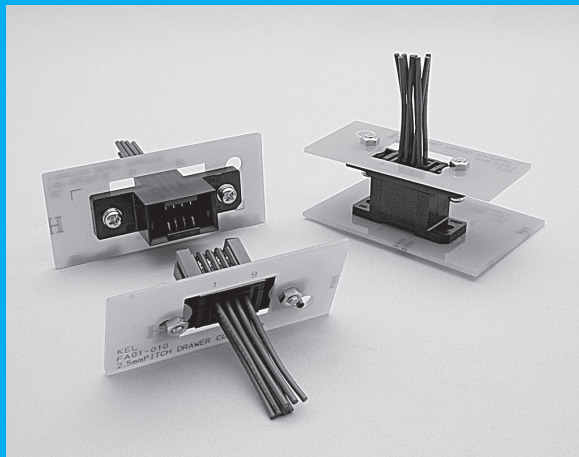


# FA SERIES

## 2.5mm PITCH DRAWER CONNECTOR

RoHS  
Compliant



### FEATURES

- ▶ Receptacle (FA:Cable side connector), Plug (FA11:PCB side connector) and Cable plug (FA12:Cable side connector for cable to cable) are available and can accommodate a wide range of usage.
- ▶ Absorbs  $\pm 3\text{mm}$  (0.118") gap in X and Y directions when mating.
- ▶ Floating structure of the screwed area enables  $\pm 1.4\text{mm}$  (0.055) displacement in X and Y directions in mated condition.
- ▶ Highly reliable design with effective mating length of 3mm (0.118").
- ▶ With a twin-leaf pinching 2 point contact structure adopted as a contact mechanism, improved reliability based on stable contact performance is ensured.
- ▶ Option applicable for Hot swap is available for FA12 series.

### ORDER CODE

**FA01**-      -  

①            ②            ③

\*Please order in multiples of the quantity per package.

① **[Type] FA01** : Receptacle (Cable side connector)

② **[Number of contacts]** 004 : 4pin 006 : 6pin 008 : 8pin 010 : 10pin 012 : 12pin 014 : 14pin 016 : 16pin 018 : 18pin  
020 : 20pin 022 : 22pin 024 : 24pin 026 : 26pin 028 : 28pin 030 : 30pin 032 : 32pin 034 : 34pin 038 : 38pin 040 : 40pin

③ **[Positioning post]** No code : With post 1 : Without post\*

\*Above order code FA01-□□□-□ is for the housing only, contact terminals are sold separately. About contact order code, please refer next page.

\*Pin counts for without positioning post type will be added to the line up accordingly. Please contact your local KEL sales office for consideration and purchasing.

### ORDER CODE

**FA11**-      

①            ②

\*Please order in multiples of the quantity per package.

① **[Type] FA11** : Plug (PCB side connector)

② **[Number of contacts]** 004 : 4pin 006 : 6pin 008 : 8pin 010 : 10pin 012 : 12pin 014 : 14pin 016 : 16pin 018 : 18pin  
020 : 20pin 022 : 22pin 024 : 24pin 026 : 26pin 028 : 28pin 030 : 30pin 032 : 32pin 034 : 34pin 040 : 40pin

### ORDER CODE

**FA12**-      

①            ②

\*Please order in multiples of the quantity per package.

① **[Type] FA12** : Plug (Cable plug)

② **[Number of contacts]** 006 : 6pin 008 : 8pin 012 : 12pin 016 : 16pin 020 : 20pin 024 : 24pin 034 : 34pin 038 : 38pin 040 : 40pin

\*Above order code FA12-□□□ is for the housing only, contact terminals are sold separately. About contact order code, please refer next page.

### SPECIFICATIONS

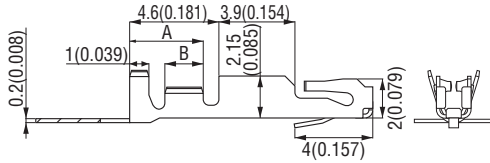
Material and plating		Electrical characteristics	
Insulator material	Glass-filled PBT (UL94V-0), Black	Rated current	3A per contact
Contact material	Copper alloy	Contact resistance	30mΩ max.
Contact plating	(Contact /Terminal area) Gold over Nickel (Crimping area) Tin over Nickel	Dielectric withstanding voltage	650V AC for 1 minute.
		Insulation resistance	1000MΩ min. at 500V DC
Washer / Rivet material	Stainless steel	Operating temperature	-40°C to +85°C
		Durability of insertion and withdrawal	2,000 times
		Applicable cable	#22/24/26/28 AWG Discrete wire cable (outer diameter of cable coating : $\Phi 0.88$ to $\Phi 1.70\text{mm}$ )

\*High mating cycle endurance type (5,000 times min.) is also available, please contact your local KEL sales office.

## Crimp contact

Unit : mm(inch)

### ◆ Crimp contact for FA01-□□□-□ receptacle (Cable side connector)



Packaging style
Reel

#### ▶ Product table / Dimensions

Part number	A	B	Number of packaging
#566□	3.80 (0.150)	2.0 (0.079)	10,000
#566□-1	3.55 (0.140)	1.5 (0.059)	10,000

**ORDER CODE** **#566** □ - □

① ② ③

\*Please order in multiples of the quantity per package.

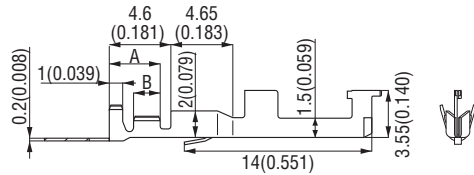
① **[Contact] #566** : Crimping type contact for FA01

② **[Gold plating thickness] No code** : 0.05 μm min. **D** : 0.25 μm min.

③ **[Applicable cable size] No code** : #22 AWG, #24 AWG and #26 AWG(Cable diameter : φ 1.00mm to φ 1.70mm)  
**1** : #26 AWG and #28 AWG(Cable diameter : φ 0.88mm to φ 1.20mm)

\*Durability of insertion and withdrawal for D(0.25μm min.):5,000 times

### ◆ Crimp contact for FA12-□□□ plug (Cable plug)



Packaging style
Reel

#### ▶ Product table / Dimensions

Part number	A	B	Number of packaging
#570	3.80 (0.150)	2.0 (0.079)	7,500
#570-1	3.55 (0.140)	1.5 (0.059)	7,500

**ORDER CODE** **#570**- □

① ②

\*Please order in multiples of the quantity per package.

① **[Contact] #570** : Crimping type contact for FA12

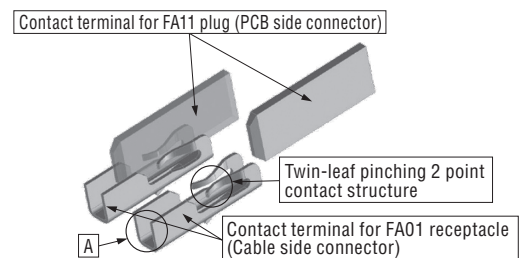
② **[Applicable cable size] No code** : #22 AWG, #24 AWG and #26 AWG(Cable diameter : φ 1.00mm to φ 1.70mm)  
**1** : #26 AWG and #28 AWG(Cable diameter : φ 0.88mm to φ 1.20mm)

## Twin-Leaf Pinching 2 Point Contact Structure

With the KEL original twin-leaf pinching 2 point contact structure, the flat plate type contact of plug connector is inserted into the contact of receptacle connector (A part of the figure on the right side) for electrical contact.

The flat plate shaped contact of plug connector is tolerant of buckling compared to pin header type contact, and the stable contact force of the pinching structure of receptacle connector assures high reliability of electrical contact.

The twin-leaf pinching 2 point contact structure is a contact method well acknowledged for our GF series battery connector which has high sales and is highly evaluated in lap top computer market.



## Assembly tool



#### ▶ Crimping hand tool

Part number	CH-01	CH-02	CH-04
Applicable cable size	#22 AWG, #24 AWG	#26 AWG, #28 AWG	#22 AWG, #24 AWG
Crimp contact	#566□	#566□-1, #570-1	#570

\*Please consult with your local KEL sales office if you intend to use an #26 AWG cable at #566 or #570 contact and crimp them using a hand tool.

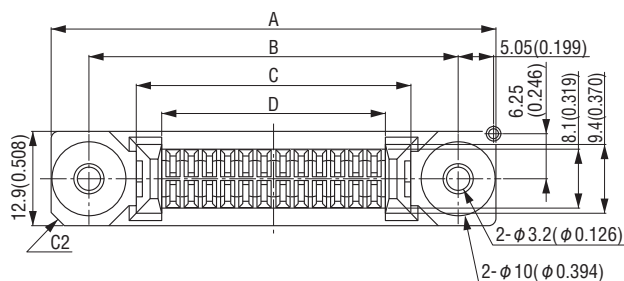
#### ▶ Crimping machine

Crimp contact	#566□	#566□-1	#570	#570-1
Manufacturer	Japan Automatic Machine Co., Ltd.			
Crimping machine	LPC220S			
Applicator	CFS779100	CFS815200	CFS791600	CFS813100

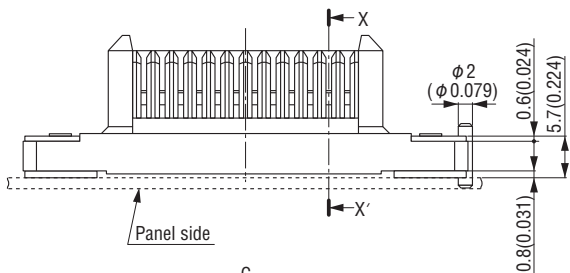
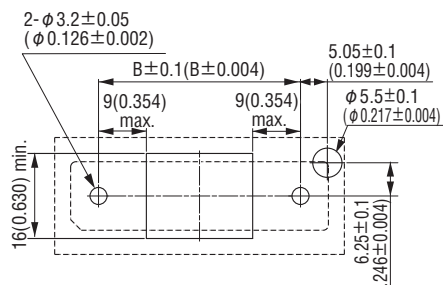
\*A crimping machine and applicator are available for purchase from Japan Automatic Machine Co., Ltd.

# FA01-□□□□-□ (Receptacle, Cable side connector, Housing)

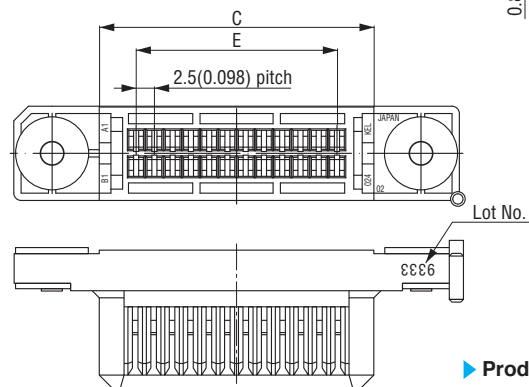
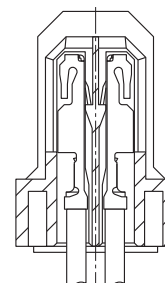
Unit : mm(inch)



## Panel Layout (Component Side View)



## X-X' Cross Section (With the contact inserted)



Packaging style

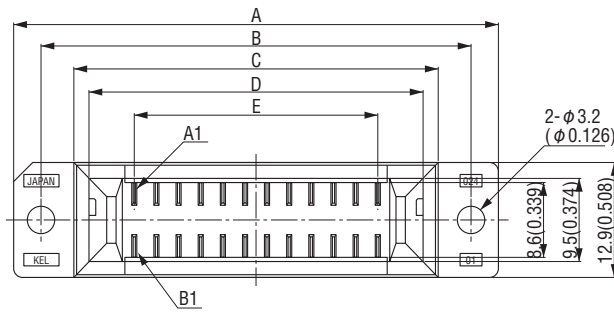
Pipe

## Product table / Dimensions

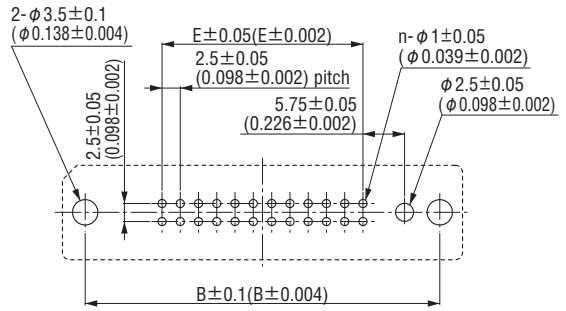
No. of contacts	Part number	A	B	C	D	E	Number of packaging
4	FA01-004-□	36.0 (1.417)	25.5 (1.004)	12.5 (0.492)	5.7 (0.224)	2.5 (0.098)	108
6	FA01-006-□	38.5 (1.516)	28.0 (1.102)	15.0 (0.591)	8.2 (0.323)	5.0 (0.197)	108
8	FA01-008-□	41.0 (1.614)	30.5 (1.201)	17.5 (0.689)	10.7 (0.421)	7.5 (0.295)	96
10	FA01-010-□	43.5 (1.713)	33.0 (1.299)	20.0 (0.787)	13.2 (0.520)	10.0 (0.394)	96
12	FA01-012-□	46.0 (1.811)	35.5 (1.398)	22.5 (0.886)	15.7 (0.618)	12.5 (0.492)	84
14	FA01-014-□	48.5 (1.909)	38.0 (1.496)	25.0 (0.984)	18.2 (0.717)	15.0 (0.591)	84
16	FA01-016-□	51.0 (2.008)	40.5 (1.594)	27.5 (1.083)	20.7 (0.815)	17.5 (0.689)	72
18	FA01-018-□	53.5 (2.106)	43.0 (1.693)	30.0 (1.181)	23.2 (0.913)	20.0 (0.787)	72
20	FA01-020-□	56.0 (2.205)	45.5 (1.791)	32.5 (1.280)	25.7 (1.012)	22.5 (0.886)	72
22	FA01-022-□	58.5 (2.303)	48.0 (1.890)	35.0 (1.378)	28.2 (1.110)	25.0 (0.984)	72
24	FA01-024-□	61.0 (2.402)	50.5 (1.988)	37.5 (1.476)	30.7 (1.209)	27.5 (1.083)	60
26	FA01-026-□	63.5 (2.500)	53.0 (2.087)	40.0 (1.575)	33.2 (1.307)	30.0 (1.181)	60
28	FA01-028-□	66.0 (2.598)	55.5 (2.185)	42.5 (1.673)	35.7 (1.406)	32.5 (1.280)	60
30	FA01-030-□	68.5 (2.697)	58.0 (2.283)	45.0 (1.772)	38.2 (1.504)	35.0 (1.378)	60
32	FA01-032-□	71.0 (2.795)	60.5 (2.382)	47.5 (1.870)	40.7 (1.602)	37.5 (1.476)	60
34	FA01-034-□	73.5 (2.894)	63.0 (2.480)	50.0 (1.969)	43.2 (1.701)	40.0 (1.575)	48
38	FA01-038-□	78.5 (3.091)	68.0 (2.677)	55.0 (2.165)	48.2 (1.898)	45.0 (1.772)	48
40	FA01-040-□	81.0 (3.189)	70.5 (2.776)	57.5 (2.264)	50.7 (1.996)	47.5 (1.870)	48

# FA11-□□□ (Plug, PCB side connector)

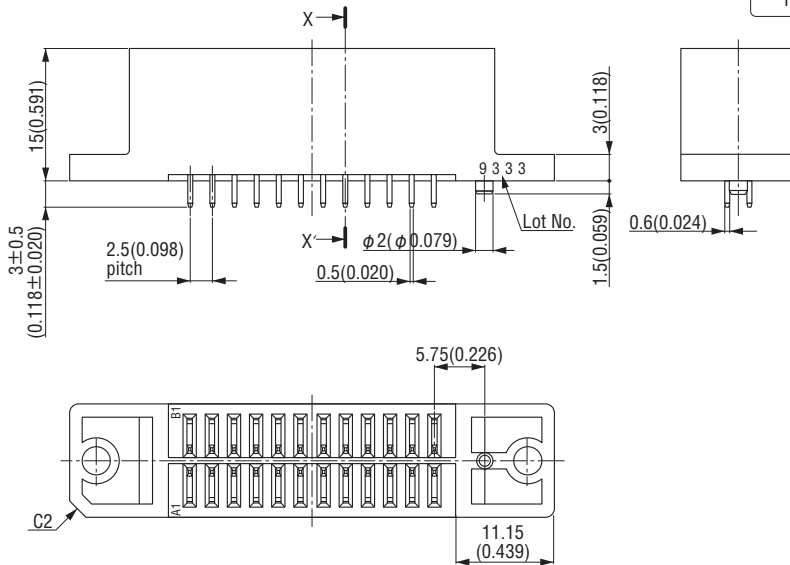
Unit : mm(inch)



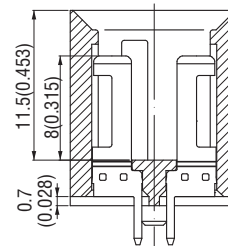
## Printed Circuit Board Layout (Component Side View)



"n" is number of contacts.  
Reference PCB thickness t=1.6(0.063)



## X-X' Cross Section

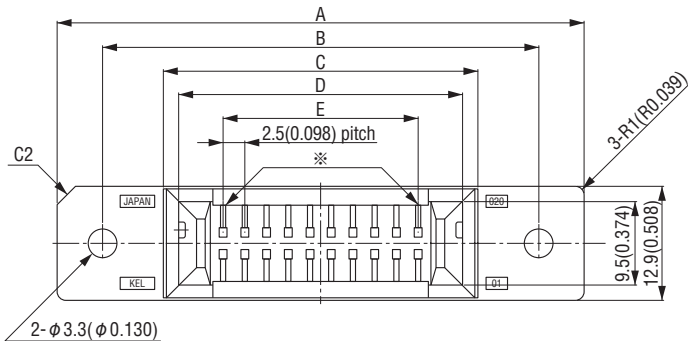
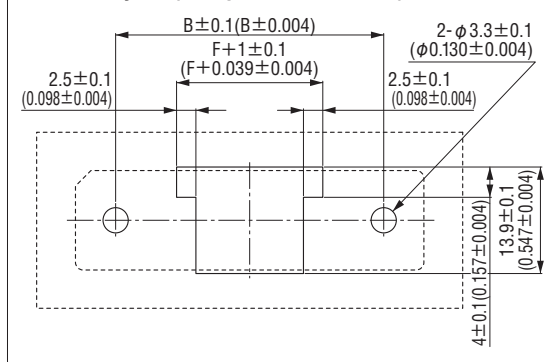
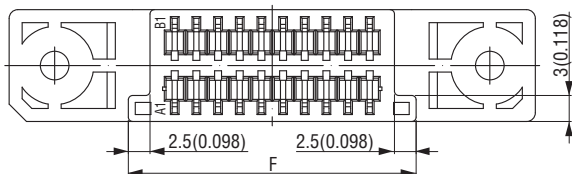
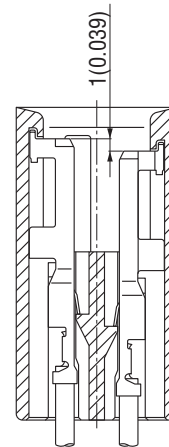
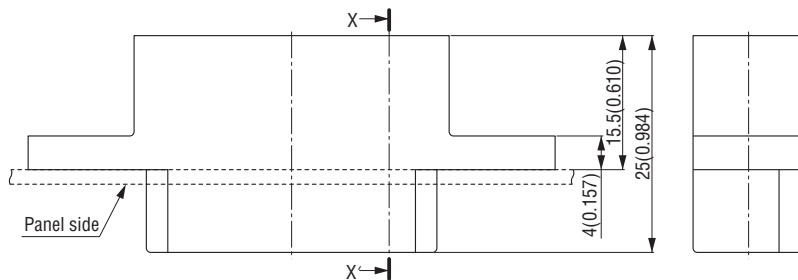


Packaging style

Pipe

## Product table / Dimensions

No. of contacts	Part number	A	B	C	D	E	Number of packaging
4	FA11-004	29.8 (1.173)	23.6 (0.929)	16.2 (0.638)	12.8 (0.504)	2.5 (0.098)	17
6	FA11-006	32.3 (1.272)	26.1 (1.028)	18.7 (0.736)	15.3 (0.602)	5.0 (0.197)	15
8	FA11-008	34.8 (1.370)	28.6 (1.126)	21.2 (0.835)	17.8 (0.701)	7.5 (0.295)	14
10	FA11-010	37.3 (1.469)	31.1 (1.224)	23.7 (0.933)	20.3 (0.799)	10.0 (0.394)	13
12	FA11-012	39.8 (1.567)	33.6 (1.323)	26.2 (1.031)	22.8 (0.898)	12.5 (0.492)	12
14	FA11-014	42.3 (1.665)	36.1 (1.421)	28.7 (1.130)	25.3 (0.996)	15.0 (0.591)	12
16	FA11-016	44.8 (1.764)	38.6 (1.520)	31.2 (1.228)	27.8 (1.094)	17.5 (0.689)	11
18	FA11-018	47.3 (1.862)	41.1 (1.618)	33.7 (1.327)	30.3 (1.193)	20.0 (0.787)	10
20	FA11-020	49.8 (1.961)	43.6 (1.717)	36.2 (1.425)	32.8 (1.291)	22.5 (0.886)	10
22	FA11-022	52.3 (2.059)	46.1 (1.815)	38.7 (1.524)	35.3 (1.390)	25.0 (0.984)	9
24	FA11-024	54.8 (2.157)	48.6 (1.913)	41.2 (1.622)	37.8 (1.488)	27.5 (1.083)	9
26	FA11-026	57.3 (2.256)	51.1 (2.012)	43.7 (1.720)	40.3 (1.587)	30.0 (1.181)	8
28	FA11-028	59.8 (2.354)	53.6 (2.110)	46.2 (1.819)	42.8 (1.685)	32.5 (1.280)	8
30	FA11-030	62.3 (2.453)	56.1 (2.209)	48.7 (1.917)	45.3 (1.783)	35.0 (1.378)	8
32	FA11-032	64.8 (2.551)	58.6 (2.307)	51.2 (2.016)	47.8 (1.882)	37.5 (1.476)	7
34	FA11-034	67.3 (2.650)	61.1 (2.406)	53.7 (2.114)	50.3 (1.980)	40.0 (1.575)	7
40	FA11-040	74.8 (2.945)	68.6 (2.701)	61.2 (2.409)	57.8 (2.276)	47.5 (1.870)	6


**Panel Layout (Component Side View)**

**X-X' Cross Section (With the contact inserted)**


\*Hot-swap positions A1 and An/2 are two places.

Packaging style

Tray

**Product table / Dimensions**

No. of contacts	Part number	A	B	C	D	E	F	Number of packaging
6	FA12-006	43.2 (1.701)	32.7 (1.287)	18.7 (0.736)	15.3 (0.602)	5.0 (0.197)	15.7 (0.618)	84
8	FA12-008	45.7 (1.799)	35.2 (1.386)	21.2 (0.835)	17.8 (0.701)	7.5 (0.295)	18.2 (0.717)	84
12	FA12-012	50.7 (1.996)	40.2 (1.583)	26.2 (1.031)	22.8 (0.898)	12.5 (0.492)	23.2 (0.913)	72
16	FA12-016	55.7 (2.193)	45.2 (1.780)	31.2 (1.228)	27.8 (1.094)	17.5 (0.689)	28.2 (1.110)	72
20	FA12-020	60.7 (2.390)	50.2 (1.976)	36.2 (1.425)	32.8 (1.291)	22.5 (0.886)	33.2 (1.307)	60
24	FA12-024	65.7 (2.587)	55.2 (2.173)	41.2 (1.622)	37.8 (1.488)	27.5 (1.083)	38.2 (1.504)	60
34	FA12-034	78.2 (3.079)	67.7 (2.665)	53.7 (2.114)	50.3 (1.980)	40.0 (1.575)	50.7 (1.996)	48
38	FA12-038	83.2 (3.276)	72.7 (2.862)	58.7 (2.311)	55.3 (2.177)	45.0 (1.772)	55.7 (2.193)	48
40	FA12-040	85.7 (3.374)	75.2 (2.961)	61.2 (2.409)	57.8 (2.276)	47.5 (1.870)	58.2 (2.291)	48