

# IFC-Serial-PRO

1x RS485 to 1-port Fiber (SC/ST) Media Converter, support PROFIBUS



- 2.5KV isolation for serial port (RS485)
- Supports fiber port for extend transmission distance
- Baud Rate up to 9.6K~12Mbps for Profibus application
- Supports Auto Baud Rate mode, or manual mode for setting Baud Rate



IFC-Serial-PRO is a serial over fiber converter that is capable of selecting interface modes for connection to RS-485 2-wire half duplex and supports high-speed data rates of PROFIBUS. Fiber optical cabling extends distances and isolates from EMC/noise to reduce interference between PROFIBUS devices. The terminal block offers an alarm relay contact and two redundant DC power inputs. IFC-Serial-PRO is also available in two operating temperature ranges, a standard -10° to 60°C commercial temperature range and an extended -40° to 75°C range, making it is reliable and an ideal solution for keeping your industrial automation applications running smoothly and continuously even in harsh environments. IFC-Serial-PRO is protocol transparent, and can be applied to PROFIBUS and other networks using RS485 interfaces (See Figure 1).

## Features

- Supports 1x Fiber and 1x RS485
- Extend serial transmission distance up to 500m, 2km, 20km
- Supports fiber port point to point (Figure 3)
- Redundant dual power inputs (12/24/48VDC)
- Protocol transparent. These products can be applied to the PROFIBUS, but also can be applied to other network using RS485 interface
- CE, FCC, heavy industrial grade EMS, EMI, EN61000-6-2, EN61000-6-4 certified
- Supports relay output for power or link failure warning
- Hardened housing with IP30 protection
- Fanless and DIN-Rail design for harsh industrial environment

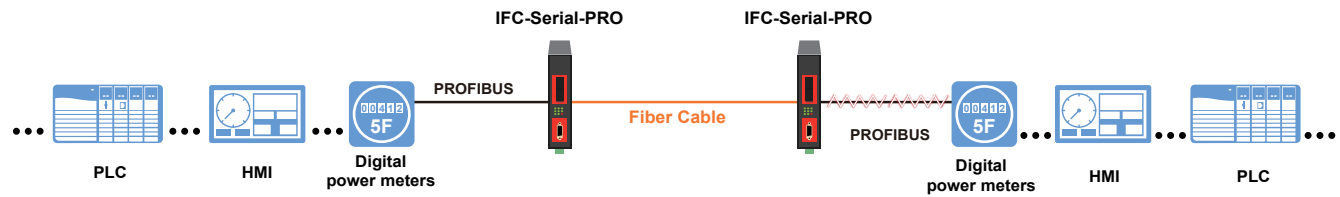
## Specifications

<b>FieldBus Protocol</b>	Protocol transparent	PROFIBUS and all operations available on RS485
<b>Problem isolation</b>	Isolate EMC/noise to reduce mutual interference between PROFIBUS device (Figure 1) Isolate the PROFIBUS side of the failure, to avoid the impact of the other side (See Figure 2)	
<b>Fiber Port Interface</b>	Connector	SC, ST
	Fiber Port	1 fiber port
	Fiber Type	M/M 500M, M/M 2KM, S/M 20KM Bidi 20KM
	Wavelength	M/M 850nm or 1310nm, S/M 1310nm Bidi: Mode A : TX1310nm/RX1550nm Mode B : TX1550nm/RX1310nm
<b>Fiber port Topology</b>	Point to point (Figure 3)	
<b>Serial port Interface</b>	Serial Port Connector	DB9 Female
	RS-485 direction	RS-485 : 2 wires, Half duplex
	RS-485 direction	Automatically detection
	Serial port Baudrate	9.6K to 12Mbps Auto mode : Auto sense Baudrate, no need to set Baudrate Manual Mode : Baudrate Set by DIP SW
	Serial port isolation	2.5KVrms isolation for serial signals EMC/noise isolation, to reduce mutual interference between serial port device
<b>Environmental</b>	Operating Temperature	-10 ~ 60°C (IFC-Serial-PRO) -40 ~ 75°C (IFC-Serial-PRO-E)
	Storage Temperature	-40 ~ 85°C
	Humidity	5 ~ 95% RH
<b>LED Indications</b>	PWR1, PWR2, Alarm, Master, TD, RD, Fiber Link, System	
<b>Alarm Relay</b>	Alarm exists for power, fiber link or ring protection Relay output with carry capacity 1A @ 24VDC	

<b>Power</b>	Power Input	Redundant Dual Power 12, 24, 48 VDC (9.6 ~ 60VDC)
	Power Consumption	<6W
	Power Reversal Protection	Yes
	Over Current Protection	Signal Short Together Protected
	Terminal Block	For Power and Alarm V1+, V1-, V2+, V2-, Alarm NC, Alarm COM
<b>Mechanical</b>	Water & Dust Proof	IP30 Protection, Fanless
	Dimensions	85x 30x 115mm (D x W x H)
	Weight	75g
<b>Certification</b>	CE (EN55032, EN55035)	
<b>EMC</b>	FCC Part 15 Subpart B Class A, CE (EN55032)	
<b>EMS (Electromagnetic Susceptibility) Protection Level</b>	EN61000-4-2 ESD Level 3	
	EN61000-4-3 RS Level 3	
	EN61000-4-4 EFT Level 3	
	EN61000-4-5 Surge Level 3	
	EN61000-4-6 CS Level 3	
<b>Free Fall</b>	IEC 60068-2-31	
<b>Vibration</b>	IEC 60068-2-6	
<b>Shock</b>	IEC 60068-2-27	
<b>Green</b>	RoHS	
<b>MTBF</b>	1,137,875 Hours (MIL-HDBK-217)	
<b>Warranty</b>	5 years	

## Application & Topology

Figure 1 : IFC-Serial-PRO Application for PROFIBUS



Benefit:

1. EMC/noise isolation, to reduce mutual interference between serial port device
2. Extend distance by fiber
3. Isolate PROFIBUS failure
4. Achieve a reliable network environment

Figure 2 : Isolate PROFIBUS Failure

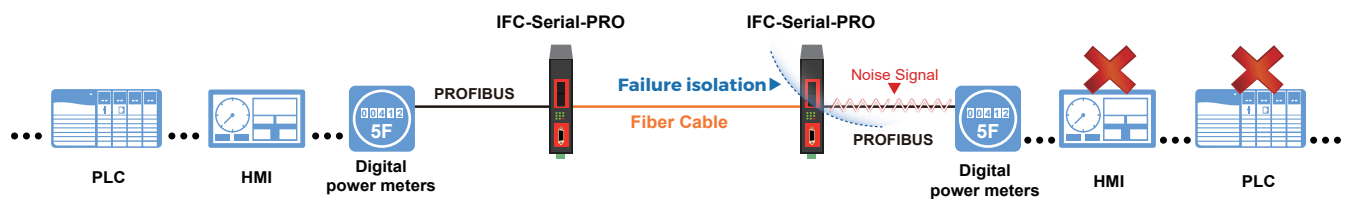
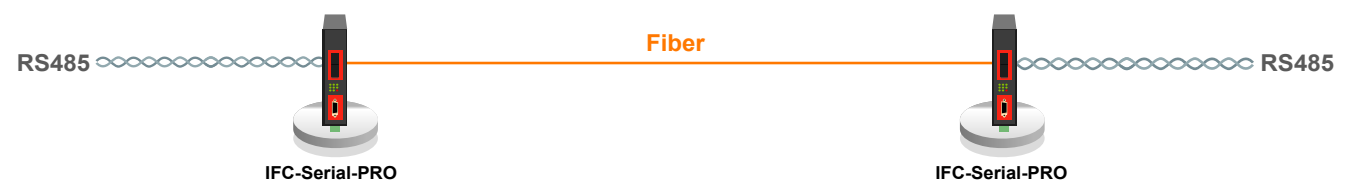
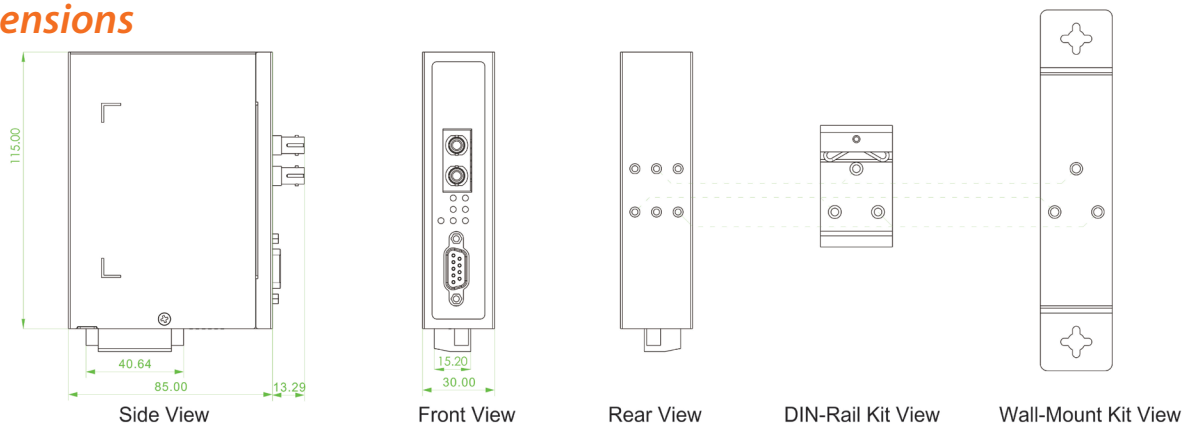


Figure 3 : Fiber Point to Point topology & application



## Dimensions



## Ordering Information

Model Name	Serial (ProfiBus)		Fiber	Power Input	Certification		Operating Temperature
	RS485	Isolation 2.5KV			CE	FCC	
IFC-Serial-PRO	1	V	1	12/24/48VDC	V	V	-10~60°C
IFC-Serial-PRO-E	1	V	1	12/24/48VDC	V	V	-40~75°C

Connector Type	Connectivity Distance		
SC,ST	001: M/M 500meter	002: M/M 2km	020: S/M 20km
	020A: 20km Bidi mode A		
	020B: 20km Bidi mode B		
	Mode A: TX 1310nm/RX1550nm	Mode B: TX 1550nm/RX1310nm	

### Package List

- One device of the series
- Terminal block
- Din Rail with screws

## Optional Accessories

### Wall Mount Kit

IND-WMK03	Wall Mount kit for Industrial product (Compact, 150 x 30mm)
-----------	---

### Industrial Power Supply

MDR-20-24	Industrial Power, Input 85 ~ 264VAC/120 ~ 370VDC, Output 24VDC, 24W, -20 ~ +70°C
MDR-40-48	Industrial Power, Input 85 ~ 264VAC/120 ~ 370VDC, Output 48VDC, 40W, -20 ~ +70°C