



## Industrial Serial to Fiber Media Converters

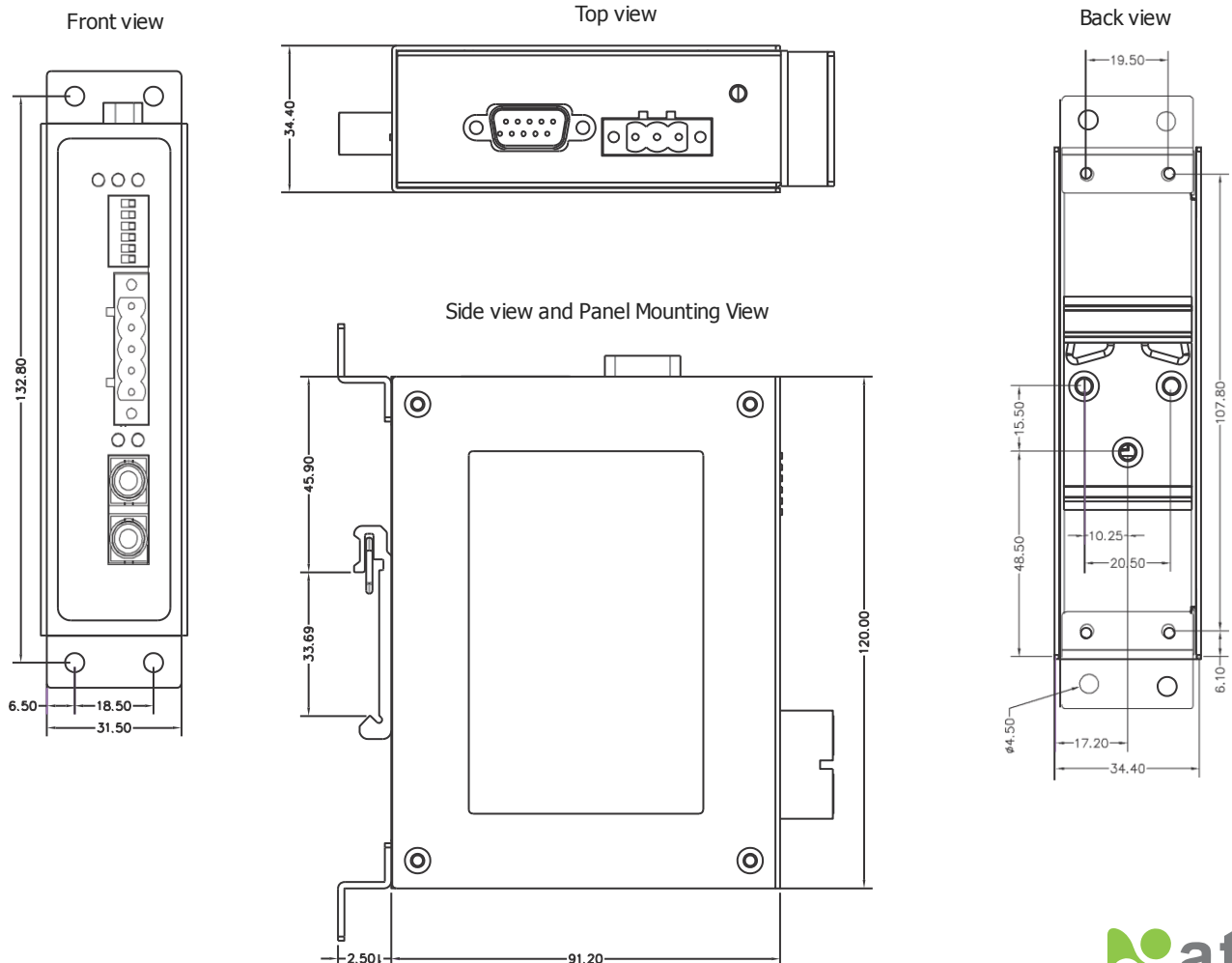
■ ■ SF63 Series

### RoHS compliant

- Supports Multi-mode 2km, Single-mode 15km / 30km
- PTP and Ring mode for serial fiber ring communication
- Supports RS-485 120 ohm line terminator
- Supports RS-485 Data signals pull high/low resistor
- Supports input voltage 9 - 48VDC
- -40 ~ 70°C Wide range of operating temperature for hazardous environment applications

The SF63 Industrial Serial to Fiber Media Converter Series provide industrial conversion between 100BaseFX (SC or ST connector), RS-232, and RS-422/485; connection options include multi-mode SC/ST connector (2km), and single-mode SC/ST connector (15km/30km). The SF63 Serial to Fiber Media Converter is designed for harsh industrial environments, and complies with FCC/CE standards.

### Mechanical



Specifications	
<b>Optical Fiber</b>	
Fiber Connector Cable	SC/ST
Requirements	Multi-mode: 50/125um, 62.5/125um / Single-mode: 9/125um
Transmission Distance	Multi-mode: 2km / Single-mode: SC 15km; ST 30km
Wavelength	SF63-TB-DB-1Fm-SC (multi-mode): 1310nm SF63-TB-DB-1Fs-SC (single-mode): 1310nm SF63-TB-DB-1Fm-ST (multi-mode): 1310nm SF63-TB-DB-1Fs-ST (single-mode): 1310nm
Tx Power	SF63-TB-DB-1Fm-SC (multi-mode): -14~-23.5 dBm @ 50/125µm / -14~-20 dBm @ 62.5/125µm SF63-TB-DB-1Fs-SC (single-mode): -20 ~ -0 dBm SF63-TB-DB-1Fm-ST (multi-mode): -14~-23.5 dBm @ 50/125µm / -14~-20 dBm @ 62.5/125µm SF63-TB-DB-1Fs-ST (single-mode): -8~-15 dBm
Rx Sensitivity	SF63-TB-DB-1Fm-SC (multi-mode): <-31 dBm SF63-TB-DB-1Fs-SC (single-mode): <-32 dBm SF63-TB-DB-1Fm-ST (multi-mode): <-32 dBm SF63-TB-DB-1Fs-ST (single-mode): <-34dBm
<b>RS-232/422/485</b>	
RS-232 Signals	TxD, RxD, GND (DCD, DTR, DSR internal short ; CTS, RTS internal short )
RS-422 Signals	TxD+, TxD-, RxD+, RxD-, GND
RS-485-4w Signals	TxD+, TxD-, RxD+, RxD-, GND
RS-485-2w Signals	Data+, Data-, GND
Baud rate	300bps ~ 921kbps
<b>Power Requirements</b>	
Input Voltage	9-48 VDC
Input Current	0.28A max, 9VDC
Connection	Remov able 3-pin Screw Terminal Block
Reverse Polarity Protection	Present
<b>Physical Characteristics</b>	
Housing	Metal, IP50 protection
Dimension	34.4 x 91.2 x 120mm (1.35 x 3.59 x 4.72 in)
Weight	700g
Installation	DIN-Rail mounting, wall mounting (optional)
<b>Environmental limits</b>	
Operating Temperature	-40°C ~ 70°C (-40°F ~ 158°F)
Storage Temperature	-40°C ~ 85°C (-40°F ~ 185°F)
Ambient Relative Humidity	5 to 95%, 55°C (non-condensing)
<b>Regulatory Approvals</b>	
EMI	FCC Part15, CISPR (EN55022) Class A
EMS	EN61000-4-2 (ESD) Lev el 4, Criteria B
	EN61000-4-3 (RS) Lev el 3, Criteria A
	EN61000-4-4 (EFT) Lev el 3, Criteria A
	EN61000-4-5 (Surge) Level 3, Criteria B
	EN61000-4-6 (CS) Level 3, Criteria A
Safty	LVD (EN60950-1)
Shock	MIL-STD-810F Method 516.5
Drop	MIL-STD-810F Method 516.5
Vibration	MIL-STD-810F Method 514.5 C-1 & C-2
RoHS compliant	
IP50 warranty	
MTBF	TBD
Warranty Period	5 Years

### Ordering Information Available Models

SF63-TB-DB-1Fm-SC	Industrial RS-232/422/485 to Multi-mode fiber converter, SC connector
SF63-TB-DB-1Fs-SC	Industrial RS-232/422/485 to Single-mode fiber converter, SC connector
SF63-TB-DB-1Fm-ST	Industrial RS-232/422/485 to Multi-mode fiber converter, ST connector
SF63-TB-DB-1Fs-ST	Industrial RS-232/422/485 to Single-mode fiber converter, ST connector

### Optional Accessories

US315-12(US-TB3)	3-pin Terminal block (5.08 mm) power adaptor, 100-240VAC input, 1.25A @ 12 VDC output, US plug
USE315-12(EU-TB3)	3-pin Terminal block (5.08 mm) power adaptor, 100-240VAC input, 1.25A @ 12 VDC output, EU plug
AD1024-24F	24W/1A DIN-Rail 24 VDC power supply with universal 100-240 VAC/120-370 VDC input
AD1048-24FS	48W/2A DIN-Rail 24 VDC power supply with universal 100-240 VAC/120-370 VDC input
AD1072-24F	72W/3A DIN-Rail 24 VDC power supply with universal 100-240 VAC/120-370 VDC input
AD1100-24F	100W/4A DIN-Rail 24 VDC power supply with universal 100-240 VAC/120-370 VDC input
AD1120-24F	120W/5A DIN-Rail 24 VDC power supply with universal 100-240 VAC/120-370 VDC input
AD1120-48F	120W/2.5A DIN-Rail 48 VDC power supply with universal 100-240 VAC/120-370 VDC input
2ESDP-03P	3-pin 5.08mm Terminal Block with 180° Angle

### Regulatory Approvals and Environmental Type Tests

#### EMI Immunity Type Tests

Test	Description	Test Levels	Severity Levels
FCC part 15	Subpart B	—	Class A
EN55022	2006+A1:2007	—	Class A

#### EMS Tests

Test	Description	Test Levels	Severity Levels	
IEC61000-4-2	ESD	Contact discharge	±8KV,Criterion B	Level 4
		Air discharge	±15KV,Criterion B	Level 4
IEC61000-4-3	RS	Enclosure ports	10V/m(un-modulated, r.m.s) 80% AM 1KHz, Criterion A	Level 3
IEC61000-4-4	EFT	Power Port	±2KV,Criterion A	Level 3
		Single port	±2KV,Criterion A	Level 3
IEC61000-4-5	Surge	Power Port	±2KV,Criterion A	Level 3
		Single Port	±2KV,Criterion B	Level 3
IEC61000-4-6	CS	Power Port	10 V (0.15 - 80 MHz), Criterion A	Level 3
		Single Port	10 V (0.15 - 80 MHz), Criterion A	Level 3

#### Environmental Type Test

Test	Description	Test Levels	Severity Levels	
MIL-STD-810F	Shock	Impact acceleration& pulse duration	40g@11ms	—
MIL-STD-810F	Freefall	8 corners, 12 edges, 6 faces	122cm	—
MIL-STD-810F	Vibration	Packaged Random wave form	x:2.4 Grms y:1.28 Grms z:3.851.04Grms	—
		Operating Random wave form	x:0.740 Grms y:0.204 Grms z:1.04Grms	—



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DM\_SF63\_E: v1-1204 16