Functional Devices, Inc.
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Confidence & Peace of Mind in Every Box™

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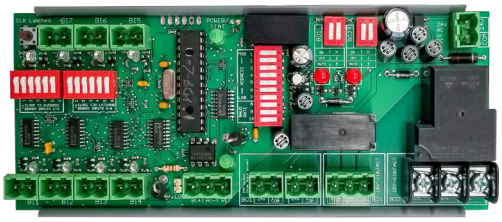
10 YEAR WARRANTY

FAN SAFETY ALARM CIRCUIT

RIBMNWLB-7-BC

AHU Fan Safety Alarm & General Purpose Logic Circuit,
BACnet MS/TP Network, 24 Vac/dc Power Input,
2 Binary Outputs + Override, 7 Binary Inputs, 2.75" Track Mount



SPECIFICATIONS

Power Input	10 million cycles minimum mechanical
Operating Temperature	-30 to 140° F
Humidity Range	5 to 95% (noncondensing)
Operate Time	8ms
Power Input	24 Vac/dc: 50-60 Hz Max current input determined by adding load current user applies to BO 1-1 (3A Max) plus 75 mA @ 24 Vac or 30 mA @ 24 Vdc depending on power source supplied by user to power RIB device, 24 Vac or 24 Vdc
Dimensions	6.62"H x 2.75"W x 1.25"D1/1.75"D2
Origin	Made of US and non-US parts
Relay Rating, BO 1-1	3 Amp Max @ 24 Vac or 24 Vdc (depending on power source supplied by user to power RIB device)
Relay Rating, BO 1-2	10 Amp Resistive @ 30 Vdc 10 Amp General Use @ 277 Vac 1/2 HP @ 120/240 Vac
Relay Rating, BO 2	20 Amp Resistive @ 277 Vac 5 Amp @ 480 Vac 20 Amp Ballast @ 277 Vac 16 Amp Electronic Ballast @ 277 Vac 1 HP @ 120 Vac 2 HP @ 277 Vac
Relay Override Switch	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)

BACnet® DETAILS

MS/TP Address & Baud Rate must be set prior to power up via DIP switches.

Device ID will default to 277XXX where XXX is the MS/TP Address. Examples:

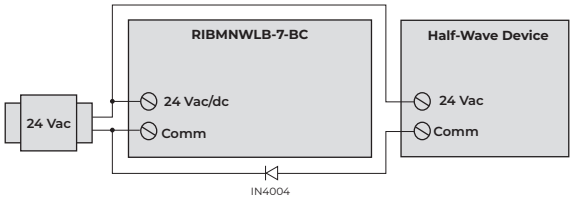
MS/TP Address - 004 Device ID - 277004	MS/TP Address - 121 Device ID - 277121

Device ID can be changed via network command. Once changed, it will no longer default to 277XXX.
(MS/TP Address & Device ID must be unique.)

DIP Switches*

8	9	10	Baud Rate
0	0	0	9600
0	0	1	19200
0	1	0	38400
0	1	1	57600
1	0	0	76800
1	0	1	115200

* 0 = Open ; 1 = Closed All other combinations = 9600 baud



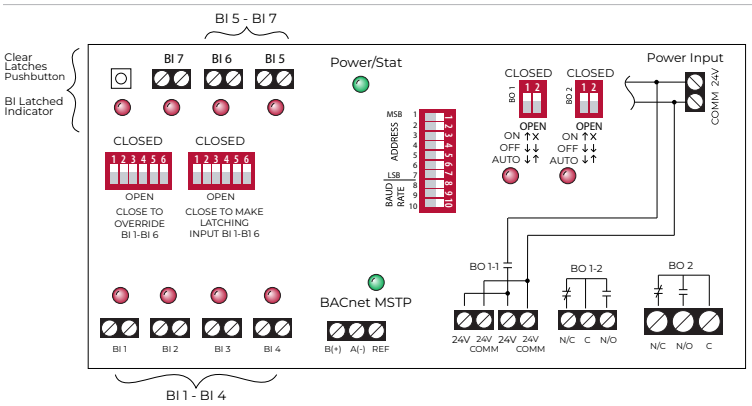
^^ Option 2: Add diode on 24 Vac power (Comm) interconnection between devices. Band on diode faces towards RIB(s).

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. ^^

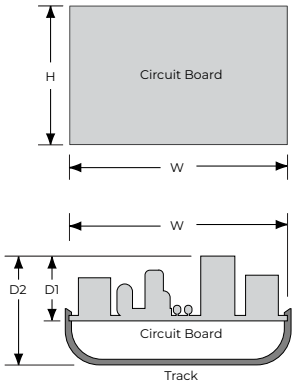
The RIBMNWLB-7-BC is set in Fan-Safety-Circuit mode by default from the factory. Fan-Safety-Circuit mode sets up BI 1 – BI 6 in an AND function, so that when all 6 binary inputs are closed, BO 1 will close. Opening any of the 6 binary inputs will open BO 1.

BO 2 is bound to BI 7 such that when BI 7 is closed, BO 2 relay will activate. Binding and Priority level can be set by properties in BO 2.

The RIBMNWLB-7-BC can also be enabled as an I/O board with 2 binary output relays and 7 general-purpose binary inputs.



WIRING DIAGRAM INCLUDED ON PAGE 2



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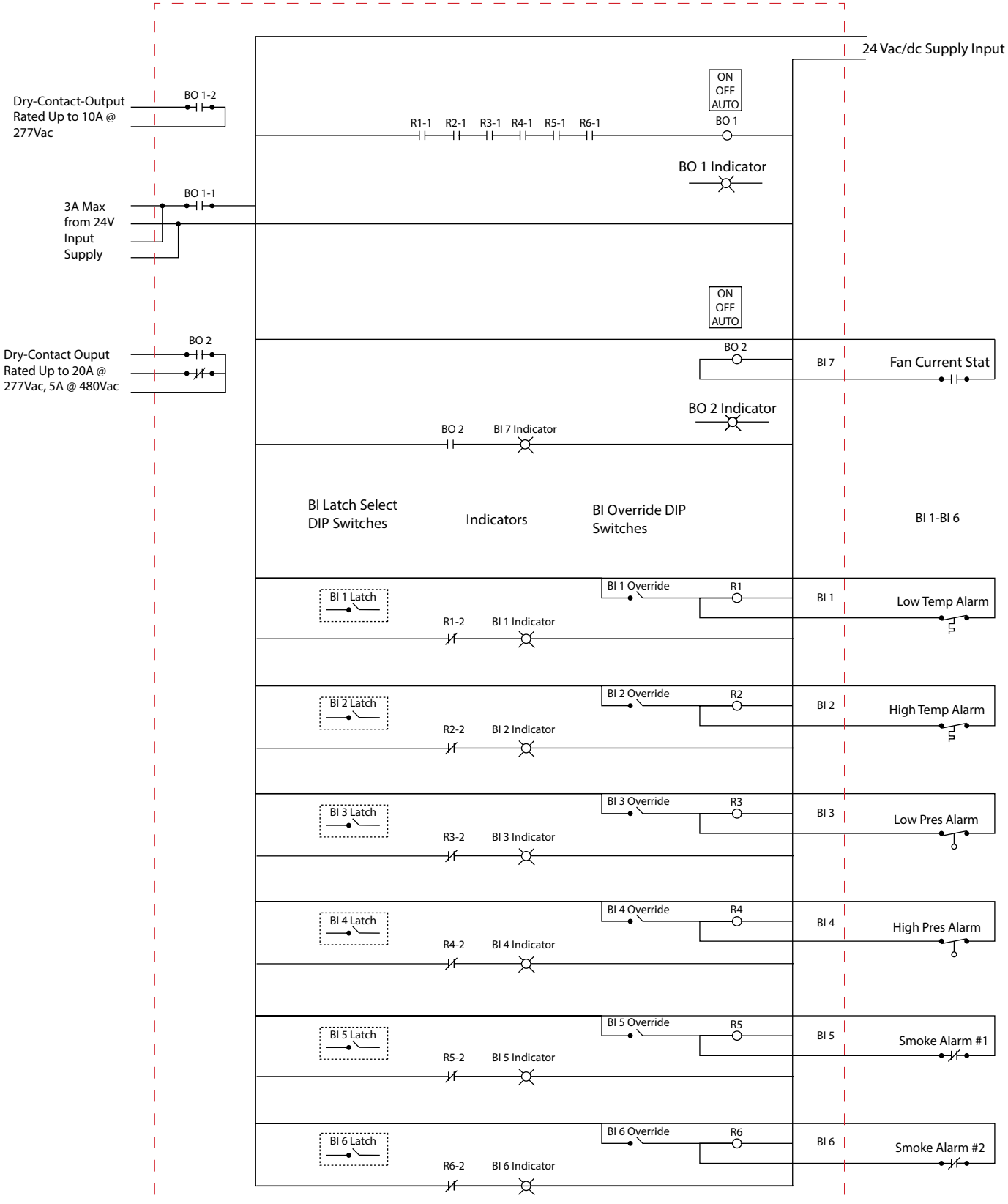
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