3onedata
Make network communication more reliable

MODEL277 Series
Serial Port to Fiber MODEM
Quick Installation Guide

3onedata Co., Ltd.

【Package Checklist】

Please check the integrity of package and accessories before using the product, and notice the differences of accessories corresponding to different models of devices.

	MODLE277	MODEL277A, MODEL277B
Serial port to fiber MODEM	√	√
5V power adapter	/	√
48V power adapter	/	/
220V power cord	/	√ (only for product with built-in 220V power supply)
Warranty card	√	√

Certification	√	√

Note: "√" means standard; "/"means not standard.

If any of these items are damaged or lost, please contact our company or dealers, we will solve it ASAP.

【Product Overview】

The series products are serial port to fiber MODEM that converts RS-232/485/422 serial port signal to optical signal. Models as follows:
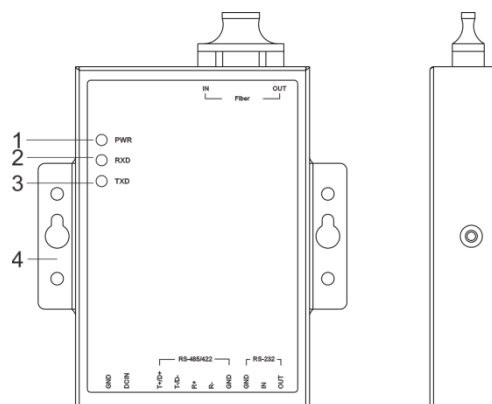
Model I.   MODEL277 (1 RS-232/485/422 + 1 fiber port)
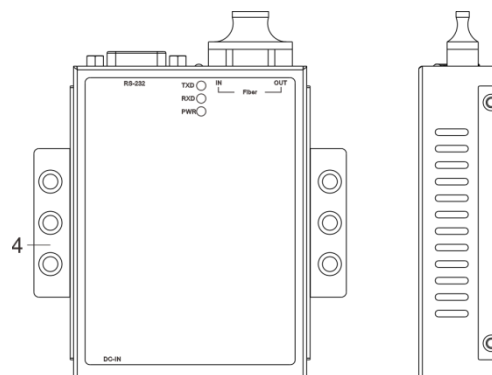Model II. MODEL277A (1 RS-232 + 1 fiber port)
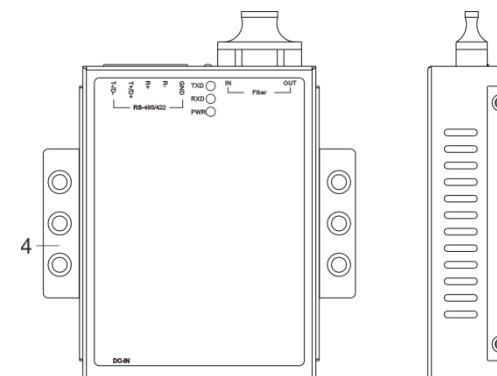Model III. MODEL277B (1 RS-485/422 + 1 fiber port)
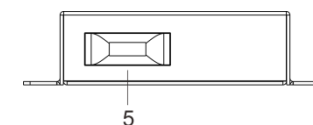
【Panel Design】

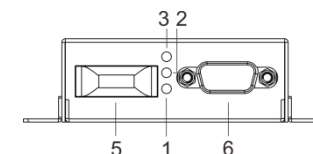➢ **Front view and Side view**

Model I
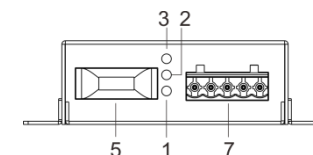

Model II

Model III

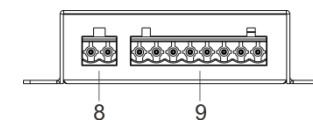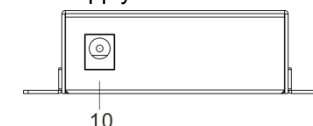➢ **Top view**

Model I

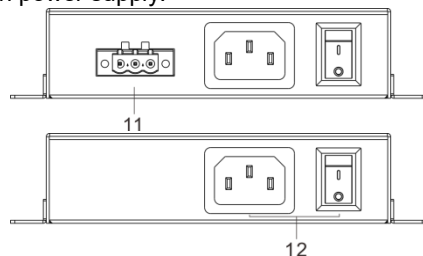Model II

Model III

➢ **Bottom view**

Model I

External power supply:

Model II, Model III
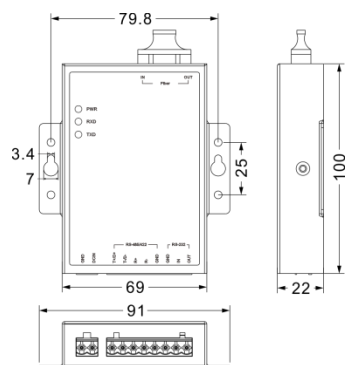
Built-in power supply:

Model II, Model III

1. Power supply indicator
2. Fiber port receiving data indicator
3. Fiber port sending data indicator
4. Mounting lug
5. Fiber port
6. RS-232 serial port (DB9F)
7. RS-485/422 serial port
8. 12~48VDC power supply input terminal
9. RS-232/485/422 serial port (terminal block)
10. 5VDC power supply input (round-head)
11. -48VDC power supply input terminal
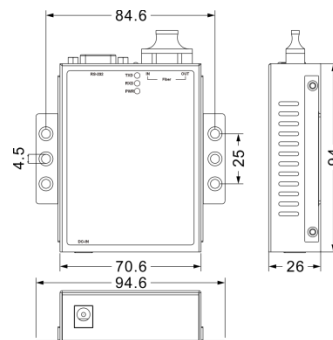12. 220VAC power supply input socket and switch
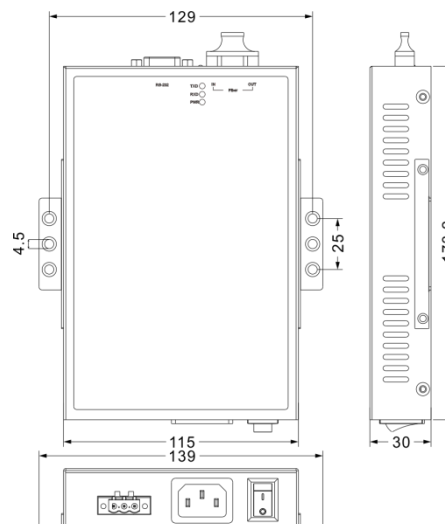
【Mounting Dimension】

Unit: mm

➢ **Model Ⅰ**

➢ **Model Ⅱ, Model Ⅲ**

External power supply:

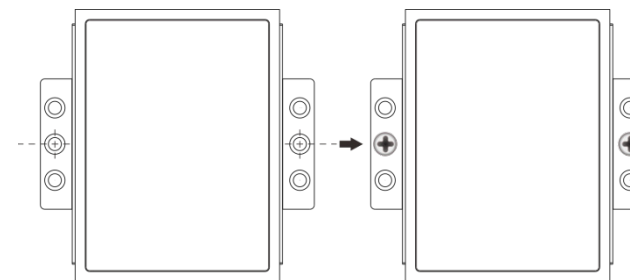Built-in power supply:

 Note before mounting:

- Don't place or install the device in area near water or moist, keep the relative humidity of the device surrounding between 5%~95% without condensation.
- Before power on, first confirm the supported power supply specification to avoid over-voltage damaging the device.
- The device surface temperature is high after running; please don't directly contact to avoid scalding.

【Installation of Wall-mounted Device】

Step 1 Place the device on the wall for reference or reference the mounting dimension to mark the position of 2 screws.

Step 2 Place the device on marked wall and tighten the screw to marked position, mounting ends.

【Disassembling of Wall-mounted Device】

Step 1 Power off the device.

Step 2 Hold the device and screw out the bolt on the wall.

Step 3 Take out the device, disassembling ends.

【Power Supply Connection】

➢ **5VDC power supply input**

The external power supply of model Ⅱ and model Ⅲ supports 5VDC power supply input. DC round-head, inner ring is the positive pole, outer ring is the negative pole. model Ⅲ supports 2.0A overcurrent protetion. Power supply: 5VDC.

➢ **12~48VDC power supply input**

Model Ⅰ provides 2-pin terminal blocks and supports 12~48VDC power supply input. The pin definition as follows:

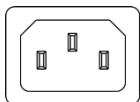| Pin	1	2
Pin definition	GND	DC IN

➢ **-48VDC power supply input**

The built-in power supply of DC series products model Ⅱ and model Ⅲ supports -48 VDC power supply input, the pin definition as follows:

Pin	1	2	3
Pin definition	GND	-48VDC+	-48VDC-

➢ **220VAC power supply input**

The built-in power supply of AC series products model Ⅱ and

model III supports 220VAC power supply input. Power supply input range: 100~240VAC/DC.
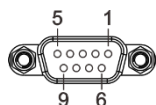
⚠️ **Note:**

- Power ON operation: first insert the power supply terminal block into the device power supply interface, and then plug the power supply plug contact.
- Power OFF operation: first unpin the power plug, then remove the terminal block wiring part; please note the operation order above.
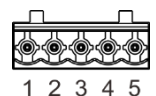
【Serial Port】

➤ RS-232 serial port

Model II provides 1 RS-232 serial port and adopts DB9 female. The pin definition as follows:

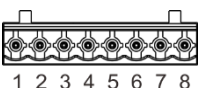| Pin	2	3	5
RS-232	OUT	IN	GND

➤ RS-485/422 serial port

Model III provides 1 RS-485/422 serial port and adopts 5-pin terminal blocks. The pin definition as follows:

Pin	1	2	3	4	5
RS-485	GND	-	-	D+	D-
RS-422	GND	R-	R+	T+	T-

➤ RS-232/485/422 serial port

Model I provides 1 RS-232 or RS-485/422 serial port and adopts 8-pin terminal blocks. The pin definition as follows:

Pin	1	2	3	4	5	6	7	8
RS-232	-	-	-	-	-	GND	IN	OUT
RS-485	D+	D-	-	-	GND	-	-	-
RS-422	T+	T-	R+	R-	GND	-	-	-

【Checking LED Indicator】

The device provides LED indicators to monitor the device working status with a comprehensive simplified troubleshooting; the function of each LED is described in the table as below:

LED	State	Description
PWR	ON	The device is powered on normally
	OFF	The device is not powered on or in abnormal condition
RXD	ON	The fiber port is in abnormal condition or disconnected
	Blinking	The fiber port is receiving data
	OFF	No data receiving in fiber port
TXD	Blinking	The fiber port is transmitting data
	OFF	No data transmission in fiber port

【Specification】

Standard	
Standard	EIA RS-232, RS-485, RS-422
Interface	
RS-232	DB9 female
RS-485/422	5-pin terminal blocks
RS-232/485/422	RS-232 or RS-485/422 serial port, 8-pin terminal blocks
Fiber port	SC/FC/ST interface optional
Indicator	Power supply indicator, fiber port data receiving and alarm indicator, fiber port data sending indicator
Power Supply	
Input power supply	➤ Model I: External power supply: 12~48VDC ➤ Model II, Model III: External power supply: 5VDC Built-in power supply: -48VDC or 220VAC
Access terminal	DC round-head, terminal block or three hole socket
Environmental Limits	

Temperature range	➤ Model I: Operating temperature: -40~75℃ Storage temperature: -40~75℃ ➤ Model II, Model III: Operating temperature: -10~60℃ Storage temperature: -40~85℃
Operating humidity	5%~95% (no condensation)

【Typical Application】

Fiber modem can extend the transmission distance of serial signal over fibers, which should be used in pairs. The device supports three types of serial port, RS-232/485/422. Users can choose one of them to connect local terminal and remote terminal. Two or three different types of serial ports are not supported at the same time.

When connecting local and remote fiber ports, please configure the parameters of fiber ports at both ends in the same way, such as Transmit/Receive wavelength, transmission distance, fiber type and so on.

The pin connection modes of each type of serial port are as shown in the picture below.