



# ISC-1310FR

## Industrial Serial Media Converter 1-port RS-232/422/485 to Fiber

### Features

- Auto or manual switching baud rate from 50 ~ 921.6 Kbps
- Support Ring mode \*
- Power requirement from +12 ~ 48 VDC
- Dual power input
- Provided DIP-Switch to set Ring function
- IP-30 housing design
- DIN-Rail and wall mounting enabled



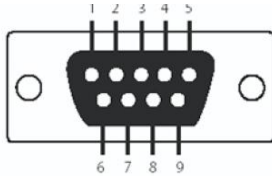
\* Max nodes in Ring mode:  
 32 nodes @ 115200 bps  
 24 nodes @ 230400 bps  
 11 nodes @ 460800 bps  
 6 nodes @ 921600 bps



### Introduction

ISC-1310FR is a cost-effective solution for the conversion between RS-232/422/485 and fiber interface, it allows you to extend the serial communication distance by optical fiber. ISC-1310FR supports fiber ring mode. ISC-1310FR series with wide operating temperature range from -40 ~ 75°C and accepts a wide voltage range from +12 ~ 48 VDC power inputs, so it is suitable for harsh operating environments

## Pin Definition




DB9 connector

Pin #	RS-232	RS-422	RS-485 ( 4 wire )	RS-485 ( 2 wire )
1		TX-	TX-	
2	RXD	TX+	TX+	
3	TXD	RX+	RX+	DATA+
4		RX-	RX-	DATA-
5	GND	GND	GND	GND
6				
7				
8				

## Dip Switch Definition

### Terminal Resistor Setting

Pull Hi / Low

OFF 

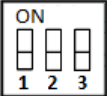
1 }  
2 }  
3 }

Term. Res.

SW No.	Description
# 1	150K/1K ohm Pull Hi/Lo resistors
# 2	
# 3	Enable/Disable terminal resistor

### Mode Setting

ON



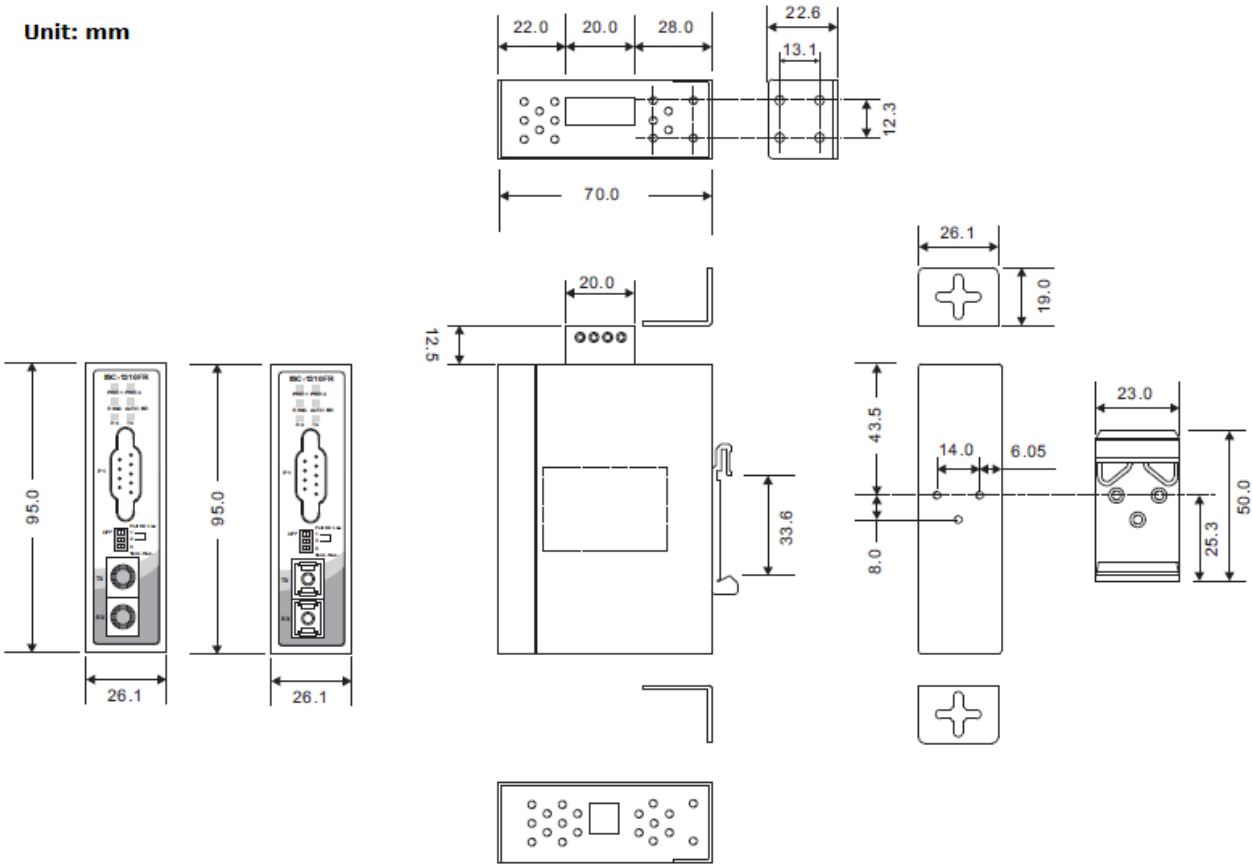
1 2 3

	RS232	RS422	4W-RS485	2W-RS485
SW1	ON	ON	OFF	OFF
SW2	OFF	ON	OFF	ON

	Normal	Ring		
SW3	OFF	ON		

# Dimension

Unit: mm



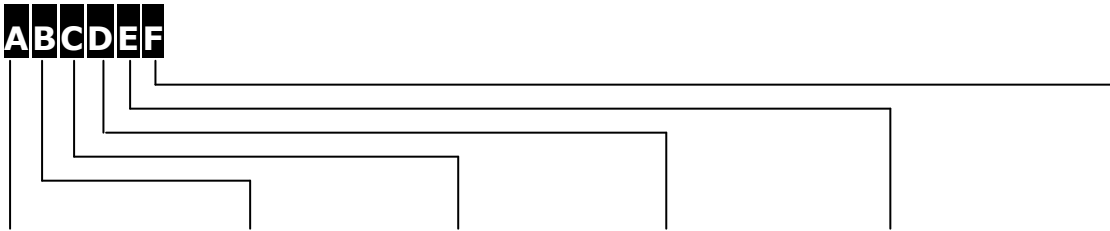
## Specifications

ORing Media Converter Model	ISC-1310FR-MM	ISC-1310FR-SS
<b>Fiber Port</b>		
Fiber Port Number	1	
Fiber Optical Connector	SC or ST	
Fiber Mode	Multi-mode	Single-mode
Typical Distance (km)	5 Km	40 Km
Wavelength (nm)	850 nm	1310 nm
TX Output	0 ~ -5 dBm	0 ~ -5 dBm
RX sensitivity	-5 ~ -20 dBm	-5 ~ -20 dBm
<b>Serial Port</b>		
Connector	DB9(male) x 1	
Operation Mode	RS-232 / RS-422 / 4(2)-Wire RS-485 can be configured by DIP switch	
Serial Baud Rate	50 bps to 921.6 Kbps	
RS-232	TxD, RxD, GND	
RS-422	Tx+,Tx-, Rx+, Rx-,GND	
RS-485 (2-wire)	D+, D-, GND	
RS-485 (4-wire)	Tx+,Tx-, Rx+, Rx-,GND	
<b>LED Indicator</b>		
Power indicator	2 x LEDs, Green On : Power is on and functioning Normal	
Auto Baud Rate LED	Green: Auto baud rate	
Serial TX / RX LEDs	Orange: Serial port is receiving data (RX) Green: Serial port is transmitting data (TX)	
Ring indicator (RING)	Green : Indicate system operated in Ring mode	
<b>Power</b>		
Input Power	Dual DC inputs. +12 ~ 48 VDC on 4-pin terminal block	
Power Consumption (Typ.)	1.6 Watts	
Overload current protection	2 A	
<b>Physical Characteristic</b>		
Enclosure	IP-30	
Dimension (W x D x H)	26.1 (W) x 70 (D) x 95 (H)mm	
Weight (g)	205 g	
<b>Environmental</b>		
Storage Temperature	-40 to 85°C (-40 to 185°F)	
Operating Temperature	-40 to 75°C (-40 to 167°F)	
<b>Regulatory approvals</b>		
EMI	FCC Part 15B, CISPR 32 ( EN55032 Class B)	
EMS	EN61000-4-2 (ESD) EN61000-4-3 (RS) EN61000-4-4 (EFT) EN61000-4-5 (Surge) EN61000-4-6 (CS) EN61000-4-8 EN61000-4-11	

Shock	IEC60068-2-27
Free Fall	IEC60068-2-31
Vibration	IEC60068-2-6
<b>Warranty</b>	<b>5 years</b>

## Ordering Information

ISC- **A B C D E F**



Code Definition	Serial port number	Serial Type	Converter port number	Converter Type	Other type	Additional function
Option	- 1 : 1 port	- 1 : RS-232 - 2 : RS-422/485 - 3 : RS-232/422/485	- 1 : 1 port	- 0 : other type - 1 : RS-232 - 2 : RS-422/485 - 3 : RS-232/422/485	- F : Fiber	- R : Ring mode

	Model Name	Description
Available Model	ISC-1310FR-MM-SC	Industrial Serial Media Converter ,1-port RS-232/422/485 to Fiber, SC, multi-mode, 5Km/850nm
	ISC-1310FR-SS-SC	Industrial Serial Media Converter ,1-port RS-232/422/485 to Fiber, SC, single-mode, 40Km/1310nm
	ISC-1310FR-MM-ST	Industrial Serial Media Converter ,1-port RS-232/422/485 to Fiber, ST, multi-mode, 5Km/850nm
	ISC-1310FR-SS-ST	Industrial Serial Media Converter ,1-port RS-232/422/485 to Fiber, ST, single-mode, 40Km/1310nm

## Packing List

- **ISC-1310FR x 1**
- **Quick Installation Guide x 1**
- **Wall-mount Kit x 1**
- **DIN-Rail Kit x 1**

## Accessories

### Fiber Patch Cord

- **FPC-SCST-MM3M**
- **FPC-SCSC-MM3M**
- **FPC-SCST-SS3M**
- **FPC-SCSC-SS3M**