

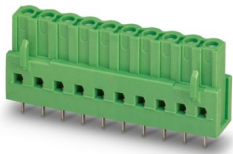
ICV 2,5/24-G-5,08 - PCB header



1786161

<https://www.phoenixcontact.com/in/products/1786161>

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PCB headers, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Sn, contact connection type: Socket, number of potentials: 24, number of rows: 1, number of positions: 24, number of connections: 24, product range: ICV 2,5/..-G, pitch: 5.08 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.6 mm, number of solder pins per potential: 2, plug-in system: COMBICON MSTB 2,5, Pin connector pattern alignment: Standard, locking: without, mounting method: without, type of packaging: packed in cardboard

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
- Inverted header with socket contacts for touch-proof device outputs or PCB/PCB connections

Commercial data

Item number	1786161
Packing unit	50 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)
Sales key	AAC
Product key	AACSAG
Catalog page	Page 179 (CC-2005)
GTIN	4017918042318
Weight per piece (including packing)	20.1 g
Weight per piece (excluding packing)	19.9 g
Customs tariff number	85366930
Country of origin	DE

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Technical data

Product properties

Product type	PCB headers
Product family	ICV 2,5/...-G
Product line	COMBICON Connectors M
Type	Inverted
Number of positions	24
Pitch	5.08 mm
Number of connections	24
Number of rows	1
Number of potentials	24
Mounting flange	without
Pin layout	Linear pinning
Solder pins per potential	2

Electrical properties

Nominal current I_N	12 A
Nominal voltage U_N	320 V
Contact resistance	1.5 mΩ
Rated voltage (III/3)	320 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

Mounting

Mounting type	Wave soldering
Pin layout	Linear pinning

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 contact area (top layer)	Tin (4 - 8 μm Sn)
Metal surface soldering area (top layer)	Tin (4 - 8 μm Sn)

Material data - housing

Color (Housing)	green (6021)
Insulating material	PA
Insulating material group	I

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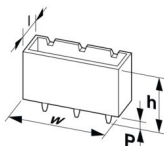
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CTI according to IEC 60112	600
Flammability rating according to UL 94	V0
Glow wire flammability index GWFI according to EN 60695-2-12	850
Glow wire ignition temperature GWIT according to EN 60695-2-13	775
Temperature for the ball pressure test according to EN 60695-10-2	125 °C

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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Dimensions

Dimensional drawing	
Pitch	5.08 mm
Width [w]	123.92 mm
Height [h]	22.4 mm
Length [l]	10.2 mm
Installed height	18.9 mm
Solder pin length [P]	3.6 mm
Pin dimensions	0.47 x 1.15 mm

PCB design

Pin spacing	5.08 mm
Hole diameter	1.4 mm

Mechanical tests

Visual inspection

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

Dimension check

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

Resistance of inscriptions

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

Polarization and coding

Specification	IEC 60512-13-5:2006-02
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Result	Test passed
Contact holder in insert	
Specification	IEC 60512-15-1:2008-05
Contact holder in insert Requirements >20 N	Test passed
Insertion and withdrawal forces	
Result	Test passed
No. of cycles	25
Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	6 N

Electrical tests

Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	16

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

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)

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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	1.5 mΩ
Contact resistance R ₂	1.5 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

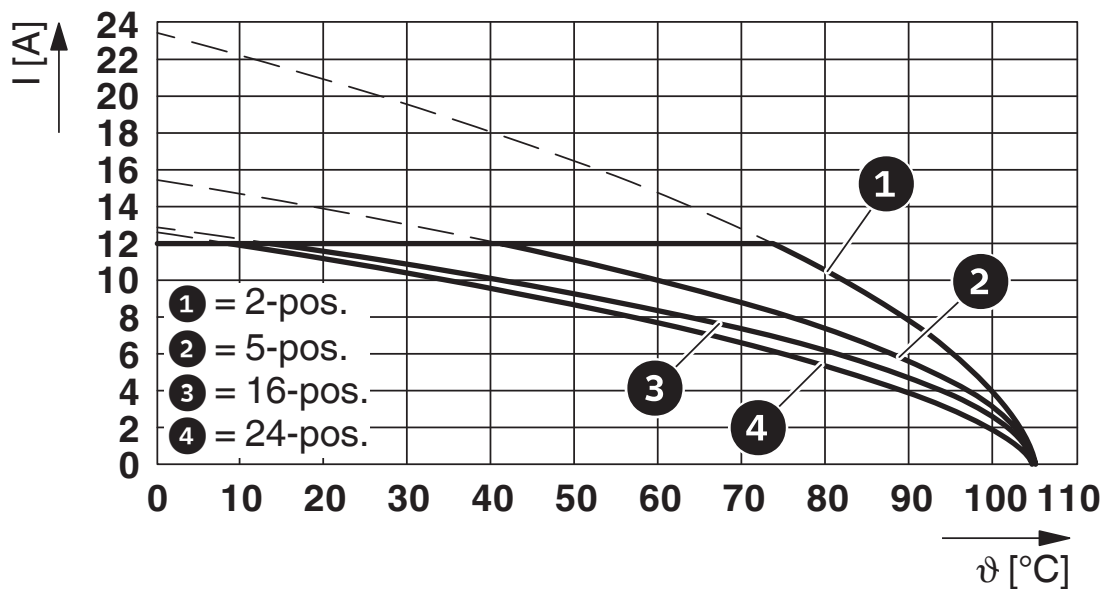
Ambient temperature (operation)	-40 °C ... 100 °C (dependent on the derating curve)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

Packaging specifications

Type of packaging	packed in cardboard
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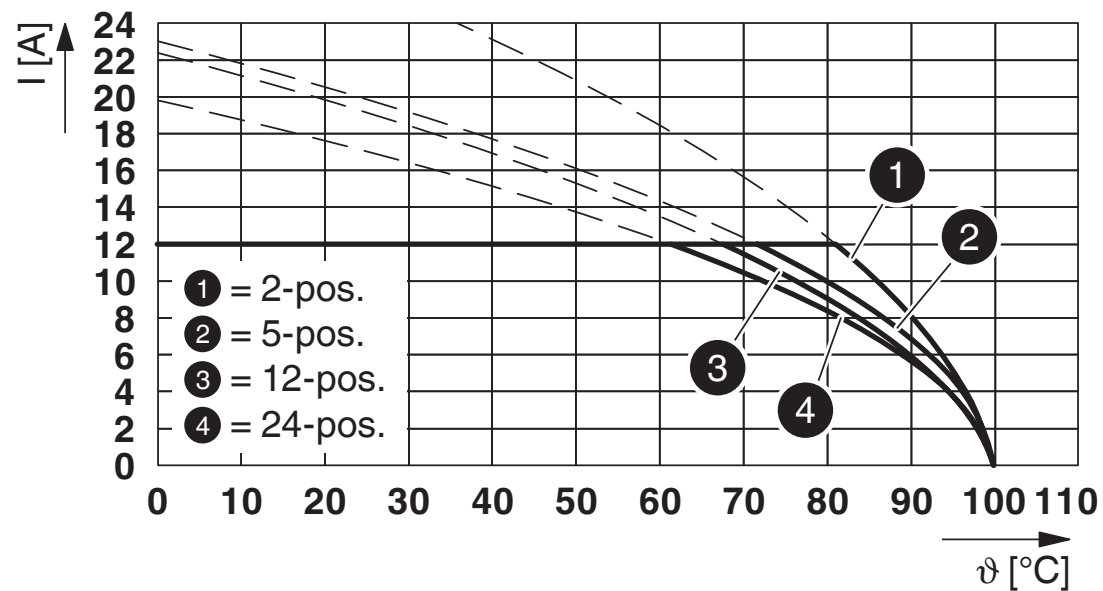
Drawings

Diagram

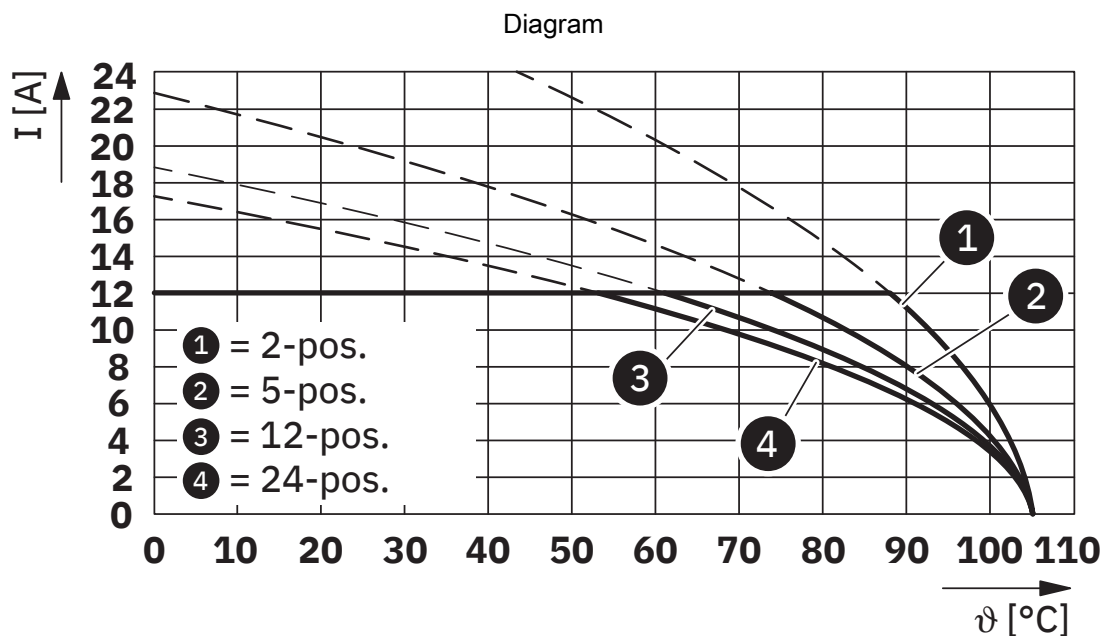


Type: ICV 2,5/...-G-5,08 with MSTBV 2,5/...-G-5,08

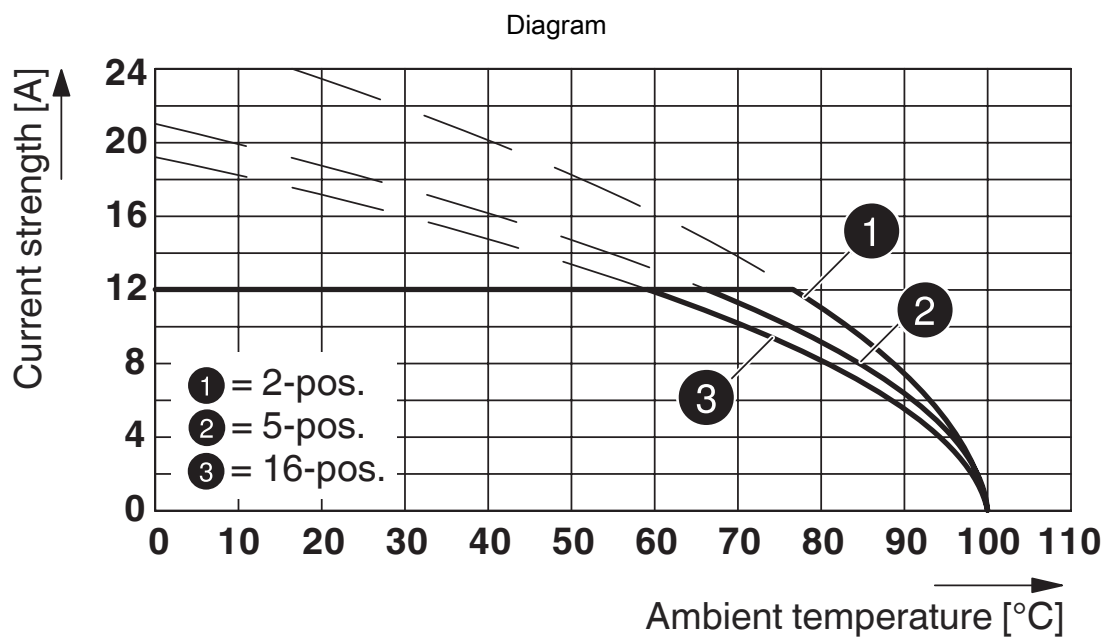
Diagram



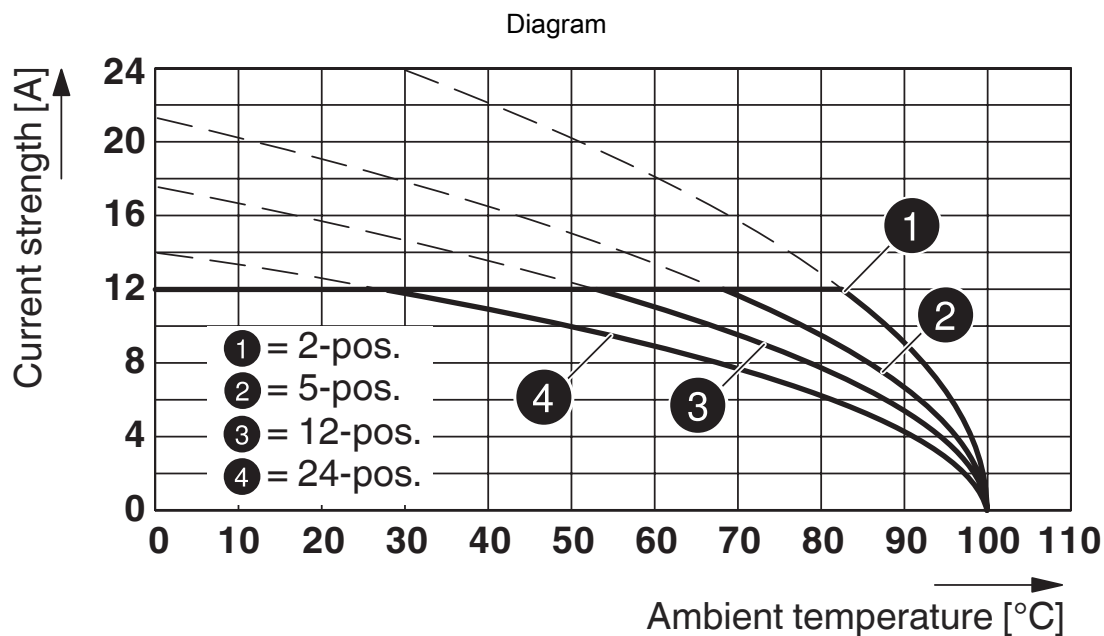
Type: IC 2,5/...-ST-5,08 with ICV 2,5/...-G-5,08



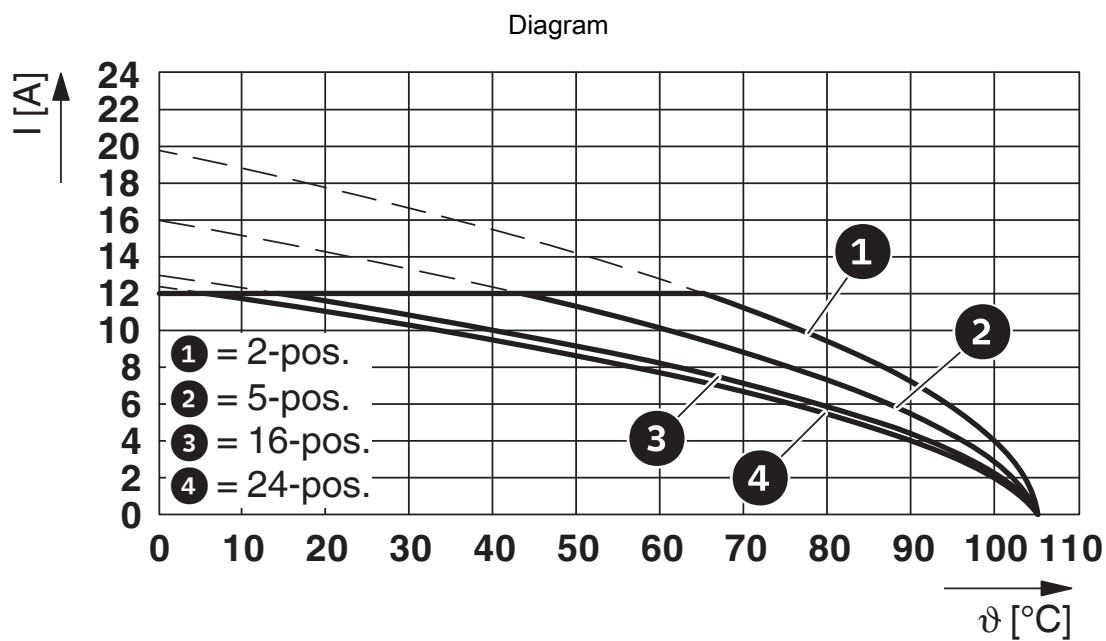
Type: ICV 2,5/...-G-5,08 with CCA 2,5/...-G-5,08 P...THR



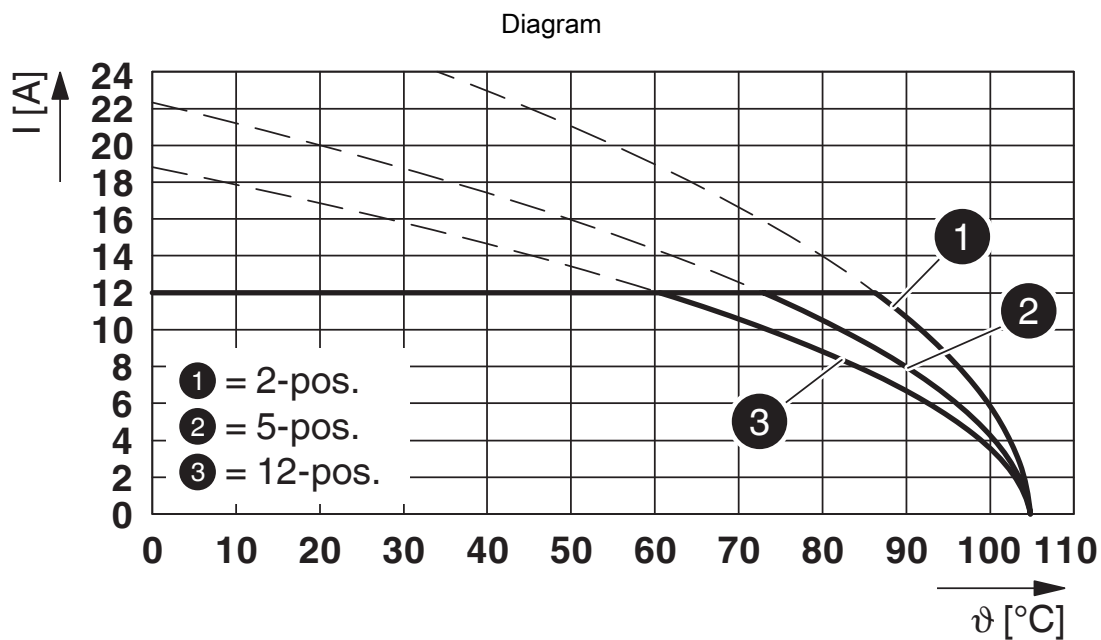
Type: FKIC 2,5/...-ST-5,08 with ICV 2,5/...-G-5,08



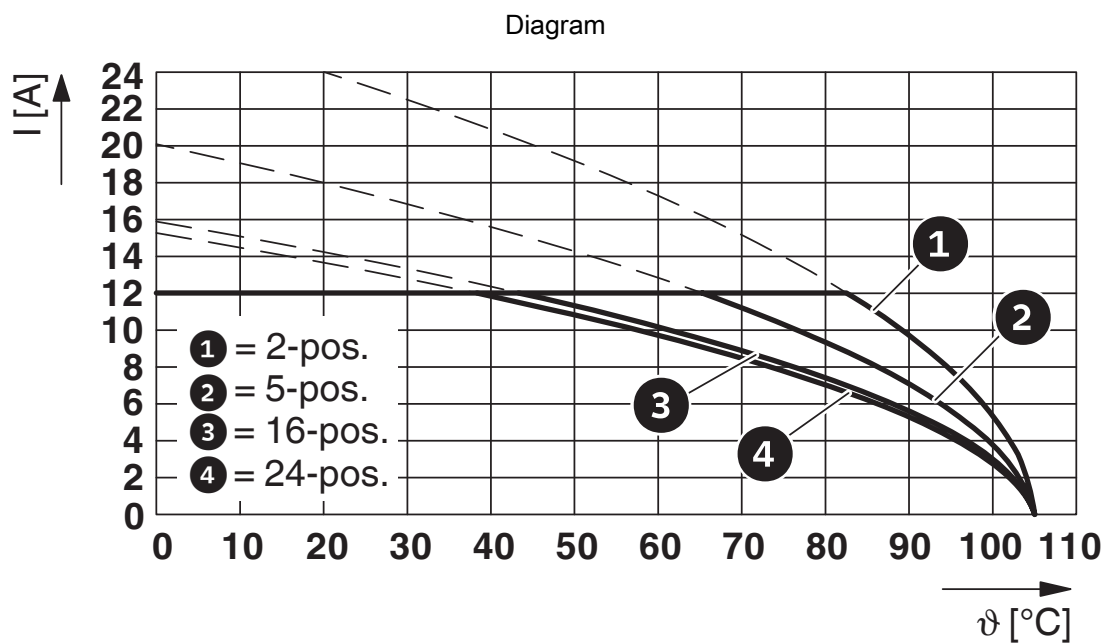
Type: ICV 2,5/...-G-5,08 with MSTBA 2,5/...-G-5,08



Type: ICV 2,5/...-G-5,08 with MSTBVA 2,5/...-G-5,08

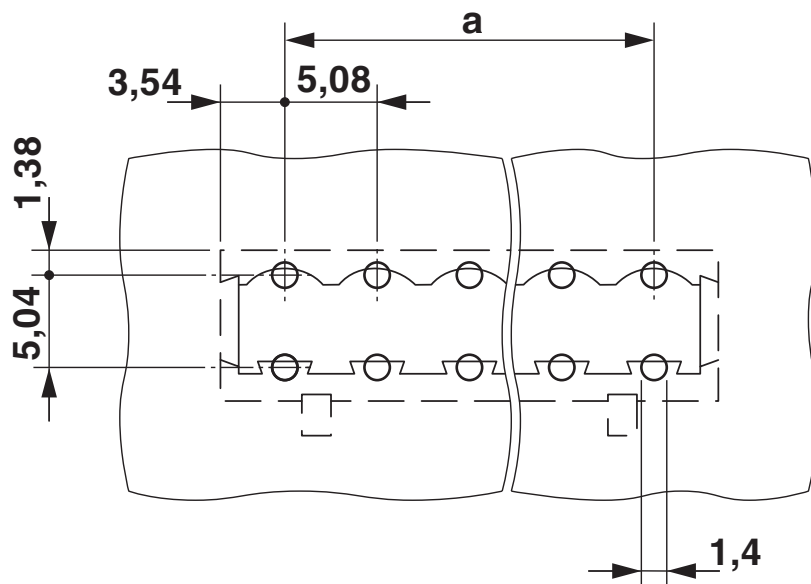


Type: ICV 2,5/...-G-5,08 with CCV 2,5/...-G-5,08 P...THR

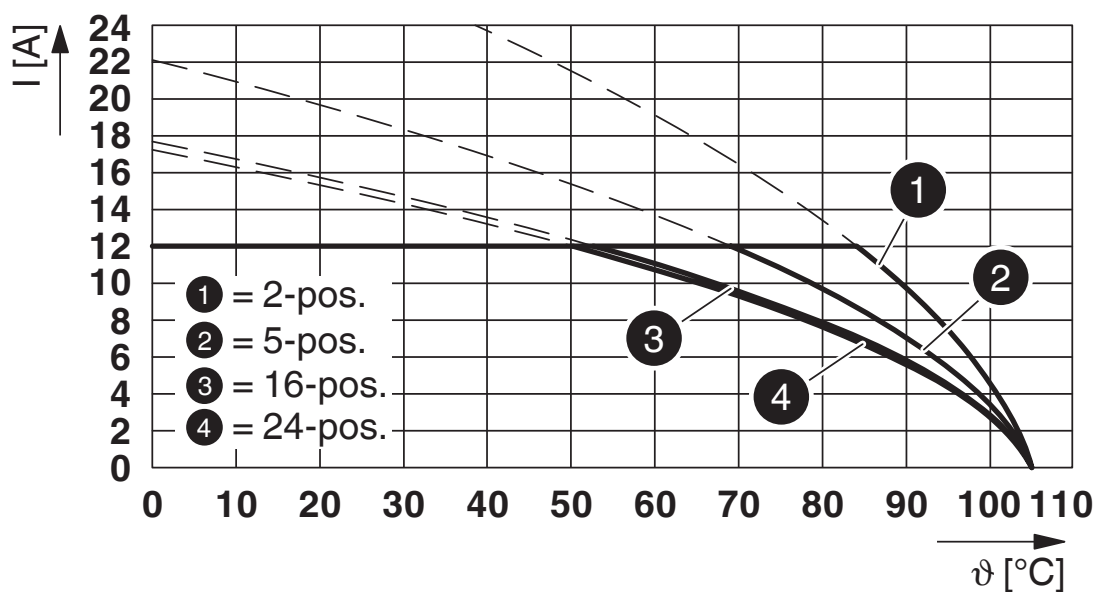


Type: ICV 2,5/...-G-5,08 with MSTBW 2,5/...-G-5,08

Drilling plan/solder pad geometry



Diagram



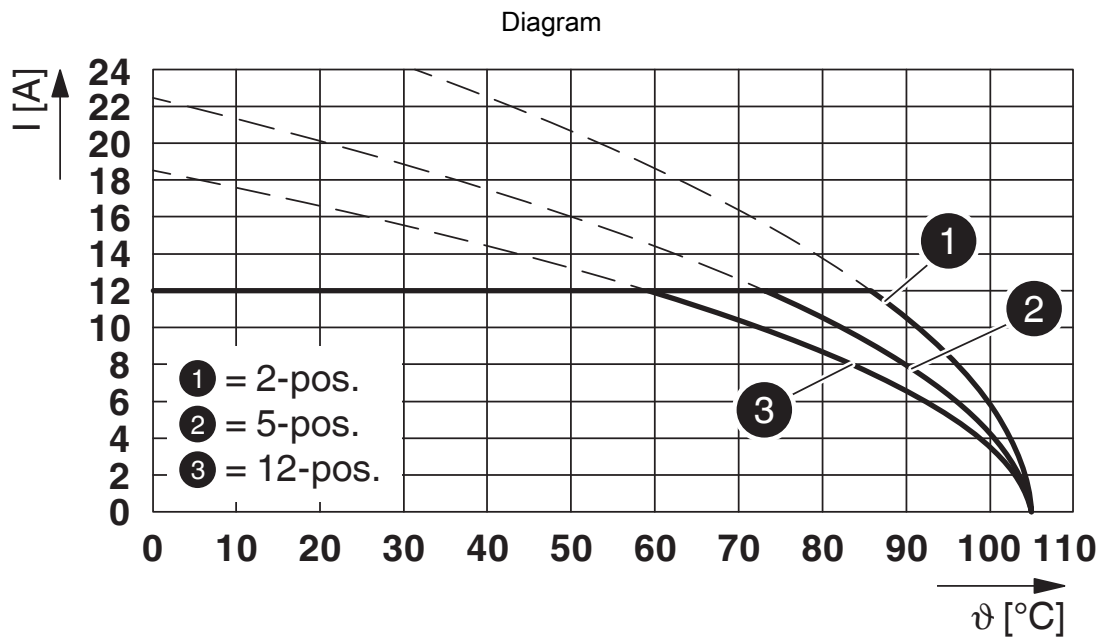
Type: ICV 2,5/...-G-5,08 with MSTB 2,5/...-G-5,08

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Type: ICV 2,5/...-G-5,08 with CC 2,5/...-G-5,08 P...THR

ICV 2,5/24-G-5,08 - PCB header



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/in/products/1786161>

 CSA Approval ID: 13631				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B				
	300 V	10 A	-	-
Use group D				
	300 V	10 A	-	-

 cULus Recognized Approval ID: E60425-19931014				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B				
	250 V	12 A	-	-
Use group D				
	300 V	10 A	-	-

 VDE approval of drawings Approval ID: 40050648				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	250 V	12 A	-	-

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Classifications

ECLASS

ECLASS-11.0	27460201
ECLASS-12.0	27460201
ECLASS-13.0	27460201

ETIM

ETIM 9.0	EC002637
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UNSPSC

UNSPSC 21.0	39121400
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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%

ICV 2,5/24-G-5,08 - PCB header

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Accessories

MPS-MT - Test plug

0201744

<https://www.phoenixcontact.com/in/products/0201744>



Test plug, with solder connection up to 1 mm² conductor cross section, number of positions: 1, color: gray

RPS - Reducing plug

0201647

<https://www.phoenixcontact.com/in/products/0201647>



Reducing plug, number of positions: 1, color: gray

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CP-MSTB - Coding profile

1734634

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



FLRP/ICV 80 - Mounting material

1808353

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Pair of guide rails, is inserted into the groove ICV/...G, height: 86 mm, hole diameter: 3.4 mm



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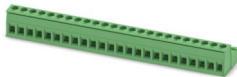
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IC 2,5/24-ST-5,08 - PCB connector

1786394

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PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Sn, contact connection type: Pin, number of potentials: 24, number of rows: 1, number of positions: 24, number of connections: 24, product range: IC 2,5/..-ST, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting method: without, type of packaging: packed in cardboard

MSTBW 2,5/24-G-5,08 - PCB header

1735662

<https://www.phoenixcontact.com/in/products/1735662>



PCB headers, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Sn, contact connection type: Pin, number of potentials: 24, number of rows: 1, number of positions: 24, number of connections: 24, product range: MSTBW 2,5/..-G, pitch: 5.08 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm, number of solder pins per potential: 1, plug-in system: COMBICON MSTB 2,5, Pin connector pattern alignment: Standard, locking: without, mounting method: without, type of packaging: packed in cardboard

ICV 2,5/24-G-5,08 - PCB header

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SMSTBA 2,5/24-G-5,08 - PCB header

1767591

<https://www.phoenixcontact.com/in/products/1767591>



PCB headers, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Sn, contact connection type: Pin, number of potentials: 24, number of rows: 1, number of positions: 24, number of connections: 24, product range: SMSTBA 2,5/...-G, pitch: 5.08 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm, number of solder pins per potential: 1, plug-in system: COMBICON MSTB 2,5, Pin connector pattern alignment: Standard, locking: without, mounting method: without, type of packaging: packed in cardboard

SMSTB 2,5/24-G-5,08 - PCB header

1769683

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PCB headers, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Sn, contact connection type: Pin, number of potentials: 24, number of rows: 1, number of positions: 24, number of connections: 24, product range: SMSTB 2,5/...-G, pitch: 5.08 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm, number of solder pins per potential: 1, plug-in system: COMBICON MSTB 2,5, Pin connector pattern alignment: Standard, locking: without, mounting method: without, type of packaging: packed in cardboard

ICV 2,5/24-G-5,08 - PCB header

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ICC 2,5/24-STZ-5,08 - PCB connector

1824065

<https://www.phoenixcontact.com/in/products/1824065>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact connection type: Pin, number of potentials: 24, number of rows: 1, number of positions: 24, number of connections: 24, product range: ICC 2,5/...-STZ, pitch: 5.08 mm, connection method: Crimp connection, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON MSTB 2,5, locking: Snap-in locking, mounting method: Engagement nose, type of packaging: packed in cardboard, Corresponding male crimp contacts with current [A] and conductor cross section range [mm²] data: 10A/ICC-MT 0,5-1,0 (3190577); 10A/ICC-MT 0,5-1,0 BA (3190603); 12A/ICC-MT 1,5-2,5 (3190580); 12A/ICC-MT 1,5-2,5 BA (3190593). BA = Bandkontakte

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