Estimated installation time = 15-30 minutes

Wiring Details

Figure 1.1

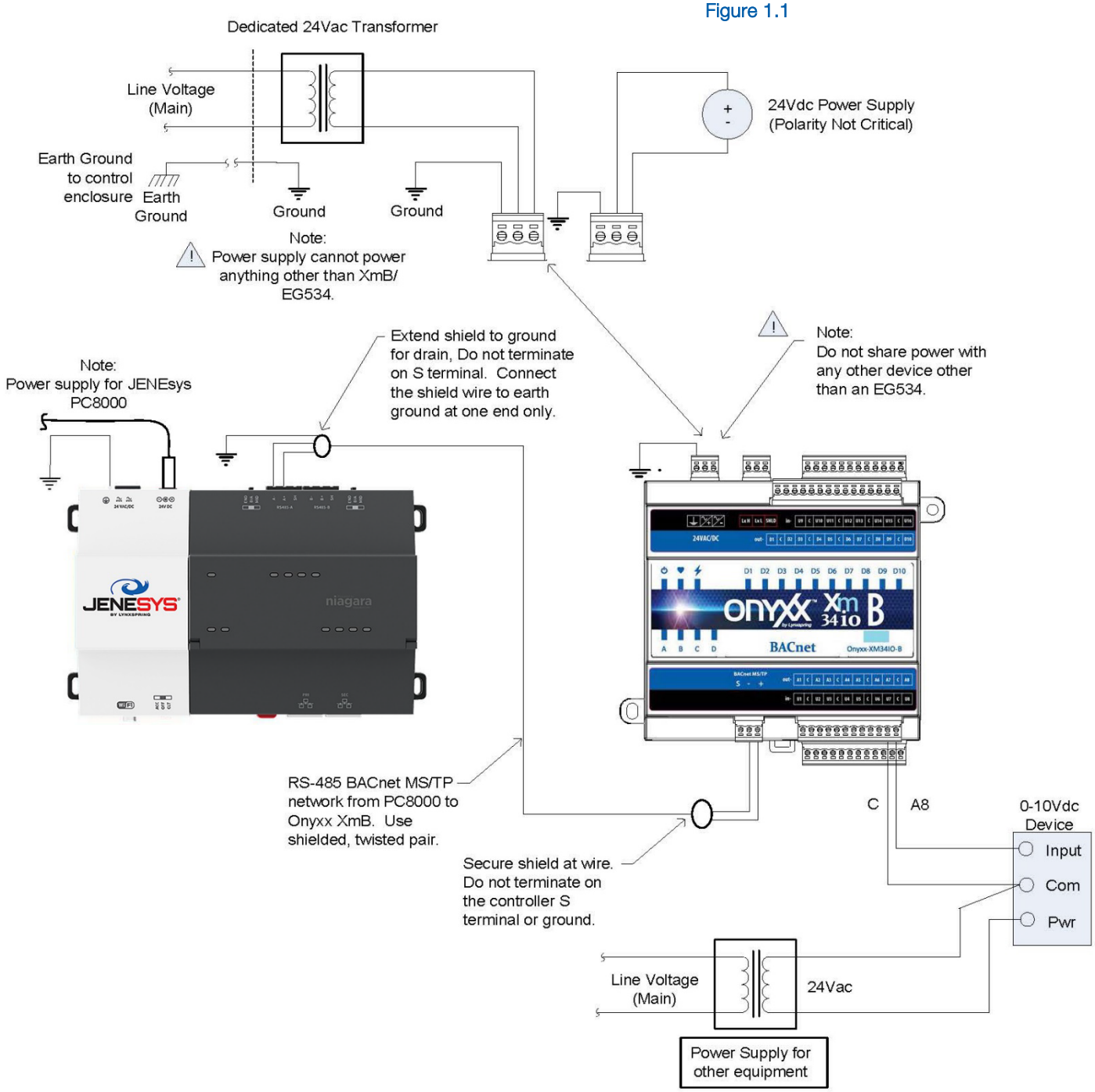
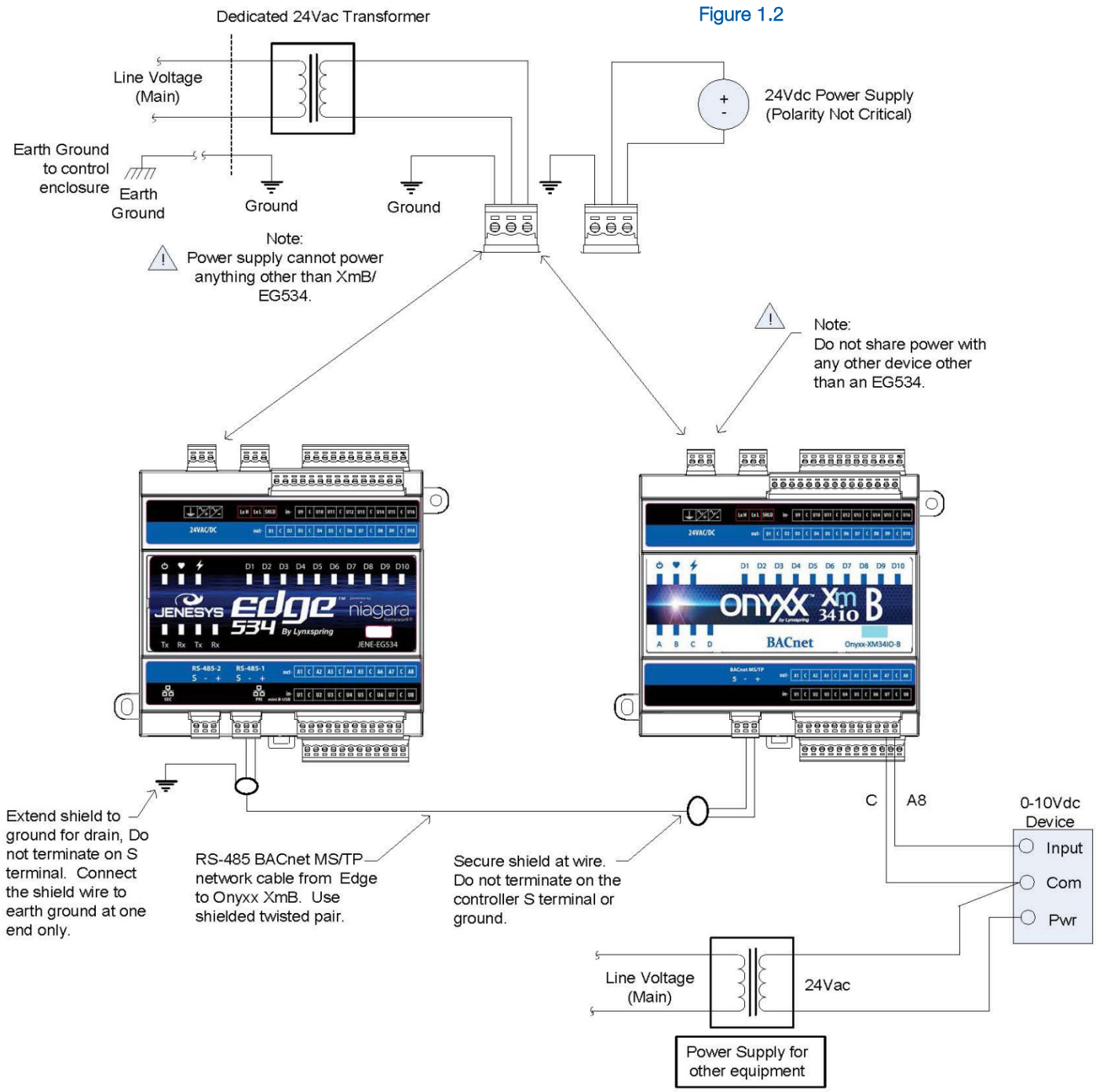


Figure 1.2



Power Wiring

The Onyxx XM 34IO-B can be powered by wiring it to a dedicated Class 2, 24 Vac/dc transformer or power source. Do not ground either side of the secondary of a 24 Vac transformer. As shown in Figure 1.1 and Figure 1.2, the Onyxx XM 34IO-B's 3-position power connector (black) is located at the top corner of the unit. Unplug the connector from the device and make connections to it as shown.

Note: Do not apply 24 Vac power (reinsert connector plug into the Onyxx XM 34IO-B) until all other wiring is completed, including Onyxx XM 34IO-B inputs and outputs. Do not power other equipment with it.

Inputs

Each of the 16 universal inputs can support any one of the following:

- ✓ Binary Resistive Input Point
- ✓ Resistive Analog Input Point
- ✓ Voltage Analog Input Point
- ✓ Current Analog Input Point

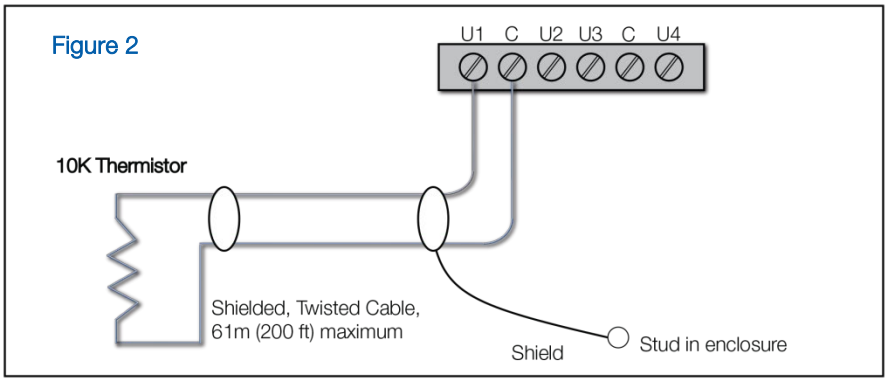
Resistive Analog and Binary Resistive Input Points 0-100 K ohms

[Includes Type 3 Thermistors]

The inputs can read a resistive signal within a range from 0 to 100,000 ohms.

Note: The universal input option is optimized to provide the best resolution around the 10 K ohm range. For a sensor with a range far from 10 K ohms (such as a 100-ohm or 1000-ohm type), resolution will be poor. To use such a sensor, it is recommended you install a transmitter that produces a Vdc or mA signal, and then wire the transmitter to the UI according to the 0–10 Vdc or 4–20 mA instructions.

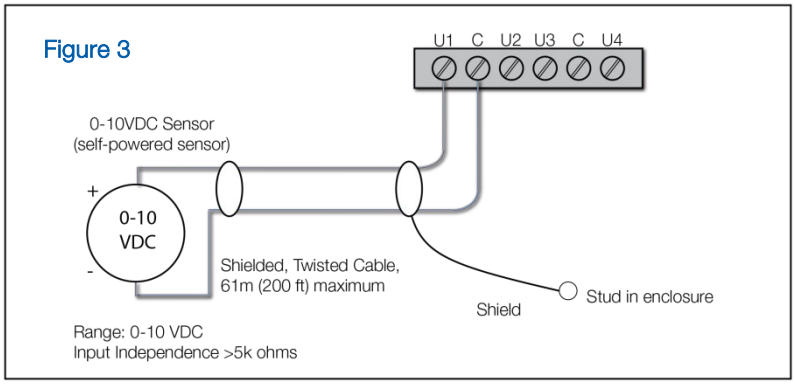
Figure 2



Voltage Analog Input Points 0-10 Vdc

The inputs support self-powered 0–10 Vdc sensors. Input impedance is greater than 5 K ohms. 0–10-volt accuracy is ± 2% of span, without user calibration. Figure 3 shows the wiring diagram.

Figure 3



2900 NE Independence Ave
Lees Summit, MO 64064
sales@lynxspring.com
1 (877) 649-5969

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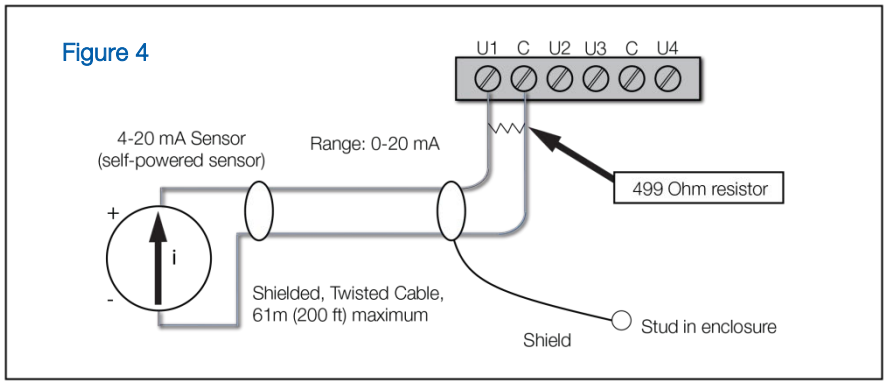
Current Analog Input Points 4-20 mA

The inputs support self-powered 4–20 mA sensors. Input accuracy is ± 2% of span, without user calibration. Figure 4 shows the wiring diagram, which requires a 499-ohm resistor wired across the input terminals.

Figure 4



Outputs

There are ten (10) N.O. digital relay outputs and eight (8) 0–10 volt analog outputs.

Binary Output Point

Each relay output is rated at 24 Vac or Vdc at 0.5A. Figure 5 shows an example wiring diagram.

Note that the 15-position DO connector has common terminals marked “C” that are isolated from each other. This is useful if controlled loads are powered from different circuits.

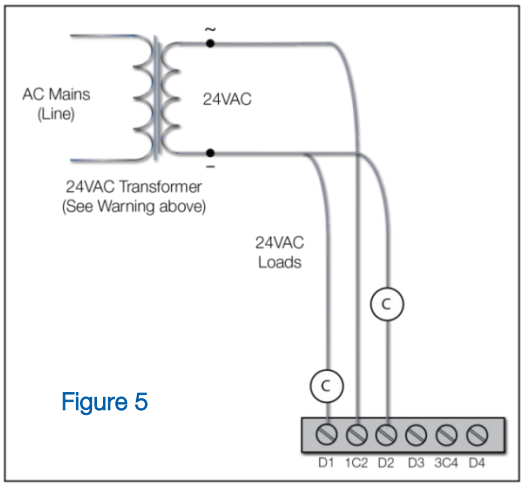


Figure 5

LED Indicators

LED indicators are provided to display status and activity. Become familiar with these indicators for a quick visual device reference.

The **Power LED** is illuminated when 24 V power is applied to the device.

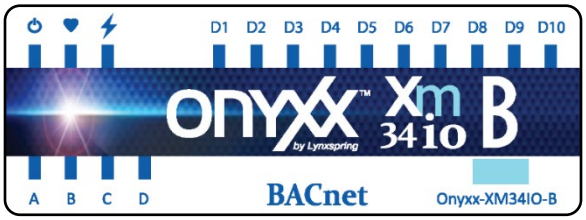
The **Heartbeat LED** beats on/off once per second during normal operation.

The **Lightning Bolt LED** shows internal software communication.

An LED status indicator for each relay (D1–D10) is located on the cover (Figure 6). Under normal operation, each digital status LED indicates activity as follows:

- Off – relay high-impedance/no current flows
- On – relay low-impedance/load current flows; relay is closed and the load is powered

Figure 6



Analog Output Point

Analog outputs (AO) are referenced by the terminals labeled “A(n)” and “C” (ground). Each AO can supply a maximum of 20 mA over the entire 0 to 10 Vdc range. The minimum input impedance of a device controlled by an AO must be greater than 2500 ohms. Typical wiring for an AO is shown in Figure 7.

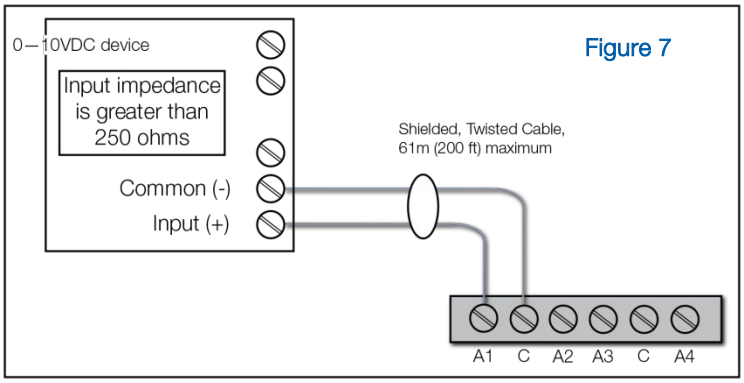


Figure 7

For further reference, please visit our Lynxspring YouTube channel.

2900 NE Independence Ave
Lees Summit, MO 64064
sales@lynxspring.com
1 (877) 649-5969

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