

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

FieldBus Protocol	Protocol Transparent PROFIBUS and all operations available on RS485	
Problem isolation	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)	
Fiber Port Interface	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
Fiber port Topology	Point to Point (Figure 3)	

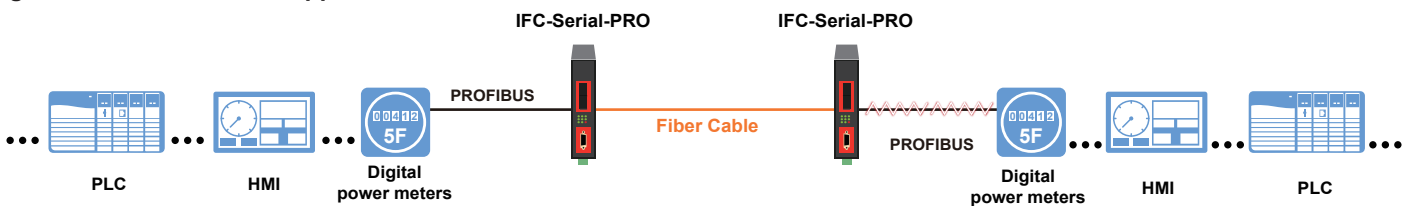
Serial port Interface	Serial Port Connector	DB9 Female
	RS-485 Direction	RS-485 : 2 wires, Half duplex
	Serial Port Baudrate	9.6K to 12Mbps Auto mode : Auto sense Baudrate, no need to set Baudrate Manual Mode : Baudrate Set by DIP SW
	Serial Port Isolation	2.5KVrms isolation for serial signals EMC/noise isolation, to reduce mutual interference between serial port device
	Environmental	Operating emperature -10 ~ 60°C (IFC-Serial-PRO) -40 ~ 75°C (IFC-Serial-PRO-E)
	Storage Temperature	-40 ~ 85°C
	Humidity	5 ~ 95% RH
LED Indications	PWR1, PWR2, Alarm, Master, TD, RD, Fiber Link, System	
Alarm Relay	Alarm exists for power, fiber link or ring protection, Relay output with carry capacity 1A @ 24VDC	
Power	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	
Mechanical	Water & Dust Proof	IP30 Protection, Fanless
	Dimensions	85x 30x 115mm (D x W x H)
	Mounting	DIN-Rail, or wall mounting (Optional)
	Weight	295g

Certification

EMC	CE (EN55032, N55035)
EMI	FCC Part 15 Subpart B Class A, CE (EN55032)
EMS (Electromagnetic Susceptibility) Protection Level	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
Free Fall	IEC 60068-2-31
Vibration	IEC 60068-2-6
Shock	IEC 60068-2-27
Green	RoHS
MTBF	1,137,875 Hours (MIL-HDBK-217)
Warranty	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

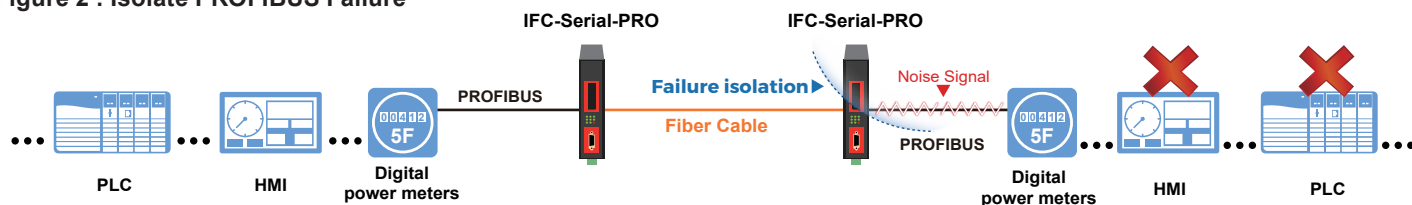
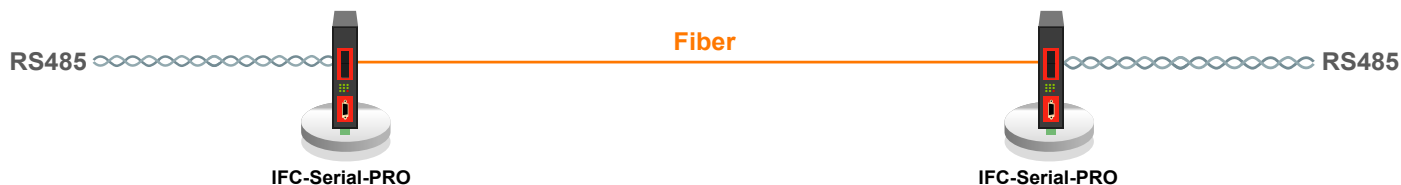
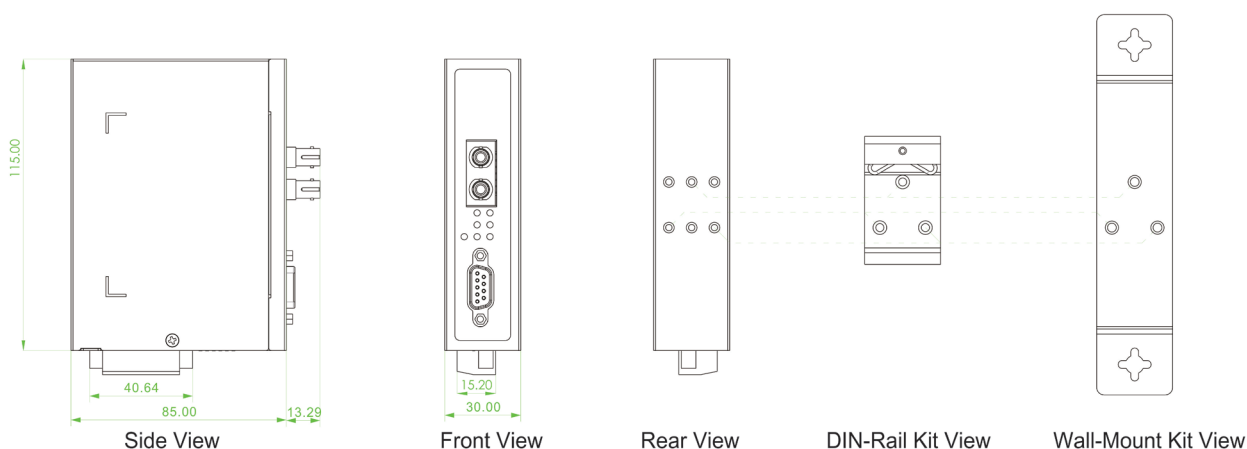


Figure 3 : Fiber Point to Point topology & application



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

Optional Accessories

Wall Mount Kit

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