SC/UPC(male) To SC/APC(Female)

SM-9/125 Single-mode Fiber Hybrid Adapter

1. Product Description

This hybrid fiber adapter provides an interface conversion between an SC/UPC male connector and an SC/APC Female connector for single-mode 9/125 µm optical fiber systems. It is designed for low insertion loss and high return loss performance, and is widely used in FTTH networks, optical test instruments, CATV links, and telecommunication transmission systems.

2. Optical Specifications

Parameter	Wavelength	Specification	Unit
Insertion Loss (Typ.)	1310 nm	≤ 0.3	dB
Insertion Loss (Typ.)	1550 nm	≤ 0.3	dB
Return Loss	1310 nm	≥ 55	dB
Return Loss	1550 nm	≥ 55	dB
Operating Wavelength Range	—	1260 – 1650	nm

3. Mechanical & General Specifications

Item	Specification
Fiber Type	Single-mode (SM) 9/125 µm
Connector A (Input)	SC/UPC — Male
Connector B (Output)	SC/APC — Female
Ferrule Material	Zirconia Ceramic
Housing Material	Plastic (ABS / PC blend)
Insertion / Extraction Force	≤ 30 N
Durability (Mating Cycles)	≥ 1000 cycles
Tensile Strength	≥ 50 N

4. Environmental Specifications

Parameter	Condition	Value
Operating Temperature	—	-25 °C ~ +70 °C
Storage Temperature	—	-40 °C ~ +85 °C
Relative Humidity	Non-condensing	≤ 95 % RH
Vibration	10 – 55 Hz, 1.5 mm amplitude	No damage
Temperature Cycling	-25 °C ↔ +70 °C, 5 cycles	IL change ≤ 0.2 dB

5. Typical Applications

- FTTH (Fiber to the Home) access networks
- Optical fiber test and measurement instruments
- CATV and optical communication transmission systems
- Local area networks (LAN) and data centers
- Patch panel and equipment interface conversion

6. Ordering Information

Part Number	Description	Fiber	Connector
JW-SCUPC-SCAPC-SM	SC/UPC(M) to SC/APC(F) Hybrid Adapter	SM 9/125	SC/APC ♀ ↔ SC/UPC ♂

7. Notes

1. All specifications are measured at 23 ± 2 °C unless otherwise stated.
2. Insertion loss values are typical; maximum values may be specified upon request.
3. Specifications are subject to change without prior notice.