ODC-120A Series

RS-232/RS-485/RS-422 Serial-to-Fiber Converters (Point-to-point transmission)

Introduction

The ODC-120A serial-to-fiber converter series transfer RS-232/RS-422/RS485 to optical fiber signals to extend transmission distance. This series support full/half duplex, bidirectional and **point-to-point transmission**. There are single mode or multimode media with different types of connectors available in the ODC-120A series for your network need.

This series offers 2 serial ports, with a 5-pin terminal block for RS-422/RS-485 and a DB-9 serial connector for RS-232 communication. The best part is that this series can automatically detect the communication speed, no need for any manual setting.

With this time-saving and cost-effective solution for users and system integrators to quickly transform its serial equipment to the optical fiber network with no need of replacing the existing serial equipment.
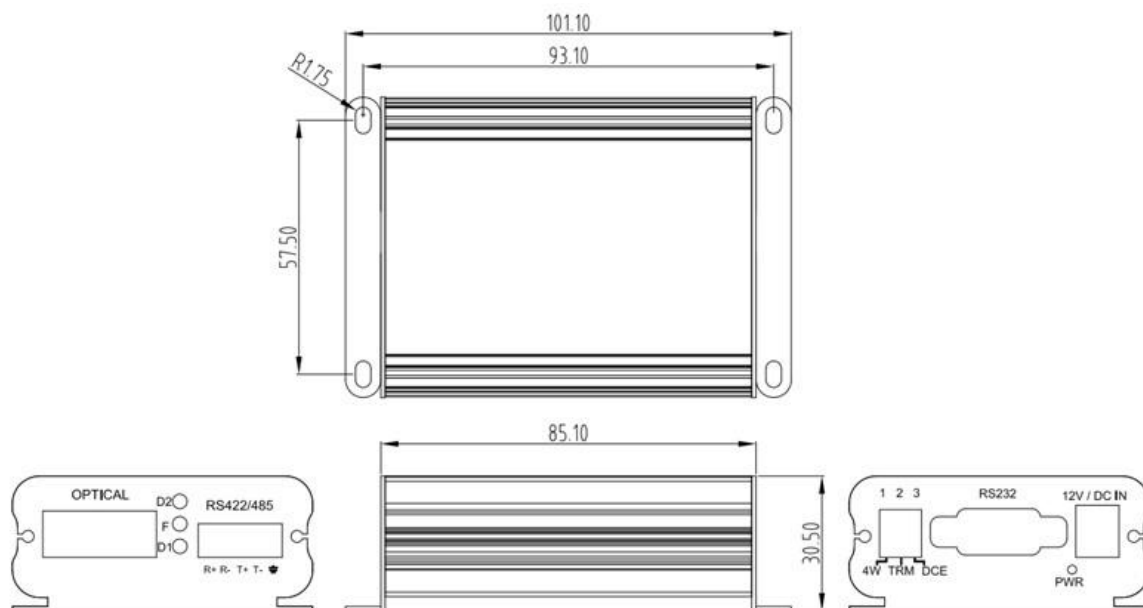
Features

- Point-to-point transmission
- Half or full duplex transmission on RS-232/422/485
- Complied with EIA/TIA-232, EIA/TIA-422, EIA/TIA-485, EIA/TIA-574 and CCITT V.28 standards
- Automatic baudrate detection
- Dip switch to change the 2-wire or 4-wire mode.
- Supports RS-232 in DTE or DCE mode

- Extends serial-to-fiber signal transmission up to 20km with single mode (9/125µm) fiber
- EMI, RFI and transient surge immunity
- Clear LED indicators
- Wide operating temperature (-20 to +75°C)
- MTBF > 50000 hours
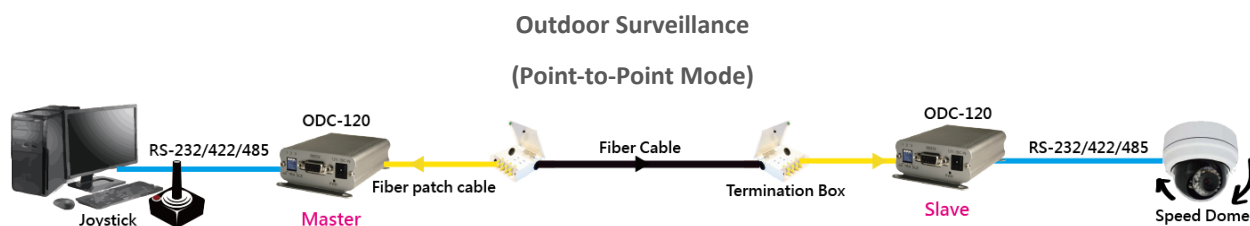- Designed and made in Taiwan

Specifications

Fiber Communication	
Connector type	SC/ST/FC

Transmission distance	ODC-120A-SM Series:
	   Single mode fiber for 20 km (standard)
	 ODC-120A-MM Series:
	   Multi mode fiber for 550m (standard)

Fiber cable requirement	ODC-120A-SM Series: 9/125um ODC-120A-MM Series: 50/125, 62.5/125um
Wavelength	ODC-120A-SM Series: 1310nm ODC-120A-MM Series: 850nm
TX Output	ODC-120A-SM Series: ≥ -8 dBm ODC-120A-MM Series: ≥ -8 dBm
RX Sensitivity	ODC-120A-SM Series: -16 dBm ODC-120A-MM Series: -14 dBm
Point-to-point transmission	Half or Full duplex

Serial Communication	
Serial standards	RS-232, RS-422, RS-485
Connector type	5-pin terminal block, DB-9 (male)
Signals for 4-wire RS-422	Tx+, Tx-, Rx+, Rx-, GND
Signals for 2-wire RS-485	D+, D-, GND
Signals for RS-232 (DB-9)	DCD, RXD, TXD, DTR, GND, DSR, RTS, CTS, RI
Baudrate	50bps to 1Mbps (automatic detection)
Power Parameter	
Power supply	12 VDC
Reverse power protection	Protects against V+/V- reversal
Over current protection	Supported
Power consumption	<3.5W
Physical Characteristics	
Dimensions (W x D x H)	86 x 86 x 26 mm
Material	Aluminum
Gross weight	80g
Environment	
Operating temperature	-20 °C ~ 75 °C
Storage temperature	-20 °C ~ 85 °C
Operating humidity	5 to 95% RH (Non-Condensing)
Regulatory Approvals	
Certifications	CE, FCC
Package Contents	
Device	ODC-120A series converter x 1
Documentation	Quick installation guide x 1

Dimensions (Unit: mm)

Application

Outdoor Surveillance

(Point-to-Point Mode)

Ordering Information

Model Name	Description
ODC-120A-SM-SC-2F	RS-232/RS-485/RS-422 Serial-to-Fiber Converter, Single Mode, SC connector, duplex fiber
ODC-120A-MM-SC-2F	RS-232/RS-485/RS-422 Serial-to-Fiber Converter, Multi-mode, SC connector, duplex fiber
ODC-120A-SM-ST-2F	RS-232/RS-485/RS-422 Serial-to-Fiber Converter, Single Mode, ST connector, duplex fiber
ODC-120A-MM-ST-2F	RS-232/RS-485/RS-422 Serial-to-Fiber Converter, Multi-mode, ST connector, duplex fiber
ODC-120A-SM-FC-2F	RS-232/RS-485/RS-422 Serial-to-Fiber Converter, Single Mode, FC connector, duplex fiber