

STF-401C Series

Compact 1-Port RS-232/422/485 Serial to 100Fx Fiber Converter



Features

- ▶ Fan-less and Din-Rail design for Harsh Industrial Environment
- ▶ Built in 1Port RS232(DB9) or RS422/485(Terminal Block) Serial Port
- ▶ Supports SC or ST Multi-mode 2Km, Single-mode 30Km
- ▶ Dip Switch to Change RS-485 Data Signals Pull High/Low Resistor
- ▶ Supports Input Voltage 9 ~ 48VDC
- ▶ Supports Reverse Polarity Protection
- ▶ Wide Range Operating Temperature Supports: -40 to 70°C
- ▶ Applicable with Point-to-Point, Half Duplex Single Ring Topology Serial Fiber Daisy Chain Network application
- ▶ 5-Year Warranty



Overview

The STF-401C series Compact Industrial Serial-to-Fiber Media Converter Series provides a solution to extend any RS-232 or RS-422/485 serial device data transmission distance with 100Fx Fiber (SC or ST connector) options via Multi-Mode in 2Km or Single-Mode in 30Km. It features a Din-Rail Type design to give users an easy installation and maintenance purpose in any harsh industrial environments.

A perfect solution for any single "Point-to-Point" applications with

- ▶ Industrial manufacturing in Factory Automation;
- ▶ Remote sensing and signaling/metering in ITS;
- ▶ EMI resistant for IEDs data transmission in Substation Automation;
- ▶ Industrial Control in Process Control Automation, such as WWTP and Oil/Gas/Mining

Specifications

STF-401C Series Specifications

Optical Fiber Interface

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|------------------------|--|
| Fiber Connector: | SC or ST |
| Cable Requirement: | Multi-Mode: 50/125um, 62.5/125um Single-Mode: 9/125um |
| Fiber Port: | 1 Fiber Port |
| Transmission Distance: | Multi-Mode: 2km Single-Mode: SC 30km |
| Wavelength: | 1310nm |
| Tx Power: | Multi-Mode: -14 ~ -23.5 dBm @ 50/125um / -14~-20 dBm @ 62.5/125um Single-Mode: -8 ~ -15 dBm |
| Rx Sensitivity: | Multi-Mode: -31 dBm Single-Mode: - 32 dBm |

Serial Interface

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|------------------------|--|
| Serial Port Connector: | RS-232 - TxD, RxD, GND (DCD, DTR, DSR internal short ; CTS, RTS internal short) RS-422-4w - TxD+, TxD-, RxD+, RxD-, GND RS-485-2w - Data+, Data-,GND |
| Baud Rate: | 300bps ~ 921kbps |
| Serial Isolation: | N/A |
| ESD Protection: | 15KV |
| Pull High/Low: | Dip Switch adjustment |

Power Requirements

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|--------------------|--------------------------------------|
| Power Input: | 9 ~ 48VDC |
| Power Consumption: | 2.52W - @0.28A max, 9 VDC |
| Power Connector: | Removable 3-pin Screw Terminal Block |
| Power Protection: | Reverse Polarity Protection |

Mechanical Characteristics

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|-------------|--|
| Housing: | Metal, IP50 Protection |
| Dimensions: | 34.4 x 91.2 x 120mm (1.35 x 3.59 x 4.72 in) |
| Weight: | 700g |
| Mounting: | DIN-Rail Mounting, Wall Mounting Kits (Optional) |

Environmental

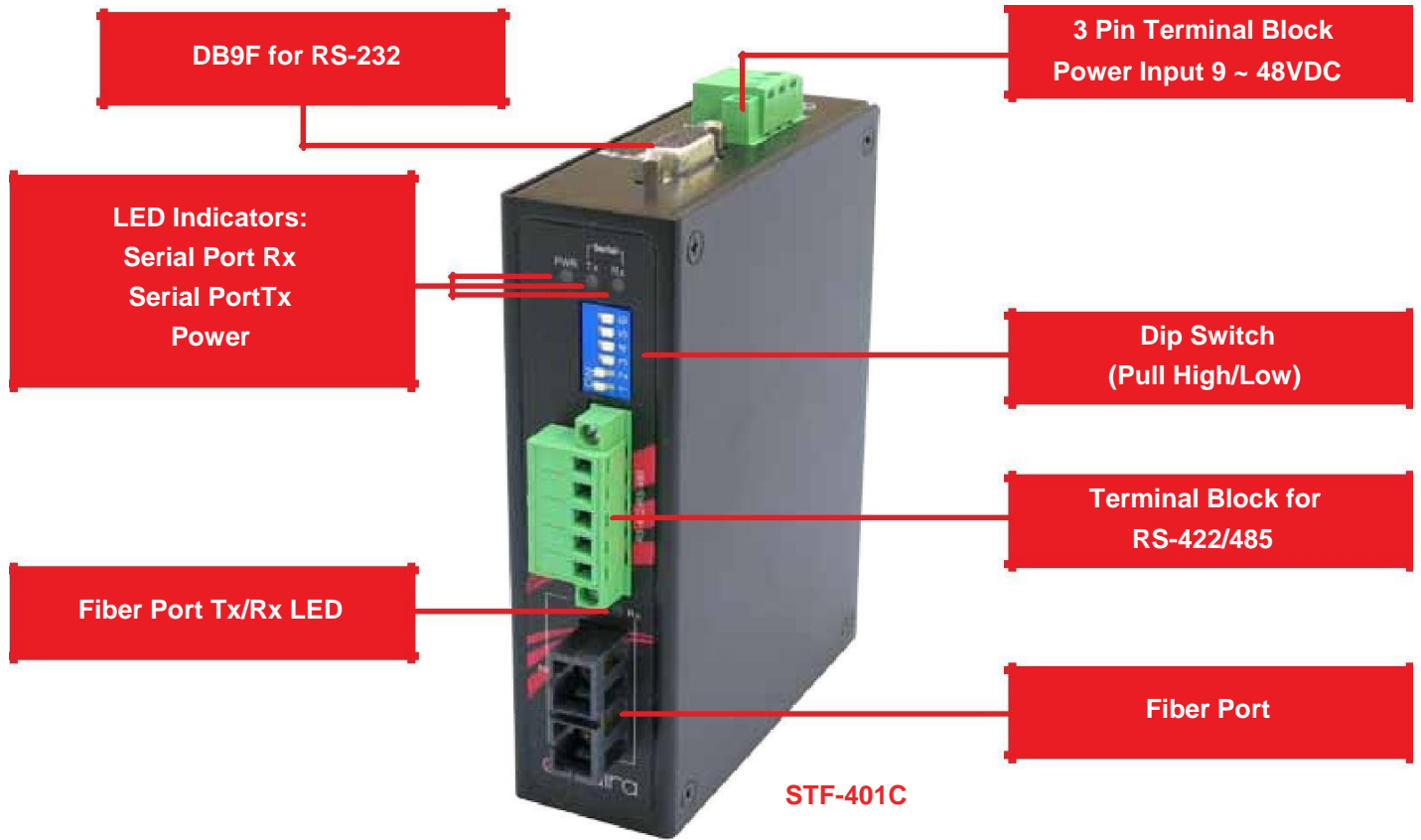
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|----------------------|---------------------------------|
| Operating Temp: | -40°C ~ 70°C (-40°F ~ 158°F) |
| Storage Temperature: | -40°C ~ 85°C (-40°F ~ 185°F) |
| Humidity: | 5 to 95%, 55°C (Non-Condensing) |

Regulatory Approvals

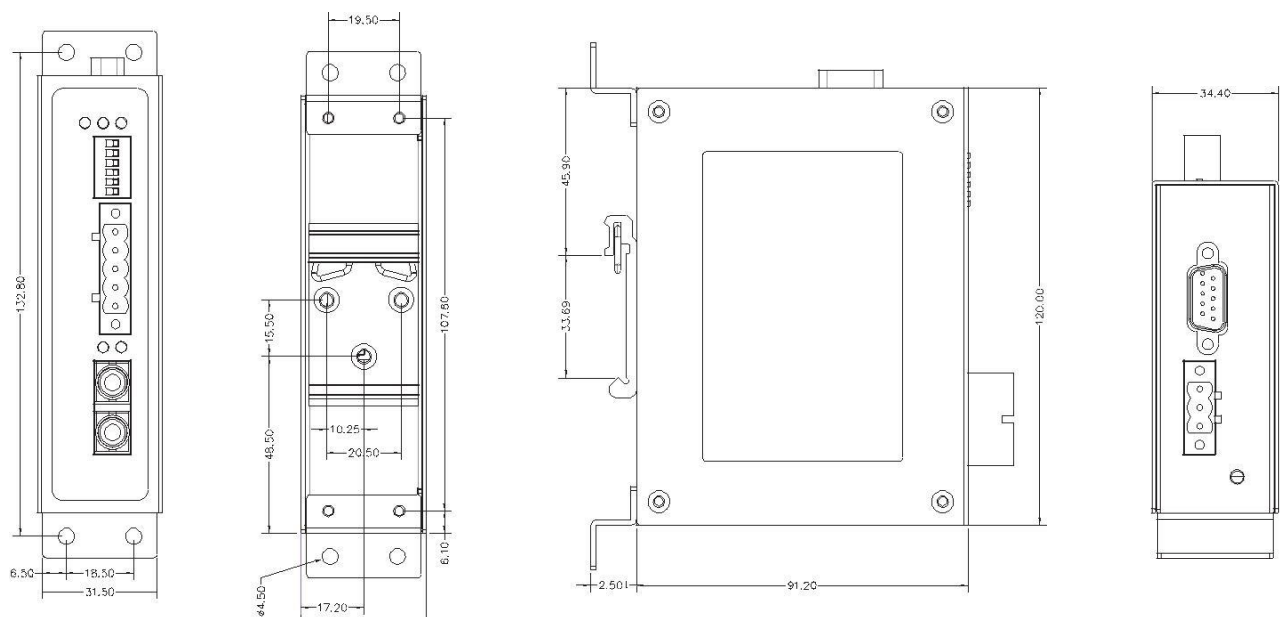
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|-------------------------------|---|
| EMI: | FCC Part15, CISPR (EN55022) Class A |
| EMS: | EN61000-4-2 (ESD) Level 4, Criteria B EN61000-4-3 (RS) Level 3, Criteria A EN61000-4-4 (EFT) Level 3, Criteria A EN61000-4-5 (Surge) Level 3, Criteria B EN61000-4-6 (CS) Level 3, Criteria A |
| Shock / Freefall / Vibration: | Shock: MIL-STD-810F Method 516.5 Free Fall: MIL-STD-810F Method 516.5 Vibration: MIL-STD-810F Method 514.5 C-1 & C-2 |
| Green: | RoHS Compliant |
| MTBF: | 216,388 Hours |
| Certifications: | FCC, CE |
| Warranty: | 5-Year Warranty |

Layout

Product Highlights



Dimension Drawing (unit = mm)



Ordering Information

Single Fiber Version




| | |
|-----------------|---|
| STF-401C-CM02-T | Compact Industrial RS-232/422/485 Serial to 100Fx Fiber Converter, Multi-Mode 2KM, SC, -40°C ~ 70°C |
| STF-401C-CS30-T | Compact Industrial RS-232/422/485 Serial to 100Fx Fiber Converter, Single-Mode 30KM, SC, -40°C ~ 70°C |
| STF-401C-TM02-T | Compact Industrial RS-232/422/485 Serial to 100Fx Fiber Converter, Multi-Mode 2KM, ST, -40°C ~ 70°C |
| STF-401C-TS30-T | Compact Industrial RS-232/422/485 Serial to 100Fx Fiber Converter, Single-Mode 30KM, ST, -40°C ~ 70°C |

Optional Accessories

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|----------|--------------------------------------|
| DR-45-24 | 45W Industrial Din Rail Power Supply |
| DR-75-24 | 75W Industrial Din Rail Power Supply |

Comparison

Industrial Serial-to-Fiber Product Family Comparison

| | STF-401C Series Compact 1 Fiber Port | STF-501C series High Performance 1 Fiber Port | STF-502C series High Performance Dual Fiber Ports |
|--|---|--|--|
| Compare Features |  |  |  |
| Supports 1*RS232 (DB9), or 1*RS422/485 (Terminal Block) | ● | ● | ● |
| Supports Multi-mode in 2Km, Single-mode in 30Km | ● | ● | ● |
| Baud Rate up to 1024Kbps | | ● | ● |
| Serial Isolation | | ● | ● |
| ESD Protection | ● | ● | ● |
| RS422/485 Pull High / Low | ● | ● | ● |
| Support Point-to-Point Application | ● | ● | ● |
| Support Half-Duplex Daisy Chain / Ring Topology Serial-Fiber Network | ● | ● | ● |
| Support Full-Duplex Redundant Ring Serial-Fiber Network | | | ● |
| 5 Years Product Warranty | ● | ● | ● |