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Connecting. Converting. Leading!

**Document Name: User Manual for RS232/485/422 to Fiber converter, Model: SC09FSNN**

**Introduction**

The Model SC09FSNN Series converter is equipped with a multiple interface circuit that can handle RS-232, or RS-422/485 serial interfaces and multi-mode or single- mode fiber. Model SC09FSNN converters are used to extend serial transmission distance up to 2 km (multi-mode fiber) or up to 120 km (single- mode fiber).

Note that the RS-232 and RS-422/485 interfaces cannot be used on the same Model SC09FSNN at the same time to convert to fiber. Auto Baud Rate Detection

The Model SC09FSNN Series incorporates a method for automatically detecting the serial signal baud rate by hardware. This is an extremely convenient feature for the user. Even if a device's baud rate is changed, the signal will still be transmitted through the RS-232 or RS-422/485 to fiber converter without any problem.

**Features**

- Extends RS-232/422/485 transmission distance:
  - Up to 120 km with Single mode
  - Up to 2 km with Multi mode
- Plug & Play
- Compact size
- Decreases signal interference
- Protects against electronic degradation/chemical corrosion
- Supports baud rate up to 115.2 Kbps

**Specifications**

**Serial Communications**

- RS-232 Signals : TX, RX, GND
- RS-422 Signals : TX+, TX-, RX+, RX-, GND
- 4-wire RS-485 Signals : TX+, TX-, RX+, RX-, GND
- 2-wire RS-485 Signals : TX+, TX-, GND
- Baud Rate : 300 bps to 115.2 Kbps
- Surge Protection : 15 KV ESD

**Fiber Communication Distance:**

- Single mode fiber for 120 km
- Multi-mode fiber for 2 km

**Support Cable:**

- Single mode : 8.3/125, 8.7/125, 9/125 or 10/125  $\mu$ m
- Multimode : 50/125, 62.5/125, or 100/140  $\mu$ m

**Wavelength:**

- Single mode : 1310 nm
- Multimode : 1310 nm. 850nm on request

**Min. TX Output:**

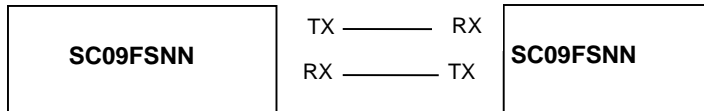
- Single mode : -9 dBm
- Multimode : -16 dBm

**Max. TX Output:**

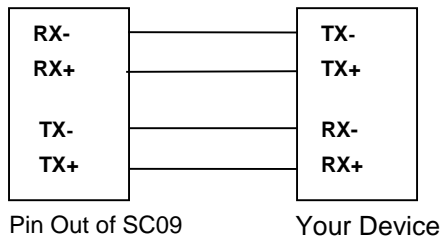
- Single mode : -6 dBm
- Multimode : -7 dBm

### Fiber Connections

Connection diagram for Back to Back mode

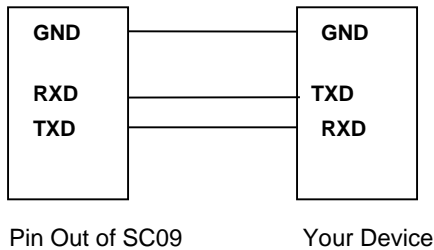


### Serial Connections: RS485 / RS422



**NOTE: - USE TX+ & TX- for RS485, 2 wire**

### Serial Connections: RS232



### LED Indications:

- TX : Transmits Data from fiber
- RX : Receives Data from fiber
- SD : Fiber connected well when the LED on.
- PWR : The Power is active when the LED on

### Environment

- Operating Temperature : 0 to 60°C (32 to 142°F)
- Storage Temperature : -20 to 85°C (-4 to 185°F)
- Humidity : 5 to 95% RH

### External power adaptor:

110v to 240 VAC. Output: 12VDC 1A

### Mechanical

Dimensions (W x D x H):71 x 95 x 26 mm (External power adaptor)

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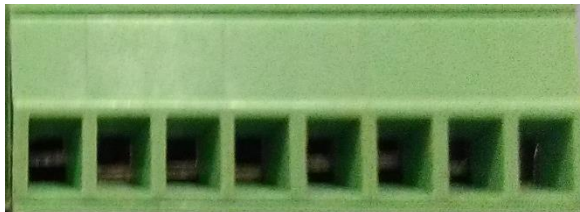
### Application

According to the customers' requirements, Model SC09FSN can fulfill the point-to-point communication between RS-232/RS-422/RS-485.



### Interface

8 Pin Terminals Block Interface



RX- RX+ TX- TX+ GND GND RX TX  
└── RS485/422 ─┘ └── RS232 ─┘