

DMCV 1,5/20-G1-3,5 P35 - PCB header



1053862

<https://www.phoenixcontact.com/us/products/1053862>

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PCB headers, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Pin, number of potentials: 40, number of rows: 2, number of positions: 20, number of connections: 40, product range: DMCV 1,5/..-G1, pitch: 3.5 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 DFMC 1,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard

Your advantages

- Conductor connection on several levels enables higher contact density
- Small component size for applications where space is at a premium
- Vertical connection enables multi-row arrangement on the PCB
- Well-known mounting principle allows worldwide use

Commercial data

Item number	1053862
Packing unit	1 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)
Sales key	AA02
Product key	AABSJC
GTIN	4055626687759
Weight per piece (including packing)	8.034 g
Weight per piece (excluding packing)	8.034 g
Customs tariff number	85366930
Country of origin	CN

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Technical data

Product properties

Product line	COMBICON Connectors S
Product type	PCB headers
Product family	DMCV 1,5/..-G1
Number of positions	20
Pitch	3.5 mm
Number of connections	40
Number of rows	2
Number of potentials	40
Pin layout	Linear pinning
Solder pins per potential	1

Electrical properties

Nominal current I_N	8 A
Nominal voltage U_N	160 V
Degree of pollution	3
Contact resistance	2.3 mΩ
Rated voltage (III/3)	160 V
Rated surge voltage (III/3)	2.5 kV
Rated voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
Rated voltage (II/2)	250 V
Rated surge voltage (II/2)	2.5 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	Tin-plated
Metal surface contact area (top layer)	Tin (4 - 8 μm Sn)
Metal surface contact area (middle layer)	Nickel (1.5 - 4 μm Ni)
Metal surface soldering area (top layer)	Tin (4 - 8 μm Sn)
Metal surface soldering area (middle layer)	Nickel (1.5 - 4 μm Ni)

Material data - housing

Color (Housing)	green (6021)
Insulating material	PBT

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Insulating material group	IIIa
CTI according to IEC 60112	225
Flammability rating according to UL 94	V0

Dimensions

Dimensional drawing	
Pitch	3.5 mm
Width [w]	70.8 mm
Height [h]	13.5 mm
Length [l]	10.6 mm
Installed height	10 mm
Solder pin length [P]	3.5 mm
Pin dimensions	0.8 x 0.8 mm

PCB design

Pin spacing	5.50 mm
Hole diameter	1.2 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
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
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No. of cycles	25
Insertion strength per pos. approx.	3 N
Withdraw strength per pos. approx.	2 N

Electrical tests

Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	20

Air clearances and creepage distances |

Specification	IEC 60664-1:2007-04
Insulating material group	IIIa
Comparative tracking index (IEC 60112)	CTI 225
Rated insulation voltage (III/3)	160 V
Rated surge voltage (III/3)	2.5 kV
minimum clearance value - non-homogenous field (III/3)	1.5 mm
minimum creepage distance (III/3)	2.5 mm
Rated insulation voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
minimum clearance value - non-homogenous field (III/2)	1.5 mm
minimum creepage distance (III/2)	1.6 mm
Rated insulation voltage (II/2)	250 V
Rated surge voltage (II/2)	2.5 kV
minimum clearance value - non-homogenous field (II/2)	1.5 mm
minimum creepage distance (II/2)	2.5 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)
Sweep speed	5g (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h

Durability test

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	2.95 kV
Contact resistance R ₁	2.3 mΩ
Contact resistance R ₂	2.6 mΩ
Insertion/withdrawal cycles	25

Climatic test

Specification	ISO 6988:1985-02
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Corrosive stress	0.2 dm ³ SO ₂ on 300 dm ³ /40 °C/1 cycle
Thermal stress	105 °C/168 h
Power-frequency withstand voltage	1.39 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

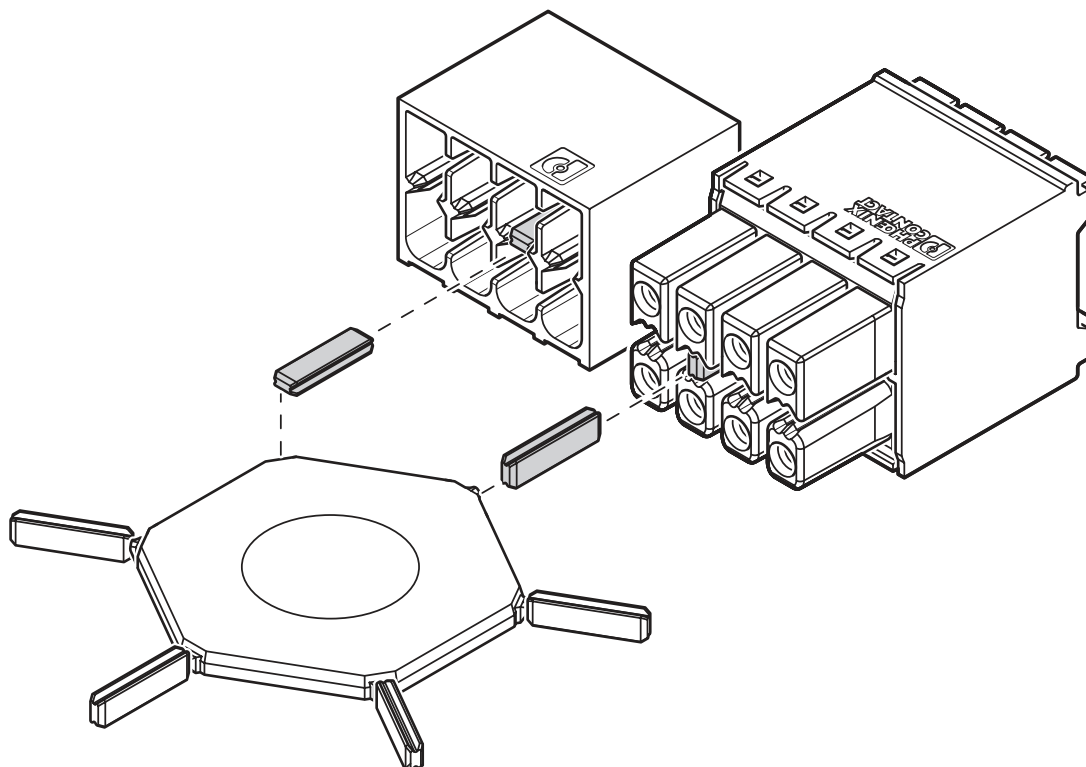
Type of packaging	packed in cardboard
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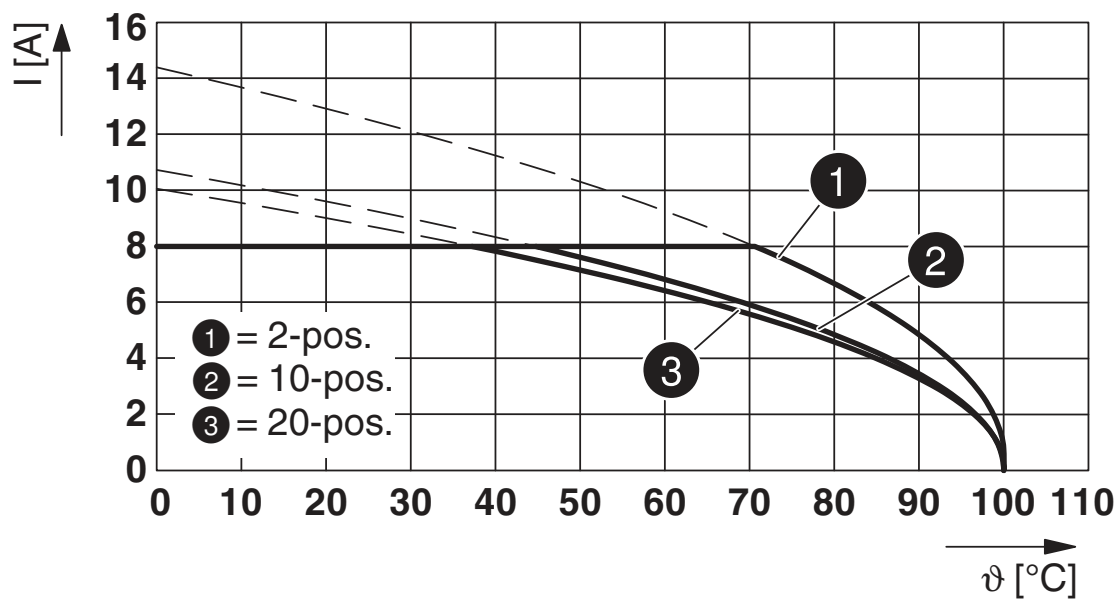
Drawings

Schematic diagram



Use of the CP-DMC... coding profile

Diagram



Type: DFMC 1,5/...-ST-3,5 with DMCV 1,5/...-G1-3,5 P35

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1053862>

 **EAC**
Approval ID: B.01687

 **cULus Recognized**
Approval ID: E60425-20110128

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B	300 V	8 A	-	-
Use group D	300 V	8 A	-	-

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Classifications

ECLASS

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

ETIM

ETIM 8.0	EC002637
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UNSPSC

UNSPSC 21.0	39121400
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Environmental product compliance

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

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Accessories

CP-DMC 1,5 NAT - Coding profile

1790647

<https://www.phoenixcontact.com/us/products/1790647>

Coding profile, for insertion between the coding ribs of the connector and the header following the reflow soldering process, insulating material, color: natural

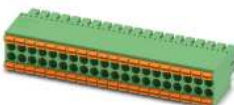


DFMC 1,5/20-ST-3,5 - PCB connector

1790289

<https://www.phoenixcontact.com/us/products/1790289>

Plug, nominal current: 8 A, rated voltage (III/2): 160 V, number of positions: 20 with 40 contacts, pitch: 3.5 mm, connection method: spring-cage connection, color: green, contact surface: tin



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