

FR 1,27/ 32-FWL - IDC female connectors



1378549

<https://www.phoenixcontact.com/us/products/1378549>

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IDC female connector, nominal current: 1.4 A, Test voltage: 500 V AC, number of positions: 32, pitch: 1.27 mm, color: black, contact surface: Gold, contact connection type: Socket



Your advantages

- Time savings during the development process with customer-specific simulations for data integrity
- Design-in support during device development using MCAD/ECAD data and a free sample service
- Can be ordered pre-assembled: IDC female connectors with flat-ribbon cable enable immediate use in the device
- Gold-plated contacts ensure transfer quality remains stable over the long term

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 1378549 |
| Packing unit | 88 pc |
| Minimum order quantity | 88 pc |
| Sales key | AA24 |
| Product key | AAXMAA |
| GTIN | 4063151746483 |
| Weight per piece (including packing) | 2.46 g |
| Weight per piece (excluding packing) | 2.22 g |
| Customs tariff number | 85366990 |
| Country of origin | CN |

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Technical data

Notes

| | |
|------------------------------|--|
| Note regarding documentation | Current documents such as 3D models, products family drawings, data sheets or packaging drawings are available in the Download Center. |
|------------------------------|--|

Product properties

| | |
|---------------------|----------------------|
| Product type | IDC female connector |
| Product family | FR 1,27/...-FWL |
| Number of positions | 32 |
| Pitch | 1.27 mm |
| Number of rows | 2 |

Electrical properties

| | |
|-----------------------|---|
| Nominal current I_N | 1.4 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 |

Connection data

Conductor connection

| | |
|-----------------------------|-------------------------|
| Connection method | Displacement connection |
| Conductor cross section AWG | 30 |

Interlock

| | |
|-----------------|---------------------|
| Locking type | Snap-in locking |
| Mounting flange | Self-locking flange |

Dimensions

| | |
|------------|----------|
| Pitch | 1.27 mm |
| Width [w] | 26.67 mm |
| Height [h] | 14.55 mm |
| Length [l] | 5 mm |

Application

| | |
|-------------------|---|
| Contact cover | 0.9 mm |
| Center offset | ± 0.7 mm in longitudinal and transverse direction |
| Angular tolerance | ± 5 ° in longitudinal and transverse direction |

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 | Selective coating |

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| | |
|---|-------------|
| Metal surface contact area (top layer) | Gold (Au) |
| Metal surface contact area (middle layer) | Nickel (Ni) |
| Metal surface soldering area (top layer) | Tin (Sn) |
| Metal surface soldering area (middle layer) | Nickel (Ni) |

Material data - housing

| | |
|--|--------------|
| Color (Housing) | black (9005) |
| Insulating material | LCP |
| Insulating material group | IIIb |
| CTI according to IEC 60112 | 150 |
| Flammability rating according to UL 94 | V0 |

Connector

Connection 1

| | |
|----------------------------|-----|
| Insulating material | LCP |
| CTI according to IEC 60112 | 150 |

Electrical tests

Thermal test | Test group C

| | |
|---------------|-----------------------|
| Specification | IEC 60512-5-2:2002-02 |
|---------------|-----------------------|

Insulation resistance

| | |
|--|--------------------------|
| Specification | IEC 60512-3-1:2002-02 |
| Insulation resistance, neighboring positions | $\geq 5 \text{ G}\Omega$ |

Air clearances and creepage distances |

| | |
|---|---------|
| Insulating material group | IIIb |
| Minimum value for clearance and creepage distance | 0.32 mm |

Environmental and real-life conditions

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 ... 58 Hz) |
| Acceleration | 200 m/s ² (58 Hz ... 2000 Hz) |
| Test duration per axis | 1 h |

Durability test

| | |
|--|-----------------------------------|
| Specification | IEC 60512-9-1:2010-03 (following) |
| Contact resistance R_1 | 10 m Ω |
| Contact resistance R_2 | 12 m Ω |
| Insertion/withdrawal cycles | 500 |
| Insulation resistance, neighboring positions | $\geq 5 \text{ G}\Omega$ |

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Shocks

| | |
|-----------------|-----------------------------------|
| Specification | IEC 60068-2-27:2008-02 |
| Pulse shape | Semi-sinusoidal |
| Acceleration | 490 m/s ² |
| Shock duration | 11 ms |
| Test directions | X-, Y- and Z-axis (pos. and neg.) |

Ambient conditions

| | |
|---|-------------------|
| Ambient temperature (operation) | -55 °C ... 125 °C |
| 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 | Tray |
| Outer packaging type | Carton |

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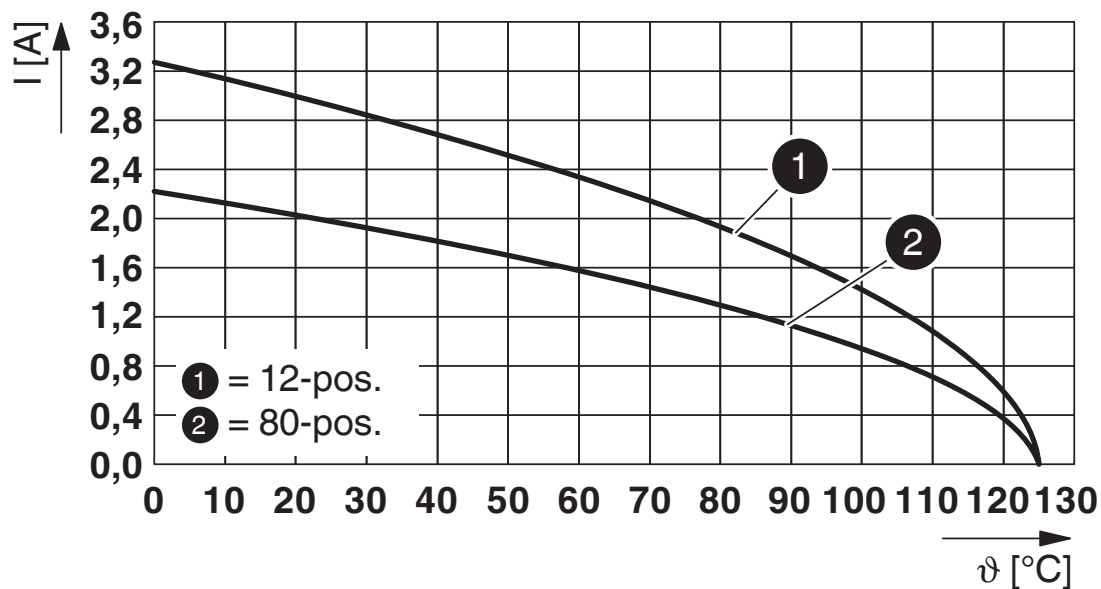
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Drawings

Diagram



Type: FR 1,27/...-FWL with FR 1,27/...-MV 3,25

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1378549>

|  cUL Recognized Approval ID: E118976-20230317 | | | | |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| Only flexible conductors | 29.9 V | 1.4 A | - 30 | - |

|  UL Recognized Approval ID: E118976-20230317 | | | | |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| Only flexible conductors | 29.9 V | 2 A | - 30 | - |

| cULus Recognized | | | | |
|-------------------------|--|--|--|--|
|-------------------------|--|--|--|--|

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-11.0 | 27460202 |
| ECLASS-12.0 | 27460202 |
| ECLASS-13.0 | 27460202 |

ETIM

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

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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Mandatory accessories

FR 1,27/ 32-MV 3,25 - SMD male connectors

1337147

<https://www.phoenixcontact.com/us/products/1337147>

SMD male connector, nominal current: 2.2 A, Test voltage: 840 V AC, number of positions: 32, pitch: 1.27 mm, color: black, contact surface: Gold, contact connection type: Pin, mounting: SMD soldering



FR 1,27/ 32-MH - SMD male connectors

1377301

<https://www.phoenixcontact.com/us/products/1377301>

SMD male connector, nominal current: 2 A, Test voltage: 500 V AC, number of positions: 32, pitch: 1.27 mm, color: black, contact surface: Gold, contact connection type: Pin, mounting: SMD soldering



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FR 1,27/ 32-MV 1,75 - SMD male connectors

1373886

<https://www.phoenixcontact.com/us/products/1373886>

SMD male connector, nominal current: 2.2 A, Test voltage: 840 V AC, number of positions: 32, pitch: 1.27 mm, color: black, contact surface: Gold, contact connection type: Pin, mounting: SMD soldering



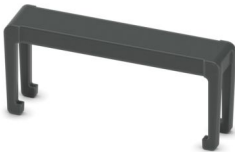
Accessories

FR 1,27/ 32-SR - Strain relief

1399645

<https://www.phoenixcontact.com/us/products/1399645>

Strain relief, number of positions: 32, pitch: 1.27 mm, color: black



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FR 1,27 CA - Preassembled IDC female connector

1498845

<https://www.phoenixcontact.com/us/products/1498845>



Assembled IDC female connector, rated current: 1.4 A, cable length: Free input (0.05 ... 0.95 m). For preassembled samples, see the "Accessories" tab.

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