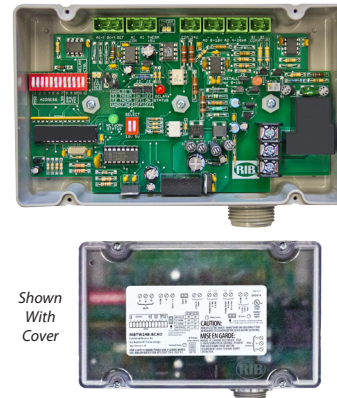
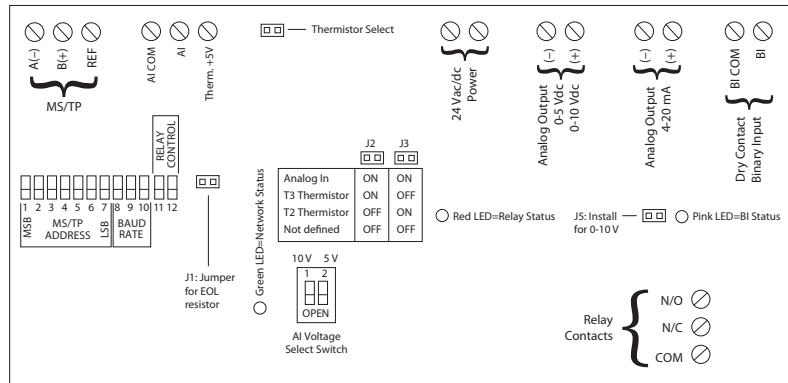


**NETWORK COMPATIBLE RELAY**

**RIBTW24B-BCAO**

Enclosed BACnet® MS/TP Network Relay Device; One Binary Output (20 Amp Relay SPDT + Override); One Binary Input (Dry Contact, Class 2); One Analog Output (0-5 Vdc, 0-10 Vdc, or 4-20 mA), One Analog Input (T2/T3 Thermistor / 0-5 Vdc / 0-10 Vdc); 24 Vac/dc Power Input; **Optional End of Line Resistor (EOL) Included.**



**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" x 7.00" x 2.00" with .75" NPT Nipple
- Approvals:** UL Listed, UL916, C-UL
- 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. [www.functionaldevices.com/pdf/bulletins/B1756\\_393218.pdf](http://www.functionaldevices.com/pdf/bulletins/B1756_393218.pdf)
  - 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

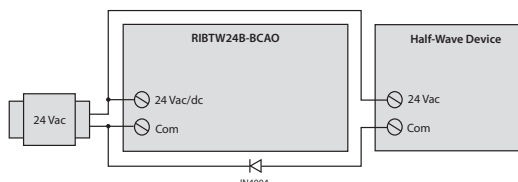
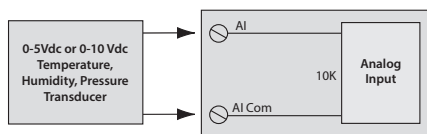
- BACnet® Details:**
  - This model utilizes: BO 1 (Relay output), BI 1 (Dry contact binary input), AI 1 (Analog input), AO 1 (Analog output)
  - PIC Statement available on website. [http://www.functionaldevices.com/pdf/pics/RIBTW24B-BCAO\\_PICS.pdf](http://www.functionaldevices.com/pdf/pics/RIBTW24B-BCAO_PICS.pdf)
  - Or scan QR code with your smart phone.
  - Addressing Specifications: Bulletin B2028 available on website. [www.functionaldevices.com/pdf/bulletins/B2028\\_393243.pdf](http://www.functionaldevices.com/pdf/bulletins/B2028_393243.pdf)



**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 (Com) interconnection between devices. Band on diode faces towards RIB(s).