

# RS485/422/232 to Fiber Converter DB-9/Terminal Block to Fiber User's Manual (620-1092-000)

## 1. Overview

The fiber optic converter of RS485/422/232 to Fiber Optic is used to extend the distance up to 2Km over the multi-mode fiber or up to 20Km over single-mode fiber. The converter is equipped with multiple interface circuit such as RS232, RS422, RS485 2/4-wire. It secures data transmission at speeds up to 115.2Kbps.

## 2. Checklist

Before you start installing the Converter, verify that the package contains the following:

- The RS485/422/232 to Fiber Converter
- AC-DC Power Adapter
- This User's Manual

Please notify your sales representative immediately if any of the aforementioned items are missing or damaged.



Fig. 2 Front View of RS485/422/232 to Fiber Converter



Fig. 1 Full View of RS485/422/232 to Fiber Converter

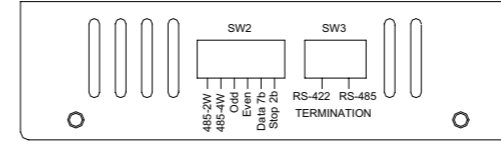
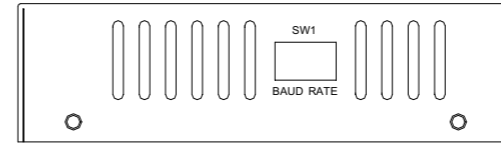
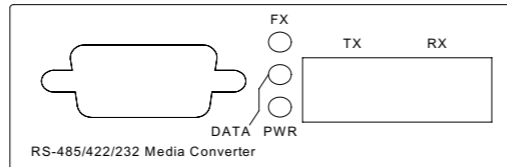
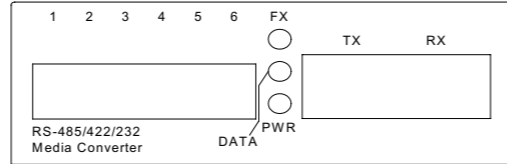


Fig. 3 RS485/422/232 to Fiber Converter Side Panel

## 3. Installing the Converter

- ⇒ Wear a grounding device for electrostatic discharge
- ⇒ Turn off the power of the device/station which the fiber converter will be attached. Check it is no activity.
- ⇒ The fiber converter can be used in multi-protocol (RS232/RS422/RS485), by setting the switches to the correct position. (Refer to DIP-Switch Setting in Section 4)
- ⇒ Use small flat blade screwdriver to release or connect wire to terminal block (See Connector Definition in Section 5) installation location as necessary.
- ⇒ Install the power adapter cord in the back of the converter, and make sure that the adapter plugs to AC power. Then, verify the PWR LED is lit.
- ⇒ Install the fiber optic cable. The Tx, Rx fiber cable must be paired at both ends.

NOTE: If you intend to use the RS232 cable, shield cables are required on DB-9 for EMC compliance.

## 4. DIP-Switch Settings

### • SW1-1,2,3,4 (BAUD RATE)

SW1 (Baud Rate Select)				
Rate	1	2	3	4
1200	OFF	OFF	OFF	OFF
2400	OFF	OFF	OFF	ON
4800	OFF	OFF	ON	OFF
9600	OFF	OFF	ON	ON
19200	OFF	ON	OFF	OFF
38400	OFF	ON	OFF	ON
57600	OFF	ON	ON	OFF
115200 *	OFF	ON	ON	ON

\*: Default

### • SW2-1,2 (485-2W, 485-4W)

SW2 (Copper Mode Select)			
Mode	1	2	Description
RS232 *	OFF	OFF	RS232 mode
RS485-4W	OFF	ON	RS422 or RS485 4-wire mode (full duplex)
RS485-2W	ON	OFF	RS485 2-wire mode (half duplex)
Reserved	ON	ON	Do not use

\*: Default

### • SW2-3,4 (PARITY0, PARITY1)

SW2-3,4 (Parity Check Bit Select)		
3	4	Description
OFF *	OFF *	None
ON	OFF	Even
OFF	ON	Odd
ON	ON	Do not use

\*: Default

- **SW2-5 (DATA)**

SW2-5 (Data Length Select)	
5	Description
OFF *	8-Bit
ON	7-Bit

\*: Default

- **SW2-6 (STOP)**

SW2-6 (Stop Bit Length Select)	
6	Description
OFF *	1-Bit
ON	2-Bit

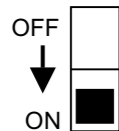
\*: Default

- **SW3 (RS-422/RS-485 TERMINATION)**

SW3 (Termination Select)	
TERMINATION	Description
SW3-1 OFF*	RS-422 TX/RX wires no terminator
SW3-1 ON	Insert 100 Ω terminator on RS-422 TX/RX wires
SW3-2 OFF*	RS-485 TX/RX wires no terminator
SW3-2 ON	Insert 120 Ω terminator on RS-485 TX/RX wires

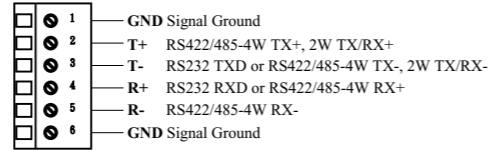
\*: Default

NOTE: SW3-1 and SW3-2 do not set to ON at the same time.



## 5. Terminal Block and DB-9 Connector

### Terminal Block



### DB-9 Connector

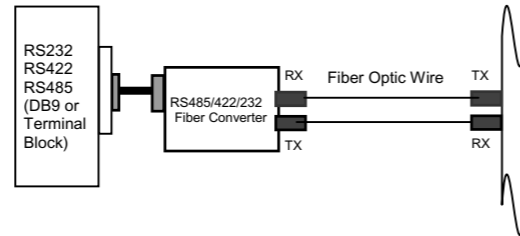
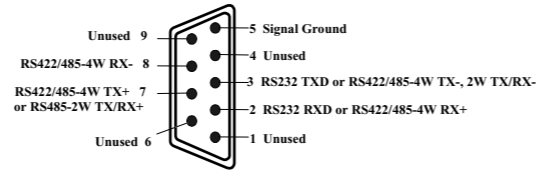


Fig. 4 Fiber Optic Network Connection

## 6. LED Description

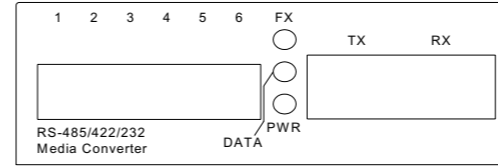


Fig. 5 RS485/422/232 to Fiber Converter Front Panel

LED	Color	Function
FX (LNK/ACT)	Green	Lit when fiber connection is good Blinks when fiber data is present
DATA (Copper)	Green	Lit when Copper data is present
PWR	Green	Lit when +5V power is coming up

## 7. DC Jack and AC-DC Power Adapter

The DC jack's central post is 2.5mm wide and it conforms to the DC receptacle(2.5mm).

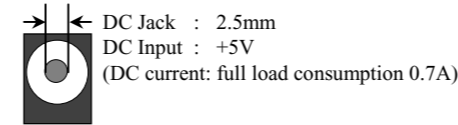


Fig. 6 DC+5V Input Jack and Dimension

AC-DC adapter using different AC input voltages is available for different areas.

AC Input:	North America	120VAC 60Hz
	Europe	230VAC 50Hz
	U.K.	230VAC 50Hz
	South Africa	240VAC 50Hz
	Australia	240VAC 50Hz
	Japan	100VAC 50/60Hz
DC Output:	5VDC @ 1.0A	

## 8. Technical Specifications

- **Standards:** RS-232 TIA/EIA-232  
RS-422 TIA/EIA-422  
RS-485 TIA/EIA-485

- **Model Description :**

Model	Interface	Fiber Type	λ(nm)	Distance
RSFX-CVRSC-1	DB-9	SC multi-mode	1310	2Km
RSFX-CVRSC-2	Terminal	SC multi-mode	1310	2Km
RSFX-CVRSC-3	DB-9	SC single-mode	1310	20Km
RSFX-CVRSC-4	Terminal	SC single-mode	1310	20Km
RSFX-CVRST-1	DB-9	ST multi-mode	1310	2Km
RSFX-CVRST-2	Terminal	ST multi-mode	1310	2Km
RSFX-CVRST-3	DB-9	ST single-mode	1310	20Km
RSFX-CVRST-4	Terminal	ST single-mode	1310	20Km

- **Network Interface :** RS232 (Terminal block/DB9)  
RS485/422 (Terminal block/DB9)  
SC/ST Fiber Transceiver

\* Any other fiber model, such as LC, MT-RJ, VF-45, BiDi, etc. is available upon request.

- **Maximum Cable Distance :**

Configuration	Max. Distance
RS232	15m(50ft)
RS422/485	1220m (4000ft)
Multi-mode Fiber	2km
Single-mode Fiber	20km *

\* Any other distance, such as 40km(1310nm), 60km(1310nm), 80km(1310nm), 100km(1550nm), etc. is available upon request.

- **Fiber Cable :**

50/125, 62.5/125, or 100/140μm multi-mode  
8.3/125, 8.7/125, 9/125 or 10/125μm single mode

- **Data Transfer Rate :** up to 115.2Kbps
- **LED :** PWR , FX, DATA
- **Power Requirement :** 1A@+5VDC
- **Ambient Temperature :** 0° to 50°C
- **Humidity :** 5% to 90%
- **Dimensions :** 26.2(H) × 70.3(W) × 94(D) mm
- **Complies with FCC Part 15 Class A and CE Mark**