

NETWORK COMPATIBLE RELAYS

RIBMNW24B-MBAI

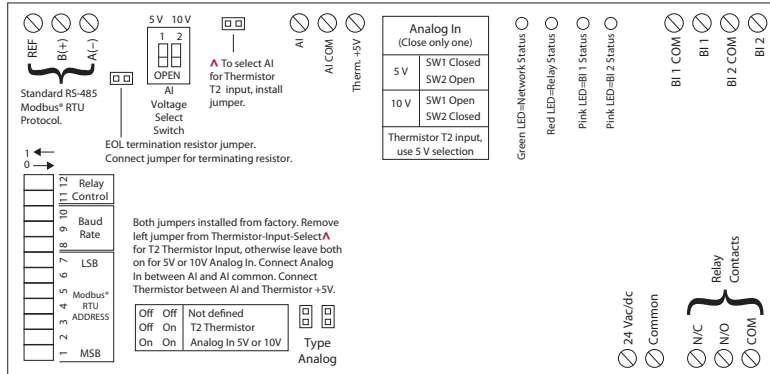
2.75" Track Mount Modbus® RTU Network Relay Device; One Binary Output (20 Amp Relay SPDT + Override); Two Binary Inputs (Dry Contact, Class 2); One Analog Input (T2 Thermistor / 0-5 Vdc / 0-10 Vdc); 24 Vac/dc Power Input; **Optional End of Line Resistor (EOL) Included.**

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Enclosed Modbus® RTU Network Relay Device; One Binary Output (20 Amp Relay SPDT + Override); Two Binary Inputs (Dry Contact, Class 2); One Analog Input (T2 Thermistor / 0-5 Vdc / 0-10 Vdc); 24 Vac/dc Power Input; **Optional End of Line Resistor (EOL) Included.**



RELAYS



SPECIFICATIONS

- # Relays & Contact Type:** One (1) SPDT Continuous Duty Coil
- Expected Relay Life:** 10 million cycles minimum mechanical
- Operating Temperature:** -30 to 140°F
- Humidity Range:** 5 to 95% (noncondensing)
- Operate Time:** 18ms
- Network Communication:** Green LED
- Relay Status:** Red LED On = Activated
- Current Sensor Status:** Pink LED On = Activated
- Binary Input Status:** Pink LED On = Activated
- Dimensions:** 6.25" x 2.75" x 1.75" (RIBMNW24B-MBAI)
4.28" x 7.00" x 2.00" with .75" NPT Nipple (RIBTW24B-MBAI)
- Track Mount:** MT212-6 Mounting Track Provided, UL
- Approvals:** Listed, UL916, C-UL
- Housing Rating:** UL Listed, NEMA 1, C-UL, CE Approved, UL Accepted for Use in Plenum, Also available NEMA 4 / 4X
- Gold Flash:** No
- Relay Override Switch:** DIP Switch Control

- Network Media:** Twisted Pair 22-24AWG, shielded recommended, EIA/TIA-485 (standard RS485)
- Terminations:** Functional Devices product installed at both ends of the standard RS485 Modbus® RTU network – Use 120 Ω end of line resistors. All other cases – Follow instructions from the device installed at the end of the Modbus® network.
- Polarity:** Network is polarity sensitive
- Baud Rate:** 9600, 19200, 38400, 57600 (DIP Switch Selectable)

- Contact Ratings:**
20 Amp Resistive @ 277 Vac
20 Amp Ballast @ 277 Vac
16 Amp Electronic Ballast @ 277 Vac (N/O)
10 Amp Tungsten @ 120 Vac (N/O)
1110 VA Pilot Duty @ 277 Vac
770 VA Pilot Duty @ 120 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

- Power Input Ratings:**
81 mA @ 24 Vdc
111 mA @ 24 Vac

- Notes:**
 - Modbus® Address & Baud Rate must be set prior to power up via DIP switches.
 - Order NEMA 4 housing by adding "-N4" to end of model number. (RIBTW24B-MBAI-N4)
 - Order with grey lid by adding "-GY" to end of model number. (RIBTW24B-MBAI-GY)
 - Order NEMA 4 housing with grey lid by adding "-N4-GY" to end of model number. (RIBTW24B-MBAI-N4-GY)
 - This model utilizes:
 - Physical coil 1 (Relay output)
 - Physical binary input 1 (Dry contact binary input)
 - Physical binary input 2 (Dry contact binary input)
 - Physical input register AI 1 (Analog input)
 - Thermistor Type 2 (T2) Precon 10 K @ 77°F (25°C) PN ST-R24, Model 24, (or equivalent.) Thermistor not included. (Range -39 to 187°F)
 - For all versions, raw analog default settings are 0 and 1023 (real), respectively.
 - When connecting 24 Vac to both the RIB(s) and a half-wave device, damage to device can occur.
 - Option 1: Use separate transformers for each device.
 - Option 2: Add diode between devices, see Option 2 note below.^^
 - Address and Baud Rate Settings on Bulletin B1676 available on website.
http://functionaldevices.com/pdf/bulletins/B1676_393208.pdf
Or scan QR code with your smart phone.



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DIP SWITCHES*			BAUD RATE
8	9	10	
0	0	0	9600
0	0	1	19200
0	1	0	38400
0	1	1	57600

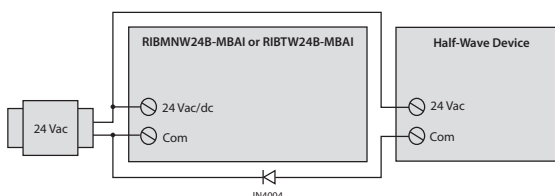
All other combinations=9600 baud

DIP SWITCHES*		RELAY STATE**
11	12	
1	0	Auto
X	1	Override on
0	0	Override off

* 0 = Open ; 1 = Closed

** Device must be powered for override

- Dry contact binary input is a general purpose input that is not tied to the relay internally. Can be used with any dry contact switching device, such as a current sensor, to feed back to the network.



- ^^ Option 2:
Add diode on 24 Vac power (Com) interconnection between devices.
Band on diode faces towards RIB(s).