Connectivity for all dimensions

Robust FINEPITCH series board-to-board connectors

PHOENIX CONTACT
INSPIRING INNOVATIONS

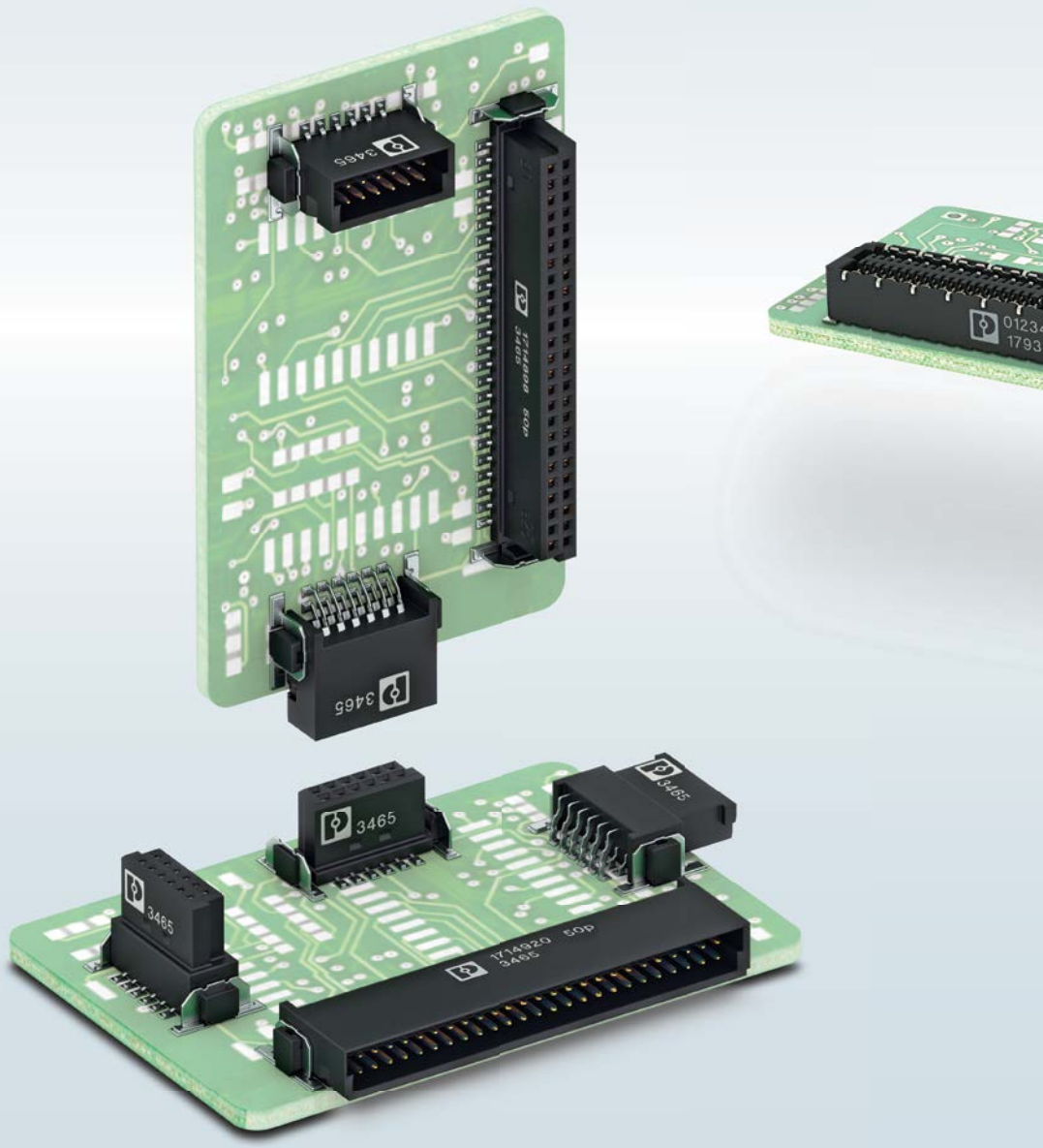
The best connectivity for all dimensions

With FINEPITCH series board-to-board connectors, Phoenix Contact provides shielded and unshielded solutions for signal and data transmission in the device for the first time. This allows you to realize individual PCB orientations with different designs, stack heights, and numbers of positions in compact 0.8 and 1.27 mm pitches.

Web code:
#1520

FINEPITCH 1.27 unshielded

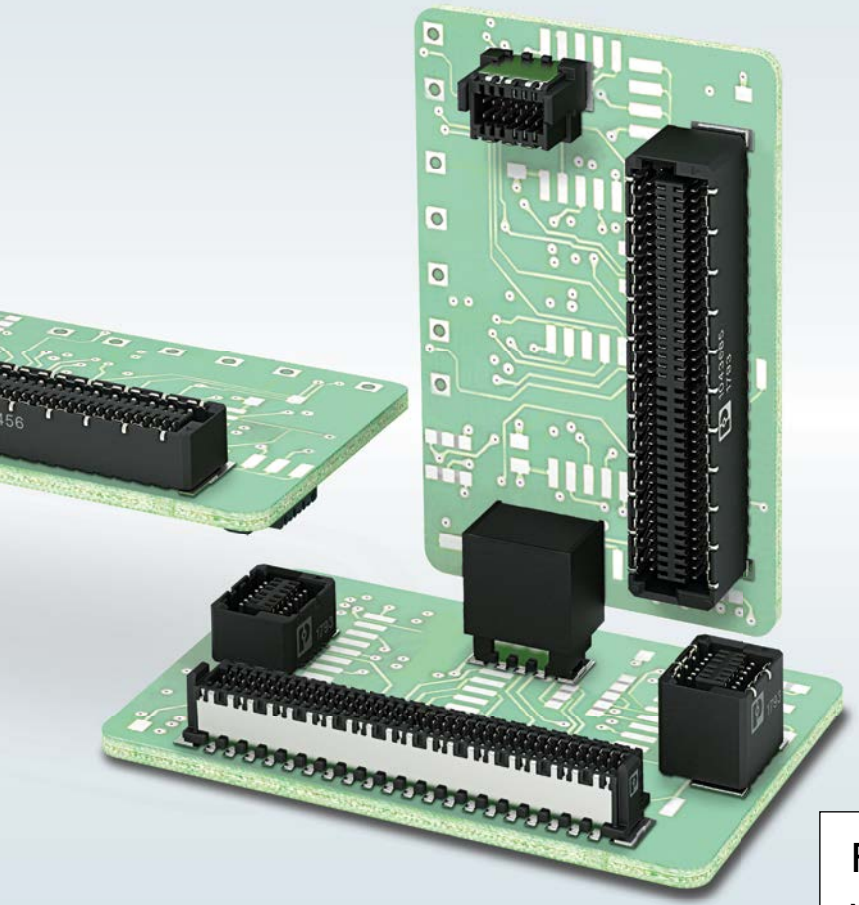
- For flexible board-to-board and wire-to-board connections
- For 1.27 mm pitch
- For high contact density from 12-pos. to 80-pos.
- For stack heights from 8 to 13.8 mm



Web code: #2069

FINEPITCH 0.8 shielded

- For robust high-speed board-to-board connections
- For 0.8 mm pitch
- For high contact density from 12-pos. to 80-pos.
- For stack heights from 6 to 12 mm
- For data transmission up to 16 Gbps
- With shielding for excellent EMC properties



Contents

Find out more with the web code

For detailed information, use the web codes provided in this brochure. Simply enter # and the four-digit number in the search field on our website.

Web code: #1520 (example)

Or use the direct link:
phoenixcontact.com/webcode/#1520

The right connection for flexible device design

Thanks to its double-sided contact system, the high-position FINEPITCH series offers the ideal solution for industrial PCB connections. You have maximum flexibility when it comes to arranging the PCBs in your device, and the wide range of FINEPITCH products enables space-saving signal and data transmission. In addition, the shielded versions offer excellent EMC properties.

I/Os

PLCs

Frequency converters

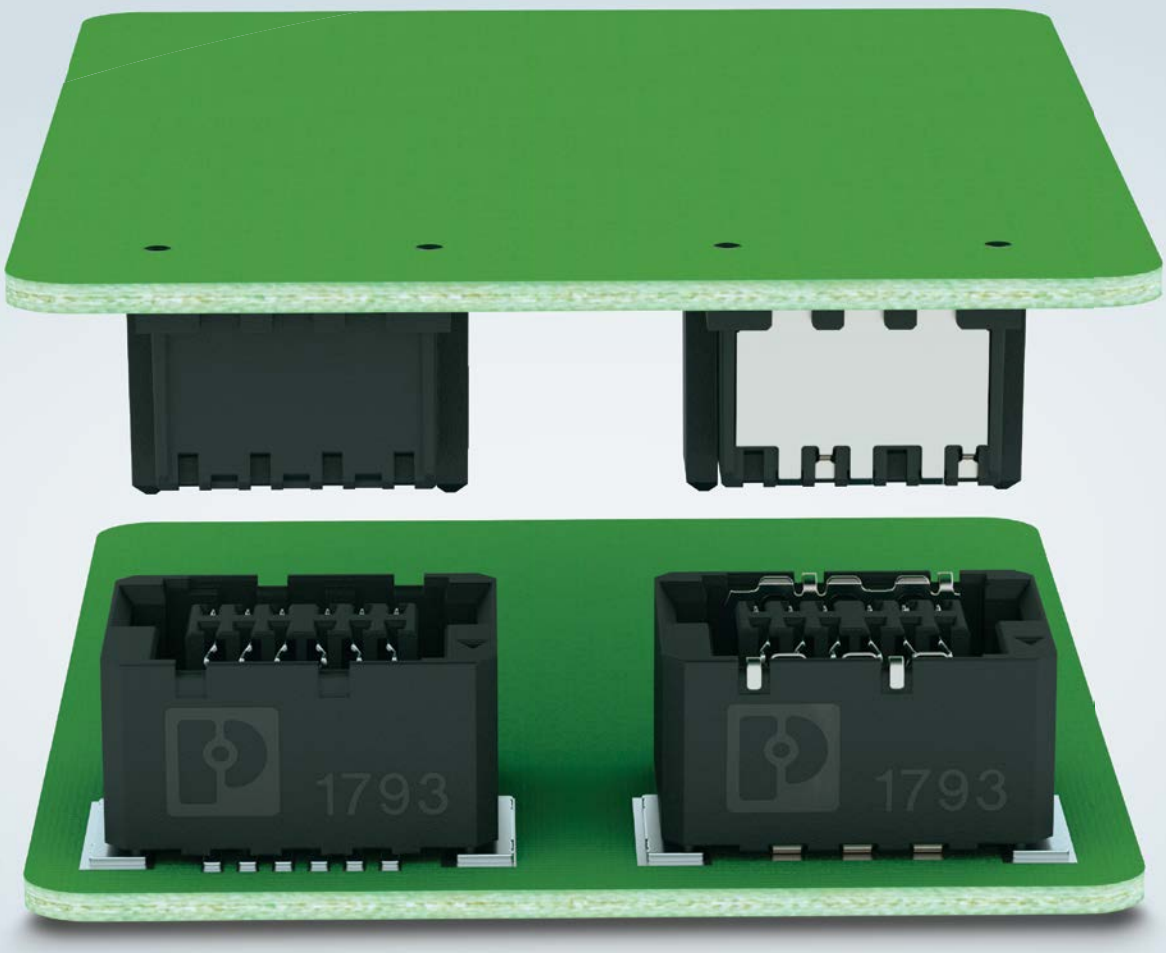
Controllers

HMIs

Sensors

Handle specific challenges, thanks to double contact technology

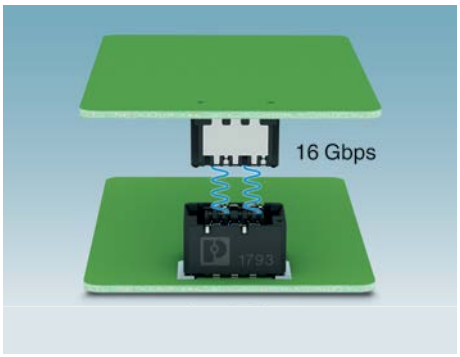
With its double-sided contact system, the FINEPITCH series with 0.8 mm pitch offers an extremely robust PCB connection. The shielding ensures excellent electromagnetic compatibility and protects against interference, both from and to the outside. High-speed data transmission up to 16 Gbps is supported. This is optimized for automated processing in the SMT process.



FINEPITCH 0.8 – Advantages at a glance

Robust insertion with high tolerance compensation

The hermaphroditic double contact enables a housing geometry in which the contacts are protected.

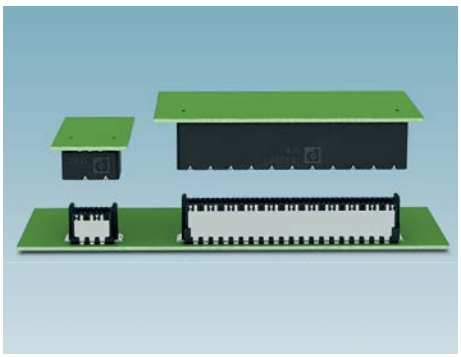


High data rate up to 16 Gbps

The FP 0.8 series offers excellent signal integrity.

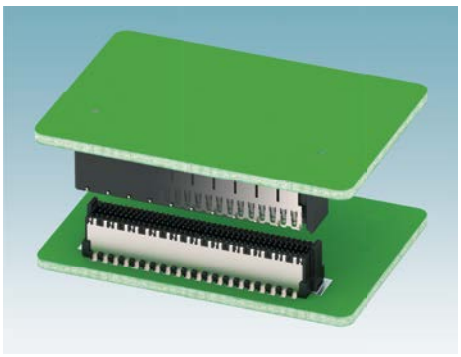
Reliably connected

The double contact enables a variable wipe length of 1.5 mm.



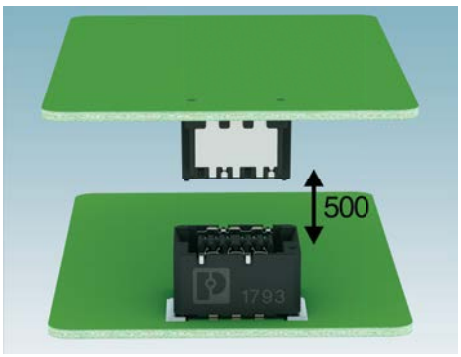
Flexible device design

With 6 to 12 mm stack heights and additional versions planned for the future, there is a great deal of freedom when it comes to the device design.



Additional protection thanks to EMC shielding

The shielded versions have excellent protection against electromagnetic interference.

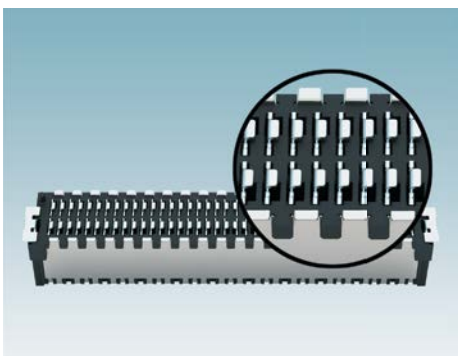


Continuously reliable contact

The contact surfaces are designed for 500 insertion cycles, which corresponds to the highest performance level 1.

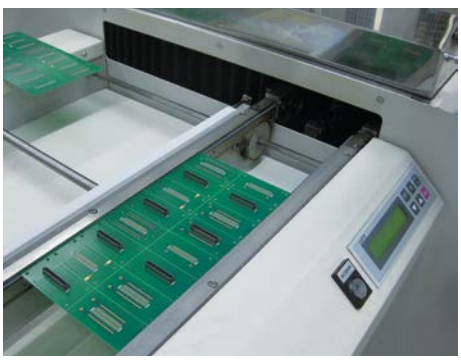
Marking with position 1

On the mating partners, position 1 in row a is marked with an arrow.



Process-reliable soldering

Female and male connectors feature a coplanarity of ≤ 0.1 mm.



Automated processing

Thanks to tape-on-reel packing and pick-and-place pads, the products can be processed automatically.

FINEPITCH 0.8 – Double contact system

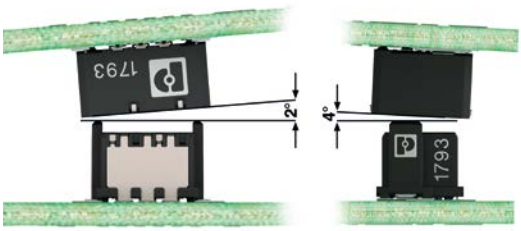
Innovative contact system

The FINEPITCH 0.8 series with double contact technology is uniquely designed to be hermaphroditic, consisting of both male and female elements. This enables vibration-proof connection in very confined spaces. The contacts also come equipped with gull-wing solder pins, which are ideal for automatic soldering processes.

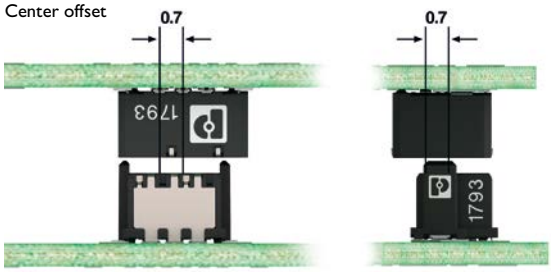
Robustness

Double contact technology enables a housing geometry in which the contacts are protected against damage in the event of mismatching. The contact system offers corresponding tolerance compensation with a center offset of ±0.7 mm and an inclination tolerance of 2°/4°. High tolerance compensation is therefore possible for your application.

Inclination tolerance



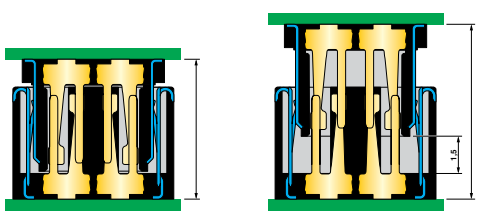
Center offset



Flexible device design

Thanks to the arrangement of male and female connectors, different stack heights can be implemented. A continuous range from 6 to 12 mm can be covered using just two male and female connectors. Within this range, the mating partners offer a variable wipe length of 1.5 mm. This minimizes product variance while simultaneously providing a high degree of flexibility for device design. We plan to extend the portfolio in future to include stack heights up to 20 mm.

Stack height (mm)	Male connector (mm)	Female connector (mm)
6 to 7.5	1.15	4.85
7.5 to 9	2.65	4.85
9 to 10.5	1.15	7.85
10.5 to 12	2.65	7.85



Minimum PCB spacing (left) and maximum PCB spacing (right), thanks to the wipe length

* See page 14 for the definition of the terms center offset, inclination tolerance, and stack height.

FINEPITCH 0.8 – Technical data

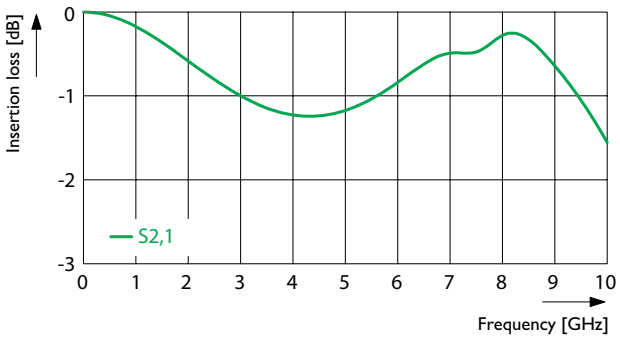
General technical data		Standards
Pitch	0.8 mm	
Number of positions	12, 20, 32, 52, 80	
EMC properties	Shielded	
Data transmission speed	Up to 16 Gbps	
Nominal current (at 20°C)	1.4 A (52-pos.)	IEC 60512-5-2:2002
Insulation resistance	Min. 5 GΩ	IEC 60512-3-1:2002
Contact resistance	Max. 20 mΩ	IEC 60512-2-1:2002
Test voltage	500 V AC	IEC 60512-4-1:2003
Air clearances and creepage distances	Min. 0.25 mm	
Temperature limits during operation	-55°C to +125°C	
Insertion and withdrawal force per contact	≤ 1.2 N	
Approval	UL 1977	
Environmental and durability tests		
Service life	500 insertion cycles, performance level I	IEC 60512-9-1:2010
Oscillation, sinusoidal	10 - 2000 Hz, 20g	IEC 60512-6-4:2002
Contact interference during oscillation, sinusoidal	< 1 µs	IEC 60512-2-5:2003
Shocks, half-sinusoidal	50g, 11 ms	IEC 60512-6-3:2002
Contact interference during shocks, half-sinusoidal	< 1 µs	IEC 60512-2-5:2003
Information on metal parts		
Note	WEEE/RoHS-compliant, free of whiskers	IEC 60068-2-82/JEDEC JESD 201
Live metal parts	Cu alloy	
Surface of contact area	Ni; Au	
Surface of soldering area	Sn	
Information on insulation material		
Insulation material and group	LCP; IIIa	
Color	Black	
Resistance to creepage	CTI 150	DIN EN 60112 (VDE 0303-11)
Flammability rating UL 94	V0	
Processing note		
Process	SMD soldering	According to IPC/JEDEC J-STD-020D.1:2008-03
Moisture sensitivity level	MSL 1	
Coplanarity	≤ 0.1 mm	
Classification temperature Tc	+260°C	
Packaging	Tape-on-reel	

FINEPITCH 0.8 – Data transmission

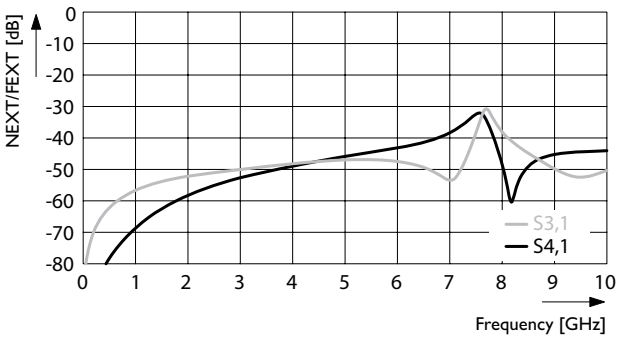
Data transmission

The FINEPITCH FP 0.8 series is particularly suitable for high-speed data transmission up to 16 Gbps. Excellent signal integrity is achieved at high frequencies up to 8 GHz. Insertion loss indicates the attenuation of the signal level during data transmission from the transmitter to the receiver. Crosstalk refers to the interference caused to data transmission on adjacent contacts. Near-end crosstalk (NEXT) is detected on the transmitter side and far-end crosstalk (FEXT) on the receiver side.

S-parameters are available in the download area to support the design-in process.



Insertion loss



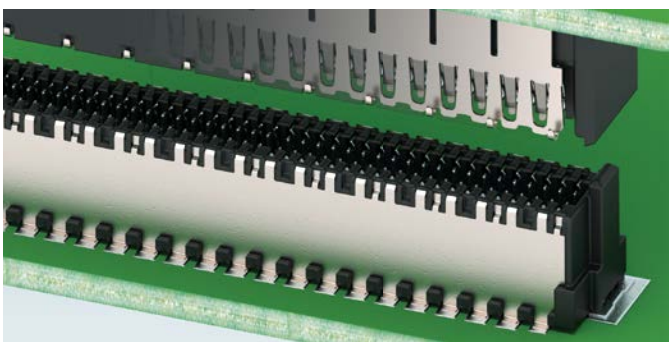
Crosstalk

EMC shielding

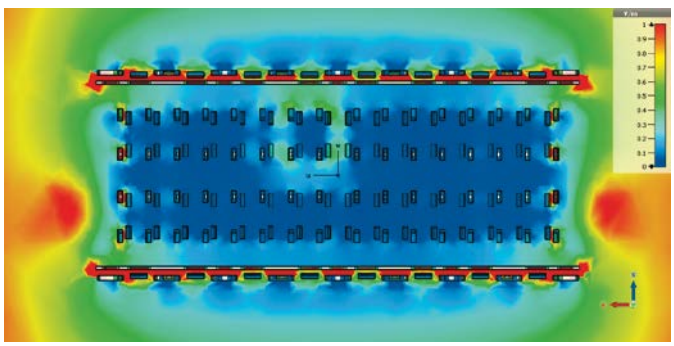
The shielded FP 0.8 series has excellent electromagnetic compatibility (EMC). The shielded connectors are therefore suitable for applications with high EMC requirements. Numerous shield transition points on the female to male connectors ensure that interference currents are immediately discharged. A good solder connection also ensures continuous connection to the PCB. This provides shielding against interference signals.

The figure of the electrical field illustrates the shielding effect and depicts a very low coupling inductance in the connector when an interference signal is present at the shield. When both external contacts are connected to ground, optimal 360° shielding is achieved.

This optimally protects data transmission against interference.



Shield transition from female to male connector



Electrical field

FINEPITCH 0.8 – Product overview

Web code: #2069

Shielded vertical female connector				
Number of positions	Height: 4.85 mm		Height: 7.85 mm	
	Type	Order No.	Type	Order No.
12	FP 0.8/ 12-FV-SH 4.85	1043710	FP 0.8/ 12-FV-SH 7.85	1043682
20	FP 0.8/ 20-FV-SH 4.85	1053612	FP 0.8/ 20-FV-SH 7.85	1053614
32	FP 0.8/ 32-FV-SH 4.85	1043711	FP 0.8/ 32-FV-SH 7.85	1043683
52	FP 0.8/ 52-FV-SH 4.85	1043713	FP 0.8/ 52-FV-SH 7.85	1043684
80	FP 0.8/ 80-FV-SH 4.85	1043714	FP 0.8/ 80-FV-SH 7.85	1043685

Shielded vertical male connector				
Number of positions	Height: 1.15 mm		Height: 2.65 mm	
	Type	Order No.	Type	Order No.
12	FP 0.8/ 12-MV-SH 1.15	1043786	FP 0.8/ 12-MV-SH 2.65	1043731
20	FP 0.8/ 20-MV-SH 1.15	1053586	FP 0.8/ 20-MV-SH 2.65	1053609
32	FP 0.8/ 32-MV-SH 1.15	1043787	FP 0.8/ 32-MV-SH 2.65	1043733
52	FP 0.8/ 52-MV-SH 1.15	1043789	FP 0.8/ 52-MV-SH 2.65	1043756
80	FP 0.8/ 80-MV-SH 1.15	1043790	FP 0.8/ 80-MV-SH 2.65	1043757

Number of positions

The FP 0.8 series includes five standard numbers of positions: 12, 20, 32, 52, and 80. Other numbers of positions between 12 and 80 are available on request.

The number of positions corresponds to the total number of contacts. Example: a 12-pos. product has six contacts per row. On all FP 0.8 series products, position 1 is marked with an arrow.

Various numbers of positions from 12 to 80

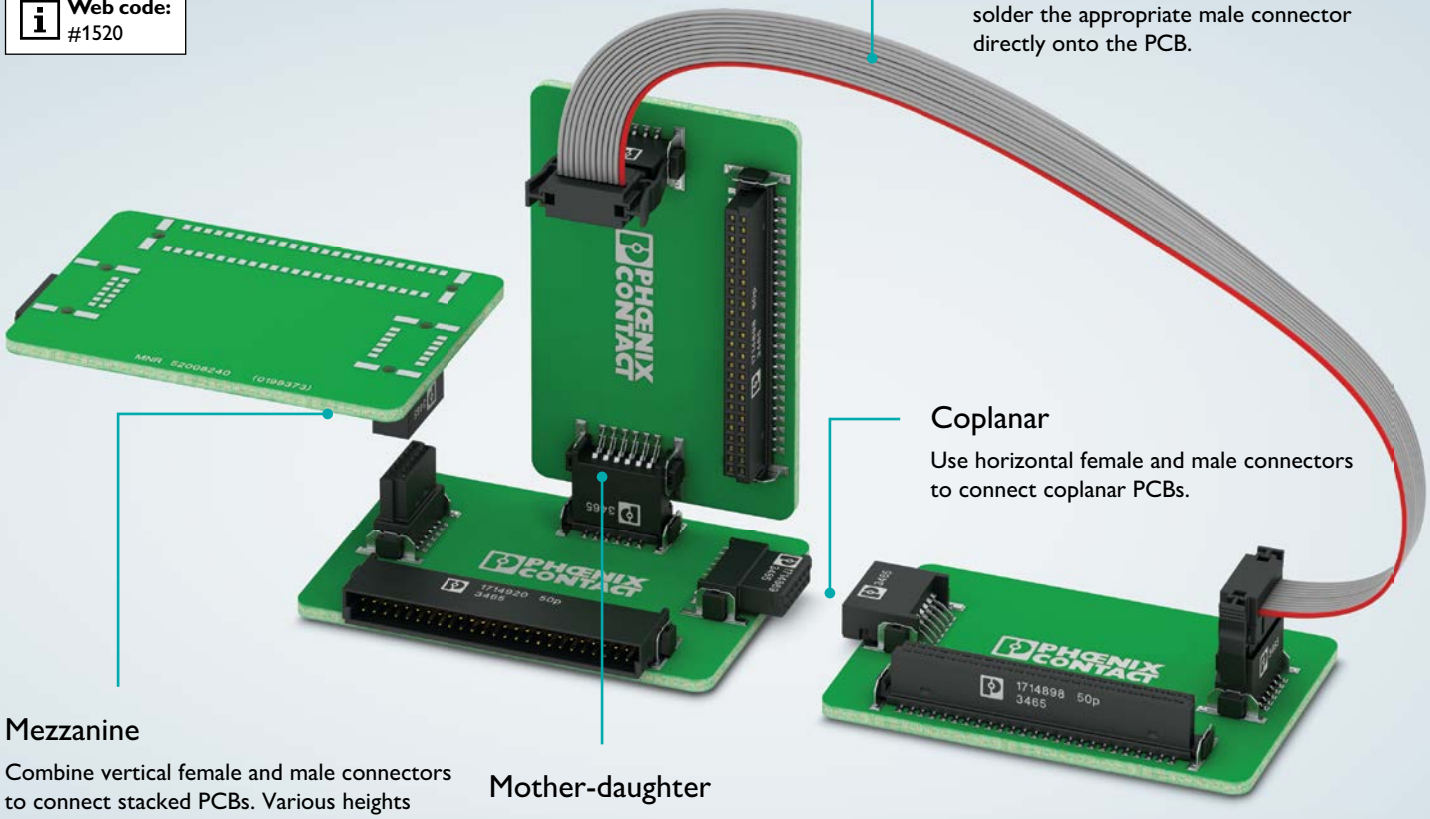
Flexibility for your device design with FINEPITCH 1.27

FINEPITCH 1.27 series board-to-board connectors offer versatile solutions for the connection of several PCBs within the device. Horizontal and vertical male and female connectors enable application-specific arrangements – with assembled flat-ribbon cables for wire-to-board applications available on request.

Web code:
#1520

Flat-ribbon cable

You can use a flat-ribbon cable and pre-assembled female connectors with IDC connection to establish flexible connections between two PCBs. You can solder the appropriate male connector directly onto the PCB.



Coplanar

Use horizontal female and male connectors to connect coplanar PCBs.

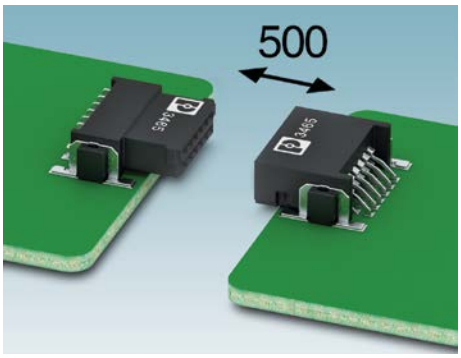
Mezzanine

Combine vertical female and male connectors to connect stacked PCBs. Various heights enable PCB spacing of 8 mm to 13.8 mm.

Mother-daughter

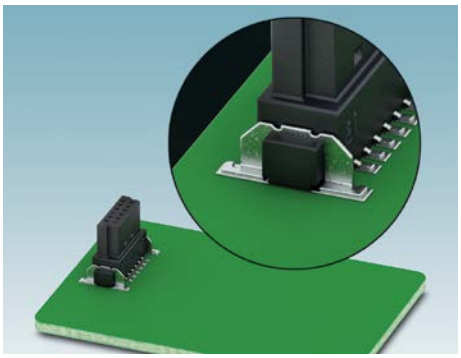
If you combine vertical and horizontal designs, a right-angled connection is established between two PCBs. Male and female connectors are available in both designs.

FINEPITCH 1.27 – Advantages at a glance



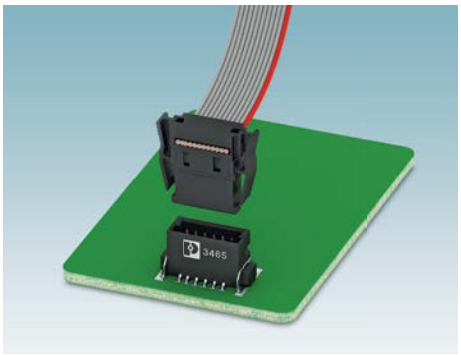
Continuously reliable contact

The gold-plated contact surface enables up to 500 insertion and withdrawal cycles, performance level 1.



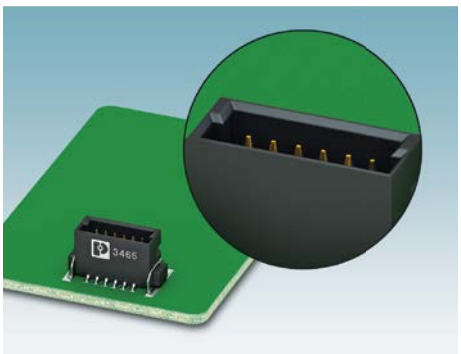
Stable soldering

Anchor metals ensure that the connection to the PCB is mechanically stable.



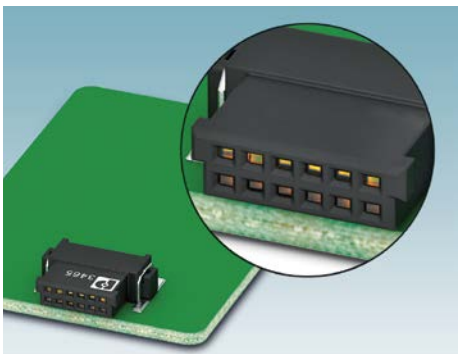
Protection from vibrations

Latching on both sides prevents connections from coming loose due to vibrations.



Reliable connection

Lead-in chamfers ensure that male and female connectors are guided and engage correctly.

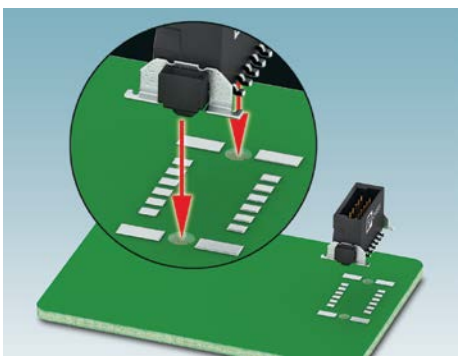


Mismatching prevented

Polarization prevents female and male connectors from being rotated 180° before being connected to each other.

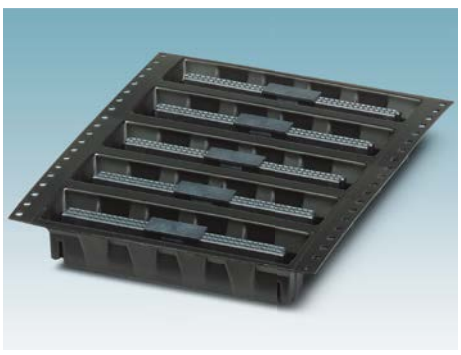
Process-reliable soldering

Female and male connectors feature a coplanarity of ≤ 0.1 mm.



Securely positioned

Positioning pins on the bottom ensure secure positioning on the PCB.



Process-compatible packaging

The female and male connectors are supplied in tape-on-reel packing, connectors without cables are supplied in tray format, and pre-assembled connectors are supplied in a bag.

Automated soldering

The PCB connectors are soldered using the SMT method. Overhead soldering and Automatic Optical Inspection (AOI) are also possible.

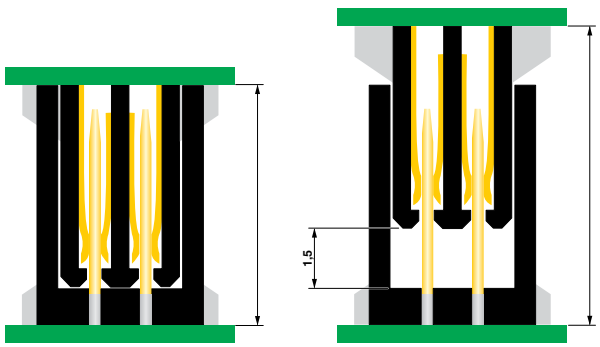
FINEPITCH 1.27 – Installation instructions

Stack heights

The stack height describes the distance between two PCBs overlapping in parallel. You can use vertical versions of the female and male connectors to reliably connect PCBs. Thanks to their wipe length of 1.5 mm, the PCB connectors are ideal for a continuous range of stack heights between 8 mm and 13.8 mm.

The female connector is fully inserted into the male connector with the respective minimum PCB spacing. If the respective maximum PCB spacing is reached, 1.5 mm of the male contact remain outside of the contact zone. This ensures reliable contact overlapping of at least 0.9 mm at all times.

Stack height (mm)	Male connector (mm)	Female connector (mm)
8.0 to 9.5	1.75	6.25
9.5 to 11.0	3.25	6.25
10.8 to 12.3	1.75	9.05
12.3 to 13.8	3.25	9.05

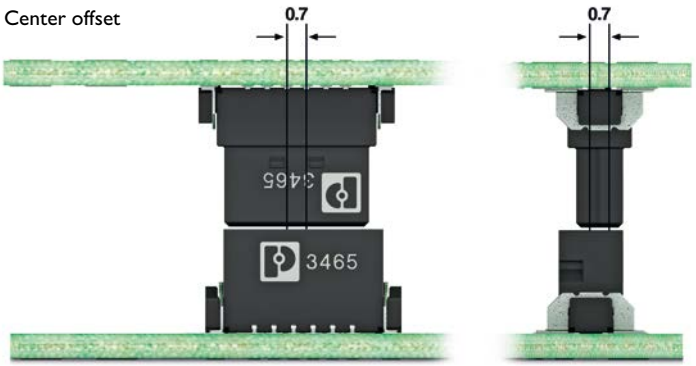


Minimum PCB spacing (left) and maximum PCB spacing (right), thanks to the wipe length

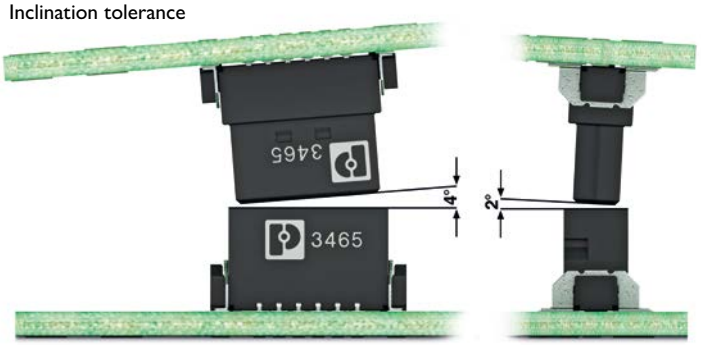
Center offset and inclination tolerance

Female and male connectors are designed so that reliable mating is ensured, even with a center offset of up to ±0.7 mm. A deviation of ±4° is permitted for longitudinal angles, and a deviation of ±2° for oblique angles. This geometry allows tolerances in the mounting process for robust applications.

Center offset



Inclination tolerance



FINEPITCH 1.27 – Technical data

General technical data		Standards
Pitch	1.27 mm	
Number of positions	12, 16, 20, 26, 32, 40, 50, 68, 80	
Nominal current (at 20°C)	1.4 A (50-pos.)	IEC 60512-5-2:2002
Insulation resistance	Min. 10 GΩ	IEC 60512-3-1:2002
Contact resistance	Max. 25 mΩ	IEC 60512-2-1:2002
Test voltage	500 V AC	IEC 60512-4-1:2003
Air clearances and creepage distances	Min. 0.4 mm	
Temperature limits during operation	-55°C to +125°C	
Insertion and withdrawal force per contact	Approx. 0.5 N	
Approval	UL 1977	
Insertion and withdrawal force per contact	Approx. 0.5 N	
Approval	UL 1977	
Environmental and durability tests		
Service life	500 insertion cycles, performance level I	IEC 60512-9-1:2010
Oscillation, sinusoidal	10 - 2000 Hz, 20g	IEC 60512-6-4:2002
Contact interference during oscillation, sinusoidal	< 1 µs	IEC 60512-2-5:2003
Shocks, half-sinusoidal	50g, 11 ms	IEC 60512-6-3:2002
Contact interference during shocks, half-sinusoidal	< 1 µs	IEC 60512-2-5:2003
Information on metal parts		
Note	WEEE/RoHS-compliant, free of whiskers	IEC 60068-2-82/JEDEC JESD 201
Live metal parts	Cu alloy	
Surface of contact area	Ni; PdNi; Au or Ni; NiP; Au	
Surface of soldering area	Sn	
Information on insulation material		
Insulation material and group	LCP; IIIa	
Resistance to creepage	CTI 175	DIN EN 60112 (VDE 0303-11)
Flammability rating UL 94	V0	
Processing note		
Process	SMD soldering	According to IPC/JEDEC J-STD-020D.1:2008-03
Moisture sensitivity level	MSL 1	
Coplanarity	≤ 0.1 mm	
Connection capacity of IDC female connector		
Pitch of flat-ribbon cable	0.635 mm	
Standard cable type	PVC	
Conductor cross section AWG/kcmil	30/7	
Contact resistance of IDC female connector	Max. 10 mΩ	

FINEPITCH 1.27 – Product overview: Female connectors

Web code: #1520

Vertical female connector

Number of positions	Height: 6.25 mm		Height: 9.05 mm	
	Type	Order No.	Type	Order No.
12	FP 1.27/ 12-FV 6.25	1714891	FP 1.27/ 12-FV 9.05	1714999
16	FP 1.27/ 16-FV 6.25	1714892	FP 1.27/ 16-FV 9.05	1715000
20	FP 1.27/ 20-FV 6.25	1714893	FP 1.27/ 20-FV 9.05	1714881
26	FP 1.27/ 26-FV 6.25	1714894	FP 1.27/ 26-FV 9.05	1714882
32	FP 1.27/ 32-FV 6.25	1714895	FP 1.27/ 32-FV 9.05	1714884
40	FP 1.27/ 40-FV 6.25	1714897	FP 1.27/ 40-FV 9.05	1714885
50	FP 1.27/ 50-FV 6.25	1714898	FP 1.27/ 50-FV 9.05	1714886
68	FP 1.27/ 68-FV 6.25	1714899	FP 1.27/ 68-FV 9.05	1714888
80	FP 1.27/ 80-FV 6.25	1714901	FP 1.27/ 80-FV 9.05	1714889

Horizontal female connector

No. of pos.	Type	Order No.
12	FP 1.27/ 12-FH	1714869
16	FP 1.27/ 16-FH	1714871
20	FP 1.27/ 20-FH	1714872
26	FP 1.27/ 26-FH	1714873
32	FP 1.27/ 32-FH	1714875
40	FP 1.27/ 40-FH	1714877
50	FP 1.27/ 50-FH	1714878
68	FP 1.27/ 68-FH	1714879
80	FP 1.27/ 80-FH	1714880

IDC female connector

No. of pos.	Type	Order No.
12	FP 1.27/ 12-FWL	1714902
16	FP 1.27/ 16-FWL	1714903
20	FP 1.27/ 20-FWL	1714904
26	FP 1.27/ 26-FWL	1714905
32	FP 1.27/ 32-FWL	1714907
40	FP 1.27/ 40-FWL	1714908
50	FP 1.27/ 50-FWL	1714909
68	FP 1.27/ 68-FWL	1714910
80	FP 1.27/ 80-FWL	1714911

Note

IDC female connectors are available on request. The processing note for assembly must be observed.

FINEPITCH 1.27 – Product overview: Male connectors

Web code: #1520

Vertical male connector				
Number of positions	Height: 1.75 mm		Height: 3.25 mm	
	Type	Order No.	Type	Order No.
12	FP 1.27/ 12-MV 1.75	1714934	FP 1.27/ 12-MV 3.25	1714924
16	FP 1.27/ 16-MV 1.75	1714936	FP 1.27/ 16-MV 3.25	1714925
20	FP 1.27/ 20-MV 1.75	1714937	FP 1.27/ 20-MV 3.25	1714927
26	FP 1.27/ 26-MV 1.75	1714938	FP 1.27/ 26-MV 3.25	1714928
32	FP 1.27/ 32-MV 1.75	1714940	FP 1.27/ 32-MV 3.25	1714929
40	FP 1.27/ 40-MV 1.75	1714941	FP 1.27/ 40-MV 3.25	1714930
50	FP 1.27/ 50-MV 1.75	1714943	FP 1.27/ 50-MV 3.25	1714931
68	FP 1.27/ 68-MV 1.75	1714944	FP 1.27/ 68-MV 3.25	1714932
80	FP 1.27/ 80-MV 1.75	1714945	FP 1.27/ 80-MV 3.25	1714933

Horizontal male connector		
No. of pos.	Type	Order No.
12	FP 1.27/ 12-MH	1714912
16	FP 1.27/ 16-MH	1714914
20	FP 1.27/ 20-MH	1714915
26	FP 1.27/ 26-MH	1714916
32	FP 1.27/ 32-MH	1714917
40	FP 1.27/ 40-MH	1714918
50	FP 1.27/ 50-MH	1714920
68	FP 1.27/ 68-MH	1714921
80	FP 1.27/ 80-MH	1714923

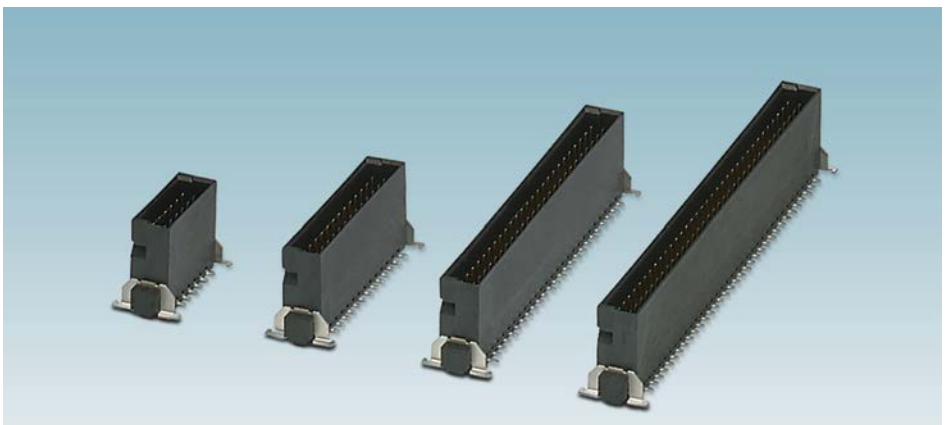
High degree of flexibility

Where the number of positions match, any male connector can be combined with any female connector. The high-position PCB connectors with 1.27 mm pitch are compatible with the layouts and connections of existing systems on the market.

Number of positions

The double-row board-to-board connectors are available with the following number of positions: 12, 16, 20, 26, 32, 40, 50, 68, and 80. The number of positions corresponds to the total number of contacts.

Example: a 12-pos. product has six contacts per row. On all FP 1.27 series products, position 1 is marked as a1.



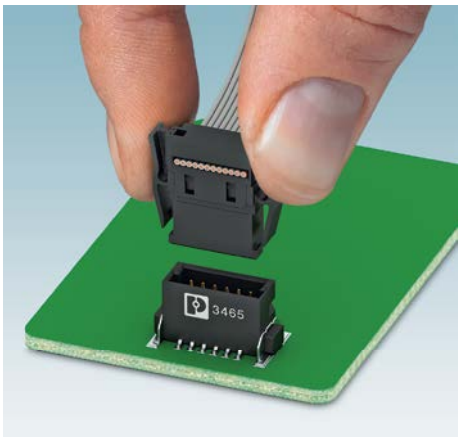
Various numbers of positions from 12 to 80

FINEPITCH 1.27 – Assembled IDC female connector

Configure your IDC female connectors in four steps

The following designation key helps you configure a flexible flat-ribbon cable connection between two PCBs. Select the following:
1. The desired number of positions
2. The appropriate assembly variant
3. The flat-ribbon cable material
4. The desired cable length

The designation key summarizes this information and is used as the individual order number for your configuration. The color-coded wire (in this case, red) is on the same side as the position 1 marking on the connector.
The delivery time for individual cable assemblies is available on request.



Designation key:

	1.								2.			3.		4.
F	**P**	**1** , **2** **7**	/	…	-	**F**	**W**	**L**	-	…	…	/	…	/	…
Fine	Pitch	Pitch		**No. of pos.**		Female connector/ plug	Wire/ cable	Locking/ locking flange		**Assembly variant**			**Type of flat-ribbon cable**		**Length**
				12						1	0		P		0.05 to 0.95 m
				16						1	1		T		
				20						1	2		H		
				26						2	0				
				32						2	1				
				40											
				50											
				68											
				80											

Cable type

The PVC flat-ribbon cable is available as standard (type P flat-ribbon cable).
Cross section: AWG 30/0.06 mm²
Litz wire: Cu litz wire, tin-plated, 7 x 0.102 mm
Pitch: 0.635 mm
Contact resistance: max. 10 mΩ

The cable length can be between 0.05 and 0.95 m. Configuration is also possible in 50 mm increments.

Key	Cable type	Operating temperature	Coded wire	Comment
P	PVC	-10°C … +105°C (-30°C at rest)	Red	Standard
T	TPE-S resistant to high temperatures	-40°C … +125°C (-60°C at rest)	Green	On request
H	TPE-0 halogen-free	-20°C … +105°C (-40°C at rest)	Blue	On request

Configurable PCB connectors with 1.27 mm pitch

Assembly variants	Number of positions	Order designation	Order No.	Type of flat-ribbon cable	Length (m)
Assembly variant 10 	12	FP 1.27/ 12-FWL-10/…/…	1010259	P	0.05 to 0.95
	16	FP 1.27/ 16-FWL-10/…/…	1010258	P	0.05 to 0.95
	20	FP 1.27/ 20-FWL-10/…/…	1010257	P	0.05 to 0.95
	26	FP 1.27/ 26-FWL-10/…/…	1010256	P	0.05 to 0.95
	32	FP 1.27/ 32-FWL-10/…/…	1010255	P	0.05 to 0.95
	40	FP 1.27/ 40-FWL-10/…/…	1010246	P	0.05 to 0.95
	50	FP 1.27/ 50-FWL-10/…/…	1010254	P	0.05 to 0.95
	68	FP 1.27/ 68-FWL-10/…/…	1010253	P	0.05 to 0.95
	80	FP 1.27/ 80-FWL-10/…/…	1010252	P	0.05 to 0.95
Assembly variant 11 	12	FP 1.27/ 12-FWL-11/…/…	1010580	P	0.05 to 0.95
	16	FP 1.27/ 16-FWL-11/…/…	1010251	P	0.05 to 0.95
	20	FP 1.27/ 20-FWL-11/…/…	1010250	P	0.05 to 0.95
	26	FP 1.27/ 26-FWL-11/…/…	1010248	P	0.05 to 0.95
	32	FP 1.27/ 32-FWL-11/…/…	1010247	P	0.05 to 0.95
	40	FP 1.27/ 40-FWL-11/…/…	1010581	P	0.05 to 0.95
	50	FP 1.27/ 50-FWL-11/…/…	1010245	P	0.05 to 0.95
	68	FP 1.27/ 68-FWL-11/…/…	1010244	P	0.05 to 0.95
	80	FP 1.27/ 80-FWL-11/…/…	1010243	P	0.05 to 0.95
Assembly variant 12 	12	FP 1.27/ 12-FWL-12/…/…	1010242	P	0.05 to 0.95
	16	FP 1.27/ 16-FWL-12/…/…	1010241	P	0.05 to 0.95
	20	FP 1.27/ 20-FWL-12/…/…	1010240	P	0.05 to 0.95
	26	FP 1.27/ 26-FWL-12/…/…	1010239	P	0.05 to 0.95
	32	FP 1.27/ 32-FWL-12/…/…	1010238	P	0.05 to 0.95
	40	FP 1.27/ 40-FWL-12/…/…	1010237	P	0.05 to 0.95
	50	FP 1.27/ 50-FWL-12/…/…	1010236	P	0.05 to 0.95
	68	FP 1.27/ 68-FWL-12/…/…	1010235	P	0.05 to 0.95
	80	FP 1.27/ 80-FWL-12/…/…	1010234	P	0.05 to 0.95
Assembly variant 20 	12	FP 1.27/ 12-FWL-20/…/…	1010233	P	0.05 to 0.95
	16	FP 1.27/ 16-FWL-20/…/…	1010232	P	0.05 to 0.95
	20	FP 1.27/ 20-FWL-20/…/…	1010231	P	0.05 to 0.95
	26	FP 1.27/ 26-FWL-20/…/…	1010230	P	0.05 to 0.95
	32	FP 1.27/ 32-FWL-20/…/…	1010229	P	0.05 to 0.95
	40	FP 1.27/ 40-FWL-20/…/…	1010228	P	0.05 to 0.95
	50	FP 1.27/ 50-FWL-20/…/…	1010224	P	0.05 to 0.95
	68	FP 1.27/ 68-FWL-20/…/…	1010221	P	0.05 to 0.95
	80	FP 1.27/ 80-FWL-20/…/…	1010220	P	0.05 to 0.95
Assembly variant 21 	12	FP 1.27/ 12-FWL-21/…/…	1010218	P	0.05 to 0.95
	16	FP 1,27/ 16-FWL-21/…/…	1010215	P	0.05 to 0.95
	20	FP 1.27/ 20-FWL-21/…/…	1010212	P	0.05 to 0.95
	26	FP 1.27/ 26-FWL-21/…/…	1010211	P	0.05 to 0.95
	32	FP 1.27/ 32-FWL-21/…/…	1010210	P	0.05 to 0.95
	40	FP 1.27/ 40-FWL-21/…/…	1010204	P	0.05 to 0.95
	50	FP 1.27/ 50-FWL-21/…/…	1010202	P	0.05 to 0.95
	68	FP 1.27/ 68-FWL-21/…/…	1010200	P	0.05 to 0.95
	80	FP 1.27/ 80-FWL-21/…/…	1010180	P	0.05 to 0.95

Assembly variant and number of positions = order designation and order number, type of flat-ribbon cable and length can be configured

In dialog with customers and partners worldwide

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