

DD21H 0,85/12-V-2,5-Z - PCB header



1378099

<https://www.phoenixcontact.com/us/products/1378099>

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.



PCB headers, color: black, nominal current: 5 A, rated voltage (III/2): 160 V, contact surface: Sn, contact connection type: Pin, number of rows: 2, number of positions: 12, product range: DD21H 0,85/..-V, pitch: 2.5 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.4 mm, number of solder pins per potential: 1, plug-in system: CONNEXIS DD, Pin connector pattern alignment: Standard, locking: Snap-in locking, mounting method: Engagement nose, type of packaging: packed in cardboard

Your advantages

- Well-known mounting principle allows worldwide use
- Vertical connection enables multi-row arrangement on the PCB
- Easy PCB replacement thanks to plug-in modules
- Intuitive locking mechanism prevents accidental disconnection

Commercial data

Item number	1378099
Packing unit	50 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)
Sales key	AA01
Product key	AAASXC
GTIN	4063151744779
Weight per piece (including packing)	9.3 g
Weight per piece (excluding packing)	3.41 g
Customs tariff number	85366990
Country of origin	CN

DD21H 0,85/12-V-2,5-Z - PCB header



1378099

<https://www.phoenixcontact.com/us/products/1378099>

Technical data

Product properties

Product type	PCB headers
Product family	DD21H 0,85/..-V
Product line	CONNEXIS Connectors XS
Number of positions	12
Pitch	2.5 mm
Number of rows	2
Pin layout	Linear pinning
Solder pins per potential	1

Electrical properties

Properties

Nominal current I_N	5 A
Nominal voltage U_N	160 V
Contact resistance	2 mΩ
Rated voltage (III/3)	40 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)	200 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 (3 - 5 μm Sn)
Metal surface contact area (middle layer)	Nickel (1.3 - 3 μm Ni)
Metal surface soldering area (top layer)	Tin (3 - 5 μm Sn)
Metal surface soldering area (middle layer)	Nickel (1.3 - 3 μm Ni)

Material data - housing

Color (Housing)	black (9005)
Insulating material	PBT
Insulating material group	II

DD21H 0,85/12-V-2,5-Z - PCB header



1378099

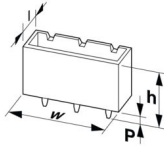
<https://www.phoenixcontact.com/us/products/1378099>

CTI according to IEC 60112	$400 \leq \text{CTI} < 600$
Flammability rating according to UL 94	V0

Notes

Note on the contact	These connectors conform to DIN EN 61984, connectors without switching capacity (COC). When used for their intended purpose, they must not be plugged in or disconnected live or under load.
---------------------	--

Dimensions

Dimensional drawing	
Pitch	2.5 mm
Width [w]	17.7 mm
Height [h]	21.19 mm
Length [l]	13.2 mm
Installed height	17.79 mm
Solder pin length [P]	3.4 mm
Pin dimensions	0.5 x 0.5 mm

PCB design

Hole diameter	2 mm
	0.8 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
---------------	------------------------

DD21H 0,85/12-V-2,5-Z - PCB header



1378099

<https://www.phoenixcontact.com/us/products/1378099>

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.	5 N
Withdraw strength per pos. approx.	4 N

Electrical tests

Thermal test | Test group C

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

Insulation resistance

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

Air clearances and creepage distances |

Specification	IEC 60664-1:2020-05
Insulating material group	II
Comparative tracking index (IEC 60112)	CTI ≥400 to <600
Rated insulation voltage (III/3)	40 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)	1.6 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)	200 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)	1.5 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)
Acceleration	50 m/s ² (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis

DD21H 0,85/12-V-2,5-Z - PCB header



1378099

<https://www.phoenixcontact.com/us/products/1378099>

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 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	105 °C/168 h
Power-frequency withstand voltage	1.39 kV

Shocks

Specification	IEC 60068-2-27:2008-02
Pulse shape	Half-sine
Acceleration	30g
Shock duration	11 ms
Test directions	X-, Y- and Z-axis (pos. and neg.)

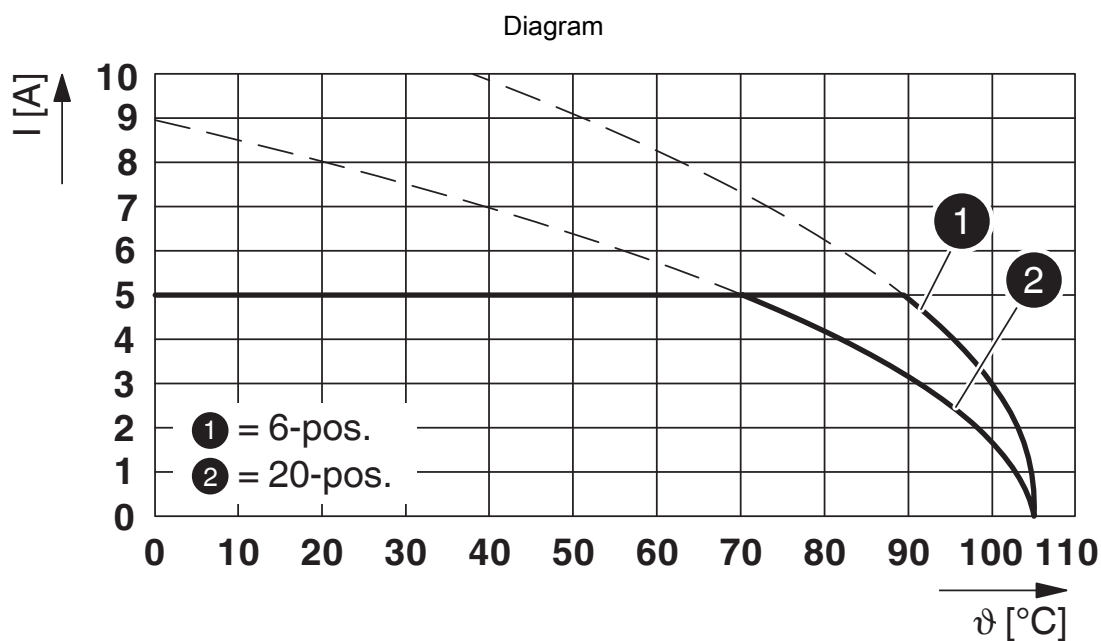
Ambient conditions

Ambient temperature (operation)	-55 °C ... 105 °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
-------------------	---------------------

Drawings



Type: DD21PC 0,85/...-2,5-Z with DD21H 0,85/...-V-2,5-Z

DD21H 0,85/12-V-2,5-Z - PCB header

1378099

<https://www.phoenixcontact.com/us/products/1378099>



Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1378099>

 UL Recognized Approval ID: E118976-20240611				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	125 V	4 A	-	-

DD21H 0,85/12-V-2,5-Z - PCB header



1378099

<https://www.phoenixcontact.com/us/products/1378099>

Classifications

ECLASS

ECLASS-13.0	27460201
ECLASS-15.0	27460201

ETIM

ETIM 9.0	EC002637
----------	----------

UNSPSC

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

DD21H 0,85/12-V-2,5-Z - PCB header



1378099

<https://www.phoenixcontact.com/us/products/1378099>

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%

Phoenix Contact 2025 © - all rights reserved
<https://www.phoenixcontact.com>

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com