

4.6. RS-232/422/485 to Fiber Optic Converters



Features

- Auto Switching Baud Rate, 300 ~ 115200 bps
- 3000 V_{oc} Isolation Protection on the RS-232 side
- ESD Protection for the RS-232/422/485 Data Line
- Transmission Speed of up to 115200 bps
- Power Input of +10 ~ +30 V_{oc}
- Supports Operating Temperatures from -25 °C ~ +75 °C
- DIN-Rail



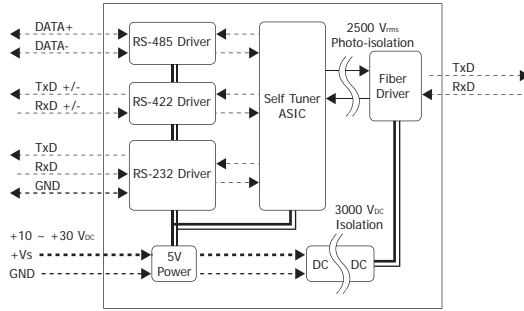
Introduction

The I-2541 is an RS-232/422/485 to fiber optic converter that secures data transmission by using fiber optic transmission to provide immunity from EMI/RFI interference. The I-2541 is used for RS-232/422 point-to-point connections and RS-485 multi-drop applications for transmitting a signal up to 2 km (6,600 ft) and is the perfect solution for applications where transmission must be protected from electrical exposure, surges, lightning or chemical corrosion.

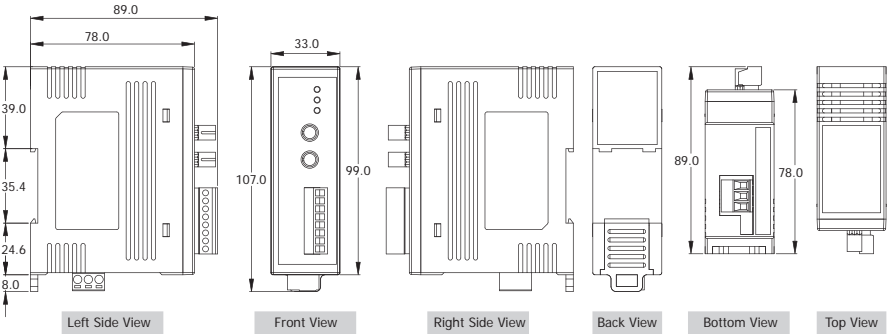
Specifications

| Interface | | |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| Fiber Interface | Fiber Port | Multi Mode; ST Connector |
| | Wavelength | 850 nm |
| | Fiber Cable | 50/125, 62.5/125, 100/140 μm |
| | Distance | 2 km, (62.5/125 μm recommended) |
| Serial Interface | RS-232 | TxD, RxD, GND |
| | RS-422 | TxD+, TxD-, RxD+, RxD- |
| | RS-485 | Data+, Data- |
| | | The RS-232, RS-422 and RS-485 cannot be used simultaneously |
| 2-wire Cabling/4-wire Cabling | Belden 8941 (2P twisted-pair cable)/Belden 8942 (4P twisted-pair cable), if different cables are used, the transmission distance may change | |
| RS-422/485 Transfer Distance | Max. 1,200 m at 9.6 kbps; Max. 400 m at 115.2 kbps | |
| Maximum Supported RS-485 Devices | 256 (Without repeater) | |
| Self-Tuner Asic Inside | Yes | |
| Speed | 300 ~ 115200 bps | |
| ESD Protection | Yes | |
| Isolated Voltage | 3000 V _{oc} on the RS-232 side | |
| RS-232/422/485 Connection | Removable 8-Pin Terminal Block | |
| LED Indicators | | |
| Power/Communication | Yes | |
| Power | | |
| Input Voltage Range | +10 V _{oc} ~ +30 V _{oc} (Non-isolated) | |
| Power Consumption | 1.9 W | |
| Mechanical | | |
| Casing | Plastic | |
| Flammability | Fire Retardant Materials (UL94-V0 Level) | |
| Dimensions (W x L x H) | 33 mm x 89 mm x 107 mm | |
| Installation | DIN-Rail | |
| Environment | | |
| Operating Temperature | -25 °C ~ +75 °C | |
| Storage Temperature | -30 °C ~ +75 °C | |
| Humidity | 10 ~ 90% RH, non-condensing | |

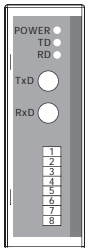
Internal I/O Structure



Dimensions (Unit: mm)



Pin Assignments



| Terminal No. | Pin Assignment |
|--------------|----------------|
| TxD | Fiber TxD |
| RxD | Fiber RxD |
| 01 | TxD+/-/DATA+ |
| 02 | TxD-/DATA- |
| 03 | RxD+ |
| 04 | RxD- |
| 05 | NC |
| 06 | GND |
| 07 | TxD |
| 08 | RxD |

Ordering Information

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|-----------|-----------------------------------------|
| I-2541 CR | RS-232/422/485 to Fiber Optic Converter |
|-----------|-----------------------------------------|

Accessories

| | |
|-----------|----------------------------------------------------------------------|
| GPSU06U-6 | 24 V _{oc} /0.25 A, 6 W Power Supply |
| DIN-KA52F | 24 V _{oc} /1.04 A, 25 W Power Supply with Din-Rail Mounting |

Applications

