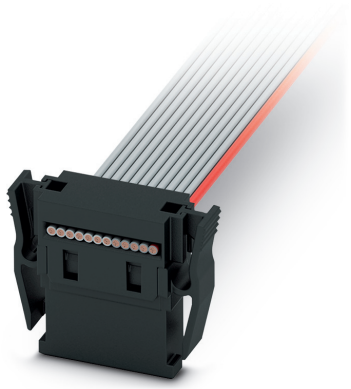
2020-02-26
Product version 00
Document revision 02

Data sheet

Order No.: 1010231

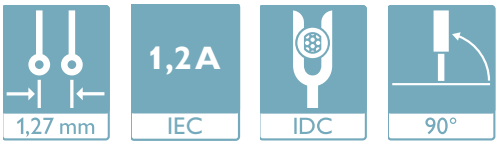
Type: FP 1,27/ 20-FWL-20/.../...

Assembled IDC female connector, Displacement connection



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

1 Main features



- No. of pos. 20
- Connection method Displacement connection
- Color black (9005)
- Pitch 1.27 mm
- Assembly Assembly variant 20
- Nominal current 1.2 A
- Test voltage 500 V AC
- Connection direction
- Type of packaging

2 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

Make sure you always use the latest documentation.
It can be downloaded at: phoenixcontact.net/product/1010231

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4 General Technical Data

4.1 item properties

Order No.	1010231
Type	FP 1,27/ 20-FWL-20/.../...
Plug-in system	FINEPITCH 1,27 mm
Product type	Assembled IDC female connector
Type of contact	Female connector
Range of articles	FP 1,27/...-FWL
Pitch	1.27 mm
Range of positions	12...80
Number of positions	20
Number of levels	2
Connection method	Displacement connection
Type of locking	Snap-in locking
	Self-locking flange
Connection direction of the conductor to the PCB	90 °

4.2 General information

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.

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5 Mechanical tests

5.1 Insertion and withdrawal force per contact

Insertion and withdrawal force per contact	approx. 0.5 N

5.2 Service life

Service life	500 Insertion/withdrawal cycles, Performance level 1

5.3 Electrical data

Nominal current at 20 °C	1.2 A IEC 60512-5-2:2002-02 (50-pos.)
Test voltage	500 V AC IEC 60512-4-1:2003

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6 Current carrying capacity/derating curves

6.1 Insulation resistance

Insulation resistance	≥ 10 GΩ, (IEC 60512-3-1:2002-02)

6.2 forward resistance

Contact resistance	≤10 mΩ, (IEC 60512-2-1:2002-02)

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7 Environmental and durability tests

7.1 Vibration test

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

7.2 Shock test

Specification	IEC 60068-2-27:2008-02
Result	Test passed
Pulse shape	Semi-sinusoidal
Peak acceleration	50g
Shock duration	11 ms
Number of shocks per direction	3
Test directions	X-, Y- and Z-axis (pos. and neg.)

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8 Cable, properties

Flat-ribbon conductor [PVC]	
Cable structure	20 x 7 x 0.102 mm
Variable cable length	Free input (0.05 ... 0.95 m)
Pitch	0.635 mm
Cable cross section	0.06 mm²
Conductor cross section AWG	30
External sheath, color	gray
Conductor material	Tin-plated Cu litz wires
Note	Coded wire: red
Test voltage Core/Core	1500 V
Flame resistance	UL VW-1
UL AWM Style	2678

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9 Approvals / Certificates

cULus Recognized	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm²]
	-	-	-	-
EAC				

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10 Commercial Data

Order No.	1010231
Type	FP 1,27/ 20-FWL-20/.../...
Pieces per package	100
Net weight	0 g
GTIN	
	Information that applies locally, see link on page 1
Country of origin	Information that applies locally, see link on page 1

11 matching counterparts

Order No.	Type
1714927	FP 1,27/ 20-MV 3,25
1714937	FP 1,27/ 20-MV 1,75
1714915	FP 1,27/ 20-MH

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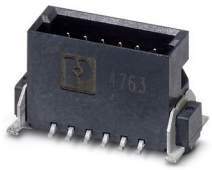
12 Combination tests

				
FP 1,27/...-FWL	**FP 1,27/...-MH**	**FP 1,27/...-MV 1,75**	**FP 1,27/...-MV 3,25**	
Mechanical tests				
Insertion/withdrawal force per position	approx. 0.5 N / 0.5 N	approx. 0.5 N / 0.5 N	approx. 0.5 N / 0.5 N	
Durability tests				
Contact resistance R_1	10 mΩ	10 mΩ	10 mΩ	
Insertion/withdrawal cycles	500	500	500	
Contact resistance R_2	10 mΩ	10 mΩ	10 mΩ	
Test voltage	500 V AC	500 V AC	500 V AC	
Thermal tests				
Tested number of positions	50	50	50	
Test current	1.4 A	1.4 A	1.4 A	

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