3One data

Model277/B

RS-485/422 to Fiber Converter

(SM & MM)

Introduction:

Model277/B is one kind can offer RS-485/422 serial port carry transparent optic fiber modem of transmission to get end to user, no need patch cords set up, switch over automatically, and can detect and examine the signal speed automatically, zero delays time to transmit automatically. Model277/B adopt optic fiber transmit, have isolate protection, data privacy is fine, working steady, data, such threats to communication equipment as the wave is welled up and interfered with electromagnetically that the effective one has prevented the abominable environment from being struck by lightning, can work in the abominable and dangerous environment reliably.

Can be used in occasions such as various industrial control, course controlling, traffic controlling and intellectual district , especially suit the bank, electricity and interfering with environment department and system with the special requirement electromagnetically.

Packing List:

Model277/B is shipped with following items.

1. Model277/B × 1
2. 5VDC power adapter × 1
2. User manual × 1

Features:

1. Extend RS-485/422 transmission
   up to 120km with single-mode(SM)
   up to 2km with multi-mode(MM)
2. Transmit asynchronously, point-to-point to use, speed reach 500Kbps
3. 600W surge protection, 1500W surge protection

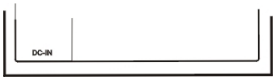
4. Examine signal speed automatically, zero delay time

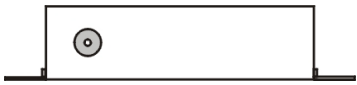
5. Plug-and-Play (Device is hot-pluggable, Data format Auto-sensing & Self-adjusting)

Pinout Configuration:

Power

the power supply input is 5VDC-IN.

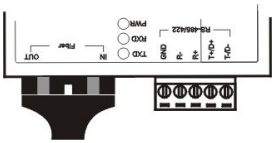


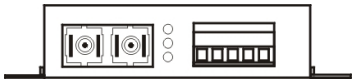


Power:

DCIN 5VDC input

RS-485/422,Optical fiber interface

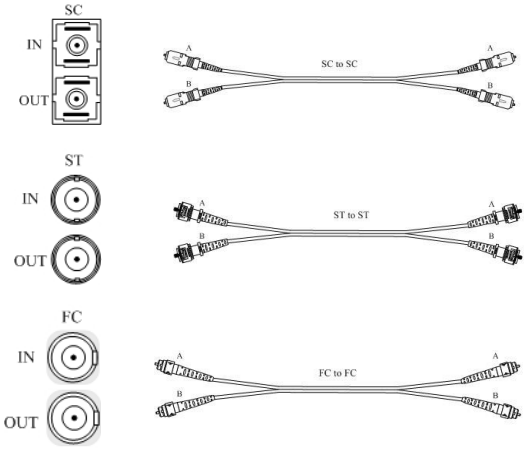




Optical fiber interface:

Optic fiber interface need use in pairs, OUT port is fiber send side, connect another long-range light of interface fiber receive end IN; IN port is fiber receive side, connect long-range same fiber send side :

Optic fibers spent both ends mark the label (the following picture show: A-A, B-B, can also mark another: A1-A2, B1-B2), in order to use.



NOTE: SC, ST or FC, for optic fiber interface, SM is look the same to MM for form. For example,Model277 SM/B/SC,the optic fiber interface(SC) is look the same to Model277 MM/B/SC.

RS-485/422:

MODEL277/B RS-485/422 interface adopt 5 bit terminal block.

RS-485/422:

T+/D+	RS-422 send+/485+(A)
T-/D-	RS-422 send-/485-(B)
R+	RS-422 receive+
R-	RS-422 receive-
GND	Signal ground

LED indications:

Power	Green, Power supply indication On: power joined; Off: no power connect
RxD	Green light, optic fiber interface receive data point out and concurrently mere port report an emergency and ask for help or increased vigilance, on: There are data that are received; Off: Have data receive
TxD	Green light, optic fiber interface send datum instruct On: Have data send; Off: no data send

Specifications:

Standards: EIA RS-485,RS-422 standard

Transfer rate: 300~500Kbps, auto test serial signal rate detect signal speed automatically, zero delay time,

Transfer distance: RS-485/422 side: 1.2Km(9600bps)

Fiber optic:20,25,40,60,80,100,120km(SM),

2,5 km(MM) optional

Fiber connector: 2 × SC, 2 × ST, 2 × FC optional

Wavelength:1310nm

Fiber optic cables:Single Mode:8.3/125,8.7/125,9/125 or 10/125 um

Muti-Mode:50/125,62.5/125 or 100/125 um

600W surge protection;1500W static protection

Power input: +5VDC power supply input

Dimensions: 94.0mm × 71mm × 26.0mm

Operating temp: -25°C to70°C

Storage temperature: -40 to 85°C

Operating humidity: 5% to 95%(no condensation)

Warranty: 5 years

Approvals: FCC,CE, RoHS approvals

Applications:

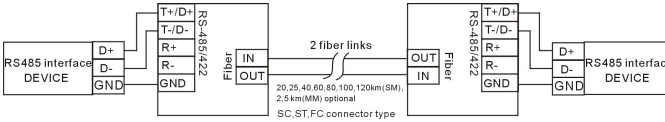


Figure 1: Extending the RS485 data distance

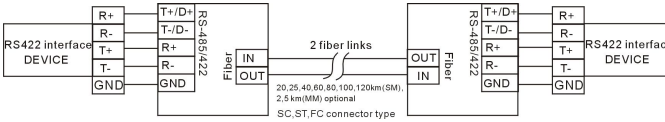
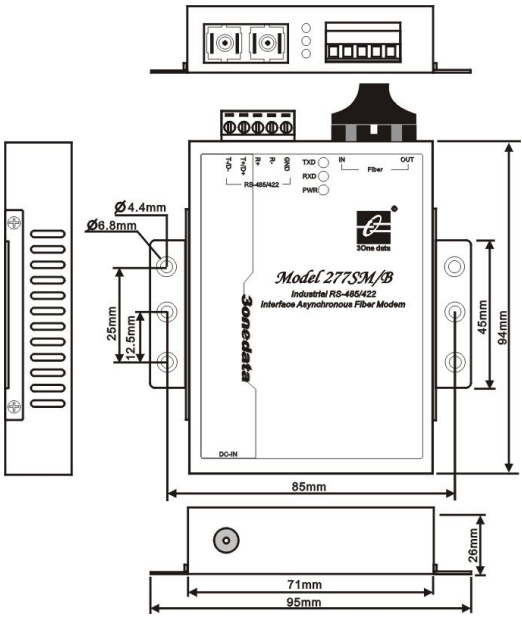


Figure 2: Extending the RS422 data distance

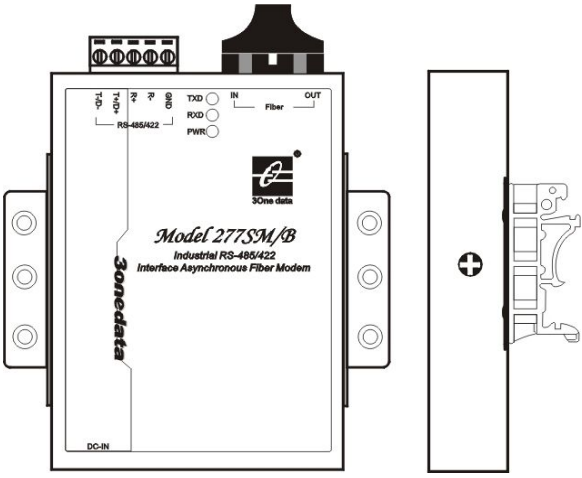
Installation:

Model277/B provides DIN-rail and wall mounting two types of installation.

Wall mounting installation



DIN-Rail Installation



Troubleshooting instructions:

1. Electric port and optic port inconnection, insert the power supply, PWR light, RXD light.

2. Use optic fiber short the optic port IN and OUT, RXD OFF.

3. Perform a loop back test on two Model277/B converters. Attach the two Model277/B converters by attaching the FIBER IN to the FIBER OUT using a SM or MM Fiber Optic Cable(Make sure the

converter fiber optic cables are connected properly,if Model277/B is SM,using SM; If Model277/B is MM,using MM). Connect the Model277/B RS-485 port or RS-422 port to a PC. Send ASCII Characters from a hyper terminal program from one converter to the other. This will test both the transmit and receive functions.

Model277/B FAQ:

LED indicator OFF

1. Power supply insert incorrect
2. Choice incorrect power supply (5VDC)

LED indicator instruction

1. PWR ON: Product work normally
2. TXD indicator flash: optic port transfer data
3. RXD indicator flash: optic port receive data
4. RXD ON: optic connection incorrect（electric port in connection, used to optic port alarm indicator）

Communication failure

1. Using incorrect power supply
2. Optic port or electric port connection incorrect.
3. Optic fiber port do not inosculate to the equipment interface
4. The equipment come from different supplier
5. Single-mode optic fiber uses multi-mode equipment or multi-mode optic fiber uses single-mode equipment
6. The optic fiber connector is incorrect, high error code, attenuation large.

Certifications:

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