

FCi Basics

FFC-FPC Connectors

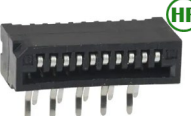
Amphenol
COMMUNICATIONS SOLUTIONS



FFC/FPC Connector Overview - 0.50mm Pitch

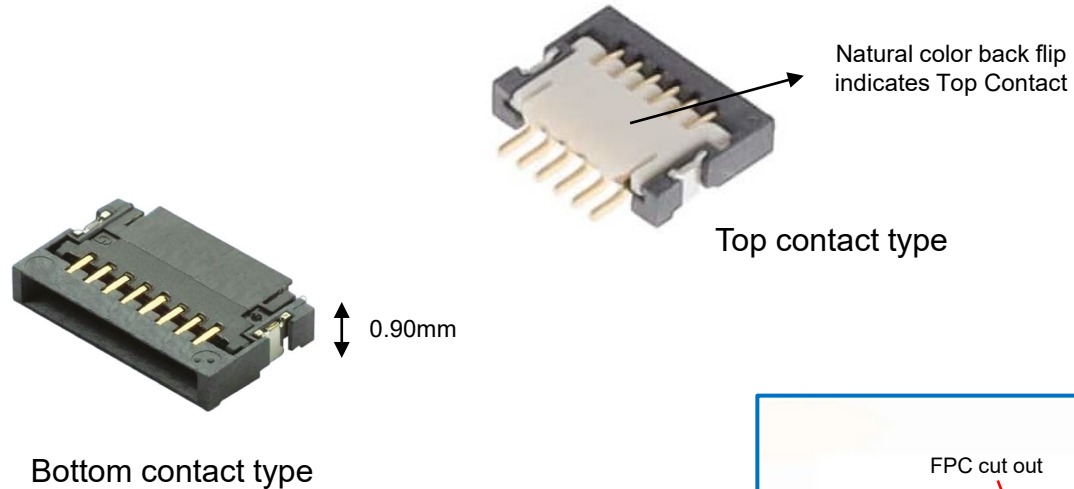
Product Family		SFVL_D	SFVL_U	VLL	SFV_RD	SFV_RU	OPU_D	OPU_U
Part Number		59453	59453	10051922	SFV	SFV	62684	62684
Pitch		0.5 mm	0.5 mm	0.5 mm	0.5 mm	0.5 mm	0.5 mm	0.5 mm
Product Image		 	 	 	 	 	 	 
Configuration		Right-Angle Surface Mount	Right-Angle Surface Mount	Right-Angle Surface Mount	Right-Angle Surface Mount	Right-Angle Surface Mount	Right-Angle Surface Mount	Right-Angle Surface Mount
Options		Cable Lock	Cable Lock	N/A	Cable Lock	Cable Lock	N/A	N/A
Height		0.9 mm	0.9 mm	1.3 mm	1.8 mm	1.8 mm	2.0 mm	2.0 mm
ZIF or Non-ZIF		ZIF Back Side Flip	ZIF Back Side Flip	ZIF Back Side Flip	ZIF Slider	ZIF Slider	ZIF Slider	ZIF Slider
Standard Plating		Gold Plating	Gold Plating	Gold Plating	Gold Plating	Gold Plating	Gold Plating	Gold Plating
Contact direction		Bottom	Top	Bottom	Bottom	Top	Bottom	Top
Cable thickness		0.2 mm	0.2 mm	0.3 mm	0.3 mm	0.3 mm	0.3 mm	0.3 mm
Positions		4,5,6,7,8,9,12,13	4,5,6,8	8 up to 30	4 up to 35	4 up to 35	32 up to 60	32 up to 57
Max Rating	Amp	0.4A (AC/DC)	0.4A (AC/DC)	0.5A (AC/DC)	0.5A (AC/DC)	0.5A (AC/DC)	0.5A (AC/DC)	0.5A (AC/DC)
	Voltage	50V (AC/DC)	50V (AC/DC)	50V (AC/DC)	50V (AC/DC)	50V (AC/DC)	50V (AC/DC)	50V (AC/DC)
Operating Temperature		-55°C ~ +105°C	-55°C ~ +105°C	-55°C ~ +85°C	-55°C ~ +105°C	-55°C ~ +105°C	-55°C ~ +85°C	-55°C ~ +85°C
Vibration & Mechanical Shock		Pass the SAE/USCAR-2	Pass the SAE/USCAR-2	IEC60068-2-6 (JIS C 60068-2-6)	IEC60068-2-6 (JIS C 60068-2-6)	IEC60068-2-6 (JIS C 60068-2-6)	IEC60068-2-6 (JIS C 60068-2-6)	IEC60068-2-6 (JIS C 60068-2-6)
Application		Mobile phone, Action CAM, Head Phone, Backlight	Wearable, Medical device, Smart meter, Backlight	Camera unit, Printer, Network server	Sensor unit, Home Appliance, Handheld	Sensor unit, Home Appliance, Handheld	IP phone, Medical Equipment, Printer	Home Audio, Display, Industrial Control
Link to info		0.50mm FFC-FPC	0.50mm FFC-FPC	0.50mm FFC-FPC	0.50mm FFC-FPC	0.50mm FFC-FPC	0.50mm FFC-FPC	0.50mm FFC-FPC

FFC/FPC Connector Overview - 1.00mm Pitch

Product Family		SFW_RD	SFW_RU	SFW_S	HFW_RD	HFW_RU	HFW_S	HLW_R	HLW_S
Part Number		SFW	SFW	SFW	HFW	HFW	HFW	HLW	HLW
Pitch		1.0 mm	1.0 mm	1.0 mm	1.0 mm	1.0 mm	1.0 mm	1.0 mm	1.0 mm
Product Image									
Configuration		Right-Angle Surface Mount	Right-Angle Surface Mount	Vertical Surface Mount	Right-Angle Surface Mount	Right-Angle Surface Mount	Vertical Surface Mount	Right-Angle Through Hole	Vertical Through Hole
Options		Cable Lock; CIC Contact; Gold Plating	Cable Lock; CIC Contact; Gold Plating	Gold Plating	CIC Contact; Gold Plating	CIC Contact; Gold Plating	Gold Plating	CIC Contact	CIC Contact
ZIF or Non-ZIF		ZIF Slider	ZIF Slider	ZIF Slider	Non-ZIF	Non-ZIF	Non-ZIF	Non-ZIF	Non-ZIF
Standard Plating		Tin Plating	Tin Plating	Tin Plating	Tin Plating	Tin Plating	Tin Plating	Tin Plating	Tin Plating
Height		2.7 mm	2.7 mm	5.3 mm	1.9 mm	1.9 mm	5.3 mm	3.9mm	5.9mm
Contact direction		Bottom	Top	Vertical	Bottom	Top	Vertical	Top	Vertical
Cable thickness		0.3 mm	0.3 mm	0.3 mm	0.3 mm	0.3 mm	0.3 mm	0.3 mm	0.3 mm
Positions		4 up to 30	4 up to 30	4 up to 30	4 up to 30	4 up to 30	4 up to 32	4 up to 32	4 up to 32
Max Rating	Amp	1A (AC/DC)	1A (AC/DC)	1A (AC/DC)	1A (AC/DC)	1A (AC/DC)	1A (AC/DC)	1A (AC/DC)	1A (AC/DC)
	Voltage	100V (AC/DC)	100V (AC/DC)	100V (AC/DC)	100V (AC/DC)	100V (AC/DC)	100V (AC/DC)	100V (AC/DC)	100V (AC/DC)
Operating Temperature		-55℃ ~ +105℃	-55℃ ~ +105℃	-55℃ ~ +105℃	-55℃ ~ +105℃	-55℃ ~ +105℃	-55℃ ~ +105℃	-55℃ ~ +85℃	-55℃ ~ +85℃
Vibration & Mechanical Shock		Pass the SAE/USCAR-2	Pass the SAE/USCAR-2	IEC60068-2-6 (JIS C 60068-2-6)	IEC60068-2-6 (JIS C 60068-2-6)	IEC60068-2-6 (JIS C 60068-2-6)	IEC60068-2-6 (JIS C 60068-2-6)	IEC60068-2-6 (JIS C 60068-2-6)	IEC60068-2-6 (JIS C 60068-2-6)
Application		Printer, Video Server, Car Tail Lamp, Handheld	Printer, Home Audio, Display connector	Printer, Gas Metering, Headset	Printer, Medical Equipment, Sound Bar	Printer, Home Audio, Display connector	Printer, Home Audio, Game	Printer, HOME AUDIO, LED Lighting	Printer, HOME AUDIO
Link to info		1.00mm FFC-FPC	1.00mm FFC-FPC	1.00mm FFC-FPC	1.00mm FFC-FPC	1.00mm FFC-FPC	1.00mm FFC-FPC	1.00mm FFC-FPC	1.00mm FFC-FPC

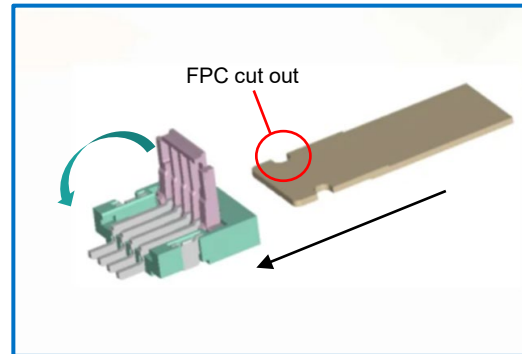
0.5mm Flex Connector – Right Angle

Halogen Free



SFVL

The SFVL and VLP series offer a **low profile**, space-saving, and strong FPC retention force (cable lock) even for small positions



The back side flip design allows for a one-handed cable insertion and actuation process. The standard **cable lock** feature ensures proper cable insertion and prevents unintentional cable release

Configurations

- Positions: 4 to 13 contacts
- Height: 0.90mm (SFVL)
- ZIF – Back Side Flip
- Contact direction: Bottom and Top
- Current rating: 0.4A
- Durability: 20 mating cycles

Features

- Back Side Flip actuator design
- Low profile of less than 1mm
- Standard cable locking feature

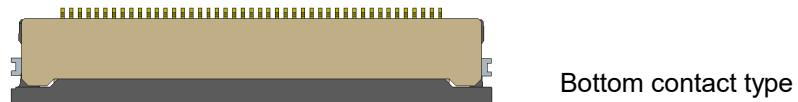
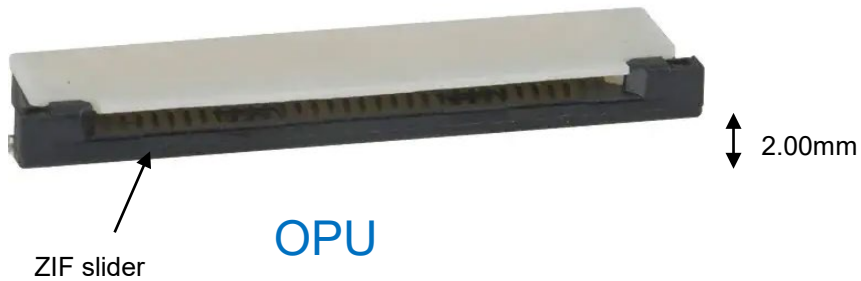
Preferred Parts	Description
59453-xx1110EHLF	Bottom contact
59453-xx2110EHLF	Top contact
0.50mm FFC-FPC Landingpage	

xx = positions

gold plating

0.5mm Flex Connector – Right Angle

Halogen Free



The OPU series offer **high pin counts** with slider action

Configurations

- Positions: 32 to 60 (OPU)
- Height: 2.0mm
- ZIF slider (OPU)
- Contact direction: Top, Bottom
- Current rating: 0.5A
- Durability: 20 mating cycles

Features

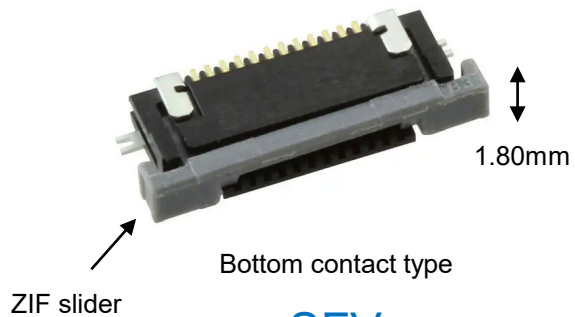
- Higher pin count
- Right-angle

Preferred Parts	Description
62684-xx1100ALF	Bottom contact
62684-xx2100ALF	Top contact
0.50mm FFC-FPC Landingpage	

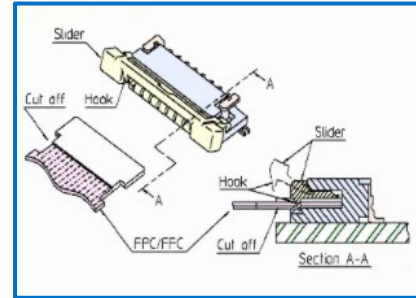
xx = total positions
gold plating

0.5mm Flex Connector – Right Angle

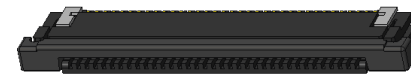
Halogen Free



SFV



The cable lock feature ensures proper alignment during mating and prevents un-intentional cable release

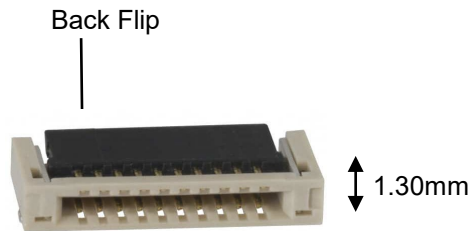


Bottom contact type



Top contact type

The back side flip actuator allows the user to insert the flex cable and lock the actuator with one hand.



VLL



SECTION POINT ACTION	SECTION OF CONTACT
CLOSE	
50DEG OPEN	
FINISHED OPEN (100DEG)	

Configurations

- Positions: 4 to 60 contacts
- Height: 1.30mm (VLL); 1.80mm (SFV)
- ZIF – Back Side Flip (VLH-VLL) and Slider (SFV)
- Contact direction: Top, Bottom
- Current rating: 0.5A (0.4A: VLL)
- Durability: 20 mating cycles

Features

- Higher pin count
- Cable Lock (SFV)

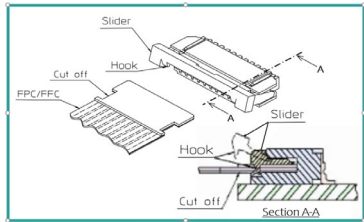
Preferred Parts	description
SFVxxR-1STBE1HLF	Bottom contact
SFVxxR-2STBE1HLF	Top contact
SFVxxR-3STBE1HLF	Bottom contact - Cable Lock
SFVxxR-4STBE1HLF	Top contact - Cable Lock
10051922-xx10ELF	Bottom contact
0.50mm FFC-FPC Landingpage	

xx = total positions
gold plating

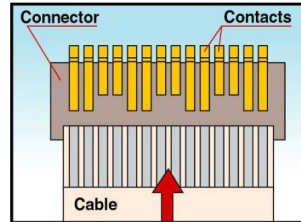
SFV and VLL offer a **low profile solution** with up to 60 contacts

1.00mm Flex Connector – Right Angle

Halogen Free

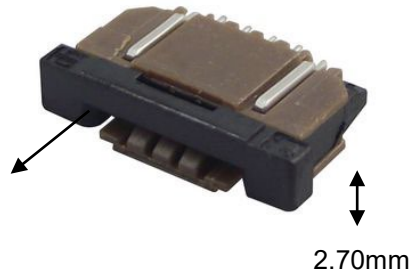


The cable lock feature ensures proper alignment during mating and prevents un-intentional cable release



The cable lock feature ensures proper alignment during mating and prevents un-intentional cable release

ZIF with prehold, which applies a small retention force on the cable to hold it in place until the actuator is locked.

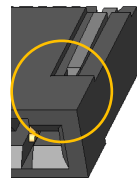


Bottom contact type

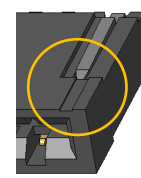


Top contact type

SFW



Bottom contact type



Top contact type

HFW

SFW and HFW support complex board-to-board connections, **ideal for demanding applications**. The cable lock option for SFW provide strong FFC/FPC retention.

Configurations

- Positions: 4 to 30 contacts
- Height: 1.90 (HFW) and 2.70mm (SFW)
- ZIF (SFW) and Non-ZIF (HFW)
- Contact direction: Top & Bottom
- Current rating: 1A
- Durability: 20 mating cycles

Features

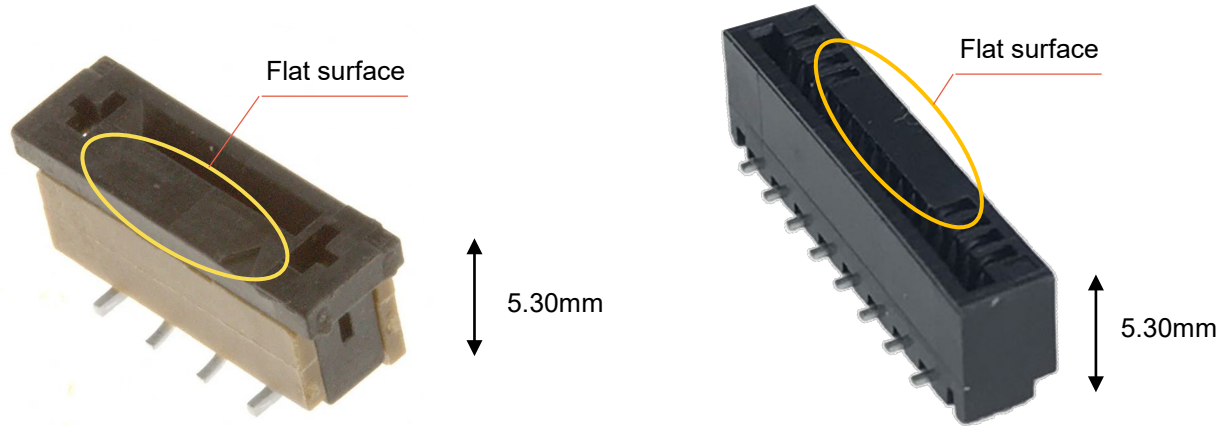
- Surface Mount
- Right-angle
- Non-ZIF and slider lock mechanisms ensure strong FFC/FPC retention

Preferred Parts	Description
SFWxxR-1STE1LF	Tin plating, Bottom contact
SFWxxR-1STAE1LF	Gold plating, Bottom contact
SFWxxR-2STE1LF	Tin plating, Top contact
SFWxxR-2STAE1LF	Gold plating, Top contact
HFWxxR-1STE1H1LF	Tin plating, Bottom contact
HFWxxR-2STE1H1LF	Tin plating, Top contact
1.00mm FFC-FPC Landingpage	

xx = total positions

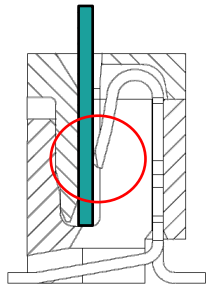
1.00mm Flex Connector – Vertical

Halogen Free

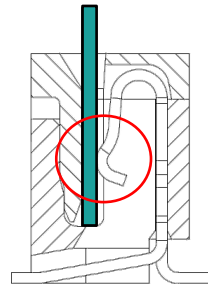


SFW

HFW



Edge type contact



Round shape contact

SFW and HFW connectors connect LCD displays and support complex board-to-board connections, ideal for demanding applications. Both have a flat surface at the top of the connector and do not require a cap or tape for pick and space.

Configurations

- Positions: 4 to 30 contacts
- Height: 5.30 mm
- ZIF and Non-ZIF
- Contact direction:, Vertical
- Current rating: 1A
- Durability: 20 mating cycles

Features

- Surface Mount
- Vertical orientation
- Non-ZIF and slider lock mechanisms ensure strong FFC/FPC retention

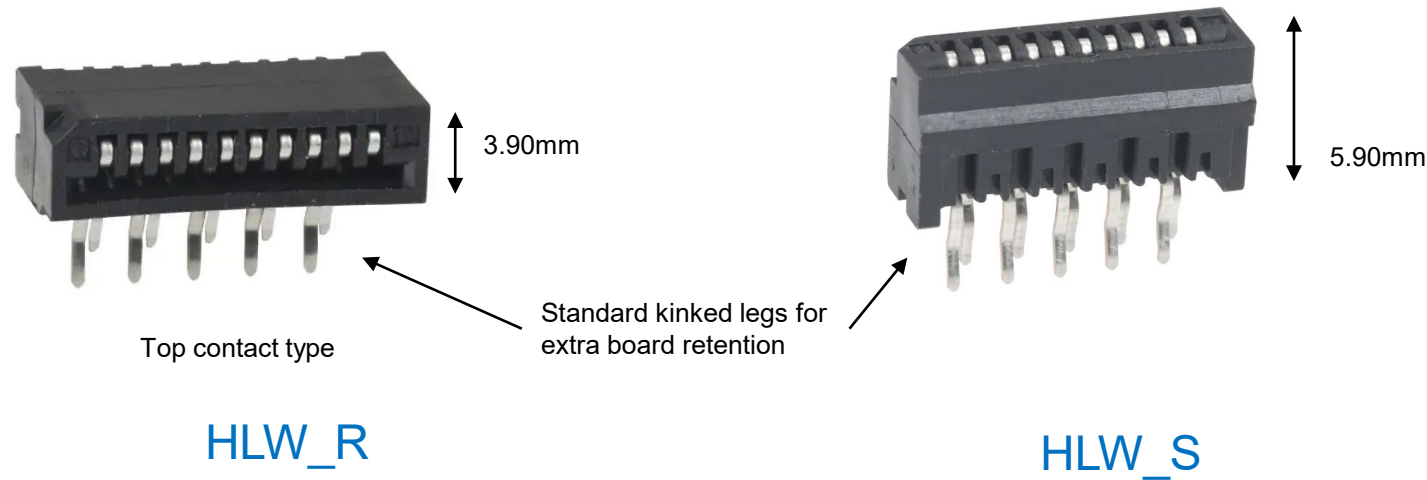
Preferred Parts	Description
SFWxxS-2STE1LF	Tin plating
SFWxxS-2STAE1LF	Gold plating
HFWxxS-4STZE1HLF	Tin plating
HFWxxS-2STAE1HLF	Gold plating
1.00mm FFC-FPC Landingpage	

xx = total positions

1.00mm Flex Connector – Right Angle & Vertical

Halogen Free

Through Hole



Configurations

- Positions: 4 to 30 contacts
- Height: 3.90 mm (HFW_R) / 5.90mm (HLW_S)
- Non-ZIF
- Contact direction: Top & Vertical
- Current rating: 1A
- Durability: 20 mating cycles

Features

- Through hole type termination
- Non-ZIF easy operation of FFC/FPC
- Pin-in past type available (special option)
- Standard Kinked Legs for good board retention

Preferred Parts	Description
HLWxxR-2C7HLF	Tin plating
HLWxxS-2C7HLF	Tin plating
1.00mm FFC-FPC Landingpage	

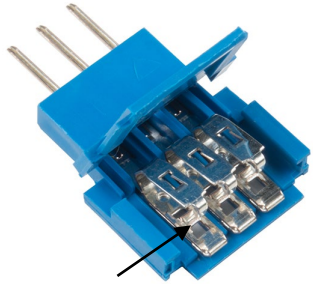
xx = total positions

kinked legs

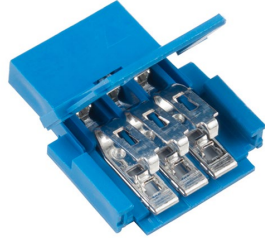
HLW connectors support complex board-to-board connections, ideal for demanding applications.

2.54mm Flex Connector - Clincher™

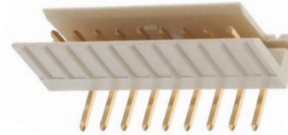
Male Pin



Receptacle



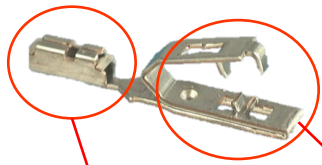
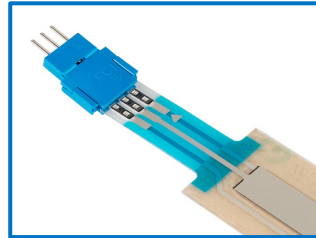
Right Angle
PCB Header



Straight
PCB Header

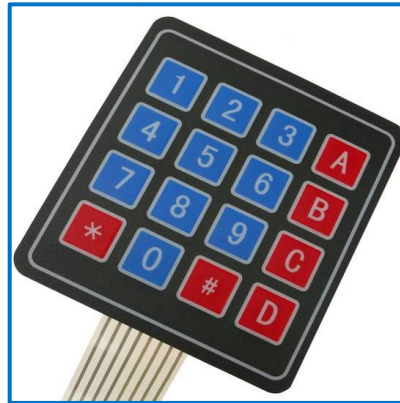


Pre-loaded contacts



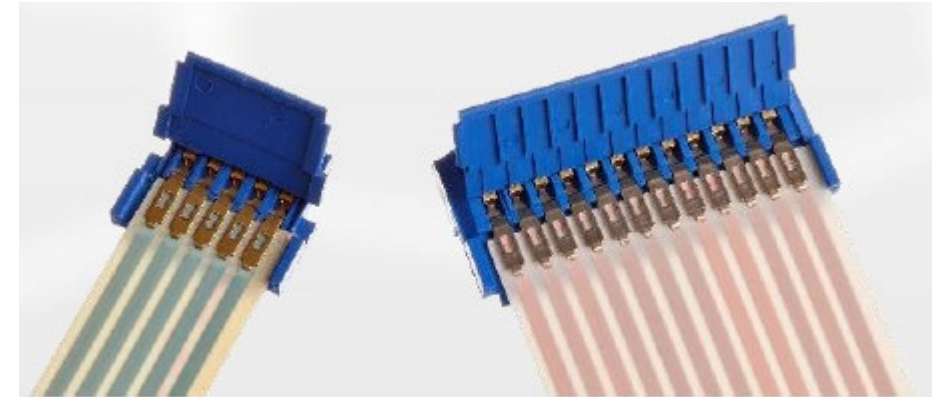
Dual-metal Mini-PV™
receptacle contact

"Clinching" section of
contact forms a gas-
tight, 4 point crimp



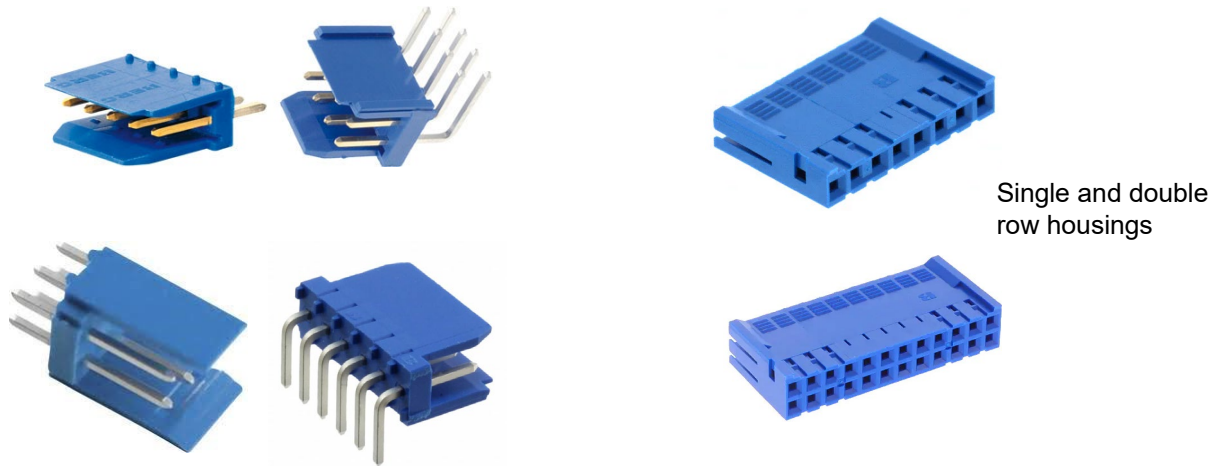
Configurations

- Positions: 2 to 34 contacts
- Height: 2.49mm HSG Thickness
- Contact direction: Top
- Current rating: 2A
- Durability: 1000 mating cycles



Preferred Parts	Description
65801	Single Row Receptacle
67516	Single Row Receptacle - passive latch
66226	Single Row Male Pin
95735	Single Row Header Straight TMT
95736	Single Row Header Right-Angle TMT
78242	Flying latch
Clincher Landingpage	

2.54mm Flex Connector - Duflex™



FCI Basics Duflex™ connectors represent a low cost and reliable solution for mass termination of FPC/FFC and touch membrane switches.

Configurations

- Positions: 2 to 36 SR; 4 to 72 DR
- Height:
 - Single row 3.80mm
 - Double row 6.34mm
- Contact direction: Top
- Current rating: 3A

Features

- Reliable dual-beam contact design with pre-stressed contact beam
- Allows mass termination to unprepared cable
- Contacts fit all housing styles

Preferred Parts	Description
76785	Duflex™ terminal
67013	Single Row Housing
66987	Double Row Housing
76384	Single Row Header STR TMT
76382	Single Row Header RA TMT
76385	Double Row Header STR TMT
76383	Double Row header RA TMT
Duflex landing page	