

RS-485 Daisy Chain Fiber Converter

IFC-485FDC



The IFC-485FDC is industrial grade fiber media converter that provides a dual fiber connection converter solution to extend asynchronous RS-485 or RS-232 transmission distance up to 2km over multimode fiber or up to 120km over single mode fiber. The dual fiber inputs allow connecting multiple devices in a cascade or "daisy chain" fashion as well as creating ring architecture for fiber redundancy. The converter is equipped with multiple interface circuits for connection to RS-232 or RS-485/422 (2 or 4 wire, full or half duplex). The IFC-485FDC secures data transmission over EMI resistant fiber at speeds up to 256kbps for RS-232 or up to 1024kbps for RS-485/422. The IFC-485FDC reliable industrial design is suitable for keeping your industrial automation applications running continuously. Each IFC-485FDC media converter comes with two relay output alarms and two redundant DC power inputs to help prevent damage and loss. The IFC-485FDC media converter is available in models that support operating temperatures of 0 to 60°C.

Features

- Extend asynchronous serial transmission from 2km to 120km over fiber
- Two fiber ports support daisy chain and ring architecture
- Multi-drop operation over fiber ring
- Dip switch selectable data interface for RS232/ 422/ 485
- Dip switch selectable two wires (half duplex) or four wires (full duplex) RS485
- Dip switch selectable three or five wires RS232
- Speeds up to 256kbps for RS232 (Async. mode)
- Speeds up to 1Mbps for RS485/422

Industrial Grade Performance

- Power or Optical Fiber failure alarm by relay output
- Supports DIN-Rail & wall mount
- Redundant dual DC power inputs

Specifications

Optical Interface

Connector : 1 x 9 (SC, ST, FC)
Data rate : 31.104Mbps
Line coding : Scrambled NRZ
Bit Error Rate : Less than 10⁻¹¹
Cable type : MM 62.2/125µm, 50/125µm, SM 9/125µm
Distance : MM 2km, SM 15/30/50/80/120km, WDM 20/40/60/80km
Wavelength : 1310nm, 1550nm

Electrical Interface

Connector: 6 pins Terminal block
Data: Signal Formats
 RS485/422 2-wire , 4-wire
 RS232 RTS/CTS 5-wire, 3-wire
 RS423 RTS/CTS 5-wire, 3-wire
 TTL 3-wire
Baud Rate : RS422, RS485 up to 1024kbps
 RS232 up to 256kbps
 TTL up to 1024kbps

Standard

EIA/TIA RS485, RS422, RS232

LED Indications

Power, FX-Link1, FX-Link2, Test, Master, Ring TD, RD

Power

Power Input 12 ~ 48 VDC
Power Consumption < 5W

Mechanical

Dimensions
 DC12 : 160 x 88 x 24mm (D x W x H)
 AC/DC48/AD: 201 x 135 x 35mm (D x W x H)
Physical Characteristics
 Housing: Metal
IP Protection
 IP30

Environmental

Temperature

Operating: 0°C ~ 60°C ,
 Storage: -10°C ~ 70°C

Humidity

0 ~ 90% non-condensing

Approvals

Safety

EN60950-1

EMI

FCC Part 15, CISPR(EN55022) ClassA

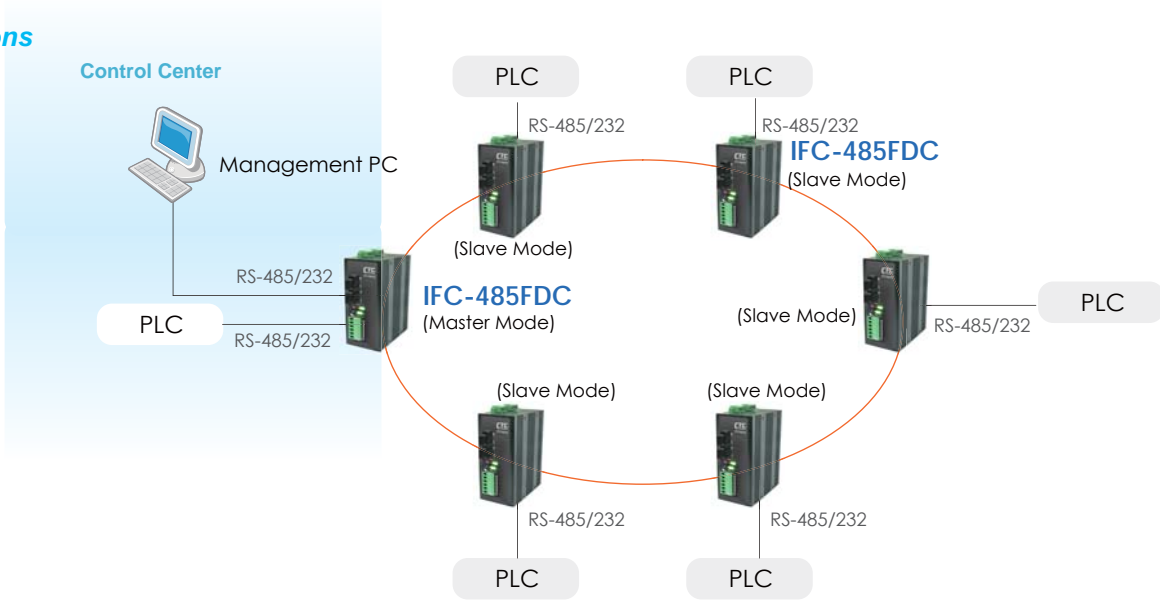
EMC

EN61000-4-2 (ESD), Level3
 EN61000-4-3 (RS), Level3
 EN61000-4-4 (EFT), Level3
 EN61000-4-5 (Surge), Level3
 EN61000-4-6 (CS), Level3
 EN61000-4-8
 EN61000-4-11

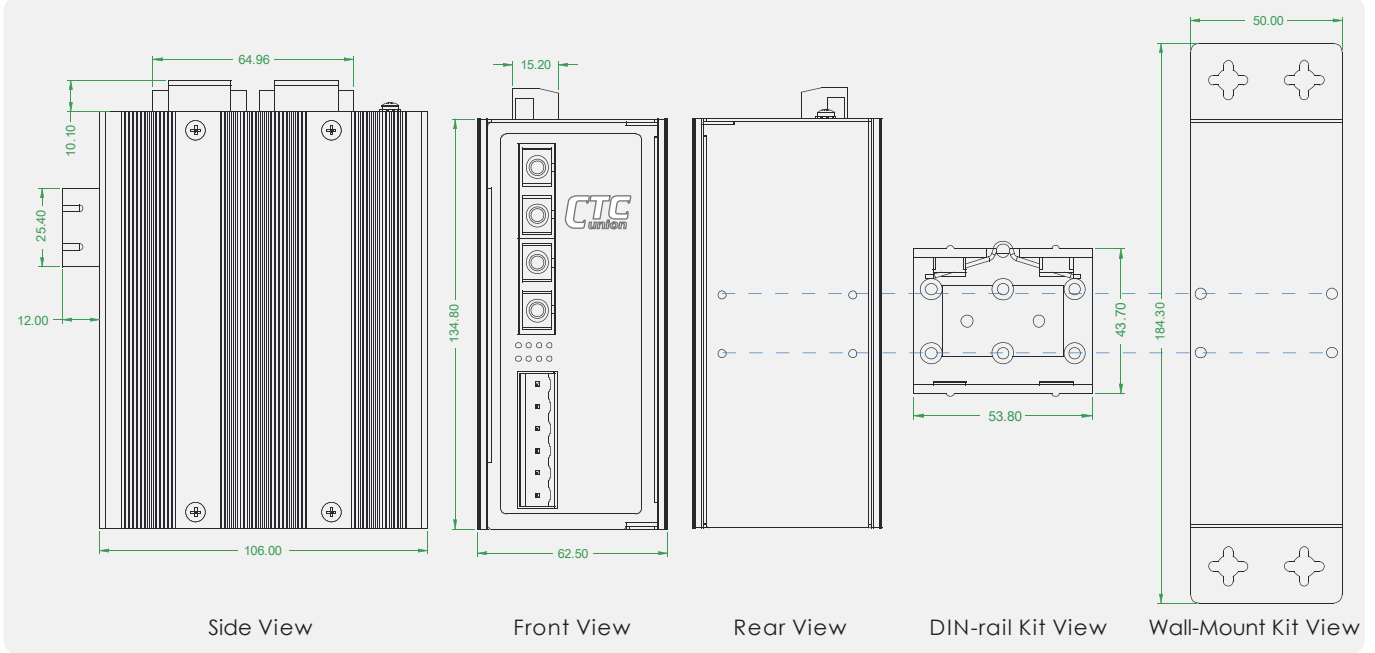
MTBF

135,202 hrs

Applications



Dimensions



Ordering Information

Model Name Description

IFC-485FDC	RS-485/232 to dual fiber media converter; Temperature Range : 0 ~ 60 degree C
IFC-485FDC-X	RS-485/232 to dual fiber media converter (wide range temp.); Temperature Range : -40 ~ 85 degree C

Connector Type Connectivity Distance

SC, ST, FC	002: 2km	015: 15km	030: 30km	050: 50km	080: 80km	120: 120km
	* 20A: WDM 20km A type	* 20B: WDM 20km B type	* 40A: WDM 40km A type	* 40B: WDM 40km B type	* 60A: WDM 60km A type	* 60B: WDM 60km B type
	* 80A: WDM 80km A type	* 80B: WDM 80km B type				

* Standard model (IFC-485FDC) has 0 - 60°C operating range.
Note: Connectivity Distance: 120/80A/80B only for IFC-485FDC

Connector Type Connectivity Distance

IFC - 485FDC -

Example: IFC - 485FDC - SC002

Optional Accessories

IFC-DRK01	Din Rail Mounting Kit (standardized 35 mm wide)
IFC-WMK01	Wall Mounting Kit