IFC-Serial

RS-232/422/485 Fiber Converter

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IFC-Serial are industrial grade fiber media converters that provides a fiber connection to extend asynchronous RS-232, RS-485 or RS-422 serial transmissions over a distance of up to 2km using multimode fiber or up to 60km using single mode fiber. The duplex fiber provides point-to-point connections. Single fiber simplex connections allow connecting multiple devices in a cascaded or "daisy chain" fashion with a single fiber ring architecture. However, no redundancy is provided and any break can disable the entire ring. The converter is capable of selecting interface modes for connection to RS-232 (3 wire), RS-485 (2 wire, half duplex) or RS-422/485 (4 wire, full duplex). IFC-Serial Series media converters feature an alarm relay contact and two redundant DC power inputs. The IFC-Serial Series reliable industrial design is perfect for keeping your industrial automation applications running smoothly and continuously. The IFC-Serial Series media converters are available in two operating temperature ranges, a standard -10° to 60°C commercial temperature range or an extended -40° to 75°C range.

Features

- Supports dual channel communication, including Triple-Way communication and Two-Way communication
- Extend serial transmission distance up to 2km, 30km, 60km
- Redundant dual power inputs (12 ~ 48VDC)
- Supports half-duplex ring application
- Supports RS-232, RS-422, RS-485(2/4 wire) transmission to fiber connections
- Wide Temperature -40 ~ 75°C (IFC-Serial-E)
- Enhanced serial baudrate up to 1024kpbs
- 2.5KV isolation for serial signal
- Supports relay output for power or link failure warning
- Hardened housing with IP30 protection
- Fan-less and DIN-Rail design for harsh industrial environment
- Adjustable pull high/low resistor and terminator for RS-422/485 transmission

Specifications

Data Flow	Dual Channel Communication	Both of Triple-Way and Two-Way Communication Way (Figure 1)
Optical Interface	Connector	SC, ST
	Fiber Optical rate	36.864Mbps
	Fiber Port	One fiber
	Fiber Type	MM 2km, SM 30km/60km
	Wavelength	MM 1310nm, SM 1310, 1550nm
	Point to Point Transmission	Half or Full duplex
	Ring Transmission	Half duplex
Electrical Interface	Serial Port Connector	RS-232(DB9), RS-422/RS-485(5 pin terminal block)
		RS-485 : 4, 2 wires, RS-422 : 4 wires
	RS-485 direction	Automatically detection
	Copper Baud rate	50 up to 1024Kbps
	Isolation	2.5KV for sevic signals
	Surge Protection	8KV ESD for serial signals
	Pull High	Selected by 10 position rotary switch
	Pull Low	Selected by 10 position rotary switch
	120 ohm terminator	Built-in 120 ohm terminator (Option by Dip switch)
Environmental	Operating Temperature	-10 ~ 60°C (IFC-Serial) -40 ~ 75°C (IFC-Serial-E)
	Storage Temperature	-40 ~ 85°C
	Humidity	5 ~ 95% RH
LED Indications	PWR1, PWR2, Alarm, Master, TD, RD, Fiber Link, Ring	
Power	Power Input	Redundant Dual Power 12, 24, 48 VDC (9.6 ~ 58VDC)
	Power Consumption	5W
	Power Reversal Protection	Yes
	Over Current Protection : Signal Short Together Protected	
	Terminal Block for Power and Alarm : Terminal Block : V1+, V1-, V2+, V2-, Alarm NC, Alarm COM, Alarm NO	

Mechanical	Water & Dust Proof	IP30 Protection
	Dimensions	106 x 38 x 142 mm (D x W x H)
	Mounting	DIN-Rail or wall mount
	Weight	0.63kg
Certification	Safety	UL60950-1
	EMC	CE, FCC
	EMI	EN55022 Class A
		EN61000-6-4 – Emission for industrial environment
	EMS	EN61000-6-2 – Immunity for Industrial environment
		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 60068-2-32
	Vibration	IEC 60068-2-6
	Shock	IEC 60068-2-27
	Green	RoHS
	MTBF	797,101 Hrs

Specifications & design are subject to change without prior notice. Please visit CTC Union website for more details.

Block Diagram

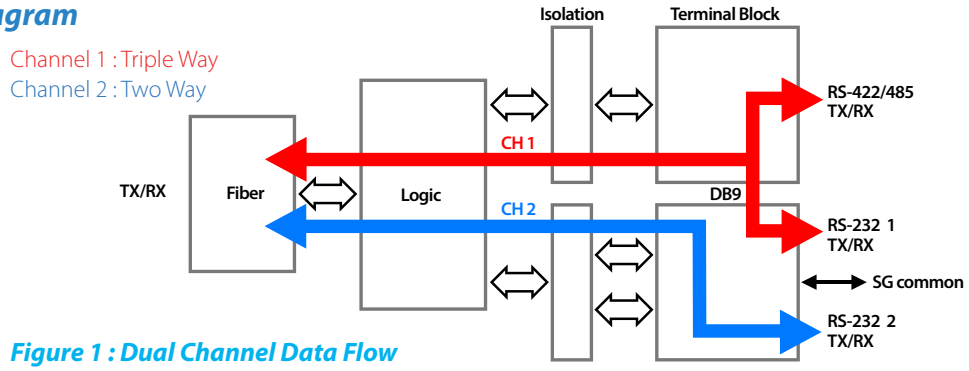


Figure 1 : Dual Channel Data Flow

Application

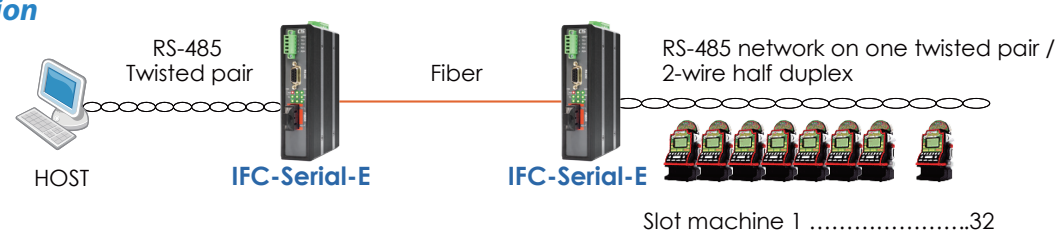


Figure 2 : Point to Point

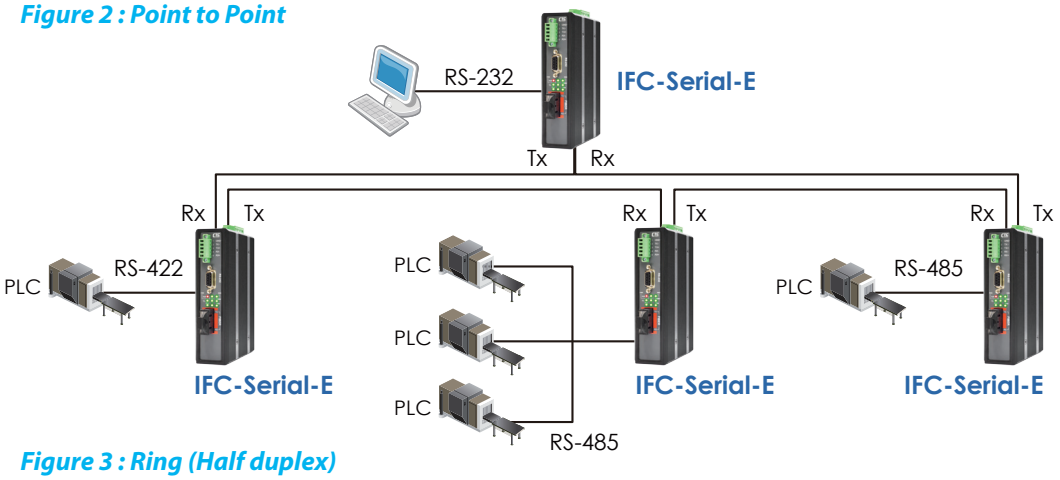
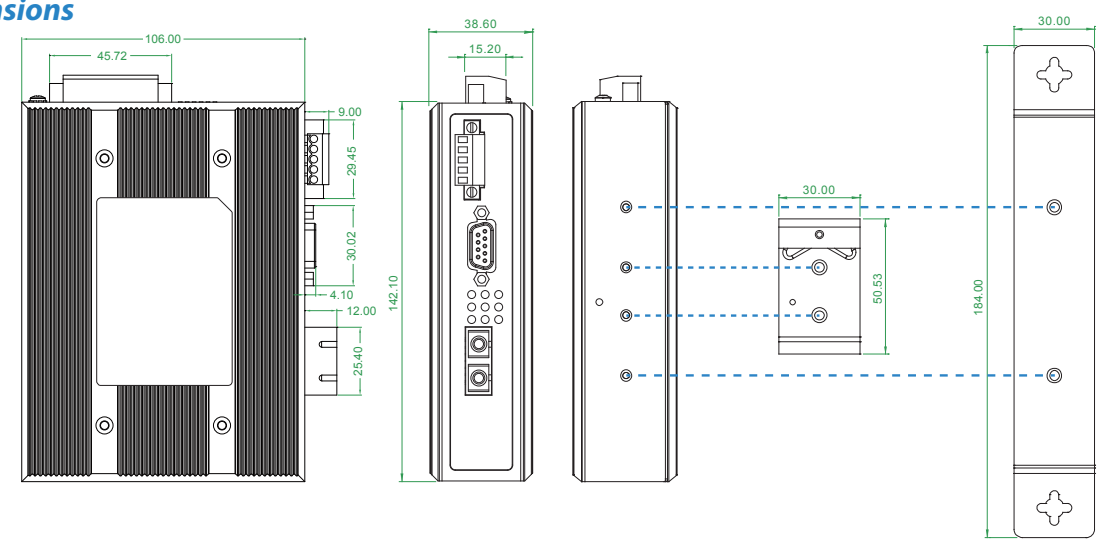


Figure 3 : Ring (Half duplex)

Dimensions



Side View | Front View | Rear View | DIN-Rail Kit View | Wall-Mount Kit View

Ordering Information

Model Name	Description
IFC-Serial	RS-232/422/485 serial to fiber media converter; Temperature Range : -10 ~ 60°C
IFC-Serial-E	RS-232/422/485 serial to fiber media converter; Temperature Range : -40 ~ 75°C
Connector Type	**Connectivity Distance**
SC, ST	002: 2km 030: 30km 060: 60km
Accessories	
DR-4524	Industrial Power, Input 85 ~ 264VAC, Output 24VDC, 48W, -10 ~ +50°C
MDR-40-24	Industrial Power, Input 85 ~ 264VAC, Output 24VDC, 40W, -20 ~ +70°C

Temperature | Connector Type | Connectivity Distance

IFS – Serial – □ – □□□□□

Example: IFS – Serial – E – SC002

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