



SRC-3002SFP-BT

1 x 100/1000Base-X SFP to
1 x 10/100/1000Base-T RJ-45
with IEEE 802.3af/at/bt PoE injector
Rugged Media Converter

Description

Connection Technology System (CTS) SRC-3002SFP-BT functions as a robust media converter designed to operate in temperatures ranging from -20 to 60°C. It facilitates the conversion from 100/1000Base-X SFP to a 10/100/1000Base-T RJ-45 port, fully compliant with the IEEE 802.3, 802.3u, 802.3ab, and 802.3z standards.

The SRC-3002SFP-BT is compatible with the IEEE 802.3af/at/bt standard, allowing it to deliver a maximum of 90 watts of Power over Ethernet (PoE) output to powered devices (PDs) through a Cat5/5E cable in the RJ-45 port. This capability significantly simplifies wiring configurations.

While functioning as an unmanaged media converter, the SRC-3002SFP-BT offers user-friendly configuration and monitoring through a DIP switch and LED indicator on its panel. The DIP switch allows control over various functions, such as Alarm, PSE Auto Power Off, Data-diode, and more.

With these features, SRC-3002SFP-BT not only become a user-friendly product, but also a comprehensive solution.

Key Features

■ Ideal for environments characterized by substantial temperature fluctuations

Unlike other media converters, the SRC-3002SFP-BT boasts an extended temperature range, enabling operation from -20 to 60°C. This broad operational range allows it to thrive in environments characterized by fluctuating temperatures.

■ Instantly grasp when link issue occur

To address the constraint wherein unmanaged devices lack the capability to transmit messages to the central server, CTS has introduced the Link Alarm function. This feature promptly notifies network managers of issues as they arise.

■ Reduce operational cost effectively

In instances of unidentified problems, particularly with remote devices situated at significant distances (e.g., 120 kilometers), the PSE Auto Power Off function becomes invaluable. It automatically deactivates PoE output in the event of a fiber link disruption, subsequently rebooting the PD if necessary. This functionality proves cost-effective by eliminating the need to dispatch personnel for manual reboots and issue resolution.

■ Assurance for Cyber Security: Data Diode

A data diode integrated into this model guarantees unidirectional data flow, allowing data packets to travel in only one direction. This prevents any possibility of data leakage or unauthorized access by blocking reverse communication channels, thus securing sensitive information and critical systems. Additionally, users can customize the direction of data transfer to meet their specific needs.

■ Higher PoE output with Cat5/5e cable

SRC-3002SFP-BT goes beyond the 30-watt limit of IEEE 802.3at by supporting IEEE 802.3bt with Cat5/5E cable. This capability allows it to deliver a robust 90-watt Power over Ethernet (PoE) output, making it suitable for high-consumption powered devices like speed dome IP cameras.

■ Lighter weight and better cooling capability

CTS opted for aluminum as a component of the case in the SRC-3002SFP-BT series, enhancing heat dissipation capabilities and reducing overall weight compared to an all-iron construction.

■ Targeted Applications

- FTTX Metro Ethernet Implementations.

Specification

■ Interface

RJ-45 Port

- 1 x 10/100/1000Base-T RJ-45 with IEEE 802.3af/at/bt injector, up to 90W PoE output

Fiber Port

- 1 x 100/1000Base-X SFP

Standards

- IEEE 802.3 10Base-T
- IEEE 802.3u 100Base-TX
- IEEE 802.3u 100Base-FX
- IEEE 802.3ab 1000Base-T
- IEEE 802.3z 1000Base-X
- IEEE 802.3af Power over Ethernet
- IEEE 802.3at Power over Ethernet +
- IEEE 802.3bt Power over Ethernet ++

■ H/W Specification

- MAC Address Table: 2K
- Non-blocking Switching Fabric: 4Gbps
- Throughput @ 64Bytes: 2.9Mpps
- Jumbo Frame: 9K Bytes
- Packet Buffer: 1Mbit
- Store and Forward Switching Mechanism
- Auto-Cross over for MDI/MDI-X in TP port
- Auto-Negotiation in TP Port
- Full/Half Duplex Mode Operation

■ Power over Ethernet

Power Pin Assignment

- IEEE 802.3af/at (mode A/end-span)
1/2(-), 3/6(+)
max. PoE output budget: 15/30W
- IEEE 802.3bt (4-pair mode, 4-pair mandatory)
1/2(-), 3/6(+)& 4/5(+), 7/8(-)
max. PoE output budget: 90W

■ Forward/Filter Rate

- 10M: 14,880/14880pps
- 100M: 148,800/148,800pps
- 1000M: 1,488,000/1,488,000pps

■ LED

- Power, Status, PoE
- TP Link/Act/Speed, F/O Link/Act/Speed

■ DIP Switch

- Manual/Auto for TP Auto-Negotiation
- TP speed 100/1000Mbps
- Force/Auto Mode for F/O
- F/O speed 100/1000Mbps
- Enable/Disable Link Alarm
- Enable/Disable Data-diode
- Data-diode Direction
block Fiber to RJ-45 direction
block RJ-45 to Fiber direction
- Enable/Disable PSE Auto Power Off (PAPO) *

■ Installation Method

- Flat type DIN-rail kit
- Flat type wall-mount kit
- Magnetic-mount kit (optional)
- Slim type DIN-rail kit (optional)
- Slim type wall-mount kit (optional)

■ Power Requirement

- Power Input: 48~57 VDC **
(2-pin removable terminal block)
- Max. Power Consumption: 102W (348 BTU/h)

■ Environmental Condition

- Operation: -20°C~60°C
- Storage: -40°C~85°C
- Humidity: 5%~95% RH, Non-Condensing

■ Dimension & Weight

- Size: 71 x 94 x 26mm (W x D x H)
- Weight: 220g
- Housing: Aluminum(Upper), Iron(Bottom), IP30

■ Standards and Certifications

CE/FCC Class A

- Safety: EN/IEC 62368-1
- EMC: EN 55032 / EN 55035
- ESD
Air Discharge: +/-8kV
Contact Discharge: +/-4kV
- EFT
DC input: +/-0.5kV
Signal (RJ-45): +/-0.5kV
- Surge Protection
DC input: +/-3kV
Signal (RJ-45): +/-3kV

UKCA/RCM

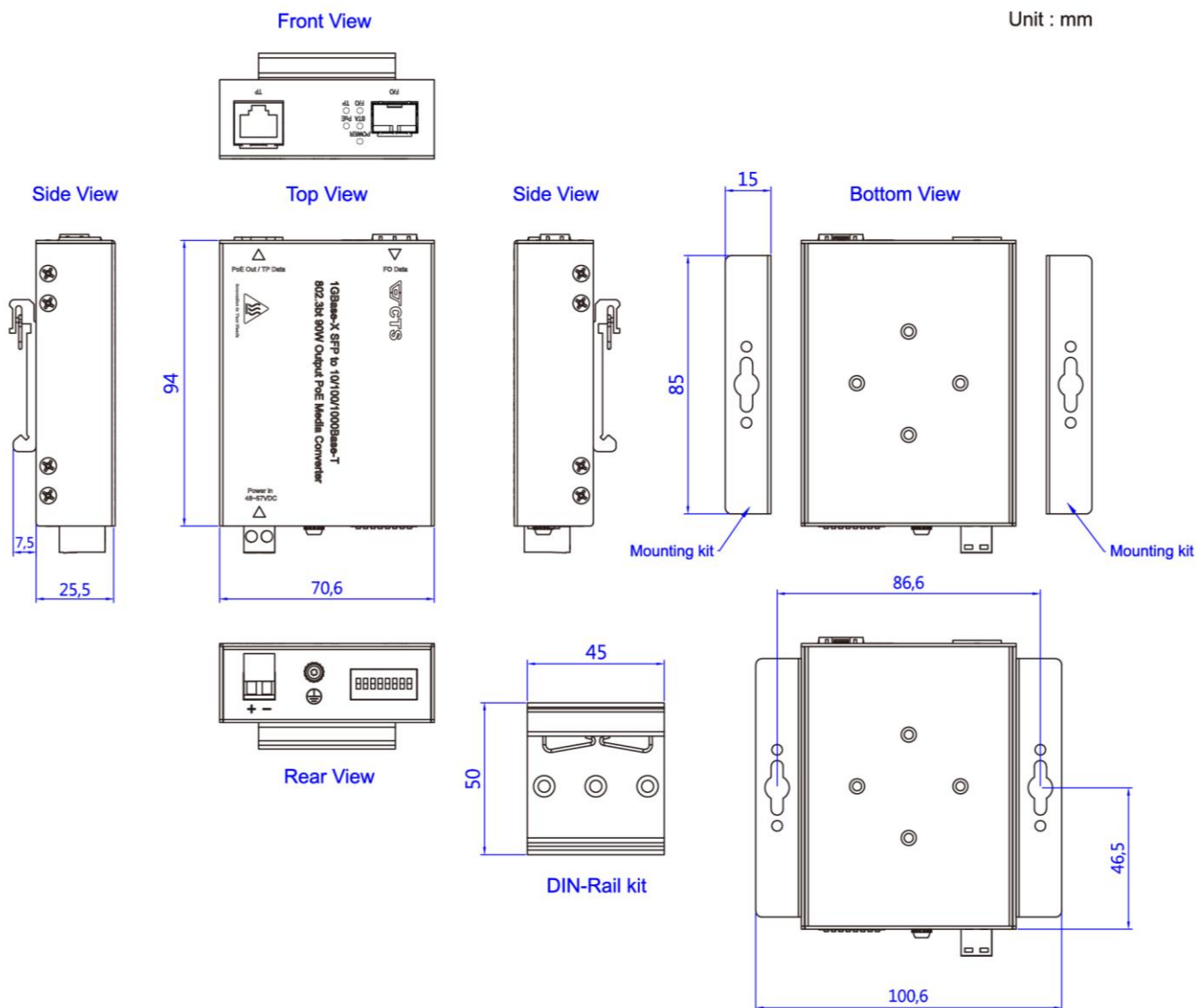
RoHS 2.0

* Only operates when the fiber interface link goes down by the link alarm function.

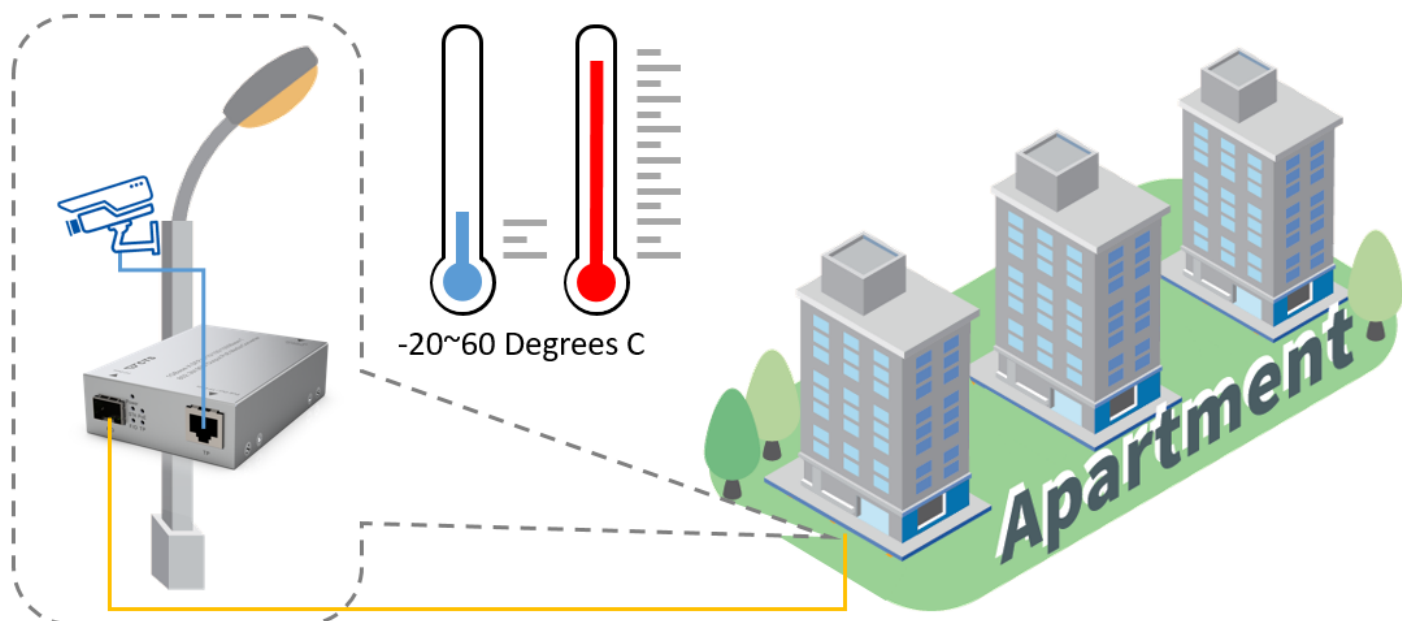
** > 50VDC for 802.3at PoE+ and > 52VDC for 802.3bt PoE++ output recommended

Dimension

Unit : mm



Application Diagram



Order Information

Model	Fiber Slot			TP Port		Support Power Source
	Speed(Mbps)	Type	Slot	Speed(Mbps)	Port	
SRC-3002SFP-BT	100/1000	SFP	1	10/100/1000	1	1 x 48~57V DC with 2-pin removable terminal block

Accessory

SFP-31-D

Model	Specification					
	Speed	Type	Connector	Distance	Wavelength	Operating Temperature
SFP-31FC-D	1000Mbps	MM	LC	550M	850nm	-40°C ~ 85°C
SFP-31FC-(MM-02)-D	1000Mbps	MM	LC	2KM	1310nm	-40°C ~ 85°C
SFP-31FC(SM-10/20)-D	1000Mbps	SM	LC	10/20KM	1310/1310nm	-40°C ~ 85°C
SFP-31W2A(SM-10/20)-D	1000Mbps	WDM	LC	10/20KM	TX: 1310/1310nm	-40°C ~ 85°C
					RX: 1550/1550nm	
SFP-31W2B(SM-10/20)-D	1000Mbps	WDM	LC	10/20KM	TX: 1550/1550nm	-40°C ~ 85°C
					RX: 1310/1310nm	

Slim Type Installation

Model	Mounting Method	Support Model
SRC/CVT Slim Wall Mount Kit	Slim type wall mounting	SRC/CVT Series Media Converter
SRC/CVT Slim Wall+DIN Rail Kit	Slim type wall mounting & DIN-rail	SRC/CVT Series Media Converter

Accessory

Power Supply

Model	Output Voltage Range	Maximum Output Watt	Operating Temperature
SDR-480-48	48~55V	480W	-25°C ~ 70°C
SDR-240-48	48~55V	240W	-25°C ~ 70°C
SDR-120-48	48~55V	120W	-25°C ~ 70°C
SDR-75-48	48~55V	75W	-25°C ~ 70°C
NDR-480-48	48~55V	480W	-20°C ~ 70°C
NDR-240-48	48~55V	240W	-20°C ~ 70°C
NDR-120-48	48~55V	120W	-20°C ~ 70°C
NDR-75-48	48~55V	75W	-20°C ~ 70°C
MDR-60-48	48~56V	60W	-20°C ~ 70°C
MDR-20-12	10.8~13.2V	20W	-20°C ~ 70°C

NOTE: Please refer to the power supply datasheet for details regarding the operating temperature and derating curve. Subsequently, choose the suitable power supply based on your specific requirements and operating environment.

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