

Modbus Junction Box MJB-3[™]

For Modbus RS-485 (ASCII or RTU)

DATA SHEET

FEATURE SUMMARY

- Pull and termination resistors
- Transient voltage protection
- Pluggable terminal blocks
- PG7 cable glands
- Made in USA.



DESCRIPTION

Dyacon Modbus Junction Box MJB-3[™] provides a convenient method to expand sensor capacity for Dyacon weather station controllers or to simplify installations.

MJB-3[™] can also be used with other RS-485 networks.

MJB-3[™] is a passive junction box that provides parallel connections for five slave devices and one master. Data and power are connected in parallel. Biasing, termination, and transient protection are included.



KEY FEATURES

Construction: Polycarbonate enclosure and aluminum mounting brackets.

Connection: 5.08 mm pitch pluggable terminal blocks (screw clamp).

Pass-through supply voltage for 12 V and 24 V.

Pass-through data.

Mounting: Pole or flat surface.

Cable Glands: Stevens PG7 cable glands allow for easy and secure cable routing.

APPLICATION

Modbus Junction Box MJB-3[™] is typically used two in different situations with Dyacon weather stations:

1) Indoor or remote weather station controller

The junction box is mounted on the same structure as the sensors. All sensors connect to the junction box. A single cable is routed to the Dyacon CM-1 weather station control module.

2) Sensor expansion.

The Dyacon CM-1 can address and read more digital Modbus RTU slave devices than its two Modbus ports allow. MJB-3 can be used to connect up to five Dyacon digital sensors to one port.

The MJB-3 can also be used in non-Dyacon applications anywhere additional 5V-biased RS-485 Modbus ports are needed.

ELECTRICAL

Power Input	5 VDC to 24 VDC
Current	Passive load and varistor leakage. 1.7 μ A at 12 VDC, 0.75 mA at 24 VDC
Circuit Protection	Varistor transient suppression for power and data.
Termination	Bias and load resistors optimized for 5V biasing from 12 V supply: 4.7 k Ω – 120 Ω – 4.7 k Ω

ENVIRONMENTAL

Operating Temperature	-40°C to 80°C
Storage Temperature	-40°C to 80°C
Humidity	0% to 99%, non-condensing

MECHANICAL

Material	Polycarbonate enclosure. Aluminum mounting brackets.
Overall (WxDxH)	25.7 cm x 12.8 cm x 7.8 cm (10.1" x 5.1" x 3.1")
Total Weight	.7 kg (1.5 lb)
Cable Glands	Stevens PG7 cable glands

DATA

RS-485	Half-duplex, parallel-connection pass-through. No active circuitry.
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COMPATIBILITY

Dyacon Controllers	CM-1
Dyacon Sensors	WSD-1, TPH-1, GT-1, PM-1

