

# DD31H 2,2/ 6-PT-3,81-X - Feed-through plug



1340629

<https://www.phoenixcontact.com/us/products/1340629>

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.



Feed-through connector, color: black, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Sn, contact connection type: Pin, number of rows: 2, number of positions: 6, product range: DD31H 2,2/...-PT, pitch: 3.81 mm, connection method: Crimp connection, conductor/PCB connection direction: 0 °, pin layout: Linear pinning, locking clip: - without locking clip, 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

- Cost-effective connection of crimped conductors in large quantities
- Small component size for applications where space is at a premium
- Contacts arranged in a double row enable high packing density in a compact area
- Intuitive locking mechanism prevents accidental disconnection
- Tools for automatic crimping available as an option

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1340629                        |
| Packing unit                         | 50 pc                          |
| Minimum order quantity               | 50 pc                          |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | AA02                           |
| Product key                          | AABCUG                         |
| GTIN                                 | 4063151647810                  |
| Weight per piece (including packing) | 7.924 g                        |
| Weight per piece (excluding packing) | 8.021 g                        |
| Customs tariff number                | 85366990                       |
| Country of origin                    | CN                             |

# DD31H 2,2/ 6-PT-3,81-X - Feed-through plug



1340629

<https://www.phoenixcontact.com/us/products/1340629>

## Technical data

### Product properties

|                     |                        |
|---------------------|------------------------|
| Product type        | Feed-through connector |
| Product family      | DD31H 2,2/...-PT       |
| Product line        | CONNEXIS Connectors S  |
| Number of positions | 6                      |
| Pitch               | 3.81 mm                |
| Number of rows      | 2                      |
| Pin layout          | Linear pinning         |

### 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 type | Engagement nose |

#### Conductor connection

|                             |                  |
|-----------------------------|------------------|
| Connection method           | Crimp connection |
| Conductor cross-section AWG | 28 ... 14        |
| Stripping length            | 4.5 mm           |

### Mounting

|            |                |
|------------|----------------|
| Pin layout | Linear pinning |
|------------|----------------|

### Material specifications

#### Material data - contact

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

#### Material data - housing

|                     |              |
|---------------------|--------------|
| Color (Housing)     | black (9005) |
| Insulating material | PBT          |

# DD31H 2,2/ 6-PT-3,81-X - Feed-through plug



1340629

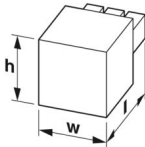
<https://www.phoenixcontact.com/us/products/1340629>

|                                        |                             |
|----------------------------------------|-----------------------------|
| Insulating material group              | II                          |
| 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 power (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.                                                                                                                |

## Dimensions

|                     |                                                                                     |
|---------------------|-------------------------------------------------------------------------------------|
| Dimensional drawing |  |
| Pitch               | 3.81 mm                                                                             |
| Width [w]           | 40 mm                                                                               |
| Height [h]          | 17.78 mm                                                                            |
| Length [l]          | 33.6 mm                                                                             |

## 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

|                                     |             |
|-------------------------------------|-------------|
| Result                              | Test passed |
| No. of cycles                       | 25          |
| Insertion strength per pos. approx. | 6 N         |
| Withdraw strength per pos. approx.  | 6 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            |

# DD31H 2,2/ 6-PT-3,81-X - Feed-through plug



1340629

<https://www.phoenixcontact.com/us/products/1340629>

## 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           |

## 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 60664-1:2007-04 |
| Insulating material group                              | II                  |
| 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              |

## 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) |

# DD31H 2,2/ 6-PT-3,81-X - Feed-through plug



1340629

<https://www.phoenixcontact.com/us/products/1340629>

|                        |                                          |
|------------------------|------------------------------------------|
| Acceleration           | 50 m/s <sup>2</sup> (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 <sub>1</sub>           | 5 mΩ                  |
| Contact resistance R <sub>2</sub>           | 5 mΩ                  |
| Contact resistance R <sub>2</sub> 2nd level | 5 mΩ                  |
| Insertion/withdrawal cycles                 | 25                    |

## Climatic test

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

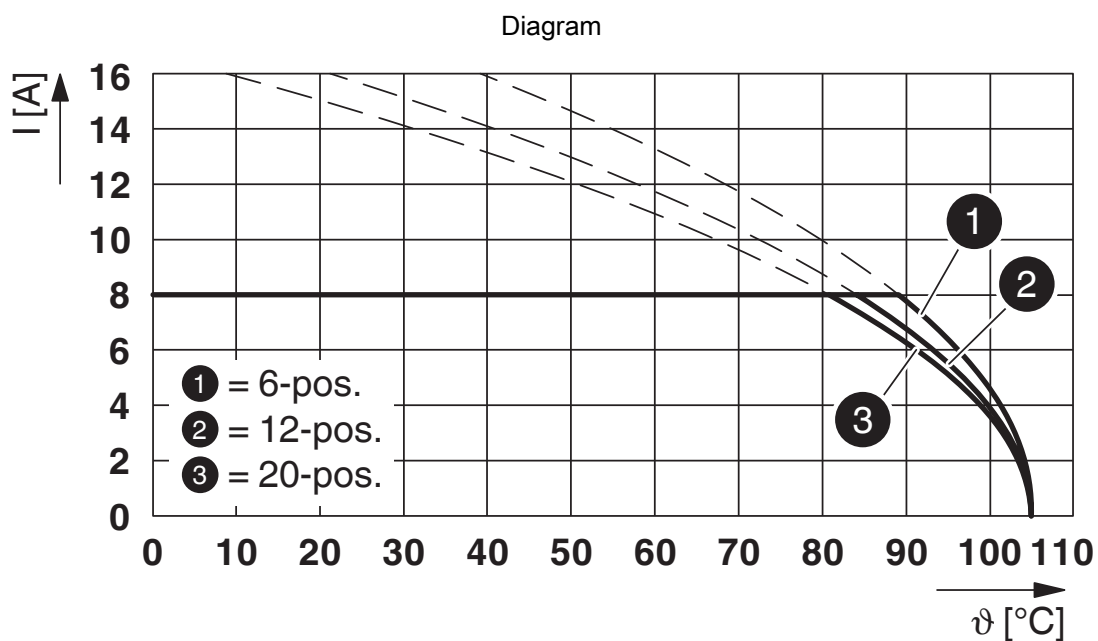
## Ambient conditions

|                                         |                                                     |
|-----------------------------------------|-----------------------------------------------------|
| 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                                    |

## Packaging specifications

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

## Drawings



Type: DD31PC 2,2/...-3,81-X with DD31H 2,2/...-PT-3,81-X

# DD31H 2,2/ 6-PT-3,81-X - Feed-through plug



1340629

<https://www.phoenixcontact.com/us/products/1340629>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1340629>

|                                                                                                                                           |                                |                                |                   |                               |
|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------------------------|-------------------|-------------------------------|
|  <b>cULus Recognized</b><br>Approval ID: E60425-20240617 |                                |                                |                   |                               |
|                                                                                                                                           | Nominal voltage U <sub>N</sub> | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
| B                                                                                                                                         |                                |                                |                   |                               |
| Factory wiring                                                                                                                            | 150 V                          | 8 A                            | 24 - 16           | -                             |

|                                                                                                                                         |                                |                                |                   |                               |
|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------------------------|-------------------|-------------------------------|
|  <b>UL Recognized</b><br>Approval ID: E118976-20240617 |                                |                                |                   |                               |
|                                                                                                                                         | Nominal voltage U <sub>N</sub> | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
| keine                                                                                                                                   |                                |                                |                   |                               |
|                                                                                                                                         | 250 V                          | 9.75 A                         | 14                | -                             |

# DD31H 2,2/ 6-PT-3,81-X - Feed-through plug



1340629

<https://www.phoenixcontact.com/us/products/1340629>

## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27460202 |
| ECLASS-15.0 | 27460202 |

### ETIM

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

### UNSPSC

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

# DD31H 2,2/ 6-PT-3,81-X - Feed-through plug



1340629

<https://www.phoenixcontact.com/us/products/1340629>

## 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](mailto:info@phoenixcon.com)