

# Waterproof optical connectors with built-in SC/LC-Duplex

SW20 Series

Waterproof

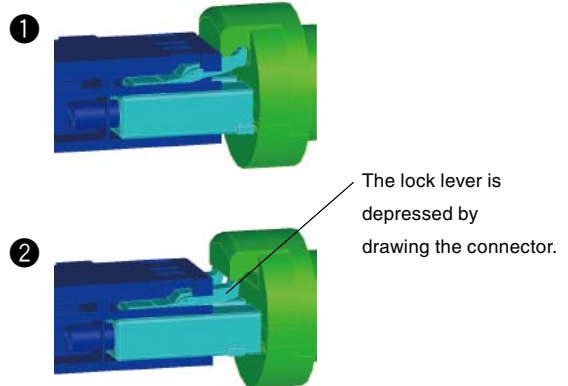
1 or 2 pos.

Bayonet lock



## One action lock/unlock mechanism (Patented)

The schematic illustration of internal mechanism. (in case of LC type)



## Features

### 1. High optical performance and reliability

Internal SC / LC connector is the same structure as a proven standard SC / LC.

### 2. Bayonet mating operation by one action

Lock release of SC / LC in conjunction with drawing of outer housing.

### 3. Harsh environmental use

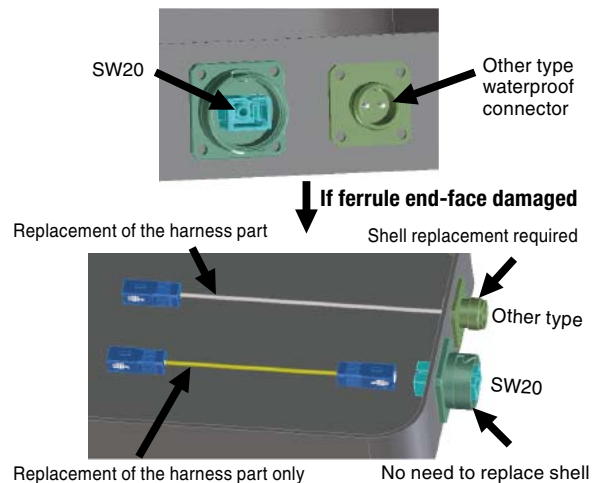
Waterproof in IP67 and corrosion resistance in 1,000 hours salt mist.

### 4. Standard SC/LC connector is available for testing.

SC/LC connector is available instead of SW20 plug.

## During maintenance and repair

Only the harness parts are replaced.



## Product Specifications

Ratings	Operating temperature range	-40°C to +85°C	Storage temperature range	-25°C to +75°C
	Item	Test method	Requirements	
Construction	General examination.	Visually and by measuring instrument.	According to drawing.	
	Marking	Confirmed visually.		
Optical characteristics (SM)	Insertion loss	Wavelength 1310±30nm(LD)	≤ 0.4dB	
		Wavelength 1550±30nm(LD)	≤ 0.5dB	
	Return loss	Wavelength 1310±30nm(LD)	≥ 40dB	
Mechanical characteristics	Tensile strength(axial)	A tensile force to cable axially for 1 minutes at 200N.	Insertion loss range: ≤ 0.3dB No Looseness,breakage,cracks	
	Durability (mating/un-mating)	200 times	1) Insertion loss fluctuation after test:0.3dB max. 2) No visible damage or components dislocation.	
	Vibration	Frequency: 10 to 55Hz, single amplitude of 0.75mm, acceleration of 98.1 m/s <sup>2</sup> , 2 hours in each of the 3 axis.		
	Shock	Acceleration of 981 m/s <sup>2</sup> , 6 ms duration, half sine shock pulse,10 cycles in each of the 3 axis.		
Environmental characteristics	Humidity (Temperature/humidity-cycles)	-10°C to +65°C, humidity: 90% to 100% 168hours. (12H/cycle×14cycle) (Telcordia GR3120-CORE)	1) Insertion loss fluctuation after test:0.3dB max. 2) No visible damage or components dislocation.	
	Temperature cycle	-40°C to +75°C, 42 cycles,168hours. (8H/cycle×42cycle)(Telcordia GR326-CORE)		
	Dry heat	240 hours at +85°C		
	Cold	240 hours at -40°C		
	Salt mist	Salt mist :5% and temperature 35°C or 1000hours.	No corrosion.	
	Water resistance (mating)	Put the product under water for 1min.With air pressure 50kPa.	No air leakage.	

## Material & Finish

Part	Plug		Receptacle	
	Material	Finish/Remarks	Material	Finish/Remarks
Housing	Zinc alloy die casting	Chrome plated	Zinc alloy	Chrome plated
	Synthetic resin	UL94V-0		
Oring/gasket	Synthetic rubber	——	Synthetic rubber	——
SC/LC	Depend on each connector. (Synthetic resin,Zirconia,spring)	——	Depend on each adapter. (Synthetic resin,Zirconia)	——
Spring	Steel wire	——	——	——
Others (Internal part)	Phosphor bronze	Nickel plated	——	——
	Zinc alloy	Nickel plated	——	——
	Stainless steel	——	——	——

## ■ Ordering information

### (1) Plug

**SW20 - SC P T75 - 1**

①
②
③
④
⑤

① Series name : SW20	④ Cable type T75 : $\phi 7$ round cable. If you would like other cables, please contact us.
② Connector type : SC...SW20-SC plug LC...SW20-LC plug	⑤ Suffix
③ Assembly type P : Single ended P2 : Double ended	

### (2) Plug cap

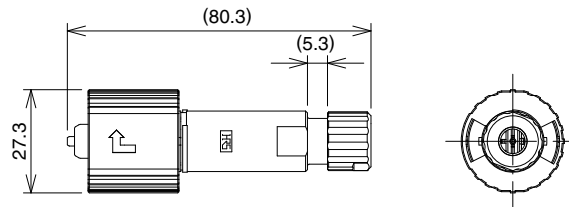
**SW20 - PC 1**

①
②
③

① Series name : SW20	③ Suffix 1:Waterproof cap
② Plug cap PC:Plug cap	

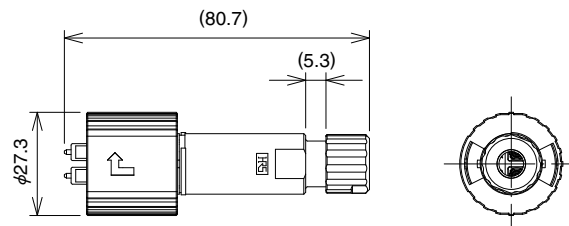
## ■ Plug

### ● SC type



Part Number	CL No.	Remark
SW20-SCPT75-2	717-5019-5-00	Standard type
SW20-SCPT75-3	717-5022-0-00	No tension member kit

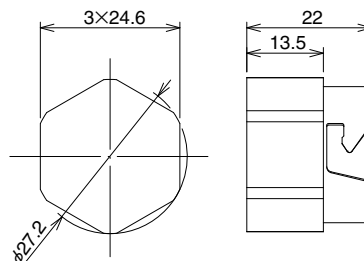
### ● LC type



Part Number	CL No.	Remark
SW20-LCPT75-3	717-5508-1-00	Standard type with SW20-PC1

## ■ Plug Cap

### ● waterproof type



Part Number	CL No.
SW20-PC1	717-5500-0-00

## Ordering information

### (3) Receptacle

**SW20** - **SC** **R** - **1**

①                      ②                      ③                      ④

① Series name : SW20	③ Receptacle R:Receptacle
② Connector type: SC...SW20-SC receptacle LC...SW20-LC recetacle	④ Suffix

### (4) Receptacle cap

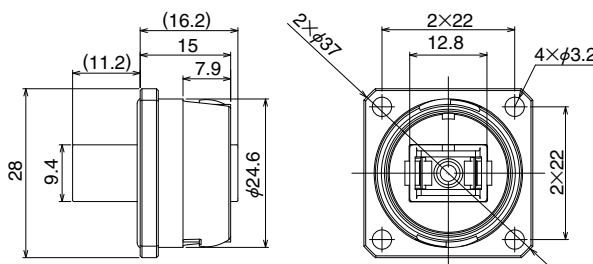
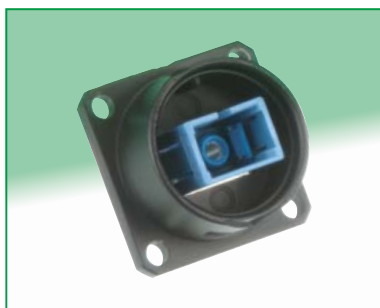
**SW20** - **RC** **1**

①                      ②                      ③

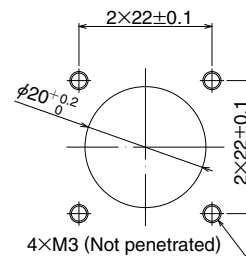
① Series name : SW20	③ Suffix 1:Waterproof cap 3:Dustproof cap(Not waterproof)
② Receptacle cap RC:Receptacle cap	

## Receptacle

### ● SC type



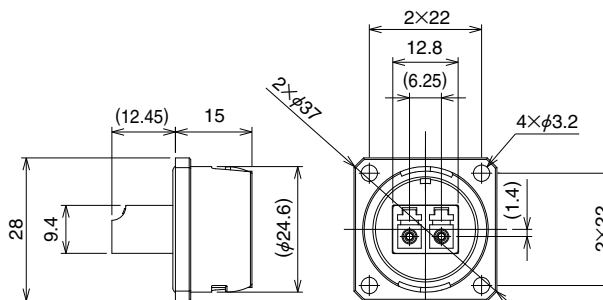
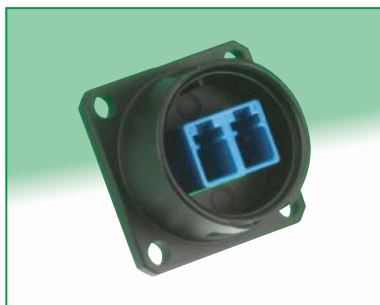
### Recommended panel cutouts



Part Number	CL No.	Packing style
SW20-SCR-1(01)	717-5002-2-01	1pcs. /pack
SW20-SCR-1(02)	717-5002-2-02	Tray

Note:LC-type's cutout same as SC-type.

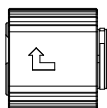
### ● LC type



Part Number	CL No.	Packing style
SW20-LCR-1	717-5004-8-00	Tray

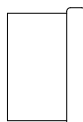
## Receptacle Cap

### ● Waterproof type



Part Number	CL No.
SW20-RC1(01)	717-5501-2-01

### ● Dustproof type



Part Number	CL No.
SW20-RC3	717-5504-0

Note : Without waterproof.

## ■ Ordering information

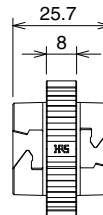
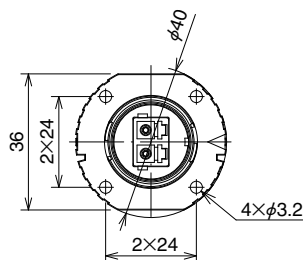
### (5) Adaptor

SW20 - LC A - 1  
 ①                      ②                      ③                      ④

① Series name : SW20	③ Adaptor A:Adaptor
② Connector type: LC···SW20-LC adaptor	④ Suffix

## ■ Adaptor

### ● LC type



Part Number	CL No.
SW20-LCA-1	717-5028-6-00

## ■ Ordering information

### (6) Plug Assembly

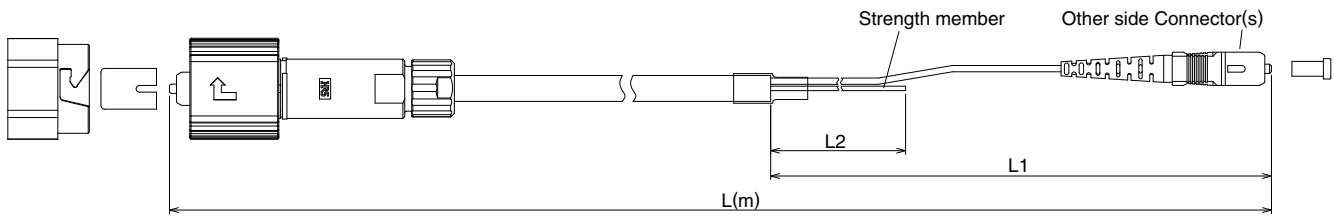
SW20 - SC P T75 - 1 - SC - L M - 1  
 ①                      ②                      ③                      ④                      ⑤                      ⑥                      ⑦                      ⑧                      ⑨

① Series name : SW20	⑤ Suffix
② Connector type : SC···SW20-SC plug LC···SW20-LC plug	⑥ Connector type at the other side ("P2" when SW20 plugs are at both ends)
③ Assembly type P : Single ended P2 : Double ended	⑦ Length in meter
④ Cable type T75 : φ7 round cable. If you would like other cables, please contact us.	⑧ Length Unit M: meter
	⑨ Suffix

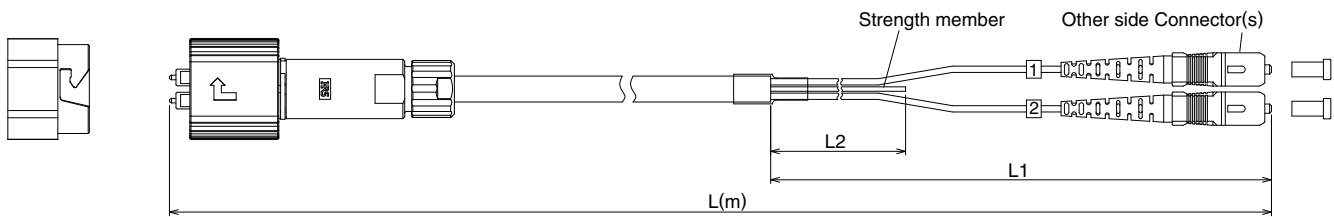
Please contact us in case you need Plug kit only.

## How to Specify Plug Cable Assembly

SW20-SCPT75-2-SC-LM-\*



SW20-LCPT75-1-SC-LM-\*



Note: Please specify "L", "L1", and "L2" in m.

## Assembly Tool



Part Number	CL No.
SW20-SCLC-T1/CV-MD	902-6065-5



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