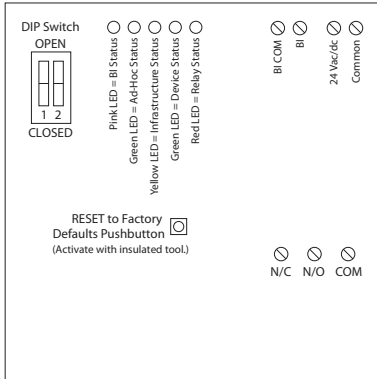


RIBTW24B-WI-N4

Enclosed Wifi IEEE 802.11 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



Shown
With
Cover



Code Version 3.3.9

Specifications

- # Relays & Contact Type:** One (1) SPST Continuous Duty Coil
- Expected Relay Life:** 10 million cycles minimum mechanical
- Operating Temperature:** -30 to 140° F
- Operate Time:** 18mS
- Green LED:** Device Status
- Green LED:** Wifi Ad-Hoc Status
- Yellow LED:** Wifi Infrastructure Status
- Pink LED:** Digital Input 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, CE, RoHS, 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/n Compatible, (G)
54 Mbps Data Rate
-95 dBm Min. Sensitivity
+16 dBm Max Output Power
Currently Unsecured Connection (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
 - Ad-Hoc mode
 - Infrastructure mode
 - Scan for wireless networks

- **Setup Instructions available on website.**

http://www.functionaldevices.com/pdf/bulletins/B1802_393224.pdf

Or scan QR code with your smart phone.



- Device Settings:**
 - Local Override
 - Reset to Network Defaults Pushbutton

- Power Input:**
 - 24 Vac = Terminal Strip
 - 24 Vdc = Terminal Strip

- 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 note of current computer IP settings and restore settings when finished. If you are unsure of settings, contact your network administrator.
2. Change TCP/IP settings of the computer to connect to the Wi-Fi RIB™ as follows:
IP Address: 192.168.100.2 Subnet mask: 255.255.255.224 Default Gateway: 192.168.100.1
3. Connect and apply power to the Wi-Fi RIB™ (24Vac or 24Vdc recommended for setup to avoid Line Voltage wiring; 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).
4. View wireless connections on the computer. Look for the network called “Wi-Fi RIB™” and connect. This establishes a connection between the Wi-Fi RIB™ and the computer in an Ad-Hoc network.
5. 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 and last command.

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

Note: *Settings can be viewed on Main Page status or in the xml status read outside the web page.*

1. Change the RIB default IP address, port number, subnet mask, or gateway if desired – click save after each setting.

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.
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...”. 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™.

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/index.htm?relay=on>
<http://192.168.100.10/index.htm?relay=off>

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?host=user defined text* (16 characters max))
[http://192.168.100.10/config.htm?loc=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>

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
<digitalInputState>CLOSED</digitalInputState>	Other digital in state: OPEN
<powerOnState>OFF</powerOnState>	Other default power on states: ON, LASTSTATE
<bindingState>UNBOUND</bindingState>	Other binding state: BOUND
<deviceHostName>Device Name</deviceHostName>	User defined label
<deviceLocation>Device Location</deviceLocation>	User defined label
<deviceVersion>v3.3.9 WIUI</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 assigned to router)
</response>
  
```

} Router Information

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.