

DFMC 1,5/10-ST-3,5 - PCB connector

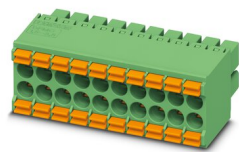


1790182

<https://www.phoenixcontact.com/de/produkte/1790182>

Please be informed that the data shown in this PDF document is generated from our Online Catalog. Please find the complete data in the user documentation. Our General Terms of Use for Downloads are valid.

Plug, nominal current: 8 A, rated voltage (III/2): 160 V, number of positions: 10 with 20 contacts, pitch: 3.5 mm, connection method: spring-cage connection, color: green, contact surface: tin



Your advantages

- Time saving push-in connection, tools not required
- Defined contact force ensures that contact remains stable over the long term
- Intuitive use through colour coded actuation lever
- Optimized for tight installation situations: operation and conductor connection from one direction

Commercial Data

Item number	1790182
Packing unit	50 pc
Minimum order quantity	50 pc
Sales Key	E1 - Leiterplattenanschl.
Product Key	AABFJA
Catalog Page	Page 184 (C-1-2013)
GTIN	4046356594332
Weight per Piece (including packing)	10,738 g
Weight per Piece (excluding packing)	10,738 g
Customs tariff number	85366990
Country of origin	DE

DFMC 1,5/10-ST-3,5 - PCB connector



1790182

<https://www.phoenixcontact.com/de/produkte/1790182>

Technical Data

Product properties

Type	Plug component
Product line	COMBICON Connectors S
Product type	PCB plug
Product family	DFMC 1,5/...-ST
Number of positions	10
Pitch	3.5 mm
Number of connections	20
Number of rows	2
Mounting flange	without
Number of potentials	20
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 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
	320 V
Rated surge voltage (II/2)	2.5 kV

Connection data

Connection technology

Type	Plug component
Connector system	COMBICON DFMC 1,5
Nominal cross section	1.5 mm ²
Type of contact	Female connector

Interlock

Locking type	without
Mounting flange	without

Conductor connection

Connection method	Push-in spring connection
Conductor/PCB connection direction	0 °
Conductor cross section solid	0.2 mm ² ... 1.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 1.5 mm ²
Conductor cross section AWG	24 ... 16

DFMC 1,5/10-ST-3,5 - PCB connector



1790182

<https://www.phoenixcontact.com/de/produkte/1790182>

Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 1.5 mm ²
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.14 mm ² ... 0.75 mm ²
Cylindrical gauge a x b / diameter	2.4 mm x 1.5 mm / 1.6 mm
Stripping length	10 mm

Specifications for ferrules without insulating collar

recommended crimping tool	1212034 CRIMPFOX 6
ferrules without insulating collar, according to DIN 46228-1	Cross section: 0.25 mm ² ; Length: 7 mm
	Cross section: 0.34 mm ² ; Length: 7 mm
	Cross section: 0.5 mm ² ; Length: 8 mm ... 10 mm
	Cross section: 0.75 mm ² ; Length: 8 mm ... 10 mm
	Cross section: 1 mm ² ; Length: 8 mm ... 10 mm
	Cross section: 1.5 mm ² ; Length: 10 mm

Specifications for ferrules with insulating collar

recommended crimping tool	1212034 CRIMPFOX 6
ferrules with insulating collar, according to DIN 46228-4	Cross section: 0.14 mm ² ; Length: 8 mm
	Cross section: 0.25 mm ² ; Length: 8 mm ... 10 mm
	Cross section: 0.34 mm ² ; Length: 8 mm ... 10 mm
	Cross section: 0.5 mm ² ; Length: 8 mm ... 10 mm
	Cross section: 0.75 mm ² ; Length: 10 mm

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)	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 (Actuating element)	orange (2003)
---------------------------	---------------

DFMC 1,5/10-ST-3,5 - PCB connector

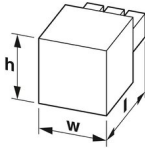


1790182

<https://www.phoenixcontact.com/de/produkte/1790182>

Insulating material	PBT
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0

Dimensions

Dimensional drawing	
Pitch	3.5 mm
Width [w]	35.8 mm
Height [h]	13.25 mm
Length [l]	23.35 mm

Mechanical tests

Test for conductor damage and slackening

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

Repeated connection and disconnection

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
	1.5 mm ² / solid / > 40 N
	1.5 mm ² / flexible / > 40 N

Insertion and withdrawal forces

Result	Test passed
No. of cycles	25
Insertion strength per pos. approx.	3 N
Withdraw strength per pos. approx.	2 N

Contact holder in insert

Specification	IEC 60512-15-1:2008-05
Contact holder in insert Requirements >20 N	Test passed

Resistance of inscriptions

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

DFMC 1,5/10-ST-3,5 - PCB connector



1790182

<https://www.phoenixcontact.com/de/produkte/1790182>

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)
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 mΩ
Contact resistance R_2	2.3 mΩ
Insertion/withdrawal cycles	25

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	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

Electrical tests

Thermal test | Test group C

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

DFMC 1,5/10-ST-3,5 - PCB connector



1790182

<https://www.phoenixcontact.com/de/produkte/1790182>

Insulation resistance

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

Temperature cycles

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

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)	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 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)	1.5 mm
Rated insulation voltage (II/2)	320 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)	1.6 mm

Packaging specifications

Type of packaging	packed in cardboard
-------------------	---------------------

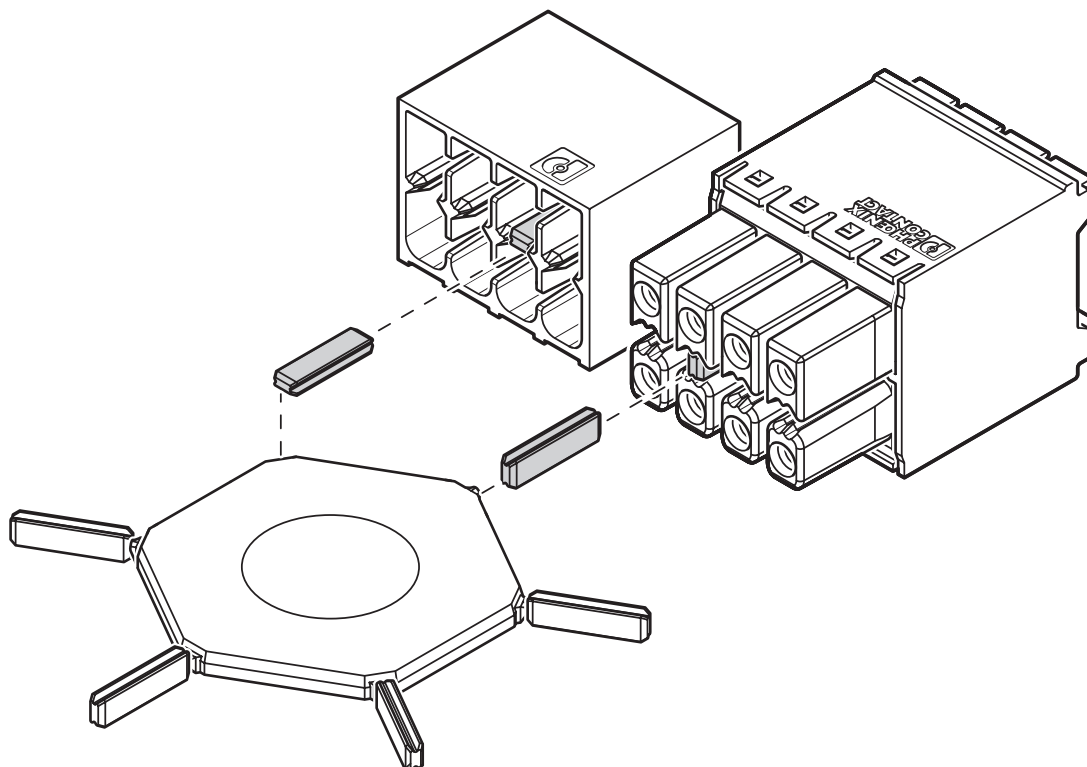
DFMC 1,5/10-ST-3,5 - PCB connector

1790182

<https://www.phoenixcontact.com/de/produkte/1790182>

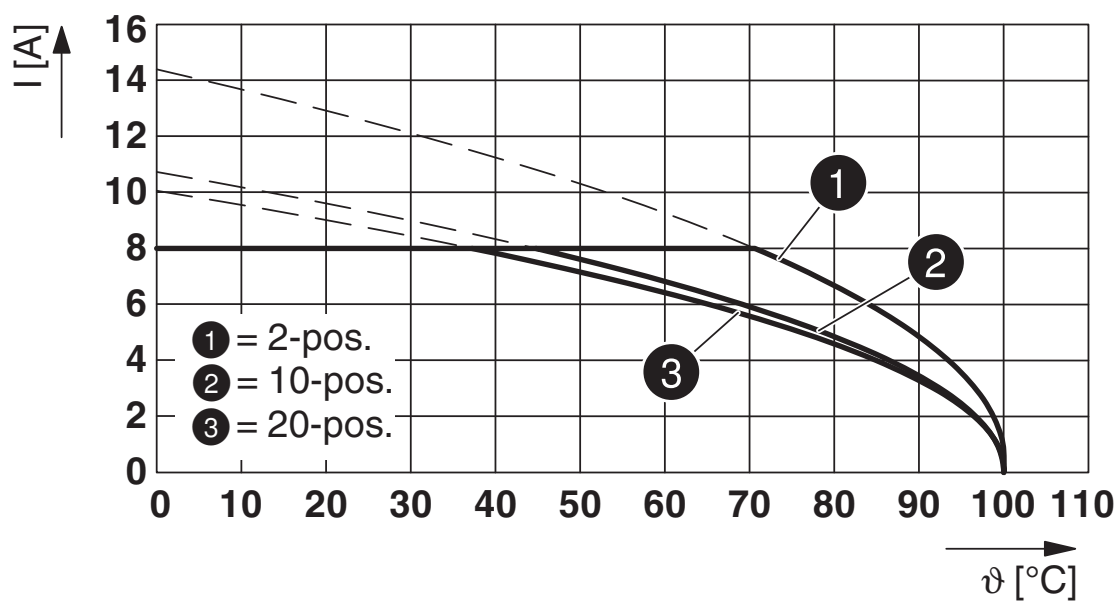
Drawings

Schematic diagram



Use of the CP-DMC... coding profile

Diagram



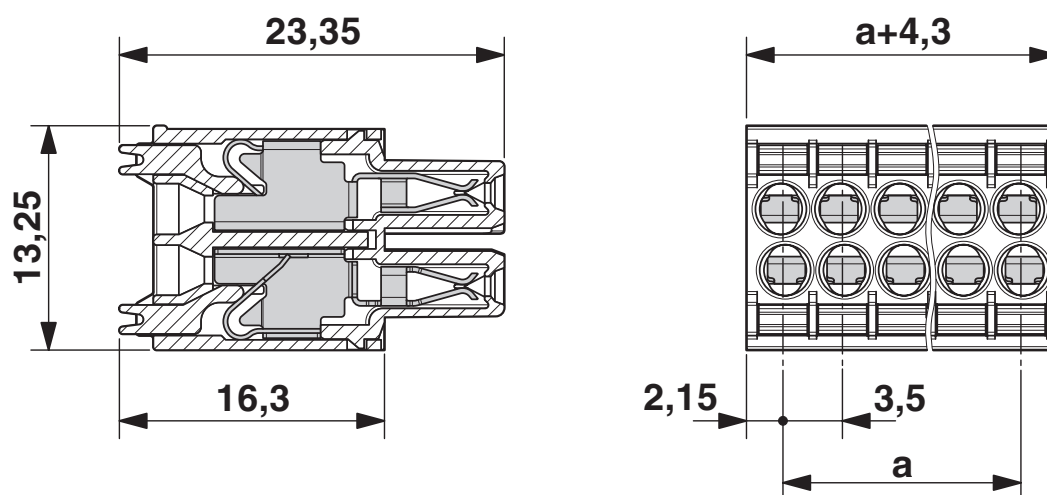
Type: DFMC 1,5/...-ST-3,5 with DMCV 1,5/...-G1-3,5 P35

DFMC 1,5/10-ST-3,5 - PCB connector

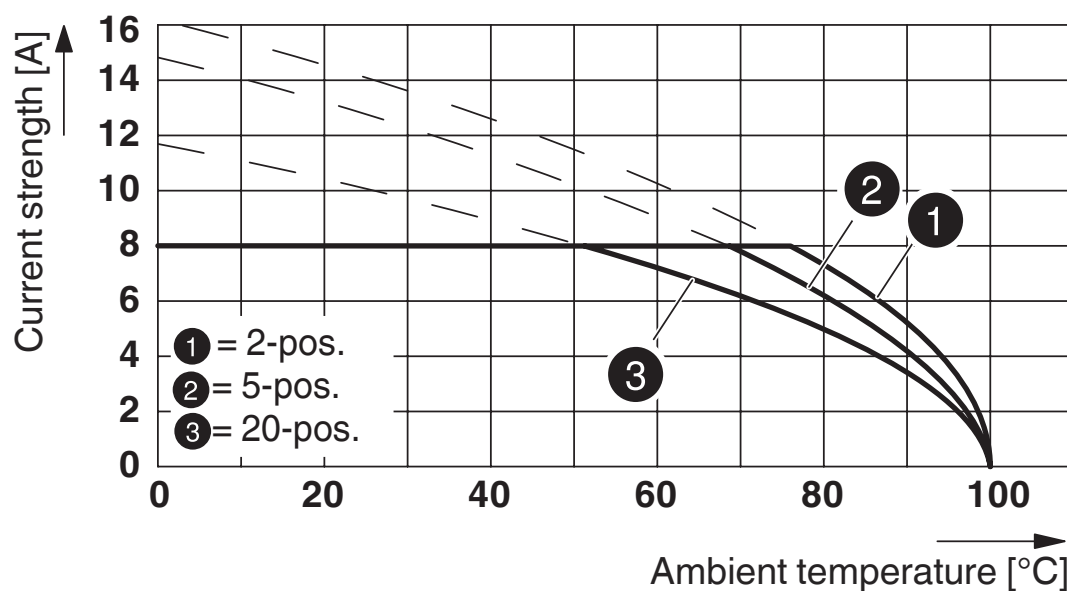
1790182

<https://www.phoenixcontact.com/de/produkte/1790182>

Dimensional drawing



Diagram

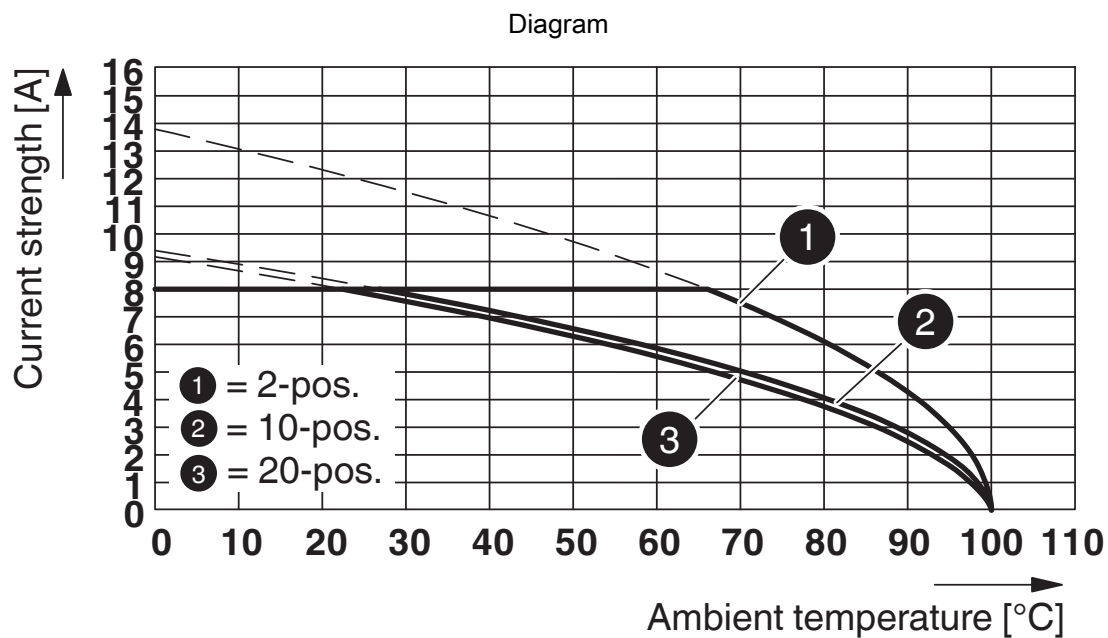


Type: DFMC 1,5/...-ST-3,5 with DMC 1,5/...-G1-3,5 P20 THR

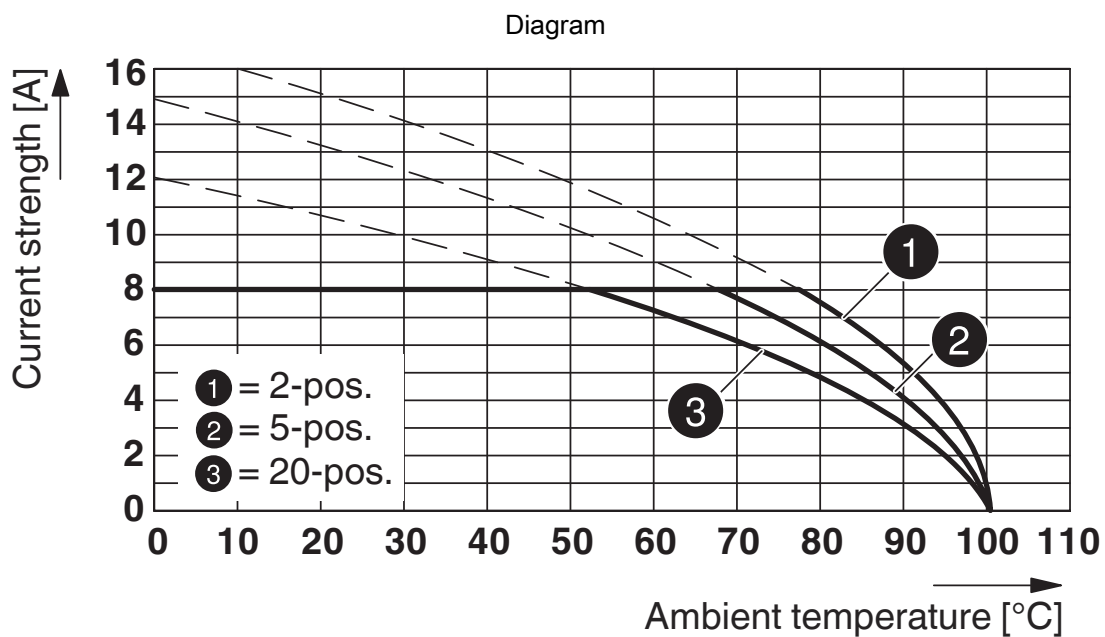
DFMC 1,5/10-ST-3,5 - PCB connector

1790182

<https://www.phoenixcontact.com/de/produkte/1790182>



Type: DFMC 1.5/...-ST-3.5 with DMC 1.5/...-G1-3.5 P35



Type: DFMC 1.5/...-ST-3.5 with DMCV 1.5/...-G1-3.5 P20 THR

DFMC 1,5/10-ST-3,5 - PCB connector



1790182

<https://www.phoenixcontact.com/de/produkte/1790182>

Approvals

	IECEE CB Scheme Approval ID: DE1-60359-B1B2			
	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	160 V	8 A	-	-

	EAC Approval ID: B.01687
---	------------------------------------

	cULus Recognized Approval ID: E60425-19920306			
	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
Use group B				
Standard	300 V	8 A	24 - 16	-
Use group C				
Factory wiring	50 V	8 A	24 - 16	-
Use group D				
Standard	300 V	8 A	24 - 16	-

	VDE Gutachten mit Fertigungsüberwachung Approval ID: 40038423			
	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	160 V	8 A	-	0.2 - 1.5

DFMC 1,5/10-ST-3,5 - PCB connector



1790182

<https://www.phoenixcontact.com/de/produkte/1790182>

Classifications

ECLASS

ECLASS-9.0	27440309
ECLASS-10.0.1	27440309
ECLASS-11.0	27460202

ETIM

ETIM 8.0	EC002638
----------	----------

UNSPSC

UNSPSC 21.0	39121400
-------------	----------

DFMC 1,5/10-ST-3,5 - PCB connector



1790182

<https://www.phoenixcontact.com/de/produkte/1790182>

Environmental Product Compliance

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

DFMC 1,5/10-ST-3,5 - PCB connector



1790182

<https://www.phoenixcontact.com/de/produkte/1790182>

Accessories

CP-DMC 1,5 NAT - Coding profile

1790647

<https://www.phoenixcontact.com/de/produkte/1790647>

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



SZS 0,4X2,5 VDE - Screwdriver

1205037

<https://www.phoenixcontact.com/de/produkte/1205037>

Screwdriver, slot-headed, VDE insulated, size: 0.4 x 2.5 x 80 mm, 2-component grip, with non-slip grip



DFMC 1,5/10-ST-3,5 - PCB connector

1790182

<https://www.phoenixcontact.com/de/produkte/1790182>



CRIMPFOX 6 - Crimping pliers

1212034

<https://www.phoenixcontact.com/de/produkte/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

DMC 1,5/10-G1-3,5 P20THR - PCB header

1786918

<https://www.phoenixcontact.com/de/produkte/1786918>



PCB headers, nominal cross section: 1.5 mm², color: black, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 20, number of rows: 2, number of positions: 10, number of connections: 20, product range: DMC 1,5/...-G1-THR, pitch: 3.5 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2 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

DFMC 1,5/10-ST-3,5 - PCB connector



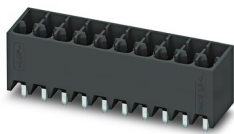
1790182

<https://www.phoenixcontact.com/de/produkte/1790182>

DMCV 1,5/10-G1-3,5 P20THR - PCB header

1787289

<https://www.phoenixcontact.com/de/produkte/1787289>



PCB headers, nominal cross section: 1.5 mm², color: black, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 20, number of rows: 2, number of positions: 10, number of connections: 20, product range: DMCV 1,5/...-G1-THR, pitch: 3.5 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2 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

DMC 1,5/10-G1-3,5 P20THR R56 - PCB header

1816182

<https://www.phoenixcontact.com/de/produkte/1816182>



PCB headers, nominal cross section: 1.5 mm², color: black, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 20, number of rows: 2, number of positions: 10, number of connections: 20, product range: DMC 1,5/...-G1-THR, pitch: 3.5 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2 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: 56 mm wide tape

DFMC 1,5/10-ST-3,5 - PCB connector

1790182

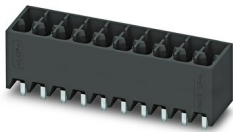
<https://www.phoenixcontact.com/de/produkte/1790182>



DMCV 1,5/10-G1-3,5 P20THR R56 - PCB header

1818656

<https://www.phoenixcontact.com/de/produkte/1818656>



PCB headers, nominal cross section: 1.5 mm², color: black, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 20, number of rows: 2, number of positions: 10, number of connections: 20, product range: DMCV 1,5/...-G1-THR, pitch: 3.5 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2 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: 56 mm wide tape

Phoenix Contact 2023 © - all rights reserved

<https://www.phoenixcontact.com>

PHOENIX CONTACT Deutschland GmbH

Flachmarktstraße 8

D-32825 Blomberg

+49 52 35/3-1 20 00

info@phoenixcontact.de