

SF63 Series

Industrial Serial to Fiber Media Converters



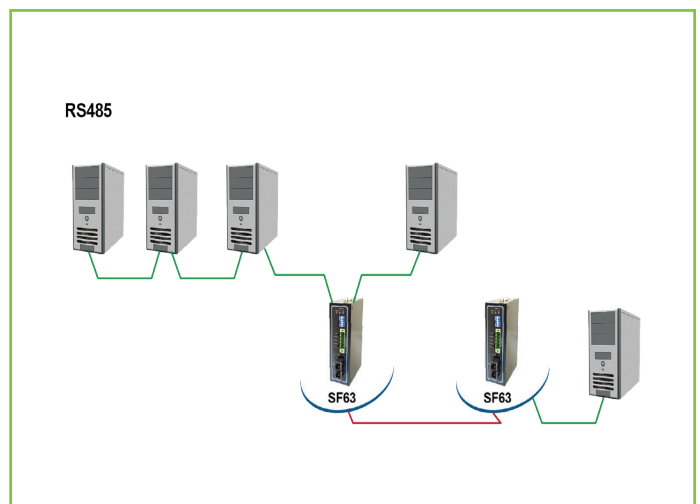
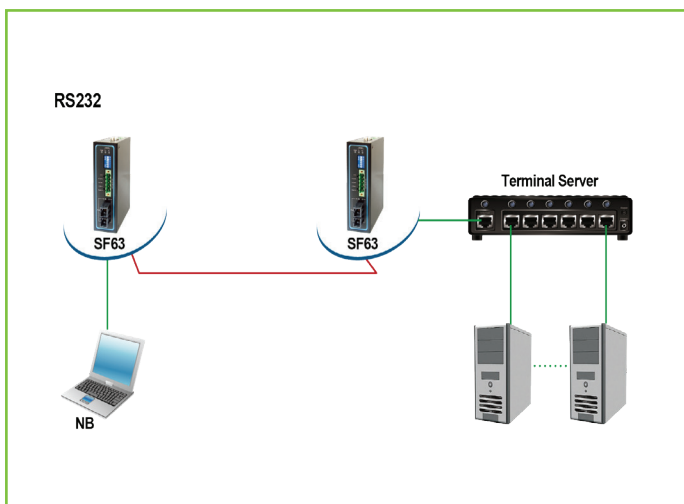
FEATURE HIGHLIGHTS

- 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

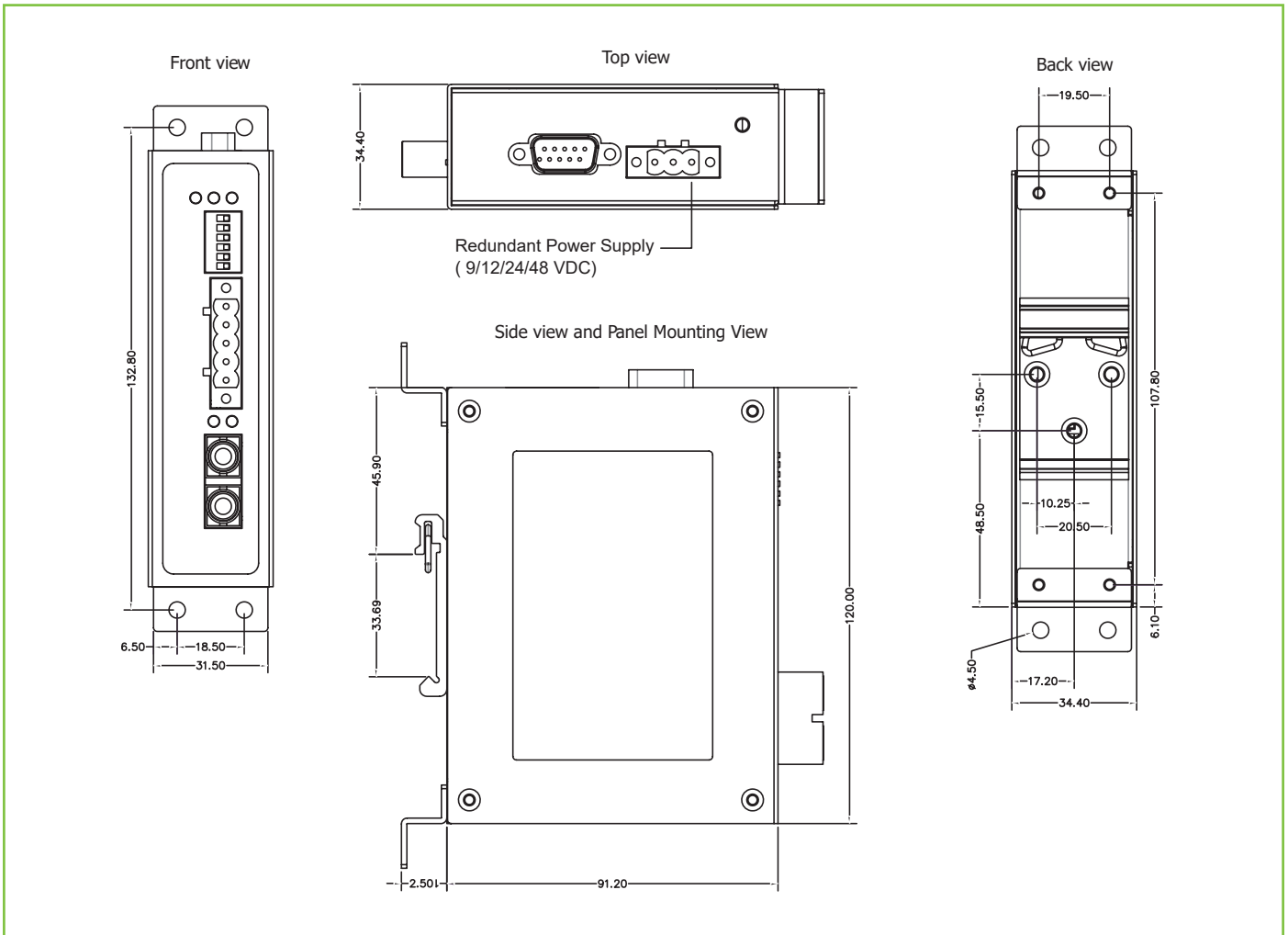
PRODUCT DESCRIPTION

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.

Application



DIMENSIONS & LAYOUT



SPECIFICATIONS

Technical Specifications	
Model Name	SF63
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-2 (multi-mode): 850nm SF63-TB-DB-1Fs-SC-30 (single-mode):1310nm SF63-TB-DB-1Fm-ST-2 (multi-mode): 1310nm SF63-TB-DB-1Fs-ST-30 (single-mode):1310nm
Tx Power	SF63-TB-DB-1Fm-SC-2 (multi-mode): -4~-9.5 dBm SF63-TB-DB-1Fs-SC-30 (single-mode):+3~-4 dBm SF63-TB-DB-1Fm-ST-2 (multi-mode): -14~-20 dBm SF63-TB-DB-1Fs-ST-30 (single-mode):-8~-15 dBm
Rx Sensitivity	SF63-TB-DB-1Fm-SC-2 (multi-mode): <-24 SF63-TB-DB-1Fs-SC-30 (single-mode): <-34 SF63-TB-DB-1Fm-ST-2 (multi-mode): <-32 SF63-TB-DB-1Fs-ST-30 (single-mode): <-34
Interface	
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	
EMC	FCC Part15, CISPR(EN55032) Class A, EN55032, EN55024, EN61000-3-2, EN61000-3-3, FCC Part15B (Class A)
Safety	EN60950-1, EN62368-1
Shock	IEC 60068-2-27
Drop	IEC 60068-2-32
Vibration	IEC 60068-2-6
RoHS	Yes
MTBF	22 years (MIL-HDBK-217F)
Warranty	5 years

Regulatory Approvals and Environmental Type Tests

EMI Immunity Type Tests				
Test		Description	Test Levels	Levels
FCC part 15	-	Subpart B	-	A
EN55032	-	2012/AC:2013	-	A
EMS Tests				
Test		Description	Test Levels	Levels
IEC61000-4-2	ESD	Contact discharge	±8KV	4
		Air discharge	±15KV	4
IEC61000-4-3	RS	Enclosure ports	10V/m(un-modulated, r.m.s) 80% AM 1KHz, Criterion A	3
IEC61000-4-4	EFT	Power Port	±2.0KV	3
		Signal Port	±2.0KV	4
IEC61000-4-5	Surge	Power Port	±2.0KV (Line to Line)	4
		Power Port	±2.0KV (Line to Ground)	3
		Signal Port	±2.0KV	3
IEC61000-4-6	CS	Power Port	10 V (0.15 - 80 MHz), Criterion A	3
		Signal Port	10 V (0.15 - 80 MHz), Criterion A	3
IEC 61000-4-8	PFMF	Enclosure	10 V/m, Criteria A	3
IEC61000-4-11	DIP	AC Power Port	-	-
Environmental Type Test				
Test		Description	Test Levels	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	-

Ordering Information Available Models

Ordering Information

Model name	Part Number	Description
SF63-TB-DB-1Fm-SC-2	1P1SF63FMSC001G	Industrial RS-232/422/485 to Multi-mode fiber converter, SC connector, 2 km
SF63-TB-DB-1Fs-SC-30	1P1SF63FSSC001G	Industrial RS-232/422/485 to Single-mode fiber converter, SC connector, 30 km
SF63-TB-DB-1Fm-ST-2	1P1SF63FMST001G	Industrial RS-232/422/485 to Multi-mode fiber converter, ST connector, 2 km
SF63-TB-DB-1Fs-ST-30	1P1SF63FSST001G	Industrial RS-232/422/485 to Single-mode fiber converter, ST connector, 30 km

Optional Accessories

Model name	Part Number	Description
UN315-1212 (US-Y)	70100000000054G	Y-Type power adapter, 100~240VAC input, 1.25A @ 12VDC output, US plug, LV6
UNE315-1212 (EU-Y)	70100000000058G	Y-Type power adapter, 100~240VAC input, 1.25A @ 12VDC output, EU plug, LV6
AD1024-24F	50500241240001G	24W/1A DIN-Rail 24 VDC power supply with universal 100~240 VAC/120~370 VDC input
AD1048-24FS	50500481240001G	48W/2A DIN-Rail 24 VDC power supply with universal 100~240 VAC/120~370 VDC input
AD1072-24F	50500721240001G	72W/3A DIN-Rail 24 VDC power supply with universal 100~240 VAC/120~370 VDC input
AD1100-24F	50501001240001G	100W/4A DIN-Rail 24 VDC power supply with universal 100~240 VAC/120~370 VDC input
AD1120-24F	50501201240001G	120W/5A DIN-Rail 24 VDC power supply with universal 100~240 VAC/120~370 VDC input
AD1120-48F	50501201480001G	120W/2.5A DIN-Rail 48 VDC power supply with universal 100~240 VAC/120~370 VDC input
2ESDP-03P	50703001G	3-pin 5.08mm Terminal Block with 180° Angle

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