



Industrial Serial to Fiber Media Converters

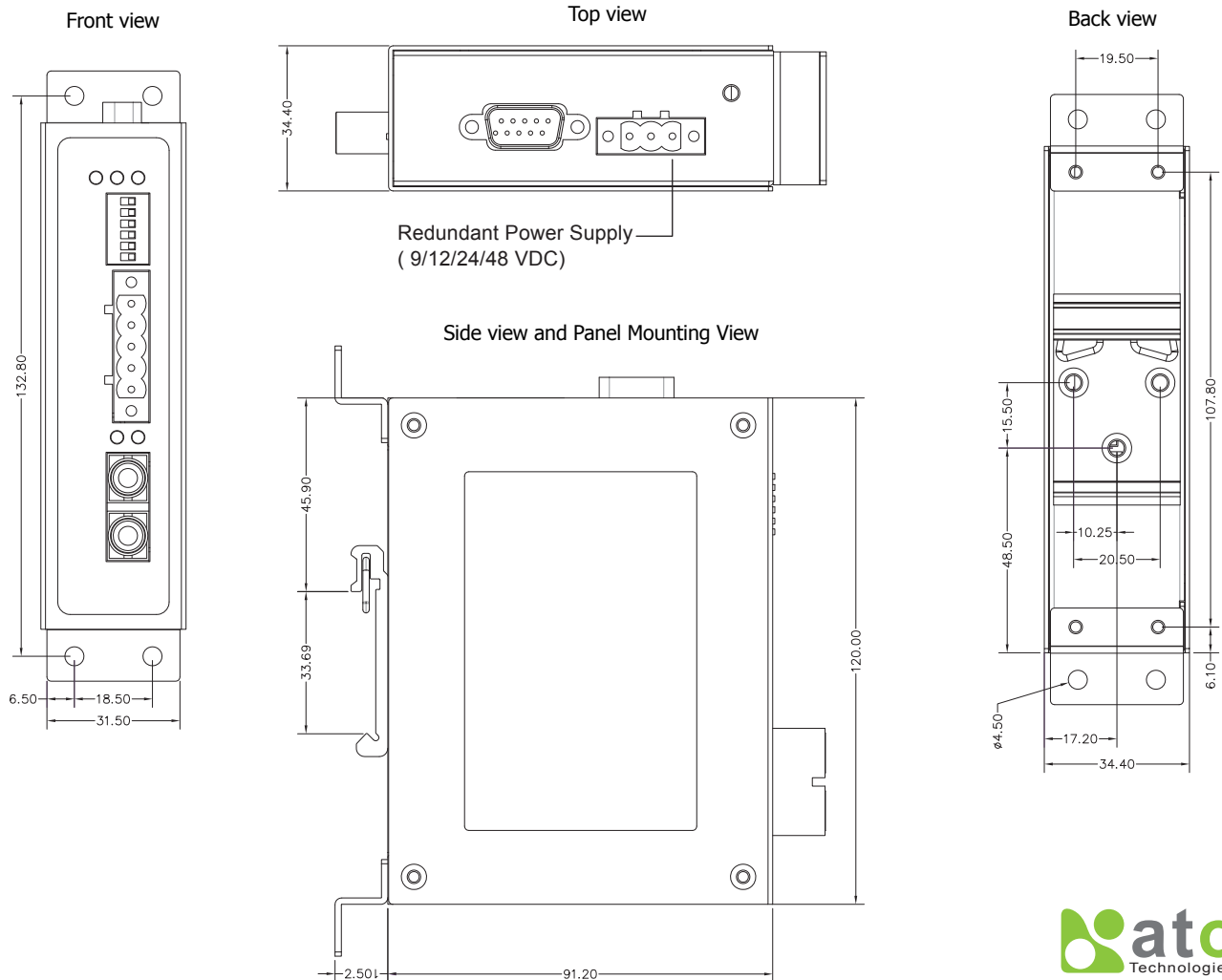
■ ■ SF63 Series

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	
Optical Fiber	
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
RS-232/422/485	
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)
Power Requirements	
Input Voltage	9~48 VDC
Input Current	0.28A max, 9 VDC
Connection	Removable 3-pin Screw Terminal Block
Reverse Polarity Protection	Present
Physical Characteristics	
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)
Environmental limits	
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)
Regulatory Approvals	
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]

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
LM38-A3S-TI-N	SFP Transceiver, 155Mbps, 1310nmLED, Multi-mode, 2km, 3.3V, -40~85C
LM38-A3S-TI-N	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
FCC part 15	—	Subpart B	—	Class A
EN55032	—	2012/AC:2013	—	Class A

EMS Tests

Test	Description		Test Levels	Severity Levels
IEC61000-4-2	ESD	Contact discharge	6KV,Criterion B	Level 3
		Air discharge	8KV,Criterion B	Level 3
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	±1KV,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
IEC 61000-4-8	PFMF	Enclosure	10 V/m, Criteria A	Level 3
IEC61000-4-11	DIP	AC Power Port		

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 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	—

Atop Technologies, Inc.

TEL : +886-3-5508137

FAX : +886-3-5508131

sales@atop.com.tw

http : //www.atop.com.tw



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DM_SF63_E : V3-160617