

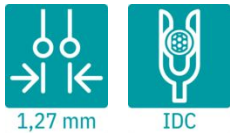
# FP 1,27/ 40-FWL-21/.../... - Preassembled IDC female connector



1010204

<https://www.phoenixcontact.com/us/products/1010204>

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Assembled IDC female connector, rated current: 1.2 A, cable length: Free input (0.05 ... 0.95 m), Cable type: Flat cable, For preassembled samples, see the "Accessories" tab., product range: FR 1,27/...-Cabling

The figure shows a 12-pos. version with 12 contacts

## Your advantages

- Gold-plated contacts ensure transfer quality remains stable over the long term
- Compact, high-position board-to-board or wire-to-board connectors for space-saving device designs
- Can be ordered pre-assembled: IDC female connectors with flat-ribbon cable enable immediate use in the device

## Commercial data

|                        |                                |
|------------------------|--------------------------------|
| Item number            | 1010204                        |
| Packing unit           | 50 pc                          |
| Minimum order quantity | 100 pc                         |
| Note                   | Made to order (non-returnable) |
| Sales key              | AA24                           |
| Product key            | AAXPAA                         |
| Customs tariff number  | 85444290                       |
| Country of origin      | DE                             |

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## Technical data

### Product properties

|                     |                                |
|---------------------|--------------------------------|
| Product type        | Assembled IDC female connector |
| Product family      | FR 1,27/...-Cabling            |
| Number of positions | 40                             |
| Pitch               | 1.27 mm                        |
| Number of rows      | 2                              |

### Electrical properties

#### Properties

|                       |   |
|-----------------------|---|
| Nominal current $I_N$ | 1.2 A IEC 60512-5-2:2002-02 (at 20°C 50-pos.) |
| Contact resistance    | 10 mΩ   |
| Test voltage          | 500 V AC IEC 60512-4-1:2003-05                |

### Notes

|                              |  |
|------------------------------|--|
| Note on application          | Please observe the application note on self-assembly in the download area.   |
| Note regarding documentation | Current documents such as 3D models, products family drawings, data sheets or packaging drawings are available in the Download Center.   |
| Notes on operation           | The permissible voltage during operation depends on the application, taking into consideration the air clearances and creepage distances within the scope of insulation requirements in accordance with IEC 60664-1. |

### Dimensions

|       |         |
|-------|---------|
| Pitch | 1.27 mm |
|-------|---------|

#### Application

|                   |   |
|-------------------|---|
| Center offset     | ± 0.7 mm in longitudinal and transverse direction |
| Angular tolerance | ± 4 ° in longitudinal direction                   |
|                   | ± 2 ° in transverse direction                     |

### Mechanical tests

#### Insertion and withdrawal forces

|                                     |             |
|-------------------------------------|-------------|
| Result                              | Test passed |
| No. of cycles                       | 500         |
| Insertion strength per pos. approx. | 0.5 N       |
| Withdraw strength per pos. approx.  | 0.5 N       |

### Electrical tests

Thermal test | Test group C

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|                            |                       |
|----------------------------|-----------------------|
| Specification              | IEC 60512-5-2:2002-02 |
| Tested number of positions | 50                    |

## Insulation resistance

|  |                       |
|--|-----------------------|
| Specification                                | IEC 60512-3-1:2002-02 |
| Insulation resistance, neighboring positions | ≥ 10 GΩ               |

## Environmental and real-life conditions

### Durability test

|  |                                   |
|--|-----------------------------------|
| Specification                                | IEC 60512-9-1:2010-03 (following) |
| Impulse withstand voltage at sea level       | 0.8 kV                            |
| Contact resistance R <sub>1</sub>            | 10 mΩ                             |
| Contact resistance R <sub>2</sub>            | 10 mΩ                             |
| Insertion/withdrawal cycles                  | 500                               |
| Insulation resistance, neighboring positions | ≥ 10 GΩ                           |

### Climatic test

|                                   |                        |
|-----------------------------------|------------------------|
| Specification                     | IEC 60512-11-7:2003-05 |
| Corrosive stress                  | Method 1, 10 days      |
| Power-frequency withstand voltage | 500 V AC               |

### Vibration test

|                        |                            |
|------------------------|----------------------------|
| Specification          | IEC 60068-2-6:2007-12      |
| Frequency              | 10 - 2000 - 10 Hz          |
| Sweep speed            | 1 octave/min               |
| Amplitude              | 1.5 mm (10 Hz ... 60.1 Hz) |
| Acceleration           | 20g (60.1 Hz ... 2000 Hz)  |
| Test duration per axis | 2.5 h                      |
| Test directions        | X-, Y- and Z-axis          |

### Shocks

|                 |                                   |
|-----------------|-----------------------------------|
| Specification   | IEC 60068-2-27:2008-02            |
| Pulse shape     | Semi-sinusoidal                   |
| Acceleration    | 50g                               |
| Shock duration  | 11 ms                             |
| Test directions | X-, Y- and Z-axis (pos. and neg.) |

### Ambient conditions

|   |                   |
|---|-------------------|
| Ambient temperature (storage/transport) | -40 °C ... 70 °C  |
| Relative humidity (storage/transport)   | 30 % ... 70 %     |
| Ambient temperature (assembly)          | -5 °C ... 100 °C  |
| Ambient temperature (operation)         | -55 °C ... 125 °C |

### Ambient conditions

|                                 |                   |
|---------------------------------|-------------------|
| Ambient temperature (operation) | -55 °C ... 125 °C |
|---------------------------------|-------------------|

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|---|------------------|
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## Connector

### Connection 1

|                            |     |
|----------------------------|-----|
| Insulating material        | LCP |
| CTI according to IEC 60112 | 175 |

## Cable/line

|              |                              |
|--------------|------------------------------|
| Cable length | Free input (0.05 ... 0.95 m) |
|--------------|------------------------------|

### Flat cable [PVC]

|   |                          |
|---|--------------------------|
| Note                                      | Coded wire: red          |
| UL AWM Style                              | 2678                     |
| Shielded                                  | no                       |
| Cable type                                | Flat cable [PVC]         |
| Conductor structure                       | 40 mm x 7 mm x 0.102 mm  |
| Conductor structure signal line           | 7x 0.10 mm               |
| AWG signal line                           | 30                       |
| Conductor cross-section                   | 0.06 mm <sup>2</sup>     |
| Wire diameter incl. insulation            | 0.66 mm                  |
| External sheath, color                    | gray                     |
| Conductor material                        | Tin-plated Cu litz wires |
| Material wire insulation                  | PVC                      |
| Pitch                                     | 0.635 mm                 |
| Max. conductor resistance                 | ≤ 354 Ω/m                |
| Insulation resistance                     | ≥ 20 MΩ*km               |
| Test voltage Core/Core                    | 1500 V                   |
| Flame resistance                          | UL VW-1                  |
| Ambient temperature (mobile installation) | -10 °C ... 105 °C        |
| Ambient temperature (installation)        | -30 °C ... 105 °C        |

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## Classifications

### ECLASS

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

### UNSPSC

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

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## 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% |
|-------------------------------------|----------------------------|

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