



**ELECTRONICS** 

CONNECTORS FOR FLEXIBLE CIRCUITRY FFC/FPC/CIC

# FCI: SETTING THE STANDARD FOR CONNECTORS

With operations in 30 countries, FCI is a leading manufacturer of connectors.

Our 12,000 employees are committed to providing customers with high-quality, innovative products for a wide range of consumer and industrial applications.

#### INTRODUCTION

You can count on FCI, as a leader in flex circuit connectors, for the most innovative and complete range of products in the industry. FCI offers products in ZIF (zero insertion force) and non-ZIF, top and bottom contact options, vertical and right angle orientations, surface mount and through hole terminations in contact spacing options all the way down to 0.2mm with finer pitch products on their way. Additional features, such as optional cable locks and additional mounting devices, ensures that FCI has a solution for almost any application, no matter how demanding.

As your connection to innovation, FCI continues to bring you unique solutions that not only gives you the footprint you need but help to maximize the quality level of your application. Many of our flex circuit connectors offer ZIF with prehold, which applies a small retention force on the cable to hold it in place until the actuator is locked. FCI introduced the first flex connector with a back side flip actuator that allows the user to insert the flex cable and lock the actuator with one hand. FCI improved that feature on many products by modifying the connector housing to provide visual confirmation that the flex cable is mated properly. FCI is also the company that first brought you the option of an FFC/FPC connector under 1mm in height. These features combine to insure your application has the highest quality possible when it leaves your site.

# **CONTENTS**

0.2MM PITCH	
XL-D Series	5
0.3MM PITCH	
YLL-D Series YLL-U Series	5 5
0.4MM PITCH	
SFGL Series	6
0.5MM PITCH	
OPU Series SFVE Series SFVL Series SFV-R Series SFV-S Series VHC Series VLK Series VLL Series VLP Series	6 7 7 8 8 9 9 10
1.0MM PITCH	
HFW Series HLW Series SFW Series SLW Series	11 11 12 13
1.25MM PITCH	
HLEM-R HLEM-S	13 13
2.54MM PITCH	
Clincher Duflex	14 14
Performance Characteristics	15

# **CONNECTOR SELECTION MATRIX**

Pitch	Family Name	Height (mm)	Contact Location	ZIF / Non-ZIF	Positions Available
0.2mm	XL-D	0.9	Bottom	ZIF (FF)	11,29
0.3mm	YLL-D	0.9	Bottom	ZIF (FF)	13,15,17,21,23,25,27,29,33, 35,39,41,43,45,51
	YLL-U	0.9	Тор	Non-ZIF	15,21,23,25,27,31,33,35,37, 39,41
0.4mm	SFGL	0.9	Bottom	ZIF (BF)	9
0.5mm	OPU-D	2.0	Bottom	ZIF (SL)	38,40,45,50,55,57
	OPU-U	2.0	Тор	ZIF (SL)	32,34,36,40,45,50,55,57
	SFVE	1.2	Тор	ZIF (FF)	18,20,24,28,30
	SFVL-D	0.9	Bottom	ZIF (BF)	4,5,6,7,8,9,12,13
	SFVL-U	0.9	Тор	ZIF (BF)	4,5,6,8
	SFV-R	1.8	Top, Bottom	ZIF (SL)	4-35
	SFV-S	4.1	N/A	ZIF (SL)	8,12,16,20,21,22,23,24,25,26 30,32,33
	VHC	2.0	Bottom	ZIF (FF)	35,50,60,70
	VLK	1.3	Bottom	ZIF (FF)	35,45,60
	VLL	1.2	Bottom	ZIF (BF)	8,10,11,12,14,15,16,18, 20,22,24,26,28,30
	VLP	0.7	Bottom	ZIF (BF)	4,8
1.0mm	HFW-R	1.9	Top, Bottom	Non-ZIF	4-30
	HFW-S	5.3	N/A	Non-ZIF	4-30,32
	HLW-R	3.9	Тор	Non-ZIF	4-32
	HLW-S	5.9	N/A	Non-ZIF	4-32
	SFW-R	2.7	Top, Bottom	ZIF (SL)	4-30
	SFW-S	5.3	N/A	ZIF (SL)	4,5,6,8,10,11,12,14,15,16,17, 18,20,22,23,24,26,28,30
	SLW-R	4.0	Bottom	ZIF (SL)	4-30
	SLW-S	5.5	N/A	ZIF (SL)	4-30
1.25mm	HLEM-R	5.0	Тор	Non-ZIF	3-40
	HLEM-S	8.0	N/A	Non-ZIF	3-40
2.54mm	Clincher	Standard rec	eptacle		2-32
	Clincher	Receptacle with keying latch		2-16	
	Clincher	Receptacle with keying feature		6-34	
	Clincher Receptacle with keying & active latch		latch	6-34	
	Clincher	Standard plu	Standard plug		3-14
	Duflex	Contact and housing			

xx - Number of Contacts

ZIF (SL): Slider action

ZIF/Non-ZIF (FF): Front side flip

ZIF/Non-ZIF (BF): Back side flip

#### XL-D SERIES - 10108361



Part Number	Number of Positions Available
10108361-xx10EHLF*	11, 29

- Orientation: Right angle
  Cable Termination: ZIF
- Cable type: FPC
- Board Termination: Surface mount
- Contact Location: Bottom
- ▶ Height: 0.9mm▶ Halogen free
- Accommodated cable thickness: 0.2mm
- Low profile & space saving
- ► FPC retention force up mechanism by design of housing
- Application: Mobile phone & digital still camera etc

#### YLL-D SERIES - 10061122



Part Number	Number of Positions Available
10061122-xx1120HLF	13,15,17,21,23,25,27,29,33,35,
	39,41,43,45,51

- Orientation: Right Angle
- Cable termination: ZIF
- Cable type: FPC
- Board termination: Surface mount
- Contact location: Bottom
- Height: 0.9mm
- Lead free with gold plating
- Optional Halogen free type
- Accommodated cable thickness: 0.2mm
- Front side flip type actuator makes cable application easy and error free
- ► Very low profile for maximum space savings
- Application: Mobile phone, brown products, wireless customer premises equipment and mobile device

#### **YLL-U SERIES - 10064555**



Part Number	Number of Positions Available
10064555-xx2x20HLF	15,17,21,23,25,27,31,33,35,37,39,41

- Orientation: Right Angle
- Cable termination: Non-ZIF (LIF)
- Cable type: FPC
- Board termination: Surface mount
- Contact location: Top
- Height: 0.9mm
- Lead-free with gold plating
- Accommodated cable thickness: 0.2mm
- Front side flip type actuator makes cable application easy and error free
- Very low profile for maximum space savings
- Application: Mobile phone, brown products, wireless customer premises equipment and mobile device

#### **SFGL SERIES - 10117184**



Part Number	Number of Positions Available
10117184-xx10EHLF	9

- Orientation: Right Angle ■ Cable termination: ZIF Cable type: FPC
- Board termination: Surface mount
- Contact location: Bottom
- ► Height: 0.9mm
- Lead-free with gold plating
- Halogen free
- Accommodated cable thickness: 0.2mm
- Back side flip design makes cable insertion easy and error free
- Low profile & space saving
- Cable locking feature provides high retention force
- Application: Mobile phone, small display, touch pad, Medical, Industrial and Instrumentation, personal computer, car multimedia device and mobile device

#### **OPU SERIES - 62684**

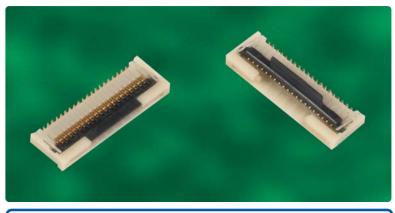


Part Number	Number of Positions Available
Top Side Contact	
62684-xx2100ALF*	32,34,36,40,45,50
62684-xx21N0ALF*	55,57
Bottom Side Contact	
62684-xx1100ALF*	40,45,50
62684-xx11N0ALF*	55,57

- Orientation: Right Angle Cable termination: ZIF
- Cable type: FFC/FPC
- Board termination: Surface mount
- Contact location: Top and bottom options
- Height: 2.0mm
- Lead-free with gold plating
- Optional Halogen free type
- Accommodated cable thickness: 0.3mm
- Economical higher pin count flex connector solution
- Traditional sliding actuator secures cable
- Application: Brown products, medical, industrial and instrumentation, printer, car multi media devices and mobile device

\*xx - Number of Contacts

#### **SFVE SERIES - 10054365**



Part Number	Number of Positions Available
10054365-xx2110ELF*	18,20,24,28,30

- Orientation: Right AngleCable termination: ZIFCable type: FFC/FPC
- Board termination: Surface mount
- Contact location: Top
  Height: 1.2mm
- Lead-free with gold plating
- Accommodated cable thickness: 0.2mm
- Front side flip type actuator makes cable application easy and error free
- Application: Car multimedia devices, brown products, medical, industrial and instrumentation

#### SFVL SERIES - 59453



Part Number	Number of Positions Available
Top Side Contact	
59453-xx2110EDHLF*	4,5,6,8
Botton Side Contact 59453-xx1110EDHLF*	4,5,6,7,8,9,12,13

\*xx - Number of Contacts

- Orientation: Right AngleCable termination: ZIFCable type: FFC/FPC
- Board termination: Surface mountContact location: Top and bottom options
- Height: 0.9mm
- Lead-free with gold plating
- Halogen free
- Accommodated cable thickness: 0.2mm
- Very low profile for maximum space savings
- Back side flip actuator design makes cable insertion easy
- Cable locking feature provides high retention force
- Application: Mobile phone, small display, touch pad, medical, industrial and instrumentation, printer, car multimedia devices and mobile device

#### **SFV-R SERIES**



- Orientation: Right Angle
- Cable termination: ZIF with prehold
- Cable type: FFC/FPC
- Board termination: Surface mount
- Contact location: Top and bottom options
- Height: 1.8mm
- Available in lead-free matte tin and gold plating
- option
- Optional cable lock
- Optional Halogen free type
- Versatile, economical connector system with uses in many applications
- Traditional sliding actuator secures cable
- Application: Mobile phone, brown products, medical, industrial and instrumentation, printer, car multimedia devices and mobile device

Part Number

SFVxxR-1STBE1LF\*

Contact Location/Cable Type

1-FFC/FPC bottom side contact

2-FFC/FPC top side contact

3-FPC bottom side with cable lock

4-FPC top side with cable lock

4-FPC top side with cable lock

B: Full gold plating

#### **SFV-S SERIES - 62674**



Part Number	Number of Positions Available
62674-xx1121ALF*	8,12,16,20,21,22,23,24,25,26,30,32,33

- Orientation: Vertical
- Cable termination: ZIFCable type: FFC/FPC
- Board termination: Surface mount
- Contact location: N/A
  Height: 4.1mm
- Lead-free with gold plating
- Economical vertical ZIF flex cable connector
- Traditional sliding actuator secures cable
- Application: Brown products, medical, industrial and instrumentation, printer, car multimedia devices and mobile device

\*xx - Number of Contacts

#### VHC SERIES - 10085901



Part Number	Number of Positions Available
10085901-xx15ELF*	35, 50, 60, 70

- Orientation: Right AngleCable termination: ZIFCable type: FFC/FPC
- Board termination: Surface mount
- Contact location: Bottom
- Height: 2.0mm
- Lead-free with gold plating
- Optional Halogen free type
- Optional Cable lock version
- Accommodated cable thickness: 0.3mm
- Front side flip actuator makes cable application easy and error free
- High pin count and robust design
- Application: Car multimedia devices, brown products, industrial control, medical, instrumentation and printer

#### **VLK SERIES - 10076529**



Part Number	Number of Positions Available
10076529-xx105EHLF*	35,45,60

- Orientation: Right AngleCable termination: ZIF
- Cable type: FFC/FPC
- Board termination: Surface mount
- Contact location: Bottom
- ► Height: 1.3mm
- Lead-free with gold plating
- ► Halogen free
- Accommodated cable thickness: 0.3mm
- Front side flip actuator makes cable insertion easy and error free
- High pin count and good operability
- Higher retention design incures cable stays in place
- Application: Brown products, Medical, Industrial and Instrumentation, personal computer, car multimedia system and mobile device

\*xx - Number of Contacts

## **VLL SERIES – 10051922 (0.5MM PITCH)**



Part Number 10051922-xx10ELF\* Number of Positions Available 8,10,11,12,14,15,16,18,20,22, 24.26.28.30

Orientation: Right Angle ■ Cable termination: ZIF ■ Cable type: FFC/FPC

■ Board termination: Surface mount

Contact location: Bottom

Height: 1.2mm

Lead-free with gold plating

Accommodated cable thickness: 0.3mm

Optional Halogen free type

Back side flip type actuator makes cable application easy

Innovative housing design provides visual confirmation that flex cable is properly inserted

Higher retention design insures cable stays in place

Application: Mobile phone, brown products, medical, industrial and instrumentation, printer, car multimedia devices and mobile device

#### **VLP SERIES - 10062827**

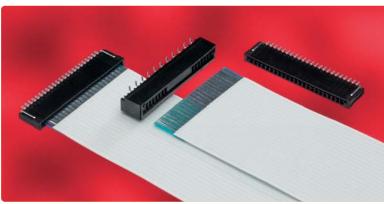


Part Number Number of Positions Available 10062827-xx10EDLF\* 4,8,10

- Orientation: Right Angle Cable termination: ZIF
- Cable type: FPC
- Board termination: Surface mount
- Contact location: Bottom
- ► Height: 0.7mm
- Lead-free with gold plating
- Halogen free
- Accommodated cable thickness: 0.12mm
- Back side flip design makes cable insertion easy and error free
- Very low profile for maximum space savings
- Cable locking feature provides high retention
- Application: Mobile phone, small display, touch pad, Medical, Industrial and Instrumentation, personal computer, car multimedia device and mobile device

\*xx - Number of Contacts

#### **HFW SERIES**



- Orientation: Right angle and vertical options
- Cable termination: Non-ZIFCable type: FFC/FPC/CIC
- Board termination: Surface mount
- Contact location: Top & bottom
- Height: 1.9mm right angle, 5.3mm vertical
- Available in lead-free matte tin and gold-flash plating option
- Versatile, economical connector system with uses in many applications
- Application: Industrial control, business & retail, Instrumentation, brown products, printer, car multimedia devices and

#### mobile device Part Number Number of Positions Available HFWxxR-1STAE1HLF\* Right angle 4-30 Vertical 4-30,32 H-Halogen-free Orientation R-Right angle S-Straight (Vertical) Packaging Right Angle Plating (Normal: matte-tin) Contact/Cable Type E1-tape and reel 2000 pieces A-Gold-plated contact tip Right Angle and tin-plated solder-tail 1-FFC/FPC bottom side contact Vertical B-Gold-flash terminals 2-FFC/FPC top side contact None-Matte tin plate E1-tape and reel 1000 pieces 5-CIC bottom side contact Mounting 6-CIC top side contact ST-SMT STM-SMT with tab (vertical only) Vertical 2-FFC/FPC 6-CIC

#### **HLW SERIES**



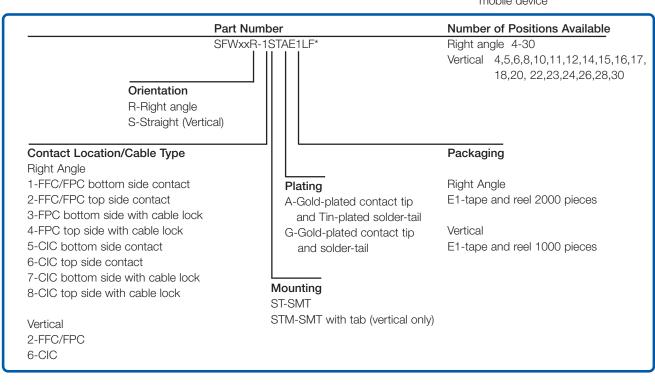
Part Number	Number of Positions Available	Number of Positions Available			
HLWxxR-2C7LF*	4-32				
Orientation	Cable Type				
R-Right angle	2-FFC/FPC				
S-Straight (Vertical)	6-CIC				

\*xx - Number of Contacts

### **SFW SERIES**



- Orientation: Right angle and vertical options
- Cable termination: ZIF
- Cable type: FFC/FPC/CIC
- Board termination: Surface mount
- Contact location: Right angle and vertical options
- ► Height: 2.7mm right angle, 5.3mm vertical
- Available in lead-free matte tin and gold-flash plating option
- Optional cable lock (Right Angle)
- Versatile, economical connector system with uses in many applications
- Traditional sliding actuator secures cable
- Application: Industrial control, business & retail, Instrumentation, brown products, printer, car multimedia devices and mobile device



\*xx - Number of Contacts

#### **SLW SERIES**



- Orientation: Right angle and vertical options
- Cable termination: ZIFCable type: FFC/FPC/CICBoard termination: Through hole
- Contact location: Bottom
- ► Height: 4.0mm right angle, 5.5mm vertical
- Lead-free plating available
- Versatile, economical connector system with uses in many applications
- Application: Industrial control, business & retail, Instrumentation, brown products, printer, car multimedia devices and mobile device

Part Number	Number of Po	Number of Positions Available		
SLWxxR-1C7LF*	4-3	30		
Orientation	Cable Type			
R-Right angle	1-FFC/FPC			
S-Straight (Vertical)	5-CIC			

#### **HLEM-R SERIES - HLEMXXR**



Part Number	Number of Positions Available					
HLEMxxR*	3-40					

- Orientation: Right angle
- Cable Termination: Non-ZIF
- Cable type: FPC/FFC
- Board Termination: DIP (Through-hole)
- Contact Location: Top
- Height: 5.0mm
- Accommodated cable thickness: 0.3 +/-
  - 0.05mm
- Application: Set-top box & printers etc

#### **HLEM-S SERIES - HLEMXXS**



- Orientation: VerticalCable Termination: Non-ZIFCable type: FPC/FFC
- ► Board Termination: DIP (Through-hole)
- Contact Location: N/A
  Height: 8.00mm
- Accommodated cable thickness: 0.3 +/-0.05mm
- Application: Set-top box & printers etc

Part Number	Number of Positions Available				
HLEMxxS*	3-40				

\*xx - Number of Contacts

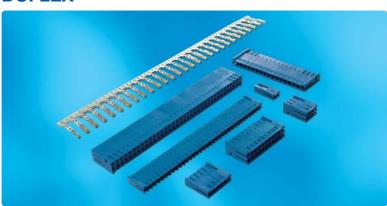
#### **CLINCHER**



Part Num	ber	Number of Positions Available			
5 digit par 65801 = receptade assembly	t number	Receptacle assembly 2-32,34 Pin assembly 2-32			
66226 = pin assembly	_	standard version for thin film circuits (0.15mm MAX. thickness) Female receptacle only			

- Cable termination: Mat or round pins
- ► Cable type: FFC/FPC/CIC
- ► Height: 2.54mm
- Lead free with gold or tin plating
- Accommodated cable thickness: 0.305+/-0.025mm (0.012+/-0.0001inch)
- Pre-assembled connectors reduce overall applied costs and ensure full contact protection
- Snap-shut allows a single connection operation and therefore increases assembly speed
- Lead free and RoHS complaint
- Application: Industrial control & equipment and business & retail equipment

#### **DUFLEX**



Housing	Part Number	Number of contacts per row			
	5 digit part number	2-36			
67013 = single row housing					
66987 = double row housing					

- Cable termination: Mates with 0.62mm square or round pins as short as 5mm
- Cable type: FFC/FPC
- ► Height of housing: 3.8mm for single row and 6.34mm for double row
- Gold or tin plating
- Accommodated cable thickness: 0.305+/-0.025mm (0.012+/-0.0001inch)
- Reliable dual beam contact design feeatures pre-stressed contact beam for low insertion force
- ldeal for large-volume users
- Mass-termination reduces overall costs and time
- Contacts fitting all housing styles ensures versatility and minimizes stock values
- Application: Industrial control & equipment and business & retail equipment

For all products featured in this catalogue, you can find all the product details like customer drawings, product specifications etc on our dedicated Flex Connector website.

# PERFORMANCE CHARACTERISTICS

Pitch	Series	Cable Type	Electrical Current Rating (AC/DC)	Electrical Voltage Rating (AC/DC)	Contact Resistance (initial)	Insulation Resistance	Dielectric Withstanding Voltage	Mechanical Durability Cycle	Operating Temperature Range
0.2mm	XL	FPC	0.2A	30V	100mΩMax.	50MΩMax.	AC90V	10	-55°C to +85°C
0.3mm	YLL-D	FPC	0.2A	30V	100mΩMax.	50MΩMin.	AC90V	10	-55°C to +85°C
	YLL-U	FPC	0.2A	30V	100mΩMax.	50MΩMin.	AC90V	10	-55°C to +85°C
0.4mm	SFGL	FPC	0.4A	50V	50mΩMax.	50MΩMin.	AC200V	20	-55°C to +85°C
0.5mm	OPU-D	FPC/FFC	0.5A	50V	30mΩMax.	100MΩMin.	AC200V	20	-55°C to +85°C
	OPU-U	FPC/FFC	0.5A	50V	30mΩMax.	100MΩMin.	AC200V	20	-55°C to +85°C
	SFVE	FPC	0.2A	30V	70mΩMax.	50MΩMin.	AC250V	10	-55°C to +85°C
	SFVL-D	FPC	0.4A	50V	30mΩMax.	100MΩMin.	AC200V	10	-55°C to +85°C
	SFVL-U	FPC	0.4A	50V	30mΩMax.	100MΩMin.	AC200V	10	-55°C to +85°C
	SFV-R	FPC/FFC	0.5A	50V	30mΩMax.	100MΩMin.	AC200V	20	-55°C to +105°C
	SFV-S	FPC/FFC	0.5A	50V	30mΩMax.	100MΩMin.	AC200V	20	-55°C to +85°C
	VHC	FPC/FFC	0.5A	50V	50mΩMax.	50MΩMin.	AC250V	20	-55°C to +85°C
	VLK	FPC/FFC	0.5A	50V	50mΩMax.	50MΩMin.	AC250V	20	-55°C to +85°C
	VLL	FPC	0.5A	50V	30mΩMax.	100MΩMin.	AC250V	20	-55°C to +85°C
	VLP	FPC	0.4A	50V	30mΩMax.	100MΩMin.	AC200V	10	-55°C to +85°C
1.0mm	HFW-R	FPC/FFC/CIC	1.0A	100V	30mΩMax.	500MΩMin.	AC500V	30	-55°C to +105°C
	HFW-S	FPC/FFC/CIC	1.0A	100V	30mΩMax.	500MΩMin.	AC500V	30	-55°C to +85°C
	HLW-R	FPC/FFC/CIC	1.0A	100V	30mΩMax.	500MΩMin.	AC500V	30	-55°C to +85°C
	HLW-S	FPC/FFC/CIC	1.0A	100V	30mΩMax.	500MΩMin.	AC500V	30	-55°C to +85°C
	SFW-R	FPC/FFC/CIC	1.0A	100V	30mΩMax.	500MΩMin.	AC500V	20	-55°C to +85°C
	SFW-S	FPC/FFC/CIC	1.0A	100V	30mΩMax.	500MΩMin.	AC500V	20	-55°C to +85°C
	SLW-R	FPC/FFC/CIC	1.0A	100V	30mΩMax.	500MΩMin.	AC500V	20	-55°C to +85°C
	SLW-S	FPC/FFC/CIC	1.0A	100V	30mΩMax.	500MΩMin.	AC500V	20	-55°C to +85°C
1.25mm	HLEM-R	FPC/FFC	1.0A	200V	30mΩMax.	1000MΩMin.	AC500V	20	-55°C to +85°C
	HLEM-S	FPC/FFC	1.0A	200V	30mΩMax.	1000MΩMin.	AC500V	20	-55°C to +85°C
2.54mm	Clincher	FFC/FPC/CIC	2.0A	500V	15mΩMax.	5000MΩMin.	AC1000V	100	-65°C to +105°C
	Duflex	FFC/FPC	3.0A	500V	15mΩMax.	N/A	AC1000V	200	-65°C to +125°C

For more information on FCI sales offices, headquarters, agents and local distributors, visit www.fciconnect.com



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