

FWSA SERIES

2.0mm PITCH WATERPROOF DRAWER CONNECTOR CONFORMING TO IP67 STANDARD

RoHS
Compliant



FEATURES

- ▶ This product features an IP67-rated waterproof connector suitable for outdoor use, incorporating a drawer mechanism that ensures a stable connection even in environments prone to misalignment during mating.
- ▶ The cable seal and the sealing ring are built in the connector housing.
- ▶ Absorbs $\pm 1.5\text{mm}$ gap in X and Y directions when mating.
- ▶ Floating structure of the screwed area enables $\pm 1.0\text{mm}$ displacement in X and Y directions in mated condition.
- ▶ Highly reliable design with effective mating length of 2.0mm.
- ▶ 2-point contact structure ensures reliability with stable contact force and prevents contact buckling.

ORDER CODE

FWSA01-16-1

① ② ③

*Please order in multiples of the quantity per package.

- ① **[Type]** **FWSA01** : Receptacle (Cable-relay connector)
- ② **[Number of contacts]** **16** : 16pin
- ③ **[Cable seal color]** **1** : Orange (Cable outer diameter ϕ 1.3 to 1.55mm)

*FWSA01-16-1 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.

ORDER CODE

FWSA12-16-1

① ② ③

*Please order in multiples of the quantity per package.

- ① **[Type]** **FWSA12** : Plug (Cable-relay connector)
- ② **[Number of contacts]** **16** : 16pin
- ③ **[Cable seal color]** **1** : Orange (Cable outer diameter ϕ 1.3 to 1.55mm)

*FWSA12-16-1 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.

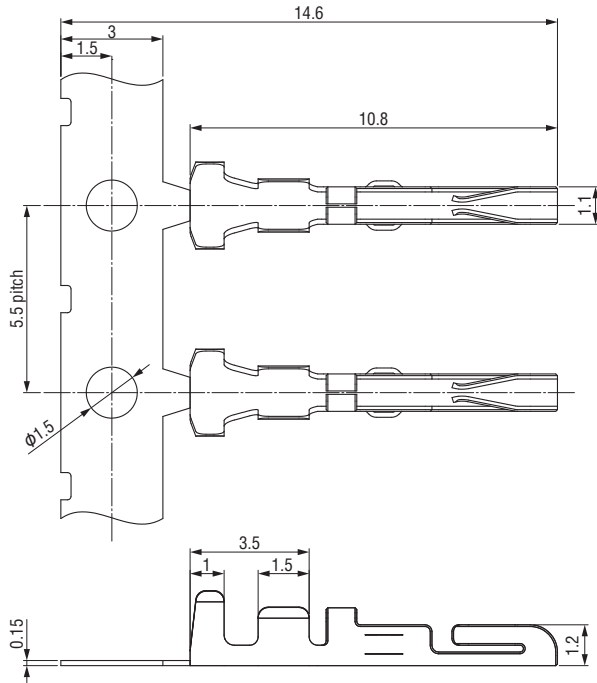
SPECIFICATIONS

Material and plating		Electrical characteristics	
Housing material	Glass-filled PBT(UL94V-0), Black	Rated current	2.5A max. per contact
Cover material		Protection grade	IP67
Cable seal material	Silicone rubber (Secondary vulcanized) Color: Orange	Contact resistance	20m Ω max.
Sealing ring material		Dielectric withstanding voltage	1000V AC for 1 minute
Gasket material	Copper alloy	Insulation resistance	1000M Ω min. at 500V DC
Contact material		Operating temperature	-55°C to +105°C
Contact plating	(Contact area) Gold over nickel (Crimping area) Tin over nickel	Durability of insertion and withdrawal	50 times
Washer / Rivet material	Stainless steel	Applicable cable	#26 AWG Discrete wire cables (0.12 sq) (Cable outer diameter: ϕ 1.3 to 1.55mm)

Crimp contact

Unit : mm

◆ Crimp contact for FWSA01-16-1 (Cable-relay connector)



ORDER CODE

#657

①

*Please order in multiples of the quantity per package.

① [Contact name] #657 : Crimp contact for FWSA01

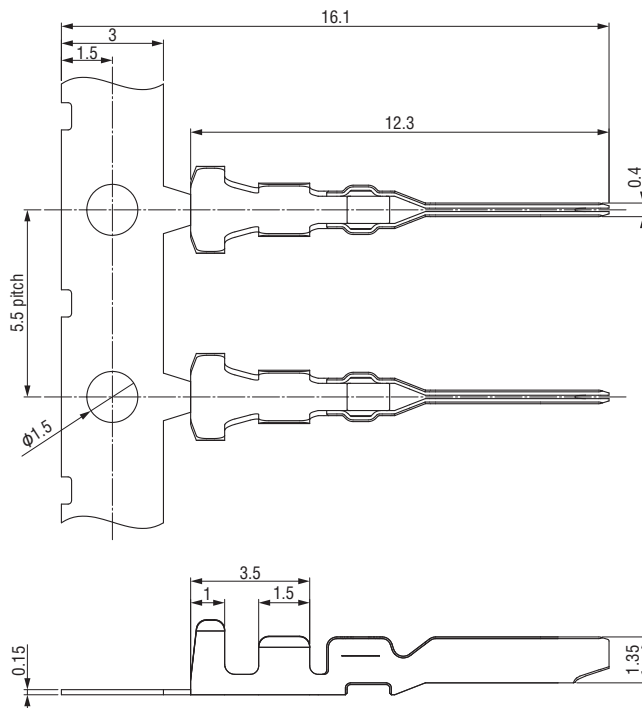
Packaging style

Reel

▶ Product table

Part number	Number of packaging
#657	20,000

◆ Crimp contact for FWSA12-16-1(Cable-relay connector)



ORDER CODE

#658

①

*Please order in multiples of the quantity per package.

① [Contact name] #658 : Crimp contact for FWSA12

Packaging style

Reel

▶ Product table

Part number	Number of packaging
#658	20,000

Assembly tool

◆ Crimping hand tool

Part number	CH-30	
Applicable part number	FWSA01	FWSA12
Applicable cable size	#26 AWG Discrete wire cables (Cable outer diameter: ϕ 1.3 to 1.5mm)	
Crimp contact	#657	#658

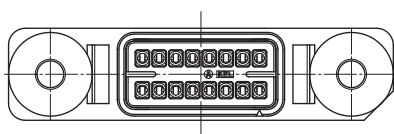
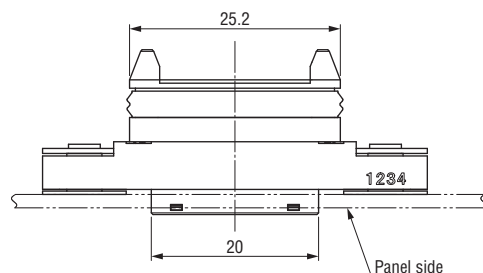
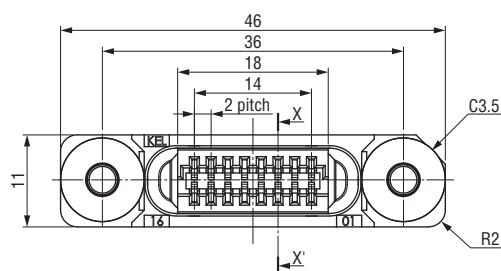
◆ Crimping machine

Crimp contact	#657	#658
Manufacturer	Japan Automatic Machine Co.,Ltd.	
Crimping machine	LPC220S	
Applicator manufacturer	JAPAN CHAIN TERMINAL CO., LTD.	
Applicator	ORJ-S1-930	ORJ-S1-931

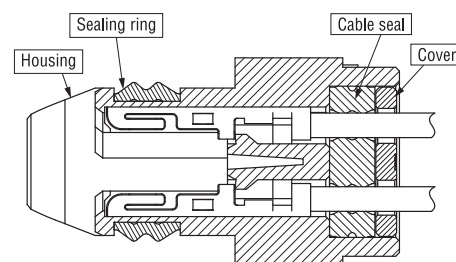
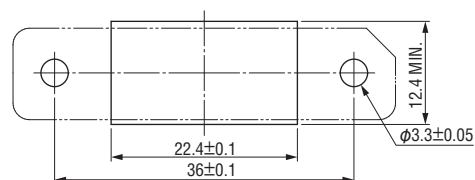
* Please purchase the crimping machine from Japan Automatic Machine Co.,Ltd. and the applicator from JAPAN CHAIN TERMINAL CO., LTD.

FWSA01-16-1 (Receptacle, Cable-relay connector)

Unit : mm



Panel layout (Component side view)



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

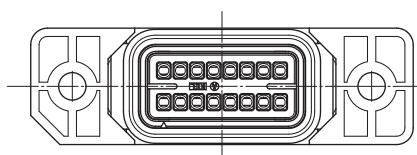
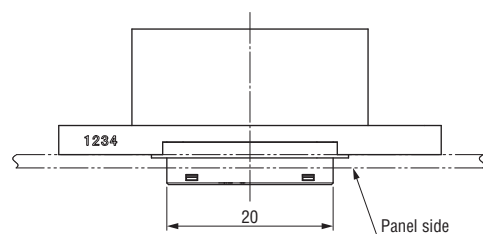
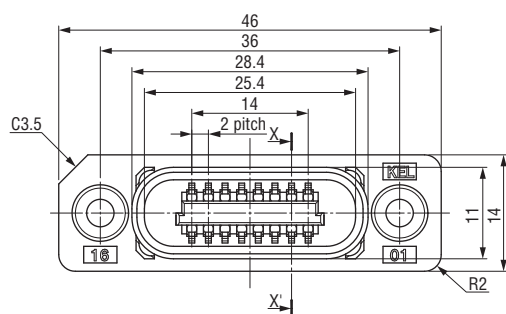
Packaging style
Tray

Product table

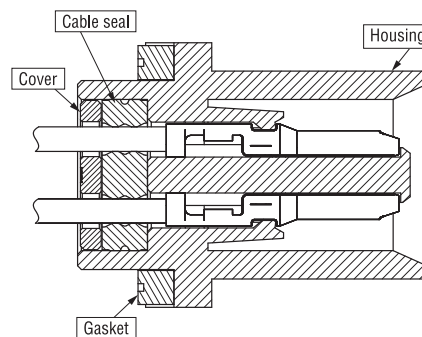
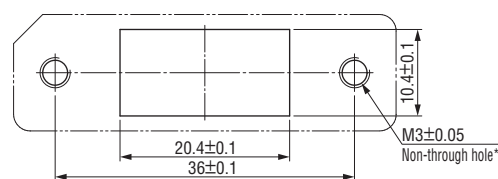
No. of contacts	Part number	No. of packaging
16	FWSA01-16-1	336

FWSA12-16-1 (Plug, Cable-relay connector)

Unit : mm



Panel layout (Component side view)



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

Packaging style
Tray

Product table

No. of contacts	Part number	No. of packaging
16	FWSA12-16-1	336

* If a through-hole is required, please ensure that appropriate waterproofing measures are taken to prevent water from entering the interior of the equipment.