



PROFI-2542 PROFI-2542-SC

PROFIBUS to Single-mode Fiber Converter

Features

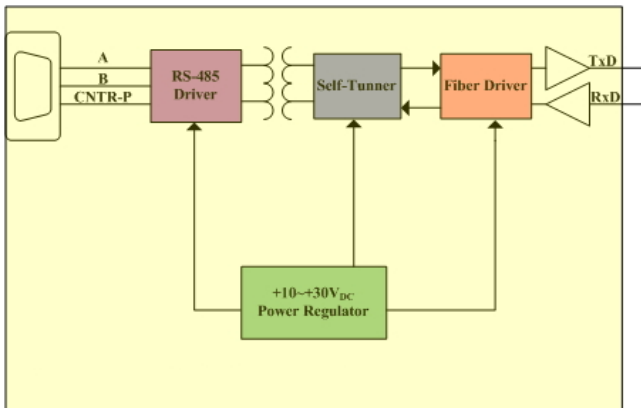
- Protocol : PROFIBUS DP
- Detect transmission rate (9.6 ~ 12000 kbps) automatically
- Max transmission speed up to 12 Mbps for PROFIBUS
- Transparency on both side
- Fiber Port: ST / SC (Single-mode)
- Wave Length: 1310 nm
- Network Isolation Protection: High Speed iCoupler
- 3000 VDC isolation protection on PROFIBUS side
- 4 kV ESD Protection
- Mount easily on DIN-rail



Introduction

The PROFI-2542(SC) is a PROFIBUS to single mode fiber optic converter which secures PROFIBUS data transmission via single mode fiber optic for providing immunity from EMI/RFI interference. It is used in PROFIBUS applications for transferring PROFIBUS signal from wire to single mode fiber optic and vice versa, and is the perfect solution for applications where transmission must be protected from electrical exposure, surges, lightning or chemical corrosion.

Block Diagram

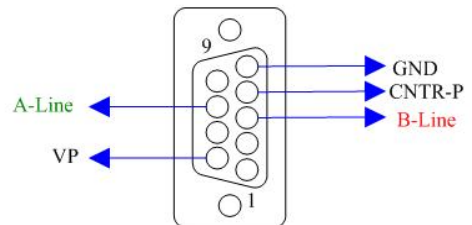


Maximum Cable Length

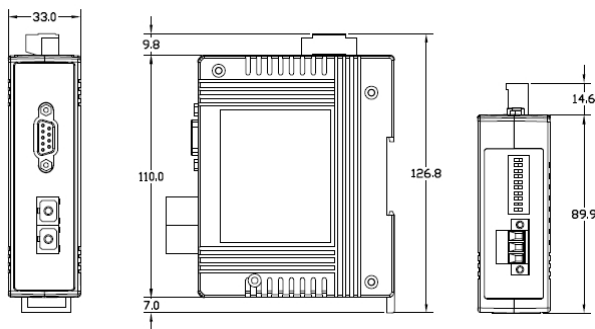
| Transmission Rate (bps) | Transmission Distance per Segment (meter) |
|-------------------------|---|
| 9.6K ~ 93.75K | 1200 |
| 187.5K | 1000 |
| 500K | 400 |
| 1.5M | 200 |
| 3M; 6M; 12M | 100 |

Pin Assignments

Female D-Sub Connector



Dimensions (Units: mm)



Front View

Left Side View

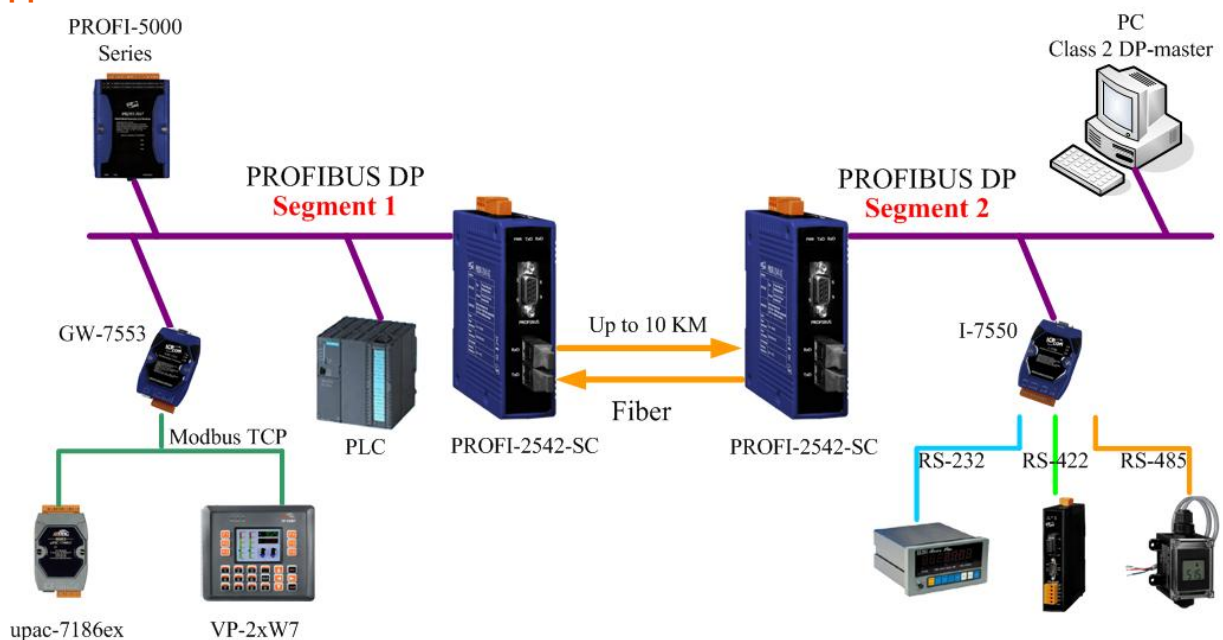
Top View

| Pin No. | Signal | Meaning |
|---------|--------|-------------------------------------|
| 3 | B-Line | Receive/Transmit data - plus |
| 4 | CNTR-P | Repeater control signal, RTS signal |
| 5 | GND | Power ground of active terminator |
| 6 | VP | Power 5 volt of active terminator |
| 8 | A-Line | Receive/Transmit data - minus |

Hardware Specifications

| | |
|---------------------------|---|
| Hardware | |
| ESD Protection | 4 kV class A |
| PROFIBUS Interface | |
| Transceiver | ADI ADM2486 |
| Connector | 9-pin female D-Sub |
| Baud Rate (bps) | 9.6 k, 19.2 k, 45.45 k, 93.75 k, 187.5 k, 500 k, 1.5 M, 3 M, 6 M, 12 M |
| Transmission Distance (m) | Depend on baud rate (for example, max. 1200 m at 9.6 kbps) |
| Isolation | 3000 V _{DC} for DC-to-DC, 2500 V _{rms} for bus-to-logic |
| Fiber Interface | |
| Connector | ST / SC type ; Single mode ; 100 Base-FX |
| Wave Length | 1310 nm |
| Fiber Cable | 9/125um recommended |
| Transmission Distance | 10 KM(indicative only) |
| LED | |
| Round LED | PWR LED, TxD LED, RxD LED |
| Power | |
| Power supply | Unregulated +10 ~ +30 V _{DC} |
| Protection | Power reverse polarity protection, Over-voltage brown-out protection |
| Power Consumption | 1 W |
| Mechanism | |
| Installation | DIN-Rail |
| Dimensions | 33mm x 126.8mm x 104.5mm (W x L x H) |
| Environment | |
| Operating Temp. | -25 ~ 75 °C |
| Storage Temp. | -30 ~ 85°C |
| Humidity | 5 ~ 95% RH, non-condensing |

Application



Ordering Information

| | |
|-------------------------|---|
| PROFI-2542 CR | PROFIBUS to Single mode Fiber Converter (ST type) |
| PROFI-2542-SC CR | PROFIBUS to Single mode Fiber Converter (SC type) |