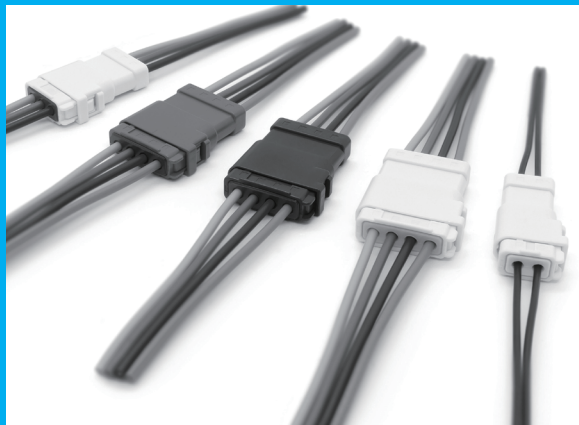


# FW SERIES

RoHS  
Compliant

## 5.0mm PITCH WATERPROOF CONNECTOR CONFORMING TO IP67 STANDARD



### FEATURES

- ▶ The smallest class external dimensions with 5.0mm pitch waterproof connector.
- ▶ Stable connection design of 3 point contact structure having same shape contacts on the plug side and the receptacle side.
- ▶ The crimp applicator can be used in common because the crimp contact on the plug side and the receptacle side have the same shape.
- ▶ Highly reliable design with an effective mating length of 1.5mm(0.059").
- ▶ The cable seal and the seal ring are built in the connector housing.
- ▶ The locking mechanism is robust and has a click feeling.
- ▶ Connector housing colors are set to 3 colors of white, red, and blue.
- ▶ Cable seal colors are set to 3 colors, black, light blue, and pink, according to the cable covering outer diameter.
- ▶ Dummy pins for closing the cable insertion hole are available. Dummy pin color are set to 2 colors, white and black, according to cable covering outer diameter.

### ORDER CODE

**FWP01**-  -  -    
1    2    3    4

※Please order in multiples of the quantity per package.

- ① **[Type] FWP01:** Receptacle (Cable-relay connector)
- ② **[Number of contacts]** 02: 2pin 03: 3pin 04: 4pin
- ③ **[Housing color]** 1: White 2: Red 3: Blue
- ④ **[Cable seal color]** 1: Black (Cable covering diameter:  $\phi$  1.9 to 2.7mm)  
 2: Light blue (Cable covering diameter:  $\phi$  1.5 to 1.9mm)  
 3: Pink (Cable covering diameter:  $\phi$  2.7 to 3.1mm)

### ORDER CODE

**FWP11**-  -  -    
1    2    3    4

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

- ① **[Type] FWP11:** Plug (Cable-relay connector)
- ② **[Number of contacts]** 02: 2pin 03: 3pin 04: 4pin
- ③ **[Housing color]** 1: White 2: Red 3: Blue
- ④ **[Cable seal color]** 1: Black (Cable covering diameter:  $\phi$  1.9 to 2.7mm)  
 2: Light blue (Cable covering diameter:  $\phi$  1.5 to 1.9mm)  
 3: Pink (Cable covering diameter:  $\phi$  2.7 to 3.1mm)

※FWP01/11-□□-□□ is sold for housing only and crimp terminals are sold separately. For the order code of the crimp contact, please refer to the next page.  
 ※The combination of the crimp contact and cable seal may change depending on the outer diameter of the cable cover.  
 For more information, please contact your local KEL sales office.

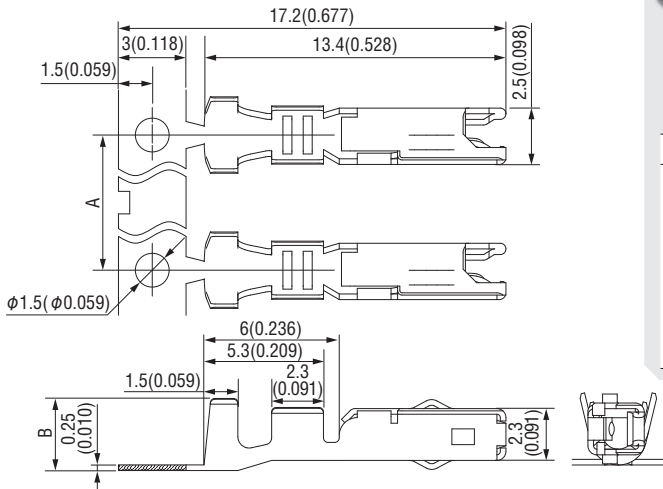
### SPECIFICATIONS

Material and plating		Electrical Characteristics	
Insulator material	Glass filled PBT (UL94V-0) Color: White, Red, Blue	Current rating	7A per contact
		Protection grade	IP67
Cable seal material	Silicone rubber (Secondary vulcanized) Color: Black, Light blue, Pink	Contact resistance	10m $\Omega$ max.
		Dielectric withstanding voltage	1,700V AC for 1 minute
Sealing ring material	Silicone rubber (Secondary vulcanized)	Insulation resistance	1,000M $\Omega$ min. at 500V DC
Contact material	Copper alloy	Operating temperature	-40°C to +85°C
Contact plating	(Contact area / Crimping area) Tin over Nickel	Durability of insertion and withdrawal	50 times
		Recommended cable	#16/18/20/22 AWG Discrete wire cables (0.3 to 1.25sq) (Cable covering diameter: $\phi$ 1.5 to 3.1mm)

## Crimp Contact

Unit : mm(inch)

### ◆ Crimp contact for FWP01/11-□□-□□ (Cable-relay connector)



#### ORDER CODE

**#635** -     
1    2

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

① **[Contact Name]** #635 : Crimp contact for FWP01/11

② **[Recommended cable size]**

**Omit** : #16/18/20 AWG (0.5 to 1.25sq)  
 (Cable covering diameter: φ 1.5 to 2.7mm)

**S** : #22 AWG (0.3sq)  
 (Cable covering diameter: φ 1.5 to 2.7mm)

**L** : #16 AWG (1.25sq)  
 (Cable covering diameter: φ 2.7 to 3.1mm)

#### Packaging style

Reel

#### ▶ Product Table / Dimensions

Part Number	A	B	Number of packaging
#635, #635-S	10(0.394)	3.2(0.126)	6,000
#635-L	12(0.472)	4.2(0.165)	3,800

## Assembly Tool

### ▶ Hand Tool

Part Number	CH-12	CH-15
Mating Cable	#18/20/22 AWG	#16/18 AWG
Mating Contact	#635, #635-S	#635-L

### ▶ Crimping Machine

Mating Contact	#635, #635-S	#635-L
Manufacturer	JAPAN AUTOMATIC MACHINE CO., LTD.	
Crimping Machine	LOC220S	
Applicator	CFX030500K-UP	CFX046400K-UP

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

## Dummy Pin

### ◆ Dummy pin for FW Series

#### ORDER CODE

**FWP** -     
1    2

① **[Type]** FWP : Dummy pin for FW Series

② **[Dummy pin color]** **1** : White (Applicable cable seal: Black, Light blue)  
**2** : Black (Applicable cable seal: Pink)

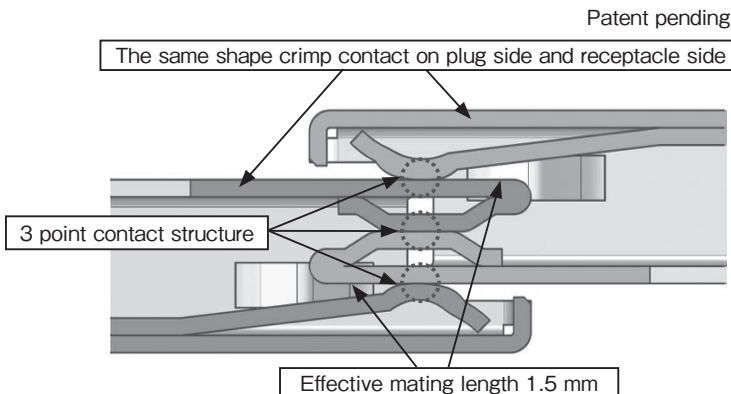
#### Packaging style

Other

#### ▶ Product Table

Part Number	Number of packaging
FWP-□	1,000

## 3 point contact with the same shape crimp contact on plug side and receptacle side



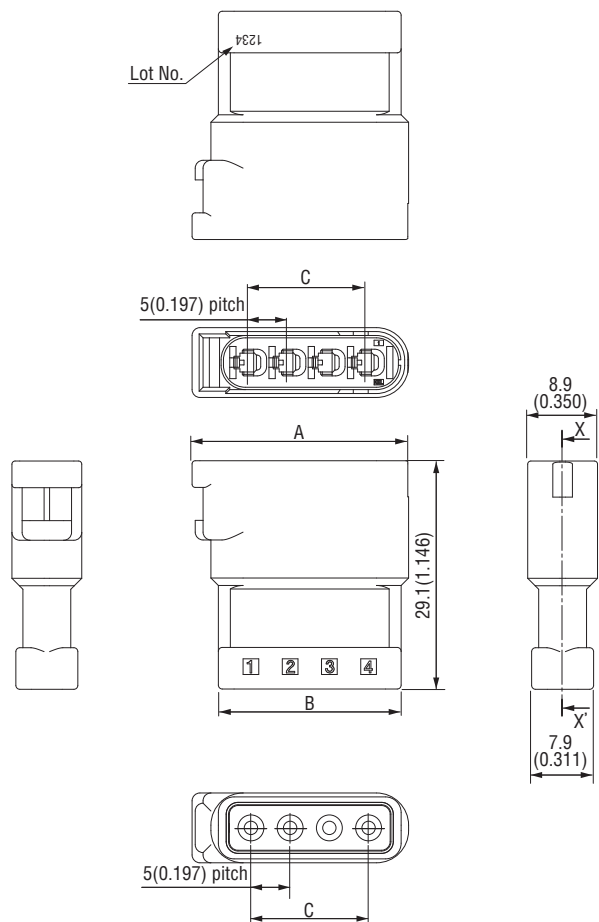
FW series adopts the same shape crimp contact on the plug side and the receptacle side.

3 point contact structure and independent spring mechanism realize stable connection.

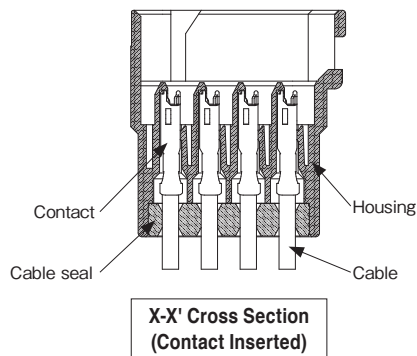
The crimp contact has the same shape on the plug side and the receptacle side, so the crimp applicator can be used in common.

## FWP01-□□-□□ (Receptacle, Cable-relay connector)

Unit : mm(inch)

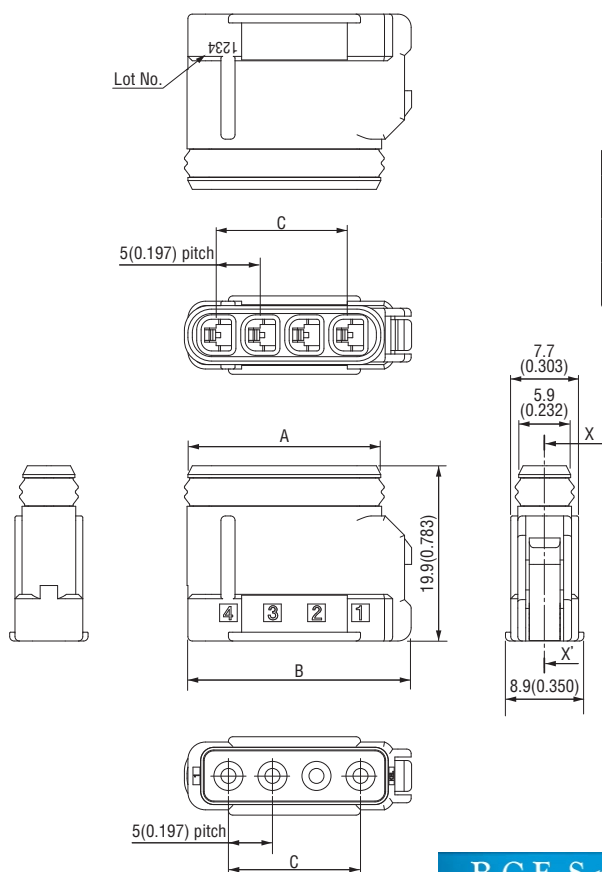


Product Table / Dimensions					Packaging style
					Tray
No. of contacts	Part Number	A	B	C	Number of packaging
2	FWP01-02-□□	17.5 (0.689)	13.3 (0.524)	5.0 (0.197)	112
3	FWP01-03-□□	22.5 (0.886)	18.3 (0.720)	10.0 (0.394)	88
4	FWP01-04-□□	27.5 (1.083)	23.3 (0.917)	15.0 (0.591)	72

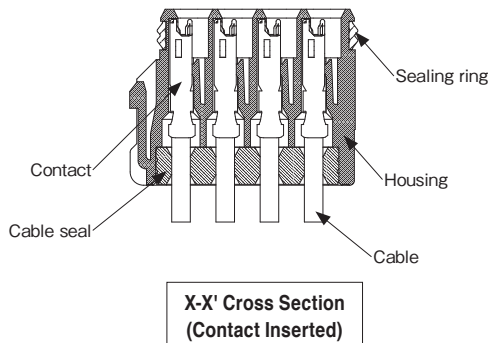


## FWP11-□□-□□ (Plug, Cable-relay connector)

Unit : mm(inch)



Product Table / Dimensions					Packaging style
					Tray
No. of contacts	Part Number	A	B	C	Number of packaging
2	FWP11-02-□□	11.9 (0.469)	15.45 (0.608)	5.0 (0.197)	112
3	FWP11-03-□□	16.9 (0.665)	20.45 (0.805)	10.0 (0.394)	88
4	FWP11-04-□□	21.9 (0.862)	25.45 (1.002)	15.0 (0.591)	72





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