Model:UT-2788

Serial to RS-232/485/422 fiber optic converter (built-in AC/DC 100-240V power supply)

Datasheet

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1. Overview

UT-2788 is a multi-functional fiber optic MODEM supporting asynchronous RS-232, RS-485, RS-422 communication interfaces, which is the best choice for connecting remote terminal unit (RTU) to host computer (HOST) or distributed data acquisition system (SCADA) controller. Support RS-232, RS-485, RS-422 multiple asynchronous communication protocols, can simultaneously mix two RS-232, RS-485 or RS-422 interfaces, support 2-port(half-duplex) RS-485 and 4-port (full-duplex) RS-422 working mode.UT-2788's RS-485 mode supports data (TXD or SD) sending control ,The UT-2788 RS-485 mode supports data (TXD or SD) sending control, thus improving the ability to adapt to various types of software and also simplifying the control mode, the fiber optic MODEM supports multiple fiber optic connections between asynchronous serial ports, it supports full duplex or half duplex communication between two devices with asynchronous serial ports via fiber optic, the communication distance can reach up to 4 km for multi-mode and 20 km for single mode, the transmission rate of RS-232 signal is up to 115.2 KBPS, RS-485/RS-422 signal transmission rate is up to 460KBPS, different electrical standards of the interface can be mixed, you can use RS-232 equipment to connect RS-485/RS-422 equipment, can replace the RS-232 to RS-485/422 interface converter or opto-isolator, and provides excellent EMI/RFT characteristics.

The UT-2788 supports two data signal transmissions: transmitting data and receiving data, and also provides an automatic enable control circuit for RS-485/RS-422 data transmission. Zero-latency conversion time, all serial ports are connected via terminal blocks, and fiber optic connections are made via 2 ST connectors.

2. Major Functions & Features

- Supports RS-232/485/422 FIBER OPTIC MODEM

3. Technical Parameters

- Support RS-232/RS-485/RS-422 interface
- Asynchronous transmission: point-to-point application, Rate: 460Kbps
- Transmission distance: multimode 3000m, single-mode 18000m
- Operating temperature: -40 ~ 85°C, Relative humidity: 5 ~ 95%
- Operating wavelength: 1310nm (multimode), 1310nm(singlemode)
- Electrical interface: RS-232, with terminal block connector
  RS-485/422 with terminal block connector
  Fiber optic interface: ST interface, (optional SC/FC interface)
- RS-232 interface features: standard RS-232 three-wire interface +/-15KV (anti-static) ESD protection support rate up to 115.2Kbps
- Input voltage: check the following technical standards
- RS-485/422 interface features: port adaptive technology to achieve from port to rate adjustment adaptively, no switch settings, ± 15KV (anti-static) ESD protection supports up to 128 nodes polling

4. Hardware Definition and Initial Setting

● Terminal Pin Assignment

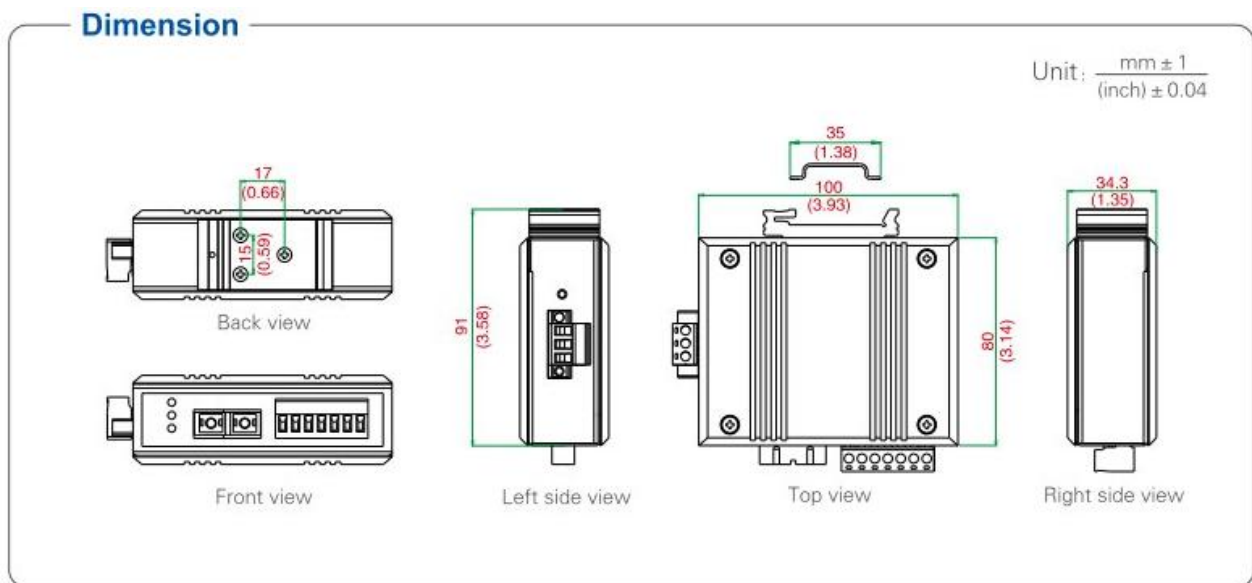| Terminal (PIN)	Signal Definition	RS-422 full-duplex wiring	RS-485 half-duplex wiring
1	T/R+	Transmitting（A+）	RS-485（A+）
2	T/R-	Transmitting（B-）	RS-485（B-）
3	RXD+	Receiving（A+）	None
4	RXD-	Receiving（B-）	None
5	TXD	RS-232(Transmitting)	
6	RSD	RS-232(Receiving)	
7	GND	RS-232GND	

● Technical Standard

Parameter		Technical parameter	
		Multi-mode	Single-mode
Optical propertie	Emission wavelength nm	1310	1310
	Transmission distance km	3	18
	Transmitting power dBm	-3~-10	-3~17
	Receiving sensitivity dBm(≤)	-18	-18
	Light saturation dBm	-3	-3
	Optical loss dBm/km	0.35	0.35
	Fiber optic interface type	SC,FC,ST interface optional	
Other request	Data sending and receiving rate	460Kbps	
	Operating Mode	Full duplex/half duplex mode	
	Power Requirement	High voltage model AC100~240V/1W Low voltage model DC12-48V/1W	
	Operating Temperature	-40~85°C	
	Storage Temperature	-40~85°C	
	Relative Humidity	5~95%	
	Dimension	100mm*80mm*34.5mm	

5. Product View (Appearance)

6. Structure Dimensions

7. Ordering Information

Model	Signal/Port		Port qty		Protection		Baudrate	Environment			Power	
	Optical fiber	RS-232/ 485/422						Temperature		Humidity		
	SC/ST/FC	Terminal block	Optical fiber	RS-232/ 485/422	RS-232	RS-485/422		-25/70℃	-40/85℃	5~95%	Port-Powered	External Power
UT-2788SM	Optional	✓	1	1	±15KV ESD	600W Surge	300~460.8Kbps		✓	✓		100~240VAC
UT-2788MM	Optional	✓	1	1	±15KV ESD	600W Surge	300~460.8Kbps		✓	✓		100~240VAC