

D31H 2,2/ 3-FH-3,81-Y - PCB connector



1341138

<https://www.phoenixcontact.com/us/products/1341138>

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 connector, color: black, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Sn, contact connection type: Pin, number of rows: 1, number of positions: 3, product range: D31H 2,2/..-FH, pitch: 3.81 mm, connection method: Crimp connection, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: CONNEXIS D, locking: Snap-in locking, mounting method: Engagement nose, type of packaging: packed in cardboard

Your advantages

- Cost-effective connection of crimped conductors in large quantities
- Small component size for applications where space is at a premium
- Intuitive locking mechanism prevents accidental disconnection
- Tools for automatic crimping available as an option

Commercial data

Item number	1341138
Packing unit	50 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)
Sales key	AA02
Product key	AABCUC
GTIN	4063151649708
Weight per piece (including packing)	5.741 g
Weight per piece (excluding packing)	5.047 g
Customs tariff number	85366990
Country of origin	CN

D31H 2,2/ 3-FH-3,81-Y - PCB connector



1341138

<https://www.phoenixcontact.com/us/products/1341138>

Technical data

Product properties

Product type	PCB connector
Product family	D31H 2,2/...-FH
Product line	CONNEXIS Connectors S
Number of positions	3
Pitch	3.81 mm
Number of rows	1

Electrical properties

Properties

Nominal current I_N	8 A
Nominal voltage U_N	160 V
Contact resistance	5 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)	320 V
Rated surge voltage (II/2)	2.5 kV

Connection data

Interlock

Locking type	Snap-in locking
Mounting flange	Engagement nose

Conductor connection

Connection method	Crimp connection
Conductor/PCB connection direction	0 °
Conductor cross section AWG	28 ... 14
Stripping length	4.5 mm

Material specifications

Material data - contact

Metal surface contact area (top layer)	Tin (Sn)
--	----------

Material data - housing

Color (Housing)	black (9005)
Insulating material	PBT
Insulating material group	II
CTI according to IEC 60112	400 ≤ CTI < 600
Flammability rating according to UL 94	V0

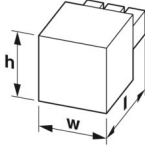
D31H 2,2/ 3-FH-3,81-Y - PCB connector



1341138

<https://www.phoenixcontact.com/us/products/1341138>

Dimensions

Dimensional drawing	
Pitch	3.81 mm
Width [w]	25.57 mm
Height [h]	12.7 mm
Length [l]	33.6 mm

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.
Note on application	All laboratory tests are performed in combination with the crimp contacts specified as accessories.
Note on application	The current depends on the crimp contact and conductor cross section used.
Note on application	The corresponding crimp contacts are to be found in the "Accessories" tab.

Mechanical tests

Tensile strength of crimp connections

Result	Test passed
Conductor cross section/conductor type/tractive force setpoint/actual value	AWG 28 / flexible / > 11 N

Insertion and withdrawal forces

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

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

D31H 2,2/ 3-FH-3,81-Y - PCB connector



1341138

<https://www.phoenixcontact.com/us/products/1341138>

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	50 m/s ² (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	2.95 kV
Contact resistance R ₁	5 mΩ
Contact resistance R ₂	5 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

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

Electrical tests

Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	10

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	II

D31H 2,2/ 3-FH-3,81-Y - PCB connector



1341138

<https://www.phoenixcontact.com/us/products/1341138>

Comparative tracking index (IEC 60112)	CTI ≥ 400 to < 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)	2.2 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)	2.2 mm

Packaging specifications

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

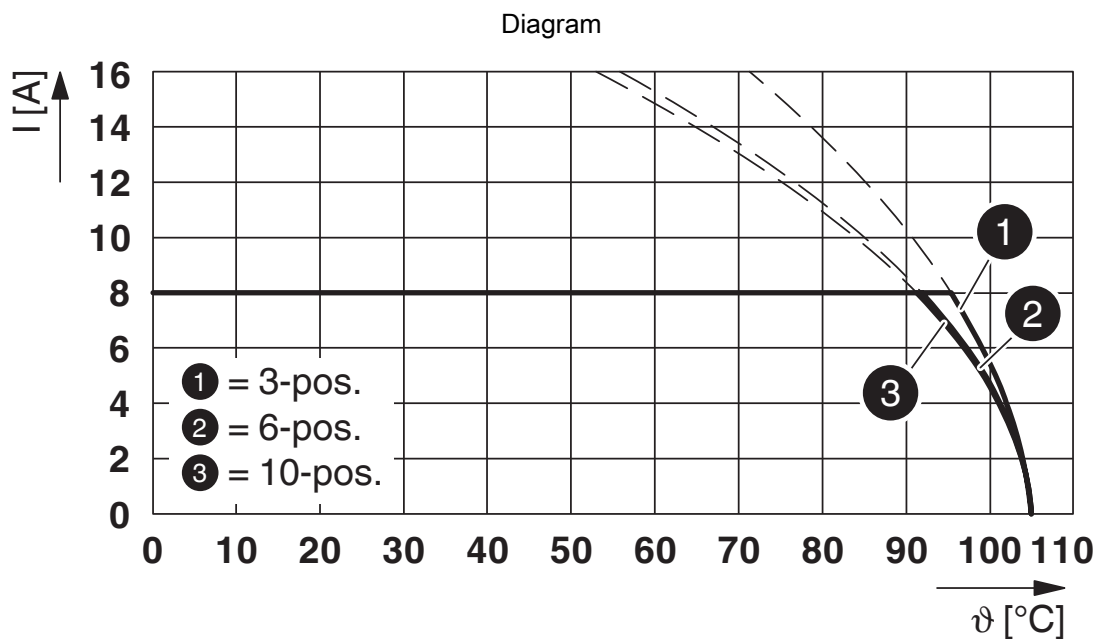
D31H 2,2/ 3-FH-3,81-Y - PCB connector



1341138

<https://www.phoenixcontact.com/us/products/1341138>

Drawings



Type: D31PC 2,2/...-3,81-Y with D31H 2,2/...-FH-3,81-Y

D31H 2,2/ 3-FH-3,81-Y - PCB connector



1341138

<https://www.phoenixcontact.com/us/products/1341138>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1341138>

	UL Recognized Approval ID: E118976-20240617			
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	250 V	12.25 A	14	-

D31H 2,2/ 3-FH-3,81-Y - PCB connector



1341138

<https://www.phoenixcontact.com/us/products/1341138>

Classifications

ECLASS

ECLASS-13.0	27460202
-------------	----------

ETIM

ETIM 9.0	EC002638
----------	----------

D31H 2,2/ 3-FH-3,81-Y - PCB connector



1341138

<https://www.phoenixcontact.com/us/products/1341138>

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