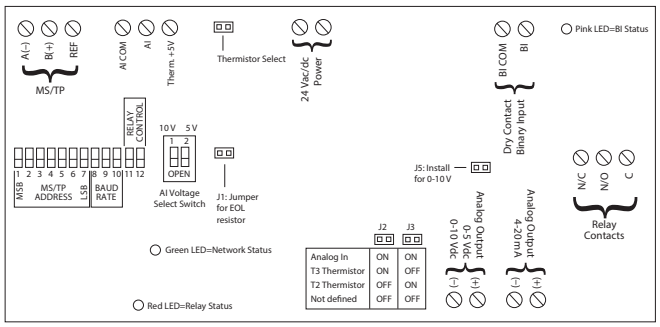
RIB Building Automation

Functional Devices, Inc. | 101 Commerce Drive, Sharpsville, IN 46068
Email: sales@functionaldevices.com | **Website:** www.functionaldevices.com
Toll Free: (800) 888-5538 | **Office:** (765) 883-5538 | **Fax:** (765) 883-7505

INTELLIGENT FIELD DEVICE

RIBTW24B-BCAO

BACnet MS/TP Network Relay Device, One Binary Output + Override, One Binary Input, One Analog Output, One Analog Input, 24Vac/dc Power Input, NEMA 1 Housing



Shown With Cover

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 = Relay Activated
Binary Input Status: Pink LED On = Activated
Dimensions: 4.28"H x 7.00"W x 2.00"D with 0.75" NPT nipple
Housing Detail: See **Housing D** in housing guide for dimensions
Origin:: Made of US and non-US parts
Approvals: UL Listed, UL916, C-UL, RoHS, BTL Certified
Housing Rating: UL Listed, NEMA 1, C-UL, CE Approved, UL Accepted for Use in Plenum,
Gold Flash: No
Relay Override: DIP Switch Control

Network Media: Twisted Pair 22-24AWG, shielded recommended
Terminations: Functional Devices product installed at both ends of the MS/TP network – Use 120 Ω end of line resistors. All other cases – Follow instructions from the device installed at the end of the MS/TP network.
Polarity: Network is polarity sensitive
Baud Rate: 9600, 19200, 38400, 57600, 76800, 115200 (DIP Switch Selectable)

Contact Ratings:
20 Amp Resistive @ 277 Vac
20 Amp Magnetic 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:
176 mA @ 24 Vac
150 mA @ 24 Vdc

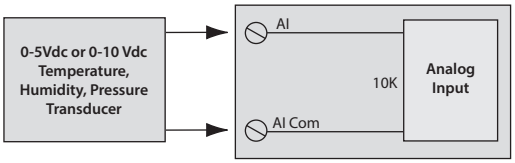
Notes:
- Use a separate 24 Vac transformer, or an isolated 24 Vdc power supply to power-up this product.
- Complete Installation Instructions: Bulletin B1756 available on website.
- When connecting 24 Vac to both the RIB(s) and a half-wave device, damage to device can occur. Option 1: Use separate transformers for each device. Option 2: Add diode between devices, see Option 2 note below. ^^

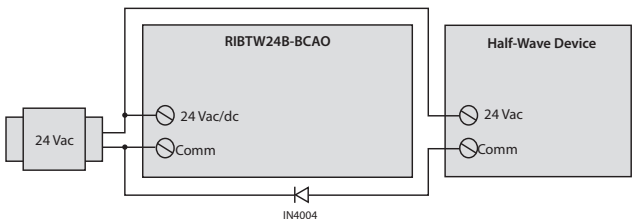
Thermistor Specifications:
- Thermistor Type 2 (T2) Precon 10 K @ 77°F (25°C) PN ST-R24, Model 24, (or equivalent.) Thermistor Type 3 (T3) Precon 10 K @ 77°F (25°C) Model 3, (or equivalent.) Thermistor not included.
- -35 to 10°C range in 1° steps / -31 to 50°F range in 1.8° steps
  10 to 32°C range in 0.1° steps / 50 to 90°F range in 0.18° steps
  32 to 100°C range in 1° steps / 90 to 212°F range in 1.8° steps

BACnet® Details:
- This model utilizes: BO 1 (Relay output), BI 1 (Dry contact binary input), AI 1 (Analog input), AO 1 (Analog output)
- PIC Statement available on website.
- Addressing Specifications: Bulletin B2028 available on website.

	ANALOG OUTPUT ACCURACY AS A FUNCTION OF OUTPUT SPAN (USING STANDARD CONDITIONS *)		
	Span 20% - 100%	Span 10% - 100%	Span 0% - 100%
Analog Output Voltage (0-5 Vdc; 0-10 Vdc)	+/- 2% error	+/- 5% error	+/- 11% error
Analog Output Current (4-20 mA)	+/- 2% error	+/- 3% error	+/- 12% error

*** Standard Conditions:**
Power Supply Input: 22 Vac/dc to 28 Vac/dc ; **Loop Resistance (Analog Output 4-20 mA Loop):** 530 Ohms max.
Load Resistance [Analog Output Voltage (0-5 Vdc, 0-10 Vdc)]: 10 K Ohms min. ; **Ambient Temperature:** -30 to 140° F





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