



## Industrial Serial to Fiber Media Converters

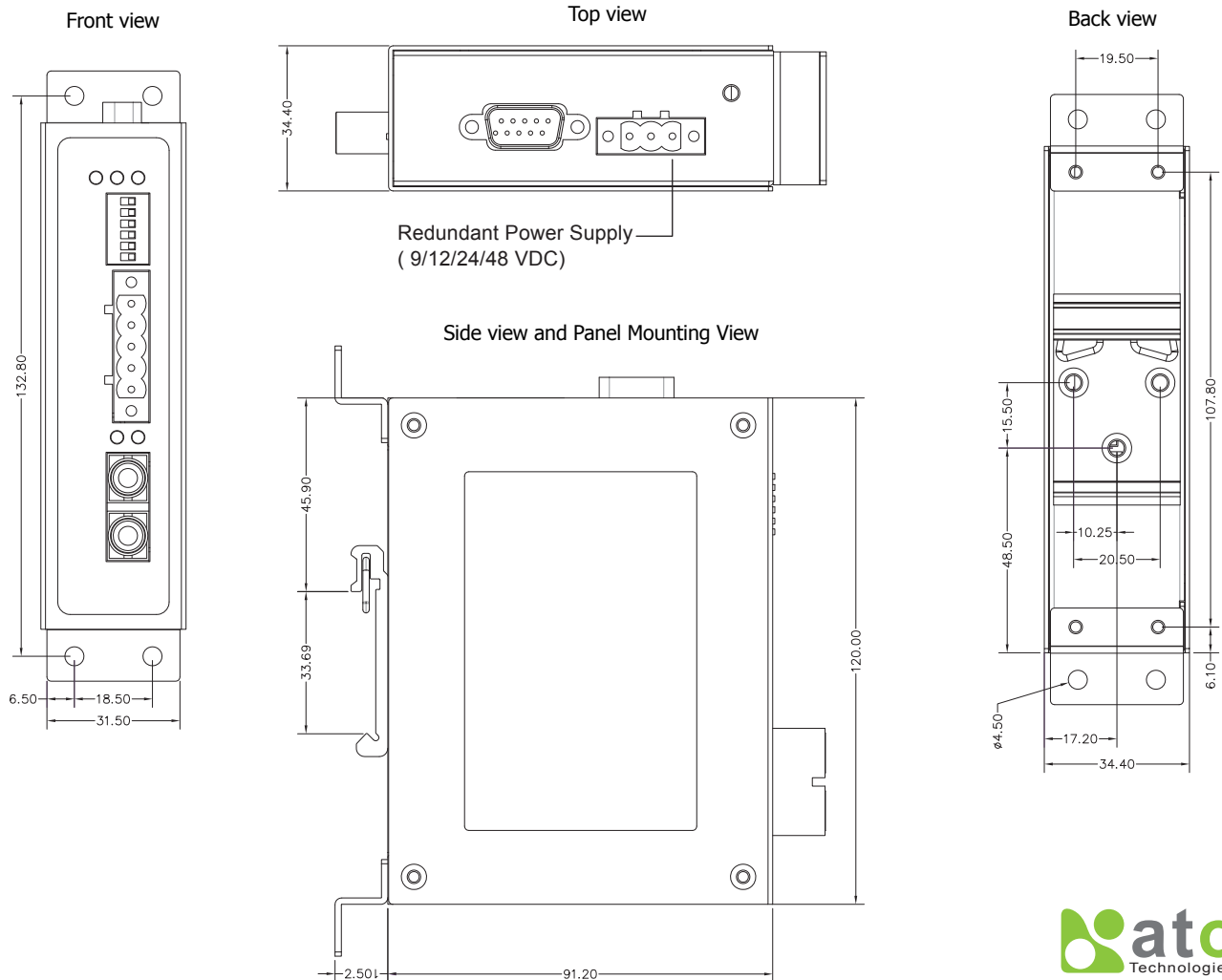
■ ■ SF63 Series

### RoHS compliant

- Supports Multi-mode 2KM, Single-mode 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 (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	SC/ST
Cable Requirements	Multi-mode: 50/125um, 62.5/125um / Single-mode: 9/125um
Transmission Distance	Multi-mode: 2km / Single-mode: 30km
Wavelength	SF63-TB-DB-1Fm-SC (multi-mode): 850nm 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): -4~-9.5 dBm SF63-TB-DB-1Fs-SC (single-mode):+3~-4 dBm SF63-TB-DB-1Fm-ST (multi-mode): -14~-20 dBm SF63-TB-DB-1Fs-ST (single-mode):-8~-15 dBm
Rx Sensitivity	SF63-TB-DB-1Fm-SC (multi-mode): <-24 SF63-TB-DB-1Fs-SC (single-mode): <-34 SF63-TB-DB-1Fm-ST (multi-mode): <-32 SF63-TB-DB-1Fs-ST (single-mode): <-34
<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 to 921.6Kbps(RS-422/485)
Baud rate	300bps to 115.2Kbps(RS-232)
<b>Power Requirements</b>	
Input Voltage	9~48 VDC
Input Current	0.28A max, 9 VDC
Connection	Removable 3-pin Screw Terminal Block
Reverse Polarity Protection	Present
<b>Physical Characteristics</b>	
Housing	Metal, IP30 protection
Dimension	34.4 x 91.2 x 120mm (1.35 x 3.59 x 4.72)
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 (EN55032) Class A
EMS	IEC61000-4-2 (ESD) Level 3, Criteria B
	IEC61000-4-3 (RS) Level 3, Criteria A
	IEC61000-4-4 (EFT) Level 3, Criteria A
	IEC61000-4-5 (Surge) Level 3, Criteria B
	IEC61000-4-6 (CS) Level 3, Criteria A
	IEC61000-4-8 (PFMF) Level 3, Criteria A
	IEC61000-4-11 (DIP)
Safety	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	Yes
IP50 warranty	
MTBF	75 Years
Warranty Period	5 Years

**Ordering Information [ Available Models ]**

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

**Optional Accessories**

<b>UN315-1212 (US-Y)</b>	Y-Type power adapter, 100~240VAC input, 1.25A @ 12VDC output, US plug, LV6
<b>UNE315-1212 (EU-Y)</b>	Y-Type power adapter, 100~240VAC input, 1.25A @ 12VDC output, EU plug, LV6
<b>AD1024-24F</b>	24W/1A DIN-Rail 24 VDC power supply with universal 100~240 VAC/120~370 VDC input
<b>AD1048-24FS</b>	48W/2A DIN-Rail 24 VDC power supply with universal 100~240 VAC/120~370 VDC input
<b>AD1072-24F</b>	72W/3A DIN-Rail 24 VDC power supply with universal 100~240 VAC/120~370 VDC input
<b>AD1100-24F</b>	100W/4A DIN-Rail 24 VDC power supply with universal 100~240 VAC/120~370 VDC input
<b>AD1120-24F</b>	120W/5A DIN-Rail 24 VDC power supply with universal 100~240 VAC/120~370 VDC input
<b>AD1120-48F</b>	120W/2.5A DIN-Rail 48 VDC power supply with universal 100~240 VAC/120~370 VDC input
<b>2ESDP-03P</b>	3-pin 5.08mm Terminal Block with 180° Angle
<b>LM38-A3S-TI-N</b>	SFP Transceiver, 155Mbps, 1310nmLED, Multi-mode, 2km, 3.3V, -40~85C
<b>LM38-A3S-TI-N</b>	SFP Transceiver, 155Mbps, 1310nmFP, Single-mode, 30km, 3.3V,-40~85C

**Regulatory Approvals and Environmental Type Tests****EMI Immunity Type Tests**

Test	Description		Test Levels	Severity Levels
<b>FCC part 15</b>	—	Subpart B	—	Class A
<b>EN55032</b>	—	2012/AC:2013	—	Class A

**EMS Tests**

Test	Description		Test Levels	Severity Levels
<b>IEC61000-4-2</b>	ESD	Contact discharge	6KV,Criterion B	Level 3
		Air discharge	8KV,Criterion B	Level 3
<b>IEC61000-4-3</b>	RS	Enclosure ports	10V/m(un-modulated, r.m.s) 80% AM 1KHz, Criterion A	Level 3
<b>IEC61000-4-4</b>	EFT	Power Port	±2KV,Criterion A	Level 3
		Single port	±1KV,Criterion A	Level 3
<b>IEC61000-4-5</b>	Surge	Power Port	±2KV,Criterion A	Level 3
		Single Port	±2KV,Criterion B	Level 3
<b>IEC61000-4-6</b>	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
<b>IEC 61000-4-8</b>	PFMF	Enclosure	10 V/m, Criteria A	Level 3
<b>IEC61000-4-11</b>	DIP	AC Power Port		

**Environmental Type Test**

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

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DM\_SF63\_E : V4-170706