

FEL CONNECTOR

Connectors for FPC and FFC

Features

●The FEL connector passed various types of durability tests for automobile

High contact force ensures contact reliability and allows stability of performance in various applications.

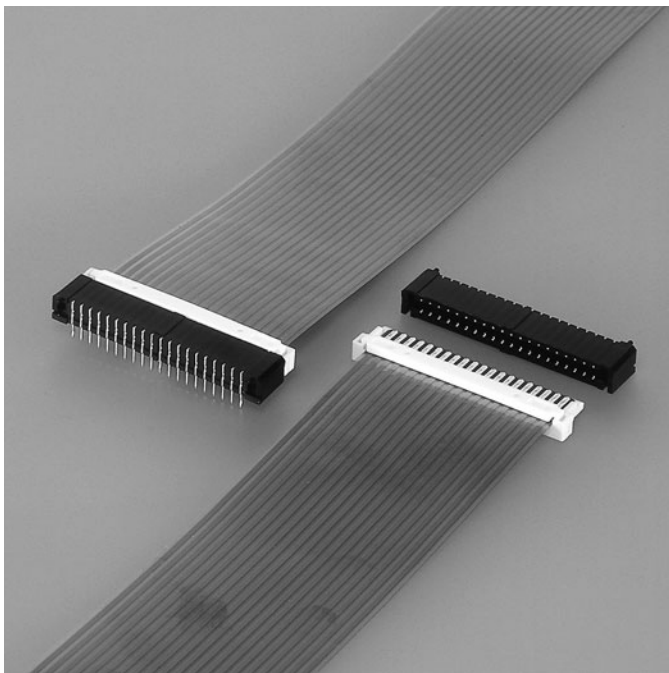
●Secure mating process

A FPC is fixed by a plug housing and a retainer and then mated to a male connector.

It prevents problems such as inverse, incomplete insertion, which occur in the conventional ZIF type connector.

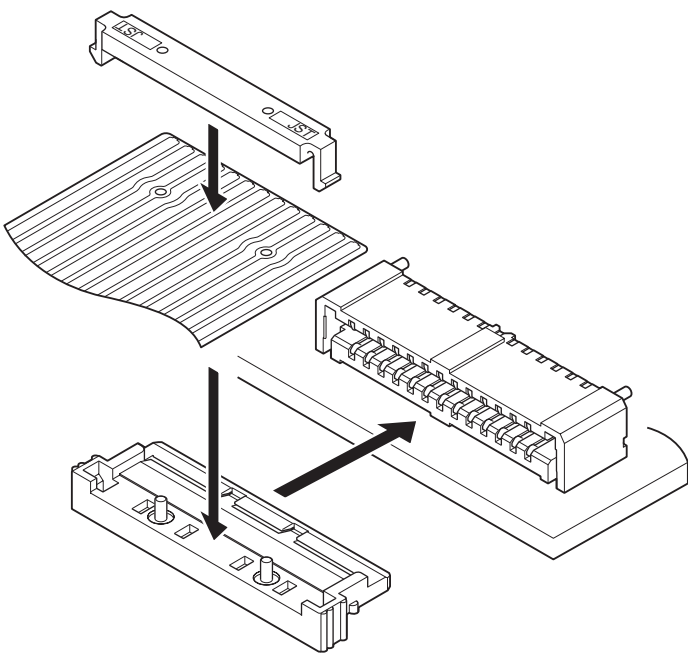
●Multi-entry type

In addition to top entry type, side normal type whose FPC is positioned with its mating surface facing upward and side reverse type whose FPC is positioned with its mating surface facing down are available for mounting designs.



The FEL connector is 2.0mm(.079") pitch FPC connector suitable for environments in automotive compartment.

The FEL connector is different from the conventional ZIF type connector, reliable connection is greatly improved by using a general housing lock for an automotive connector.



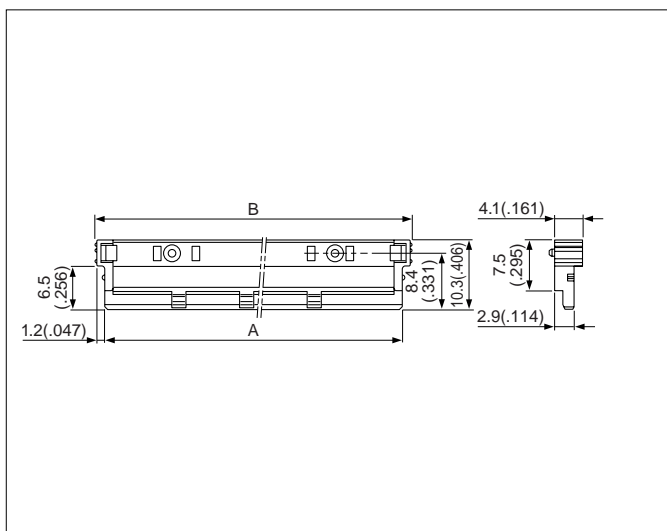
Specifications

- Current rating: 0.6 to 1.5A AC, DC
(When specific FPC pattern is used.)
- Voltage rating: 200V AC, DC
- Temperature range: -40°C to +90°C
(including temperature rise in applying electrical current)
- Contact resistance: Initial value/10mΩ max.
After environmental testing/50mΩ max.
- Insulation resistance: 100MΩ min.
- Withstanding voltage: 1,000V AC/minute
- Applicable FPC: Lead pitch/2.0mm(.079")
Lead width/1.2mm(.047")
Mating part thickness/0.14±0.02mm
(.006"±.001")
- Applicable PC board: Thickness/1.6mm(.063")
Hole size/0.8±0.1mm(.031"±.004")
(Through-hole)

* Contact JST if Lead-Free product is required.

* Contact JST for details.

Plug housing

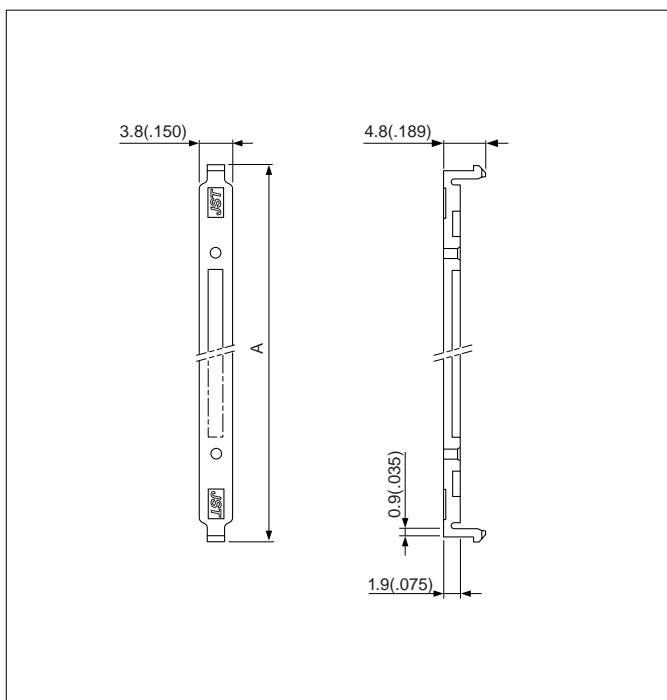


Circuits	Model No.	Dimensions mm(in.)		Q'ty/bag
		A	B	
8	FEL2P-8BG	20.0(.787)	23.0(.906)	400
13	FEL2P-13BG	30.0(1.181)	33.0(1.299)	250
20	FEL2P-20BG	44.0(1.732)	47.0(1.850)	200

Material

Glass-filled PPS, ivory

Retainer



Circuits	Model No.	Dimensions mm(in.)		Q'ty/bag
		A		
8	FEL2R-8BG	19.5(.768)		800
13	FEL2R-13BG	29.5(1.161)		500
20	FEL2R-20BG	43.5(1.713)		400

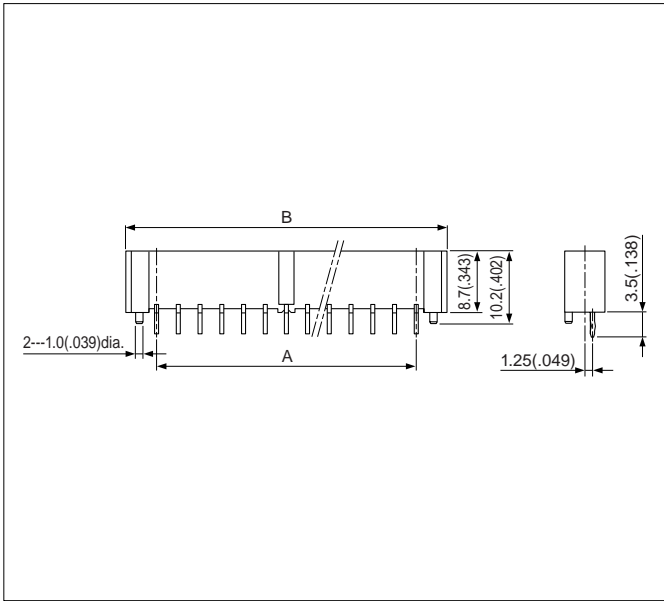
Material

Glass-filled PBT, natural (white)

FELCONNECTOR

Connectors for FPC and FFC

Header Top entry type



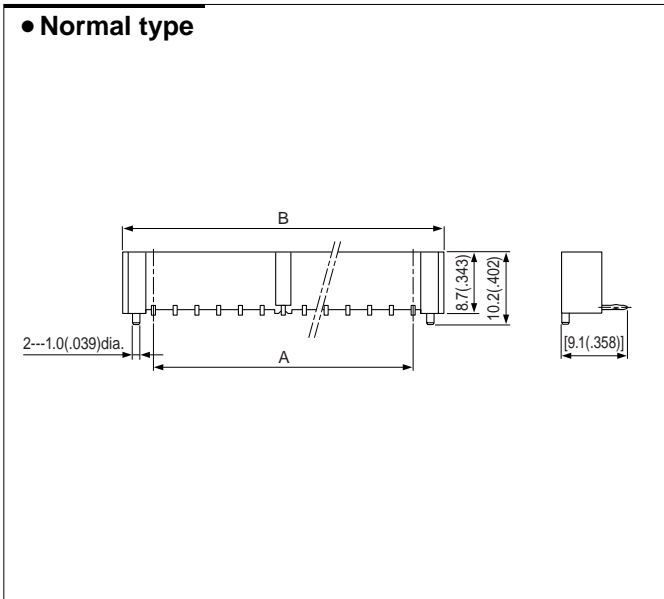
Circuits	Model No.	Dimensions mm(in.)		Q'ty/bag
		A	B	
8	8FEL2-BTN	14.0(.551)	23.0(.906)	720
13	13FEL2-BTN	24.0(.945)	33.0(1.299)	504
20	20FEL2-BTN	38.0(1.496)	47.0(1.850)	360

Material and Finish

Terminal: Phosphor bronze, copper-undercoated, tin alloy-plated
Housing: Glass-filled 6T nylon, black

Header Side entry type

• Normal type

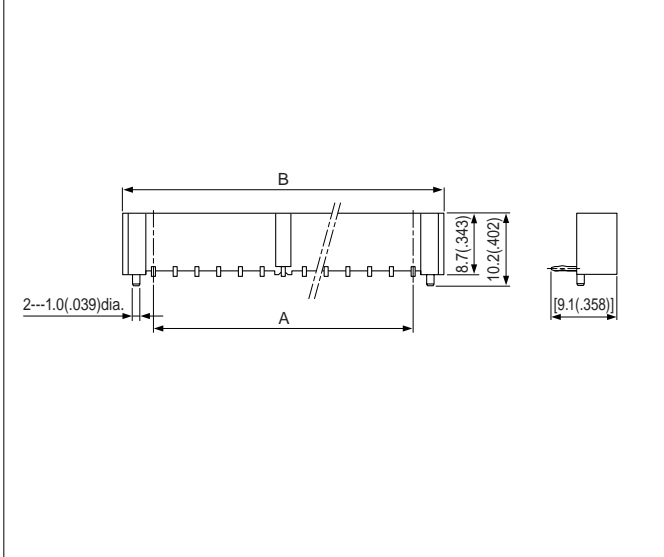


Circuits	Model No.		Dimensions mm(in.)		Q'ty/bag
	Normal type	Reverse type	A	B	
8	8FEL2-STN	8FEL2-SRTN	14.0(.551)	23.0(.906)	320
13	13FEL2-STN	13FEL2-SRTN	24.0(.945)	33.0(1.299)	224
20	20FEL3-STN	20FEL3-SRTN	38.0(1.496)	47.0(1.850)	160

Material and Finish

Terminal: Phosphor bronze, copper-undercoated, tin alloy-plated
Housing: Glass-filled 6T nylon, black

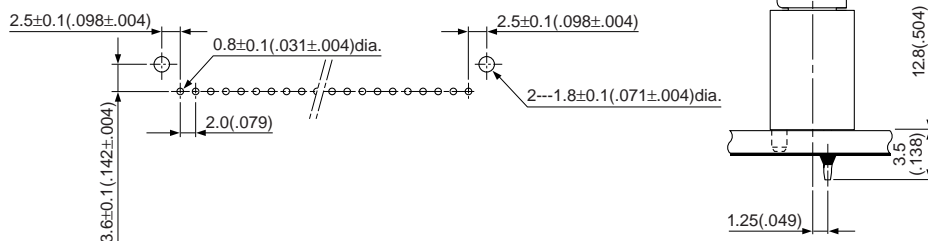
• Reverse type



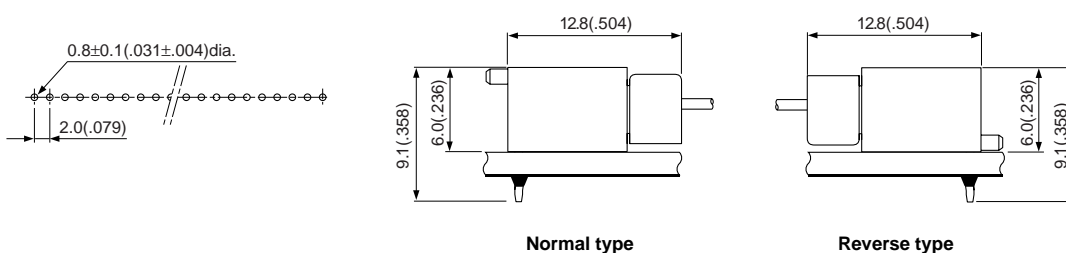
HIT
AIT
HCM
MIO
CPT
BMD
CIT
HIC
SQS
SQM
SQH
SQSI
SQW
SQF
SHUNT
RING
FEL
FMT
FOX
CN
EA1
WPZ
JUNCTION
BOX
INDEX

PC board layout and Assembly layout

• Top entry type

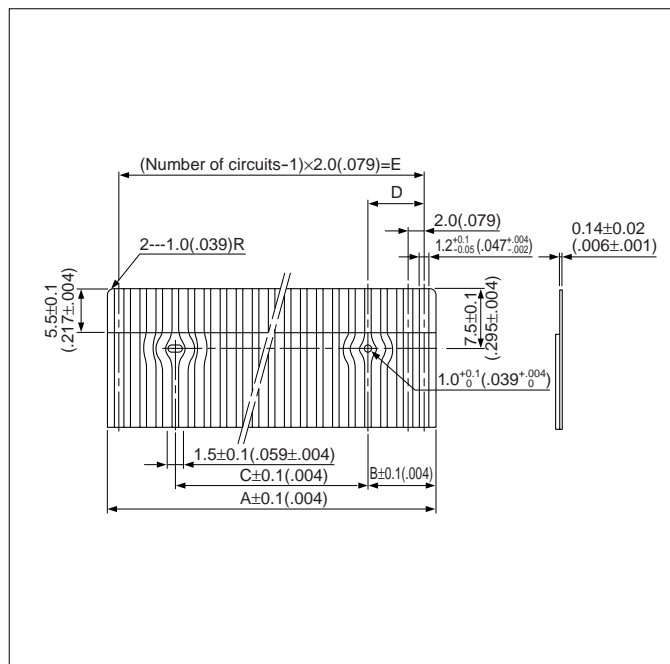


• Side entry type



Note: 1. Tolerances are non-cumulative: $\pm 0.05\text{mm}$ ($\pm .002''$) for all centers.
 2. Hole dimensions differ according to the kind of PC board and piercing method.
 The dimensions above should serve as a guideline. Contact JST for details.

Lead section dimensions of FPC



Circuits	Dimensions mm(in.)				
	A	B	C	D	E
8	17.0(.669)	4.5(.177)	8.0(.315)	3.0(.118)	14.0(.551)
13	27.0(1.063)	6.5(.256)	14.0(.551)	5.0(.197)	24.0(.945)
20	41.0(1.614)	8.5(.335)	24.0(.945)	7.0(.276)	38.0(1.496)