# 215U-2 wireless mesh networking I/O and gateway installation guide



## HAZLOC NOTICES

The 215U-2 is suitable for use in hazardous locations that are rated Class I Division 2, Groups A, B, C, D.

The 215U-2 must be installed in an enclosure that maintains an ingress protection rating of IP54 and meets the enclosure requirements of EN50014 or EN60079-0.

The RF coaxial cable must be installed in a metallic conduit, per the US National Electrical Code (NEC) or NFPA.

SUP+ and SUP- terminals must only be powered from an NEC Class 2 circuit.

## ⚠ WARNING - EXPLOSION HAZARD

**Do not disconnect equipment while the circuit is live unless the area is known to be free of ignitable concentrations. Substitution of any component may impair suitability for Class I Division 2.**

## NOTE

The 215U-2 module ships from the factory configured for global frequency and power. Set the radio region to access country specific radio options.



*Powering Business Worldwide*

## Antenna installation

When selecting an antenna, consider radio proximity.
Use Figure 1 as a guide for installing an antenna and attaching it to the 215U-2.

**Note:** Do not operate the radio without an antenna or RF load fitted

**Figure 1. Antenna installation**
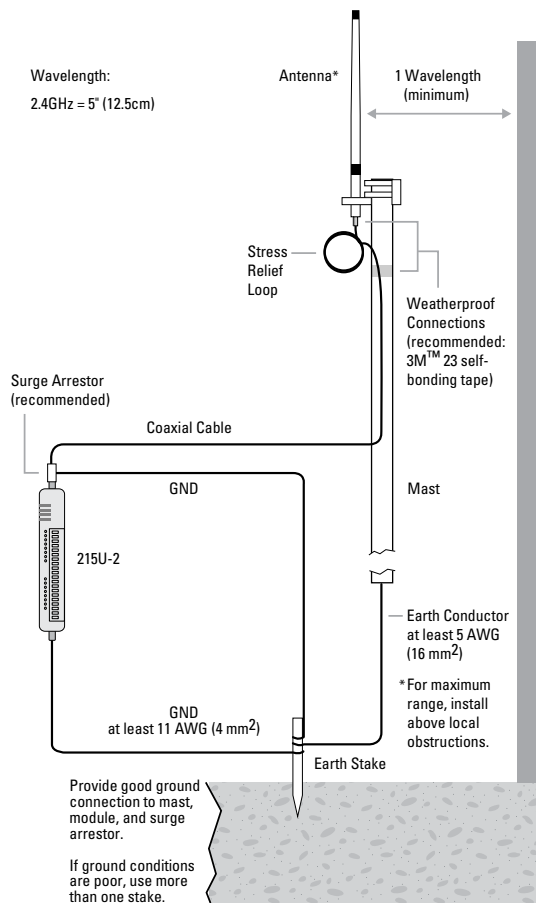


## Connecting to the module for configuration

**USB:**

• USB Driver "inf" file is available from Eaton Website
• Connect to the device at 192.168.111.1
• The PC will be automatically assigned an IP address via DHCP

**Ethernet:**

• Connect to the device at the IP address on the module label
• Assign the PC a static IP address on the 192.168.0/24 subnet
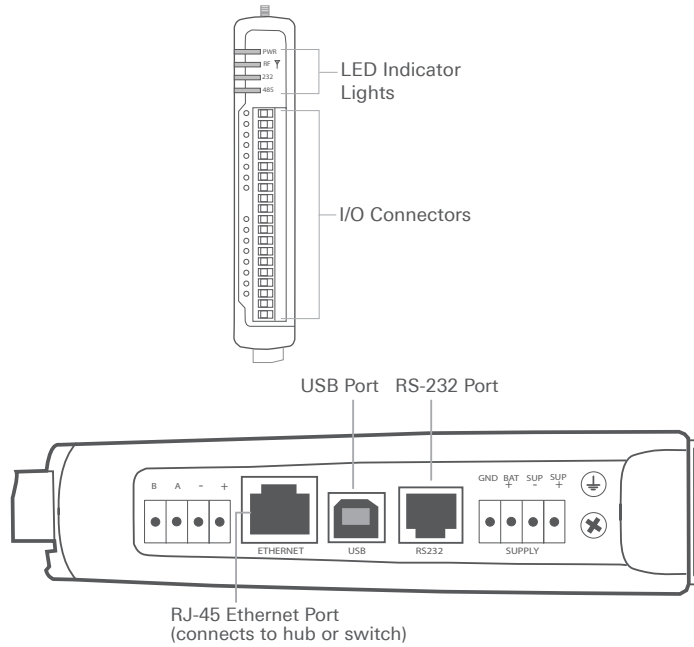
**Username:** user
**Password:** user

## SAFETY NOTICE

SELV circuits only. All voltages must be limited to 42.4VAC (peak) or 60VDC.

The following illustrations show the ports on the 215U-2.



LED Indicator Lights

I/O Connectors

USB Port   RS-232 Port

RJ-45 Ethernet Port
(connects to hub or switch)

## Power supply wiring

The ground (GND) and "SUP −" terminals are connected internally to the ground terminal.

Connect the screw terminal on the end plate to ground for surge protection.



Optional 10.8–15 Vdc Lead Acid Battery

3A Fuse

15-30 Vdc Supply
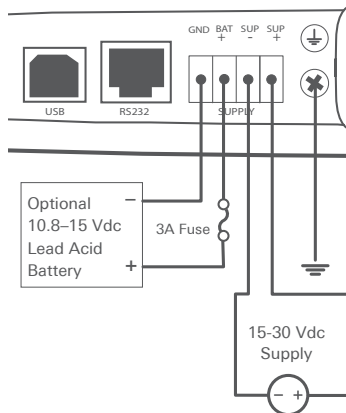
## Expanson I/O power and RS-485 serial connection

An on-board RS-485 terminating resistor provides line termination for long runs.

Enable terminating resistors at far end of the RS-485 cable.
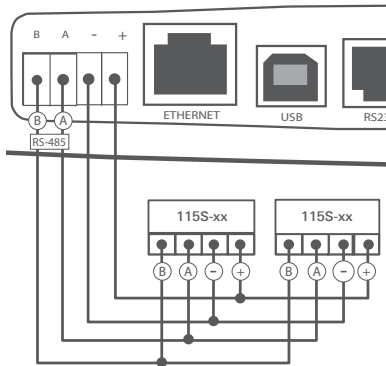


115S-xx   115S-xx

**F·A·T·N**

*Powering Business Worldwide*

## Configuration switches

Use the DIP switches in the side access panel to select analog input voltage and current, and default configuration settings.
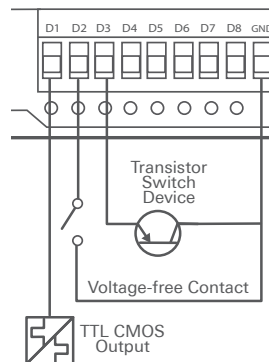
Side Access Panel

USB Host

Configuration Switches



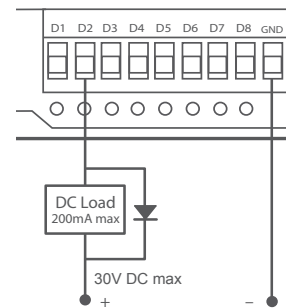| DIP | DESCRIPTION |
|-----|-------------|
| 1 | AI3 current/voltage |
| 2 | AI3 current/voltage |
| 3 | AI4 current/voltage |
| 4 | AI4 current/voltage |
| 5 | Unused |
| 6 | Enables default configuration |
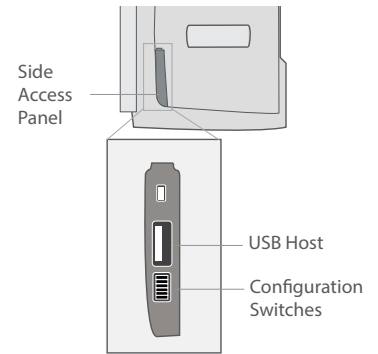
## Input and output connections

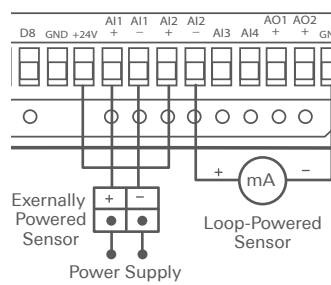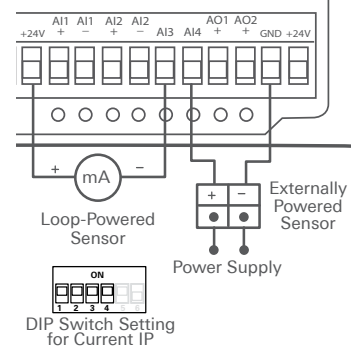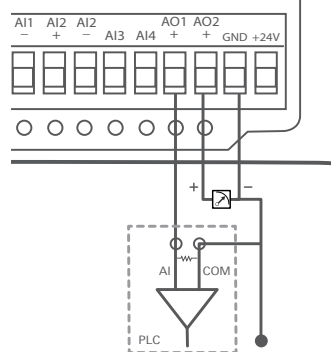The digital input/output channels can be wired as inputs or outputs.

**Digital input**



D1 D2 D3 D4 D5 D6 D7 D8 GND

Transistor Switch Device

Voltage-free Contact

TTL CMOS Output

**Digital output**



D1 D2 D3 D4 D5 D6 D7 D8 GND

DC Load 200mA max

30V DC max

**Differential 4-20mA inputs (AI1, AI2)**



Exernally Powered Sensor

Power Supply

Loop-Powered Sensor

**Single-ended 4-20mA input (AI3, AI4)**



Loop-Powered Sensor

Externally Powered Sensor

Power Supply

DIP Switch Setting for Current IP

**Analog output (0 - 20mA)**



AI   COM

PLC

**Single-ended voltage input**
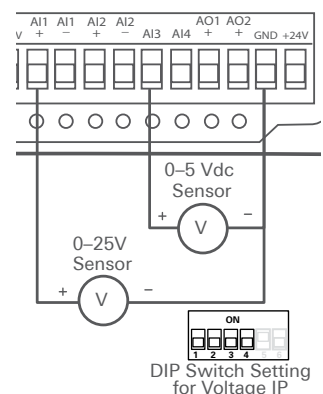


0–5 Vdc Sensor

0–25V Sensor

DIP Switch Setting for Voltage IP

Eaton is a registered trademark.

All other trademarks are property of their respective owners.