**DY-6077 (M / S):** 8 x Serial Multiplexer over Fiber Modem

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| 8 x RS-232 / RS-485 / RS-422 Multiplexer Fiber Modem | new-logo-white-stars |
| **Model：DY-6077M****DYMEC SERIAL LINKS**  |

**Operators Manual**

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* **Brief introduction**

DY-6077M multiplexer fiber modem can transmit 8 separate channels of RS-232/RS-485/422 signals bidirectionally across-one fiber optic line.

* **Capability Parameter**

|  |  |
| --- | --- |
| Electronic Port | Supports RS-232 / RS-485 / RS-422 |
| Fiber Optic Port | FC/ST/SC |
| Isolation protection | 20Kv static and 600W/ms lightning protection |
| Power Supply | DC5~12V |
| Power loss | <5W |
| Fiber Communication distances | Multi-mode Fiber (-M): 2~5 km. Single-mode Fiber (-S): 20Km ( Note: 40Km, 60Km are also available) |
| Baud rate | 300～115.2 Kbps Auto-adaptive |
| Bit error rate | ≤10-9 |
| Transmission power  | ≥-10dBm |
| Sensitivity | ≤-34dBm |
| WavelengthOpto-isolation | Multi-mode(-M): 850nm/1310nm.Single Mode(-S): 1310nm/1550nm3 KV DC |
| Applicable optical fibers | Multi-mode: 62.5/125μm or 50/125μmSingle mode: 9/125μm |
| Dimensions: (mm) (W x H x D) | 225 × 30 × 96 |
| Working temperature | -40°～+85℃ |
| Ambient Relative Humidity | 0~95% |

* **User guide**
1. **Indicator lights**

**POW:** Power indicator red, light on

**TXD:** Fiber optic port data sent green, Blinking

**RXD:** Fiber optic port data receive green, Blinking

**TX1-TX8**: 8 x serial port data sent (TX) green, Blinking

**RX1-RX8**: 8 x serial port data receive (RX) green，Blinking

**ERR:** Fiber link fault indicator light red: when the port is first powered on. If the fiber line has a link fault or the optical port does not receive the correct data, the light turn on (RED); when the fiber link is good, the light is turned off. (No ERR)

1. **The DIP Switch**

K1 to K8 are dip switches that control channels 1 to 8 respectively. When the switch position is down, the associated channel port works in RS485 mode. When the switch position is up, the associated channel port works in RS422 mode.

1. **RJ45 function**

The DY-6077(M/S) has 8 x RJ45 ports for RS-232/485/422 communications.

Note: The 8 x Serial ports are individual and separate channels. They have no relation to each other. CH1 communicates with CH1, CH2 communicates with CH2,and so on..

**The following illustration shows the associated connections:**



The DY-6077 (M / S) has 8 serial ports. The ports are **User Selectable** to RS232, RS485 or RS422 via the DIP switch settings

Port pinouts are defined as follows：



* + - 1. **RS232 Connection Guide**

RS232 connections use three lines. RS-232 uses RJ45 port pin 6, pin 7 and pin 8. These three signal lines are defined as: Pin 6 is GND, pin 7 is RX (RS232 signal from the external device to the DY-6077M), pin 8 is TX (RS232 signal from the DY-6077M to the external device).

**Note: When communicating in RS232 mode, the RJ45 port pins 1, 2, 3,and pin 4 are NOT used. The pins MUST not be connected to any signal lines. Dip Switch K1～K8 must be in the OFF position.**

* + - 1. **RS485 Connection Guide:**

Please insure the following:

Short circuit the TX+ and RX+ as signal line A+.

Short circuit the TX- and RX- as a signal B-.

The associated DIP switch should be down. Pins 7 and 8 should / must be neutral and not connected to any signal lines.

* + - 1. **RS-422 Connection Guide**

RS-422 connections utilize 4 lines. They are: TX+、RX+、TX-、RX-. The associated channel DIP switch should be up(OFF). Pins 7 and8 should / must be neutral and not connected to any signal lines.

1. **Ground Connection Guide**

**It is important to connect the GND (ground) lines**. This must be done because the RS-485 (or RS-422) line communications potential difference **must be <12V**.

RS-485 Serial connections utilize 3 lines (A＋,B－,GND). RS-422 Serial connections utilize 5 lines (TX+,TX-,RX+,RX-,GND). The Signal GND line will connect with each other**, but do not connect to the earth ground.**

1. **Fiber Optic Port**

Connect the two fiber modems end to end via the fiber cable line, TX connects with RX of the opposite modem. **The ERR light should be off when the fiber link is GOOD.**

**6）RJ45 Line Guide**

NOTE: RS-232 signals are easy influenced by RS-485 / RS-422 signals. When the device is connected with RS-485 (or RS-422) signals, please ensure the RS232 lines (pin 7 - RX line and pin 8 - TX line) are not connected. Make the RJ45 connection as followings：



**Thank you**