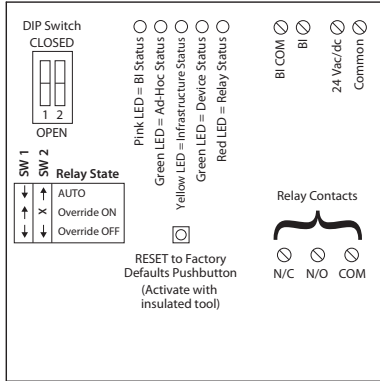## RIBTW24B-WI-N4

Enclosed Wifi IEEE 802.11 b/g Network Enclosed I/O Device: One Discrete Output (20 Amp Relay SPDT + Override), One Discrete Input (Dry Contact, Class 2); 24 Vac/dc

Network Compatible Relay

RIB™
Wi-Fi RIB™

Shown With Cover

Code Version 4.0.3

c (UL) us
LISTED

Made in USA
Meets "Buy American" of ARRA 2009

Specifications

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Operate Time: 18ms
Pink LED: Digital Input Status
Green LED: Wifi Ad-Hoc Status
Yellow LED: Wifi Infrastructure Status
Green LED: Device Status
Red LED: Relay Status
Dimensions: 4.28˝ x 7.00˝ x 2.00˝ with .75˝ NPT Nipple
Approvals: UL Listed, UL916, C-UL
FCC, Wifi Certified ASD Device
Housing Rating: UL Accepted for Use in Plenum, NEMA 4
Gold Flash: No
Relay Override Switch: DIP Switch Control
Wifi: IEEE 802.11 b/g
54 Mbps Data Rate
–95 dBm Min. Sensitivity
+16 dBm Max Output Power
Currently Unsecured Connection in Ad-Hoc
(WPA-PSK or WPA-2-PSK Available)
Supports PING and ARP
DSSS Modulation

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)
2 HP @ 277 Vac
1 HP @ 120 Vac

Power Input Ratings:
200 mA Max @ 24 Vac
200 mA Max @ 24 Vdc

Available TCP/IP Settings:
• IP Address (Static)
• Port Number
• Subnet Mask
• Gateway Address
• Ad-Hoc mode
• Infrastructure mode
• Scan for wireless networks

Device Settings:
• Local Override
• Reset to Network Defaults Pushbutton

Power Tolerances:
24 Vac = Terminal Strip (20 Vac min. ; 28 Vac max.)
24 Vdc = Terminal Strip (24 Vdc min. ; 28 Vdc max.)

Device Settings by Network:
• Power up default relay state
• Host name and location labels
• Relay bound to digital input

Wi-Fi RIB™ – Getting Started

Note: Ad-Hoc Mode must be used for set-up and may be used for permanent use.

1. Make sure laptop IP settings are in DHCP mode.

2. Apply power to the Wi-Fi RIB™ (24Vac or 24Vdc); all settings will be maintained when power is removed. The green Device Status LED will flash at a rate of once per second and the green Ad-Hoc Status LED will stay lit while in Ad-Hoc Mode, yellow Infrastructure Status LED will remain off while in Ad-Hoc Mode (see Device LEDs for other LED indications).

3. View Wi-Fi connections on the computer. Look for the network called RIBTW24B-WI-N4 and connect. This establishes a connection between the Wi-Fi RIB™ and the computer in an Ad-Hoc network.

4. In any Internet web browser, type in the default factory address of 192.168.100.10 and press enter.

Main Page – (Click "Main" link at top of page to return to this page)

In the web browser window, you should see the Wi-Fi RIB™ main web page. You will be able to control the relay and read status. To change the state of the relay, click the "on" or "off" button and click "Set Relay". At the bottom of the page you can see: status of relay, last command, and digital input status.

Setup Page – Network and operational settings (Click "Setup" link at top of page.)

Note: Settings can be viewed on Setup Page status or in the xml status page.

1. Change the RIB default IP address, port number, subnet mask, or gateway if desired – click save after all changes are made. After making any changes to these settings, you will need to reconnect to the RIB at its new address.

Note: The Wi-Fi RIB™ ships from the factory with a default IP address of 192.168.100.10, default gateway of 192.168.100.1, and default subnet mask of 255.255.255.224, and has a unique MAC address for use on the internet or on an internal intranet or network. If at anytime an incorrect address is used or address is forgotten, the Wi-Fi RIB™ may be returned to factory defaults by pressing the RESET pushbutton on the Wi-Fi RIB™ until the Device Status LED flashes rapidly (approx. 5 seconds).

2. Set "Device Name" and click save. Set "Device Location" and click save. (Up to 16 characters.)

3. "Default Relay Setting" determines the state to which the relay will default upon return from deliberate power-cycle or due to power loss. Make selection for relay to come on, stay off, or return to last commanded state. After power-up, the relay will follow commanded states if communications are restored, unless bound to Digital Input.

4. "General Purpose Digital Input/Relay Binding" allows the relay to be controlled from the Dry Contact GP Digital Input if desired. If bound, the relay will follow the state of the Digital Input (typical application: motion-detector closes dry contact input, relay turns on light). If unbound, the Digital Input may be used as a general-purpose status input or otherwise (independent of relay).

Web Page – To enter the Wi-Fi RIB™ into Infrastructure Mode or to return to Ad-Hoc Mode. (Click "Wifi" link on top of page)

Note 1: If a mistake is made setting up the Wi-Fi RIB™, it may be necessary to manually return to Ad-Hoc Mode. Pressing the RESET pushbutton (about 5 seconds) on the Wi-Fi RIB™ will return it to factory default settings, including returning it to Ad-Hoc Mode.

Note 2: You may scan for the desired router if in range, or enter the name and security type of the router – the Wi-Fi RIB™ will retain the router information if power is removed from the Wi-Fi RIB™ and will find the router once power is restored to the Wi-Fi RIB™ if the router is in range.

1. To scan for routers in range, click "Scan For Wireless Networks" to find search list of Wifi routers of desired infrastructure network and select router.

2. To enter the name and security type of the router, click Other Network, and enter Mode, Network Name, Password Type (WEP, WPA) or no password, then press Join. The green Ad-Hoc Status LED will extinguish and the yellow Infrastructure Status LED will begin flashing at a rate of once per second until the Wi-Fi RIB™ establishes connection to router and then stay on (see Device LEDs for other LED indications).

The Wi-Fi RIB™ will be entered into the infrastructure network on the router. You must now go back to view wireless networks on the computer to connect to the same network to find the Wi-Fi RIB™. Once the Wi-Fi RIB™ is connected to a router in infrastructure mode, you must connect the laptop or controller to the same router/network to see and control the Wi-Fi RIB™.

Device LEDs – A description of all LED indications

• **Green Device Status LED**: Flashes at rate of once per second (LED will be on 1/2 second and off 1/2 second). Hesitation in LED may be seen when the Wi-Fi RIB™ is answering HTTP commands.

• **Green Ad-Hoc Status LED**: On solid while in Ad-Hoc mode. LED will be off when in Infrastructure Mode.

• **Yellow Infrastructure Status LED**: Flashes at rate of once per second (LED will be on 1/2 second and off 1/2 second) when Wi-Fi RIB™ is connecting or disconnecting to Infrastructure Mode and will stay on when Infrastructure connection is established. LED will be off when in Ad-Hoc Mode.

• **Pink Digital Input Status LED**: On if Digital Input is closed, off if open.

• **Red Relay Status LED**: On if relay is activated (N/O closed, N/C open), off if deactivated (N/O open, N/C closed).

Sources of Relay Control and Order of Precedence

The relay may be controlled over the Wifi network by the web page or HTTP commands, by the general purpose Digital Input (if binding is set to Bound on the setup page), or manually by the override DIP switches on the Wi-Fi RIB™. The Digital Input (if binding activated) takes precedence over Wifi network commands, the DIP switches take precedence over both the Digital Input (if binding activated) and the Wifi network commands.

Wi-Fi RIB™ – Control and Status by HTTP Commands and XML

HTTP Get commands to control relay and get status bypassing Wi-Fi RIB™ webpage. Status returned in XML format.

To turn relay on and off:
http://192.168.100.10/ribon.htm?
http://192.168.100.10/riboff.htm?

To configure relay power up state:
http://192.168.100.10/config.htm?pwr=on
http://192.168.100.10/config.htm?pwr=off
http://192.168.100.10/config.htm?pwr=last

To configure whether relay is bound or unbound to digital input:
http://192.168.100.10/config.htm?dry=on
http://192.168.100.10/config.htm?dry=off

To set name and location:
http://192.168.100.10/config.htm?host=user defined text* (16 characters max)
http://192.168.100.10/config.htm?loc=user defined text* (16 characters max)
* Follow standard URL encoding. Avoid non-alphanumeric characters as they may be interpreted as Escape Codes and may cause errors.

To reset device:
http://192.168.100.10/reset.htm

Example commands use factory default IP address: 192.168.100.10. If you have changed the IP address of the Wi-Fi, then use your address in the commands.

To read status information:
http://192.168.100.10/status.xml

Response will be in the following format:
<?xml version="1.0" encoding="utf-8"?>

<response>

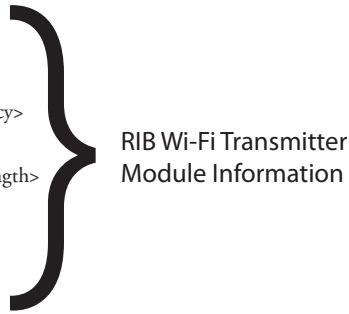|	
<relayState>OVERRIDDEN OFF</relayState>	Other relay states: OFF, OVERRIDDEN ON, ON, BOUND ON, BOUND OFF
<lastCommand>OFF</lastCommand>	Other network command: ON
<digtalInputState>CLOSED</digtalInputState>	Other digital in state: OPEN
<powerOnState>OFF</powerOnState>	Other default power on states: ON, Last State
<bindingState>UNBOUND</bindingState>	Other binding state: BOUND
<deviceHostName>Device Name</deviceHostName>	User defined label
<deviceLocation>Device Location</deviceLocation>	User defined label
<deviceVersion>v4.0.3 WI</deviceVersion>	Factory firmware version

```
<bss>
    <valid>0</valid>
    <name>0</name>
    <privacy>0</privacy>
    <wlan>0</wlan>
    <strength>0</strength>
</bss>
<scan>0</scan>
<ver>4615</ver>
<count>0</count>
<ssid>WifiRIBsBldg2</ssid>       (SSID name of router RIB is connected to)
</response>
```

} RIB Wi-Fi Transmitter Module Information