Onyxx® Modbus to BACnet® Bridge

INSTALLATION GUIDE

Onyxx® MB311

Estimated installation time: 5-10 minutes

Package Contents:

- ✓ Onyxx-MB311 Modbus to BACnet Bridge
- ✓ 7ft Ethernet Cable
- ✓ AC Power Adaptor
- ✓ Onyxx-MB311 Installation Guide *(this document)*
- ✓ 3-Position, Screw Terminal Connector
- ✓ 3-Position, Blank Terminal Connector

Ethernet Cable

Power Adaptor

Onyxx-MB311
Modbus to BACnet Bridge

Prepare to Install the Onyxx-MB311

Decide where you want to place the Onyxx-MB311 Modbus to BACnet Bridge. You can use wall mounting screws *(not provided)* to mount the Onyxx-MB311 in an open space or mount on a 35mm wide DIN rail utilizing the molded DIN rail slot located on the base of the Onyxx-MB311.

Make sure the selected location is:

- ✓ Not in direct sunlight or near a heater or heating vent.
- ✓ Not cluttered or crowded. There should be at least 4 to 6 inches *(10-15 cm)* of clear space on the side where all of the network and power connections are made.
- ✓ Well ventilated *(especially if enclosed in a cabinet)*.

Connect to your Onyxx-MB311

A 10/100-Mbit Ethernet connection is provided on the Onyxx-MB311. This is an RJ-45 port. Use a standard Ethernet patch cable for connecting to an Ethernet Hub or Switch or for connecting directly to your computer. The RJ-45 port has two LEDs. When the Onyxx-MB311 is connected to a network, the amber LINK LED is lit and the green ACTIVITY LED flashes when activity occurs.

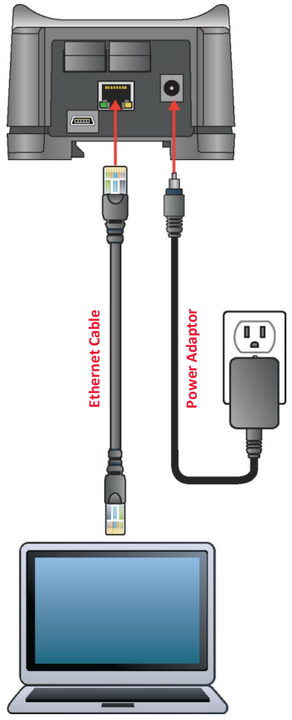
Step 1: Connect one end of the Ethernet cable to your Onyxx-MB311's RJ-45 port and the other end to the internet port on your computer.

Step 2: Connect the power adapter to the Onyxx-MB311 and then plug it into an outlet. Wait for the power LED and heartbeat LED to turn on. If none of the LEDs turn on, make sure the barrel connector on the end of the power adaptor is pressed firmly into the Onyxx-MB311.

Step 3: Temporarily change your computer's network settings so your IP address is set to 192.168.1.XXX *(Where .XXX is anything but .101)*. Make note of your computer's current network settings.

Step 4: Open your preferred internet browser and enter the Onyx-MB311's IP address *(factory default is 192.168.1.101)* in the address bar. The Onyxx-MB311's home page will be displayed.

Step 5: Click on the link to the Onyxx-MB311's User Guide for detailed instructions on how to configure the TCP/IP, Modbus, and BACnet networks.



Step 6: Once you have completed setting up the Onyxx-MB311's network settings, unplug the end of the Ethernet Cable from your computer's internet port and connect to the network infrastructure.

Connecting Your RS-485 Network to the Onyxx-MB311

The RS-485 port uses a 3-position, screw terminal connector. The screw terminals (from left-to-right) are shield, minus (-), and positive (+). The transmit (Tx) and receive (Rx) LEDs located on the Onyxx-MB311 cover will flash when there is network activity detected.

Step 1: Unplug the left, 3-position screw terminal connector from the Onyxx-MB311.

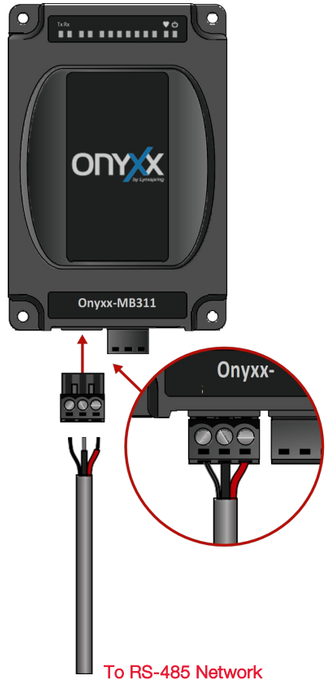
Step 2: Insert the positive wire from your RS-485 network to the positive terminal *(far right terminal)* on the 3-position, screw terminal connector and tighten down the screw.

Step 3: Insert the negative wire from your RS-485 network to the negative terminal *(center terminal)* on the 3-position, screw terminal connector and tighten down the screw.

Step 4: Insert the shield wire to the shield terminal *(far left terminal)* on the 3-position, screw terminal connector and tighten down the screw.

Step 5: If located at the end of the network, Lynxspring recommends installation of a 120 ohm end of line resistor on the + & - terminals.

Step 6: Plug the 3-position, screw terminal connector back into the RS-485 port on the Onyxx-MB311.



Specifications

PLATFORM	
Operating System	Helixx® Framewok by Lynxspring®
Processor	1 GHz AM335x ARM Cortex A-8
Memory	512 MB DDR3L 800 MHz, 4 GB 8-bit Embedded MMC on-board Flash
COMMUNICATION PORTS	
Ethernet Port	10/100 Mbps *(RJ-45 Connector)*
RS-485 Port	Optically-isolated RS-485 serial port with 3-screw connector
Mini-B USB	USB Client Connector utilizes 5 pin Mini-USB cable
POWER	
Power Input	External 9 to 15 Vdc 1A power supply
CHASSIS	
Construction	Base: Plastic, DIN rail or screw mount Cover: Plastic
Cooling	Internal air convection
Dimensions	3.75" (9.53 cm) width x 5.60" (14.22 cm) length x 2.55" (6.48 cm) depth
Mounting	Flat panel and 35mm DIN rail mounting options standard
ENVIRONMENT	
Operating Temperature Range	0 – 60 °C (32 –140 °F)
Storage Temperature Range	0 – 70 °C (32 –158 °F)
Relative Humidity Range	5 – 95% RH, non-condensing
AGENCY LISTINGS	
Compliance	FCC Part 15 Class A, RoHS, CE, CAN IC-ES-3(A)/NMB-3(A)

Troubleshooting

If the browser cannot display the web page:

- ✓ Make sure that the Onyxx-MB311 is fully up and running. Its power LED should turn on and its heartbeat LED should be flashing.
- ✓ Make sure the Ethernet cable is connected firmly to the Ethernet port on the Onyxx-MB311. The LEDs on the Ethernet port will indicate if the Onyxx-MB311 is connected to the network. The amber **LINK** LED will indicate the Onyxx-MB311 is connected to a network and the green **ACTIVITY** LED will indicate the Onyxx-MB311 is transmitting and receiving on the network.
- ✓ If you are connecting directly from your computer to the Onyxx-MB311, ensure your computer's network settings are set such that your computer's IP address is anything other than the Onyxx-MB311.
- ✓ If you are connecting to your Onyxx-MB311 through a network, make sure your computer's network setting is set to DHCP.
- ✓ Close and re-open the browser to make sure that the browser does not cache the previous page.

Statement of Conditions

In the interest of improving internal design, operational function, and/or operability, Lynxspring reserves the right to make changes to the product described in this document without notice. Lynxspring does not assume any liability that may occur due to the use or application of the product(s) or circuit layout(s) described herein.

Technical Support

Thank you for selecting Lynxspring products. Please contact our Support Team if you have any questions about installing or setting up your Onyxx-MB311 Modbus to BACnet Bridge.

support@lynxspring.com | toll free: 877-649-5969

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