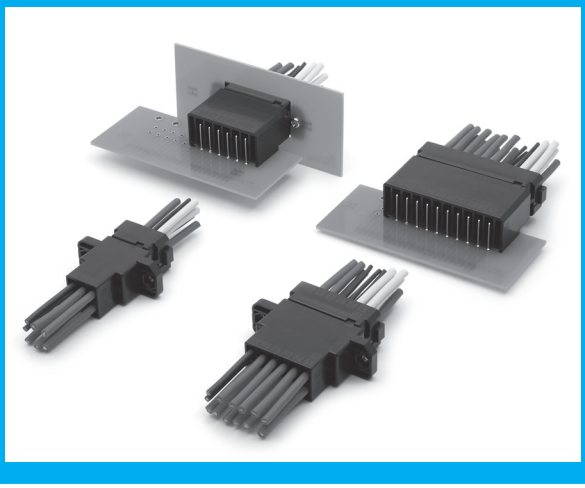
FTC SERIES

5.08 mm PITCH CONNECTOR FOR DISCRETE CABLE/TWO CABLES CRIMPABLE TYPE

*UL cUL File No. E509060 (Recognized Component)

RoHS Compliant



FEATURES

- This connector allows two cables to be crimped into one contact.
- The crimped contact of the cable can be mounted anywhere on the housing.
- By crimping two cables, space is saved and power supply can be transferred between the connectors.
- Absorbs ±3 mm(0.118") gap in XY directions.
- Movement of the screwed part of the cable connector can absorb maximum ±0.7 mm in the XY direction in mating condition.
- Highly reliable design with an effective mating length of 3 mm.
- Twin-Leaf Pinching 2 point contact structure prevents contact buckling and improves reliability with stable contact force.
- The receptacle side connector has drawer type (FTC01), with lock type (FTC02). The plug side connector has right angle type (FTC11) and cable relay type (FTC12).

ORDER CODE

FTC0□-□□

① ②

*Please order in multiples of the quantity per package.

① 【Type】 Receptacle (Cable side connector) FTC01 : Drawer type FTC02 : With lock type

② 【Number of contacts】 (FTC01) 12 : 12pin (FTC02) 06 : 06pin 10 : 10pin 12 : 12pin 20 : 20pin

*Above order code FTC0□-□□ is for housing only, crimp contact are sold separately. About contact order code, please refer next page.

ORDER CODE

FTC11-□□ □□

① ② ③ ④

*Please order in multiples of the quantity per package.

① 【Type】 FTC11 : Plug (PCB side connector)

② 【Number of contacts】 (S type) 06 : 6pin 12 : 12pin 20 : 20pin (L type) 06 : 6pin 10 : 10pin 12 : 12pin 20 : 20pin

③ 【Contact tail style】 S : Straight L : Right angle

④ 【Gold plating thickness】 B : 0.1µm min F : 0.38µm min

ORDER CODE

FTC12-□□

① ②

*Please order in multiples of the quantity per package.

① 【Type】 FTC12 : Plug (Cable-relay type)

② 【Number of contacts】 06 : 6pin 10 : 10pin 12 : 12pin 20 : 20pin

*Above order code FTC12-□□ is for housing only, crimp contact are sold separately. About contact order code, please refer next page.

SPECIFICATIONS

Material and plating	
Insulator material	Glass-filled PBT (UL94V-0), Black
Contact material	Copper alloy
Contact plating	[FTC0□/12] Nickel base (Contact area) Gold (Crimping area) Nickel [FTC11] Nickel base (Contct area) Gold (Terminal area) Gold
Retention clip material	Copper alloy
Retention clip plating	Gold over Nickel
Washer/Rivet material	Stainless steel

Electrical characteristics	
Current rating	Refer the next page "Rated current table"
Rated voltage	600V AC·DC
Contact resistance	10 mΩ max.
Dielectric withstanding voltage	2,200V AC for 1 minute.
Insulation resistance	1,000 MΩ min. at 500V DC
Operating temperature	-55°C to +105°C
Durability of inser tion and withdrawal	[Gold plating thickness 0.1µm min.] 100 times [Gold plating thickness 0.38µm min.] 500 times
Recommended cable	#14/16/18/20 AWG Discrete wire cables (Outer diameter of cable coating: Φ1.8 to Φ3.4mm)
Tensile strength of crimped part	[AWG #14/16] 190N min. [AWG #18] 120N min. [AWG #20] 75N min.

Rated current table

▶Standard　Rated current　*1　　Unit: A (per contact)

Mating matrix		Cable size			
Receptacle	Plug	AWG#14	AWG#16	AWG#18	AWG#20
FTC01-12 *2	FTC11-12S□	9.0	8.5	7.5	7.0
	FTC11-12L□	8.5	8.5	7.5	7.0
	FTC12-12	12.0	9.5	7.5	7.5
FTC02-□□ *3	FTC11-□□S□	8.0	7.0	6.0	6.0
	FTC11-□□L□	7.0	6.0	5.5	5.5
	FTC12-□□	10.0	8.5	6.5	6.5

* 1 The rated current varies depending on the number of contacts to be energized, so please contact our sales staff for details.
* 2 Rated current when all 12-pin contacts are energized
* 3 Rated current when all 20-pin contacts are energized.

▶Rated current for UL　UL1977　*UL cUL File No. E509060　　Unit: A (per contact)

Mating matrix		Cable size			
Receptacle	Plug	AWG#14	AWG#16	AWG#18	AWG#20
FTC0□-□□	FTC11-□□□□	7.0	6.0	5.5	5.5
	FTC12-□□	7.0	6.0	5.5	5.5

Mating table

ORDER CODE		Receptacle	
		FTC01-□□	FTC02-□□
Plug	FTC11-□□S□	Vertical mating / Drawer type 12pin	Vertical mating / With lock 6/12/20pin
	FTC11-□□L□	Horizontal mating / Drawer type 12pin	Horizontal mating / With lock 6/10/12/20pin
	FTC12-□□	Cable-relay mating / Drawer type 12pin	Cable-relay mating / With lock 6/10/12/20pin

Contact number table

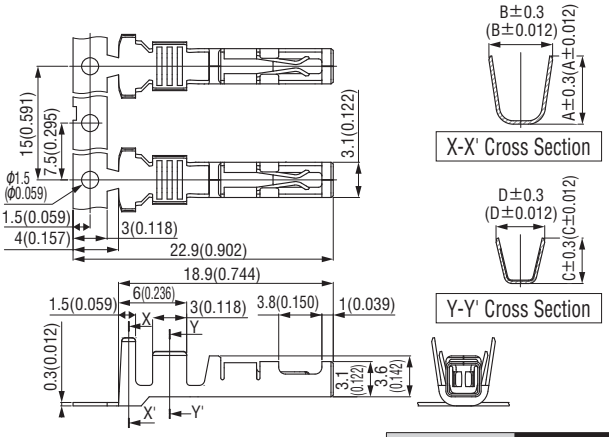
Product type		Number of contacts			
		6	10	12	20
Receptacle	FTC01-□□ Cable side connector / Drawer type	—	—	√	—
	FTC02-□□ Cable side connector / With rock	√	√	√	√
Plug	FTC11-□□S□ PCB side connector / Vertical type	√	—	√	√
	FTC11-□□L□ PCB side connector / Horizontal type	√	√	√	√
	FTC12-□□ Cable-relay type	√	√	√	√

* Other numbers of contacts will be developed. Please contact our sales representative for details.

Climp contact

Unit : mm(inch)

◆Crimp contact for FTC0□-□□ (Cable side connector) [Recommended cable size: 1M/1L]



Part number	Packaging style
#625F-1□-R	Reel
#625F-1□-B	Other

▶ Product table / Dimensions

Part number	A	B	C	D	No. of packaging
#625□-1M-R	5.0(0.197)	4.68(0.184)	3.5(0.138)	3.5(0.138)	2,000
#625□-1M-B	5.0(0.197)	4.68(0.184)	3.5(0.138)	3.5(0.138)	100
#625□-1L-R	6.0(0.236)	5.61(0.221)	4.0(0.157)	4.29(0.169)	2,000
#625□-1L-B	6.0(0.236)	5.61(0.221)	4.0(0.157)	4.29(0.169)	100

ORDER CODE　#625□ - 1□ - □

① ② ③ ④

*Please order in multiples of the quantity per package.

① 【Contact name】 #625 : Crimp contact for FTC0□

② 【Gold plating thickness】 B : 0.1μm min.　F : 0.38μm min.

③ 【Applicable cable size】

1M : Single crimp AWG #18/20
(Outer diameter of cable coating: Φ 1.8 to 2.8 mm)

Two-piece crimp AWG#20 × 2 pieces
(Outer diameter of cable coating: Φ 1.8 to 1.9 mm × 2 pieces)

Two-piece crimp AWG #18 x 2 pieces
(Outer diameter of cable coating: Φ 2.0 to 2.1 mm x 2 pieces)

1L : Single crimp AWG #14/16
(Outer diameter of cable coating: Φ 2.4 to 3.4 mm)

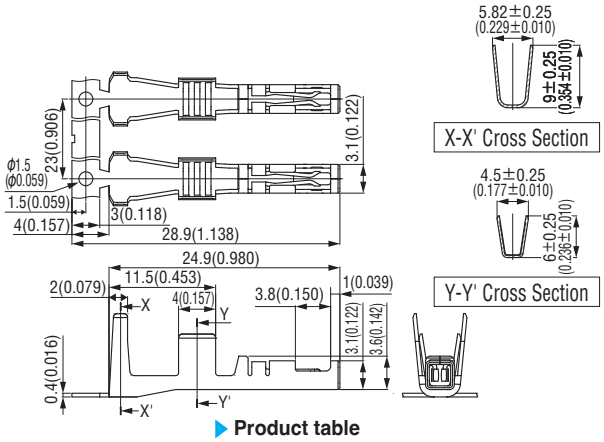
Two-piece crimp AWG #16 × 2 piece
(Outer diameter of cable coating: Φ 3.0 mm × 2 pieces)

④ 【Type】 R : Chain shape　B : In pieces

Climp contact

Unit : mm(inch)

◆Crimp contact for FTC0□-□□ (Cable side connector) [Recommended cable size: 2L]



ORDER CODE **#625□-2L-□**

① ② ③ ④

*Please order in multiples of the quantity per package.

① 【Contact name】 #625 : Crimp contact for FTC0□

② 【Gold plating thickness】 B : 0.1μm min. F : 0.38μm min.

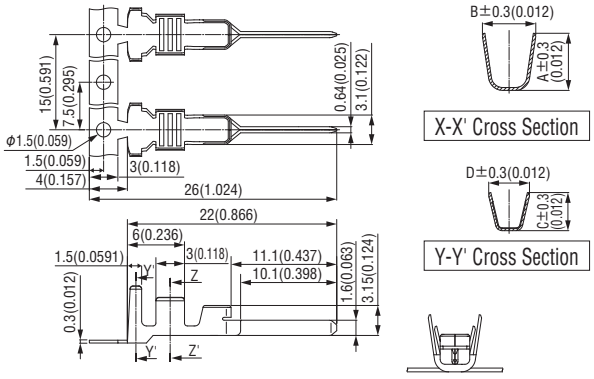
③ 【Applicable cable size】
2L : Two-piece crimp AWG #14 × 2 pieces
(Outer diameter of cable coating: Φ 3.4 mm × 2 pieces)

④ 【Type】 R : Chain shape B : In pieces

▶ **Product table**

Part number	No. of packaging	Packaging style
#625□-2L-R	800	Reel
#625□-2L-B	100	Other

◆Crimp contact for FTC12-□□□ (Cable relay type)



ORDER CODE **#641□-1□-□**

① ② ③ ④

※Please order in multiples of the quantity per package.

① 【Contact name】 #641 : Crimp contact for FTC12

② 【Gold plating thickness】 B : 0.1μm min. F : 0.38μm min.

③ 【Applicable cable size】
1M : Single crimp AWG #18/20
(Outer diameter of cable coating: Φ1.8 to 2.8 mm)
Two-piece crimp AWG#20×2 pieces
(Outer diameter of cable coating: Φ1.8 to 1.9 mm×2 pieces)
Two-piece crimp AWG #18 x 2 pieces
(Outer diameter of cable coating: Φ2.0 to 2.1 mm x 2 pieces)
1L : Single crimp AWG #14/16
(Outer diameter of cable coating: Φ2.4 to 3.4 mm)
Two-piece crimp AWG #16 × 2 piece
(Outer diameter of cable coating:Φ3.0 mm × 2 pieces)

④ 【Type】 R : Chain shape B : In pieces

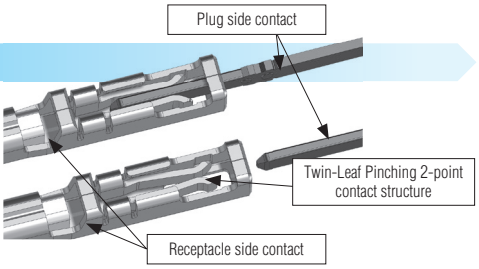
Part number	Packaging style
#641□-1□-R	Reel
#641□-1□-B	Other

▶ **Product table / Dimensions**

Part number	A	B	C	D	No. of Packaging
#641□-1M-R	5.0(0.197)	4.68(0.184)	3.5(0.138)	3.5(0,138)	2,000
#641□-1M-B	5.0(0.197)	4.68(0.184)	3.5(0.138)	3.5(0,138)	100
#641□-1L-R	6.0(0.236)	5.61(0.221)	4.0(0.157)	4.29(0,169)	2,000
#641□-1L-B	6.0(0.236)	5.61(0.221)	4.0(0.157)	4.29(0,169)	100

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.



Assembly Tool

◆Crimping hand tool

Part number	Crimp contact	Number of cables	Applicable cable size
CH-21	#625□-1M-□ #641□-1M-□	1	AWG#18/20
		2	AWG#20×2
		2	AWG#18×2
CH-22	#625□-1L-□ #641□-1L-□	1	AWG#14/16
		2	AWG#16×2
CH-23	#625□-2L-□	2	AWG#14×2

◆Crimping machine

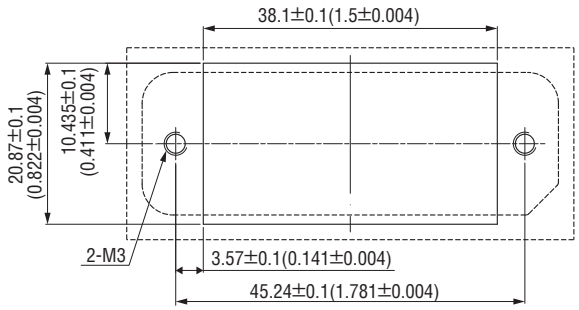
Crimp contact	#625□-1M-R	#641□-1M-R	#625□-1L-R	#641□-1L-R	#625□-2L-R
Manufacturer	Japan Automatic Machine Co.,Ltd.				
Crimping machine	LPC220S				LPC420S
Applicator	CFX064300K		CFX050300K		QFX021900K

*A crimping machine and applicator can be purchased from Japan Automatic Machine Co.,Ltd.

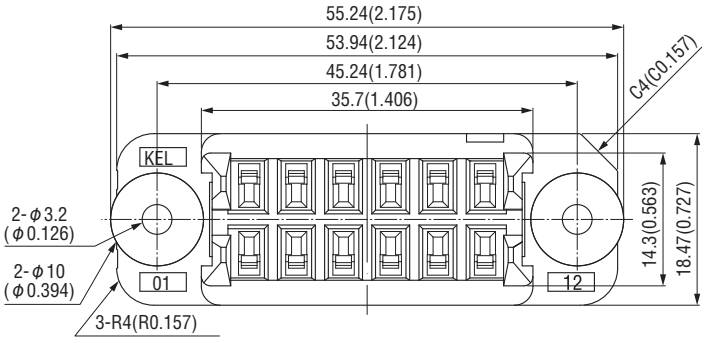
FTC01-12 (Receptacle, Cable side connector, Drawer type)

Unit : mm(inch)

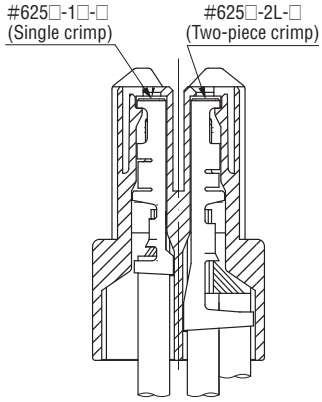
Panel Layout(Component Side View)

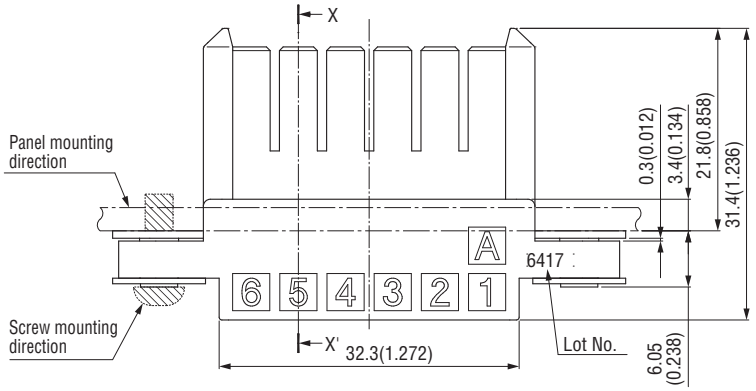


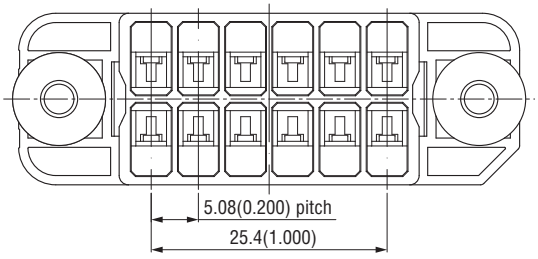
Applicable panel thickness t=2.5(0.098) max.



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







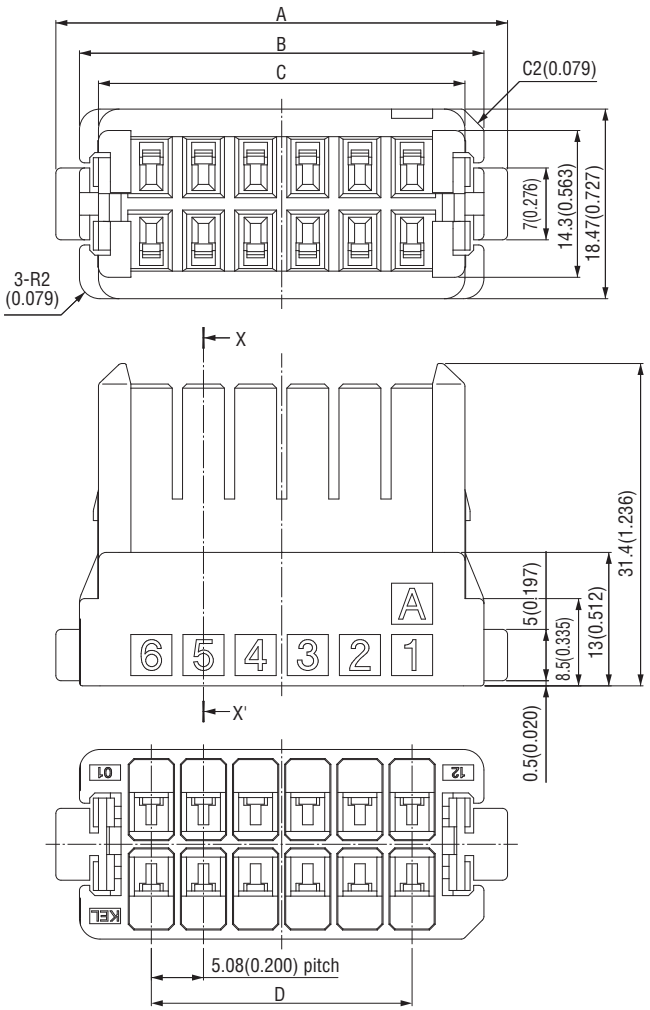
Product table

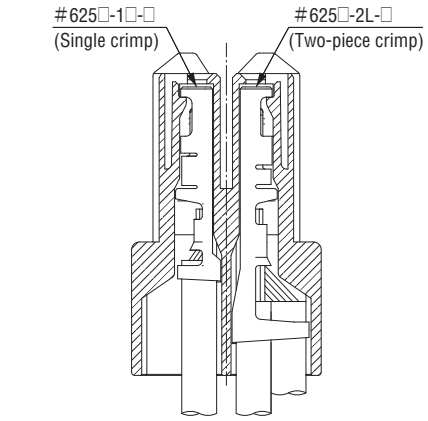
Packaging style
Tray

No. of contacts	Part number	No. of packaging
12	FTC01-12	36

FTC02-□□ (Receptacle, Cable side connector, With lock)

Unit : mm(inch)





Packaging style: Tray

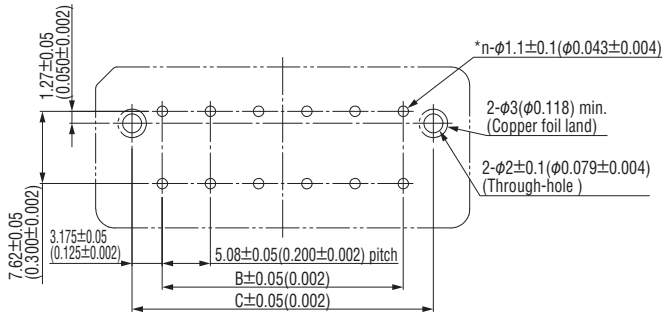
Product table / Dimensions

No. of contacts	Part number	A	B	C	D	No. of packaging
6	FTC02-06	28.76 (1.132)	24.16 (0.951)	20.46 (0.806)	10.16 (0.400)	72
10	FTC02-10	38.92 (1.532)	34.32 (1.351)	30.62 (1.206)	20.32 (0.800)	48
12	FTC02-12	44.0 (1.732)	39.4 (1.551)	35.7 (1.406)	25.4 (1.000)	42
20	FTC02-20	64.32 (2.532)	59.72 (2.351)	56.02 (2.206)	45.72 (1.800)	30

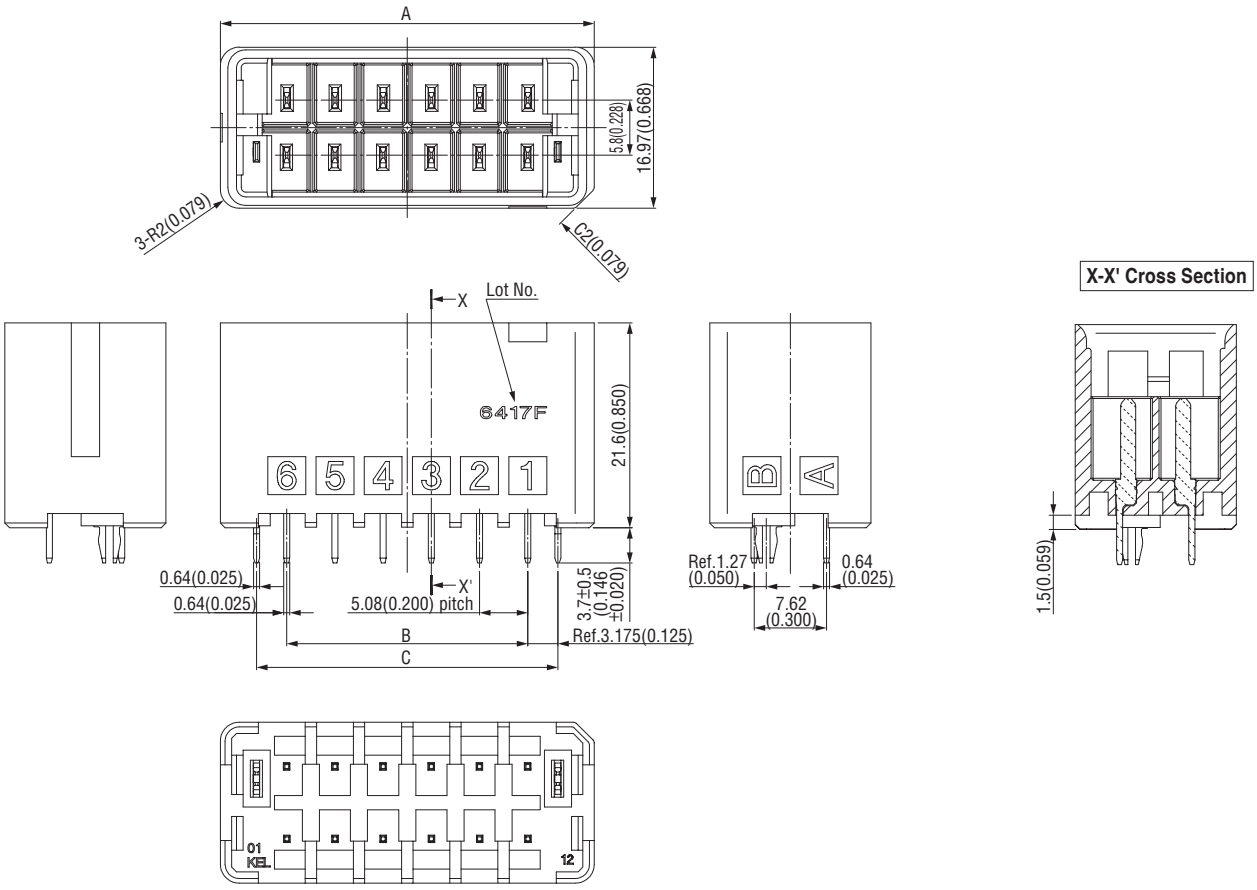
FTC11-□□S□ (Plug, PCB side connector, Straight type)

Unit : mm(inch)

Printed Circuit Board Layout (Component Side View)



Applicable board thickness t = 1.6(0.063) to 2.4(0.094)
"n" is number of contacts.



Product table / Dimensions

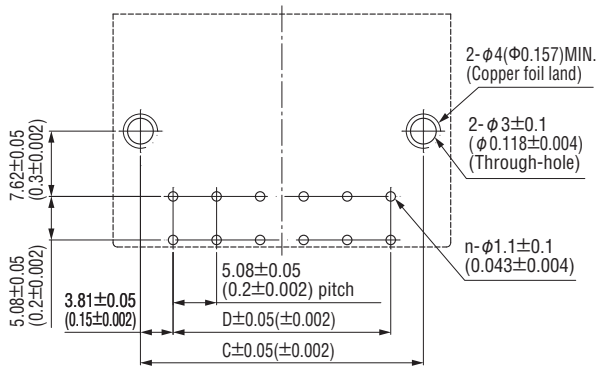
Packaging style: Pipe

No. of contacts	Part number	A	B	C	No. of packaging
6	FTC11-06S□	24.16 (0.951)	10.16 (0.400)	16.51 (0.650)	20
12	FTC11-12S□	39.40 (1.551)	25.40 (1.000)	31.75 (1.250)	12
20	FTC11-20S□	59.72 (2.351)	45.72 (1.800)	52.07 (2.050)	8

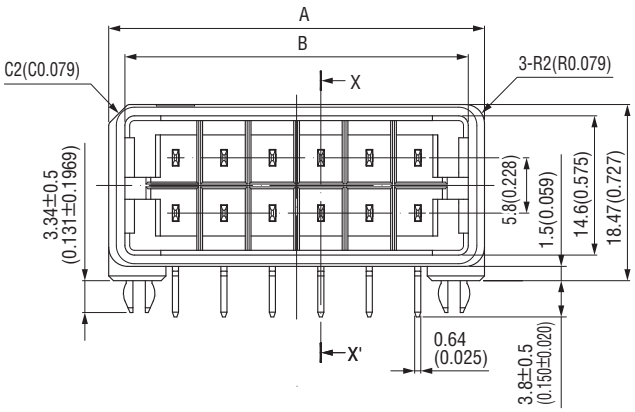
FTC11-□□L□ (Plug, PCB side connector, Right angle type)

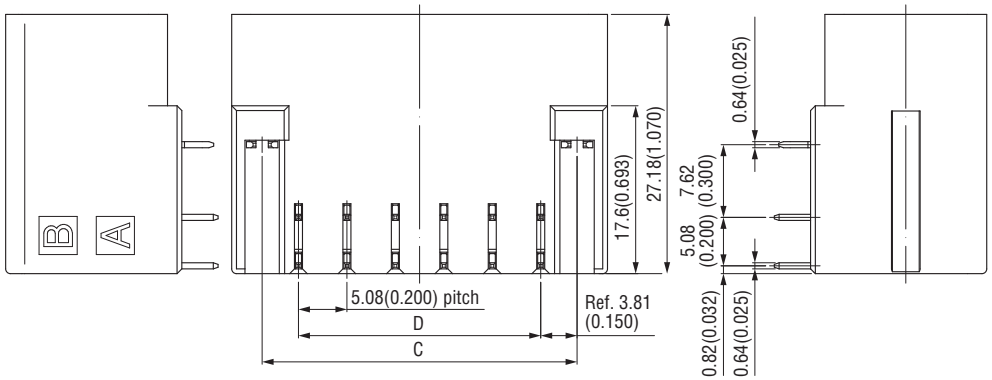
Unit : mm(inch)

Printed Circuit Board Layout (Component Side View)

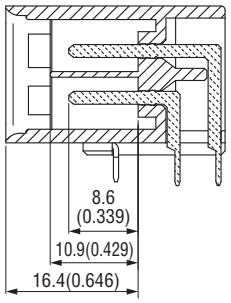


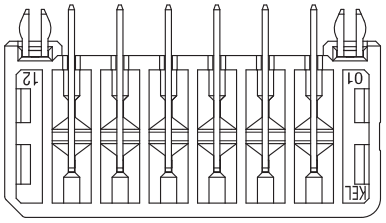
Applicable board thickness t = 1.6(0.063) to 2.4(0.094)
"n" is number of contacts.





X-X' Cross Section





Packaging style: Pipe

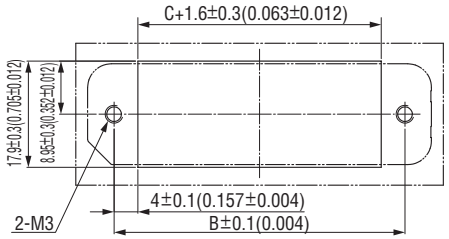
Product table / Dimensions

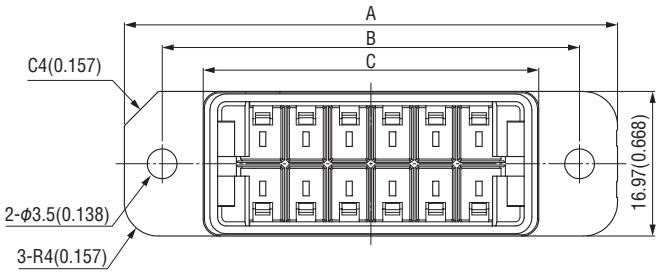
No. of contacts	Part number	A	B	C	D	No. of packaging
6	FTC11-06L□	24.16 (0.951)	20.76 (0.817)	17.78 (0.700)	10.16 (0.400)	20
10	FTC11-10L□	34.32 (1.351)	30.92 (1.217)	27.94 (1.100)	20.32 (0.800)	14
12	FTC11-12L□	39.40 (1.551)	36.00 (1.417)	33.02 (1.300)	25.40 (1.000)	12
20	FTC11-20L□	59.72 (2.351)	56.32 (2.217)	53.34 (2.100)	45.72 (1.800)	8

FTC12-□□ (Plug, Cable- relay type)

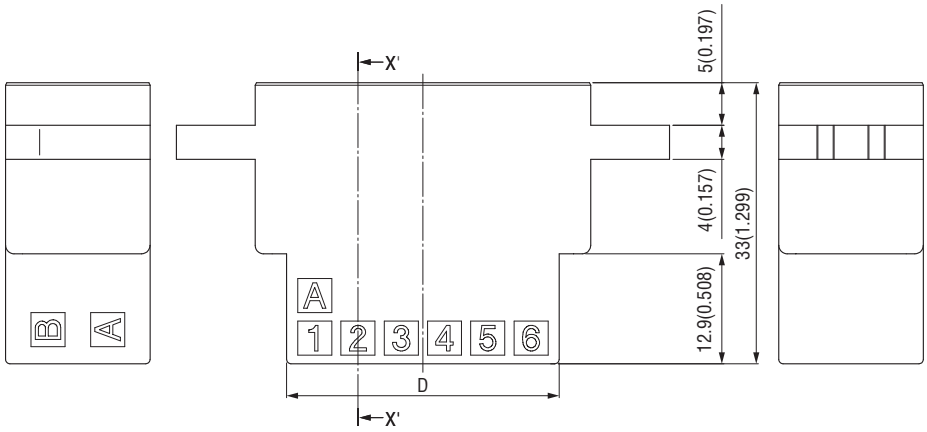
Unit : mm(inch)

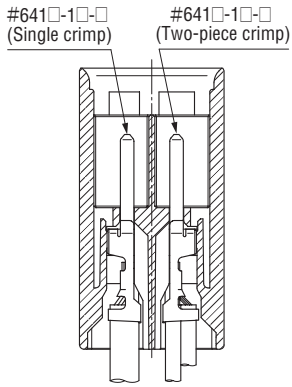
Panel Layout(Component Side View)

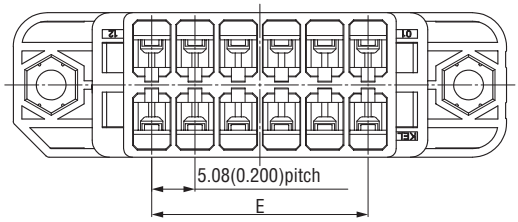




X-X' Cross Section (With the contact inserted)







Packaging style: Tray

Product table / Dimensions

No. of contacts	Part number	A	B	C	D	E	No. of packaging
6	FTC12-06	42.66 (1.680)	33.76 (1.329)	24.16 (0.951)	16.76 (0.660)	10.16 (0.400)	48
10	FTC12-10	52.82 (2.080)	43.92 (1.729)	34.32 (1.351)	26.92 (1.060)	20.32 (0.800)	36
12	FTC12-12	57.90 (2.280)	49.00 (1.929)	39.40 (1.551)	32.00 (1.260)	25.40 (1.000)	36
20	FTC12-20	78.22 (3.080)	69.32 (2.729)	59.72 (2.351)	52.32 (2.060)	45.72 (1.800)	24