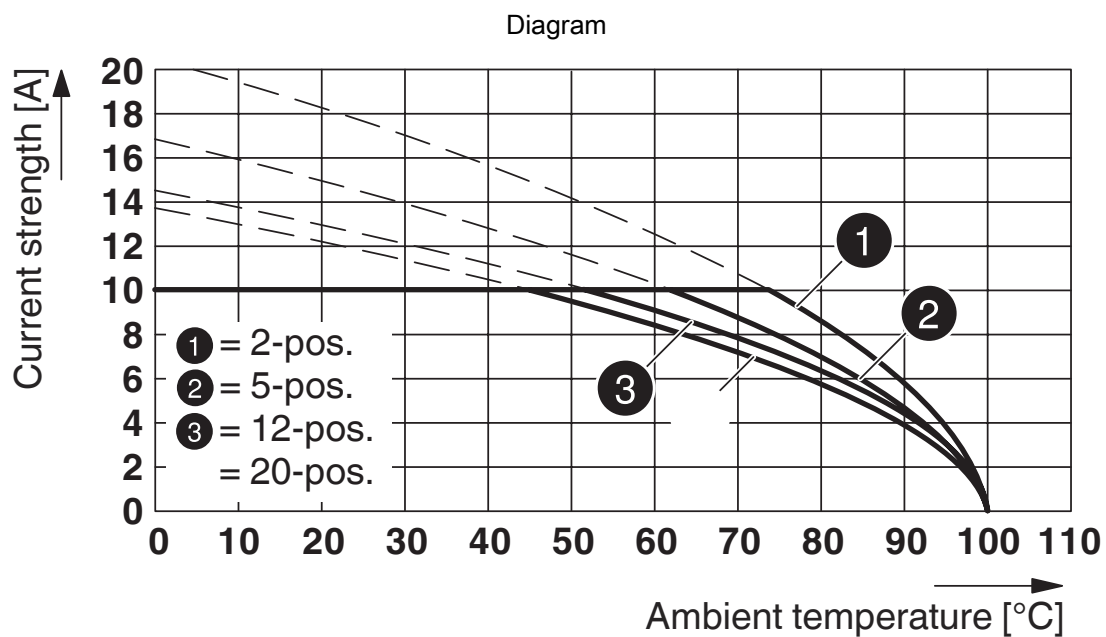
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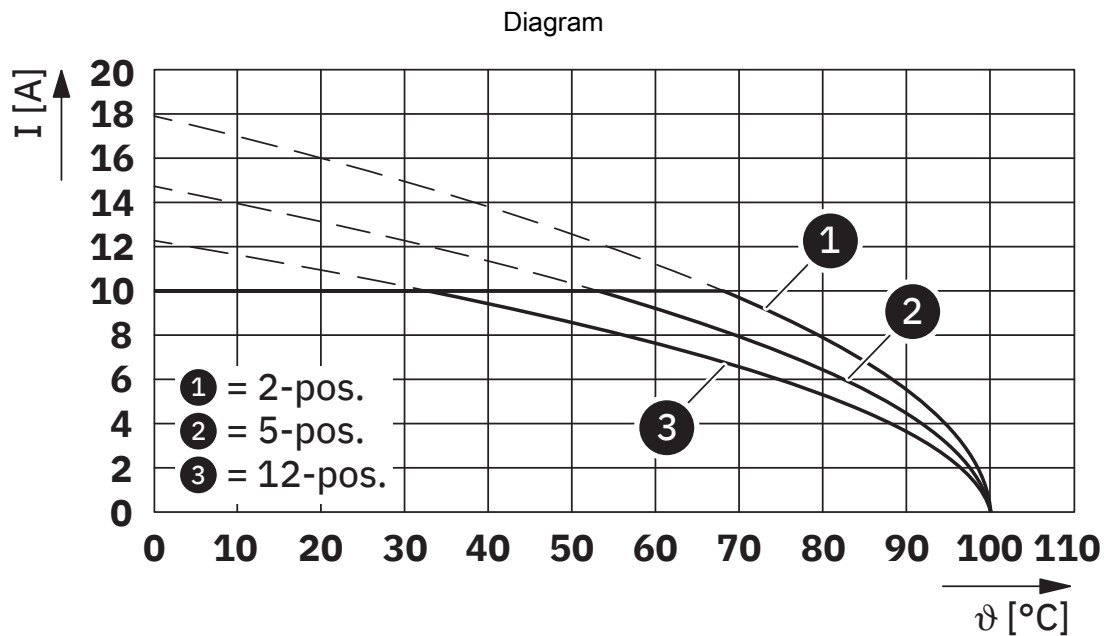
Type: MVSTB(R/W) 2,5/...-ST with MDSTBV 2,5/...-G



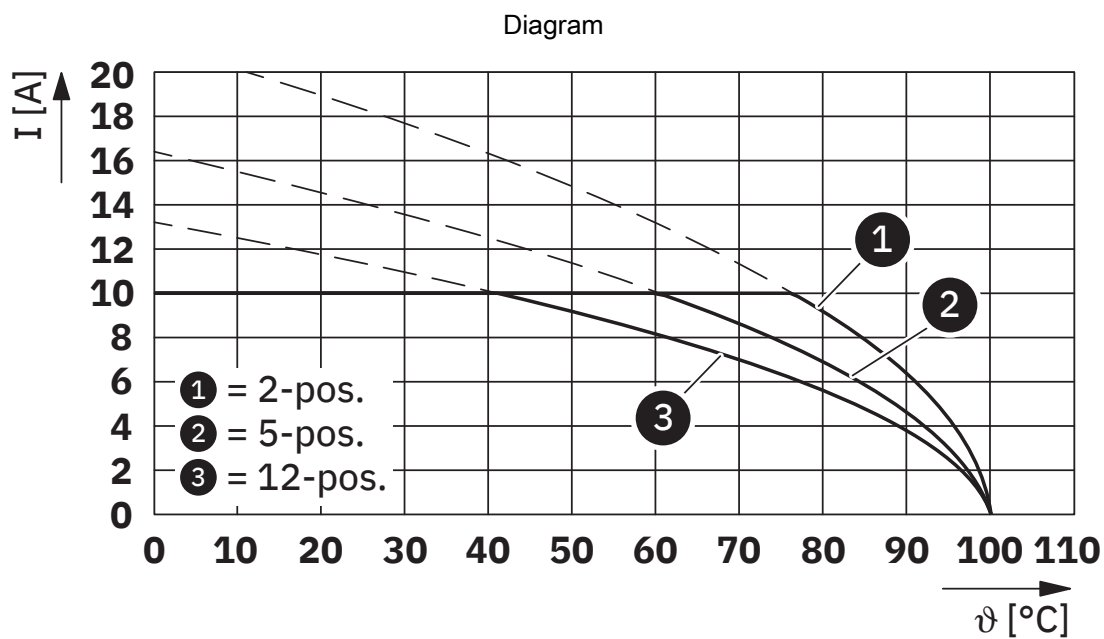
Type: MVSTB(R/W) 2,5/...-ST with MDSTB 2,5/...-G1



Type: MVSTB(R/W) 2,5/...-ST with MDSTBV 2,5/...-G1



Type: MVSTBR 2,5/...-ST with MDSTBA 2,5/...-G



Type: MVSTBR 2,5/...-ST with MDSTBVA 2,5/...-G

MVSTBR 2,5/ 8-ST GY H1L - PCB connector



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1856113>

 cULus Recognized Approval ID: E60425-19931011				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B				
	300 V	15 A	30 - 12	-
D				
	300 V	10 A	30 - 12	-

 VDE approval of drawings Approval ID: 40004701				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	250 V	12 A	-	0.2 - 2.5

 CSA Approval ID: 2585950				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B				
	300 V	10 A	28 - 12	-
D				
	300 V	10 A	28 - 12	-

MVSTBR 2,5/ 8-ST GY H1L - PCB connector



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Classifications

ECLASS

ECLASS-13.0	27460202
ECLASS-15.0	27460202

ETIM

ETIM 9.0	EC002638
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UNSPSC

UNSPSC 21.0	39121400
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MVSTBR 2,5/ 8-ST GY H1L - PCB connector



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Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes, No exemptions
China RoHS	
Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits
EU REACH SVHC	
REACH candidate substance (CAS No.)	No substance above 0.1 wt%
EF3.0 Climate Change	
CO2e kg	0.132 kg CO2e

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