



Description:

The WC-31M Dual Contact/ Thermistor Input and Dual Output Controller and Router is a multi-functions wireless I/O controller operating on the Intelliway Mesh Network. The controller delivers exceptional data performance combined with reliable controls that provide uninterrupted communication. It incorporates integrated ModBus and wireless communication to achieve flexible connections.

Application:

The WC-31M is designed to perform tasks, process data and relay wireless signal in the sensor network. There are two configurable inputs which can support dry contact inputs and 30K NTC thermistor. There are also two form C digital outputs which respond to the corresponding commands from EC1, Pan coordinator. The WC-31M is easy to install and use. It provides customers with reliable data connection, low implementation cost and low power requirement.

The Intelliway Mesh Network is scalable, highly flexible and be configured to the application's needs. Our solution can be easily designed and tailored to address the sensor network management requirements.

RF Specifications

RF Classification	802.15.4 ISM Band Device (Instrument /Scientific / Medical)
Frequency	2.4 GHz 15 Channels
Network Architecture	Full Mesh Network
Transmit Power	18 dBm Typical
Receive Sensitivity	-99 dBm
Device Classification	Full Function Device Mesh Router Repeater
Line of Sight Range	Up to 1,400 Feet / 425 Meters

Pulse Input Configurations

Period	Pulse accumulation period adjustable 60 - 3,600 Seconds
Local Storage on WC31M	8 Bin Interval Storage Periods per Input
Pulse Frequency Resolution	10 Hz (10 Pulses Per Second) max
Period	100 Milliseconds min
Pulse Width	30 Milliseconds min

Hardware Specifications

Power Requirements	Operates on 24 VAC 50/60 Hz or 12 VDC
Inputs (Two Separate)	Configurable via Mesh Network Dry Contact-Pulse or 30 K Ohm Thermistor "Type J" Curve
Outputs (Two Separate)	Form C Relays (Com/NC/NO) Rated at 1 Amp - 30 VAC VDC
Communication Port	RS 485 RTU ModBus 9600 to 19200 baud
Transmission Interval	Selectable 10 - 1,800 Seconds
LED Status Indicator	Device Indicates Transmission

Mechanical Specifications

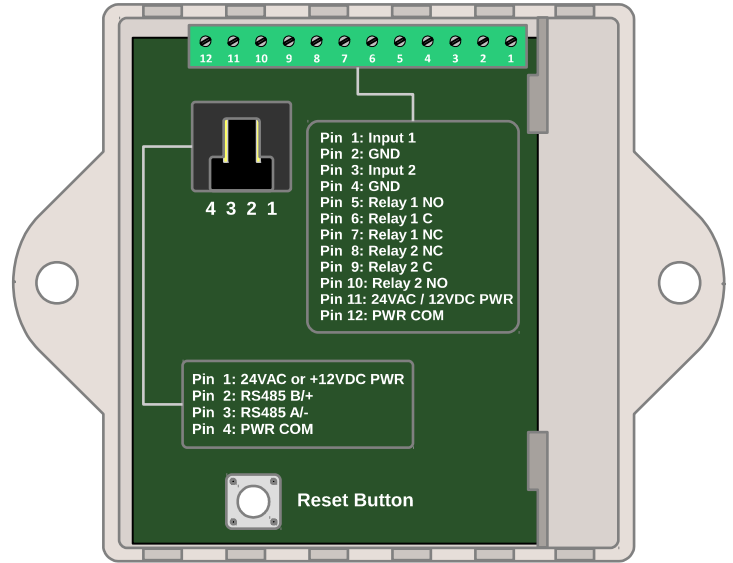
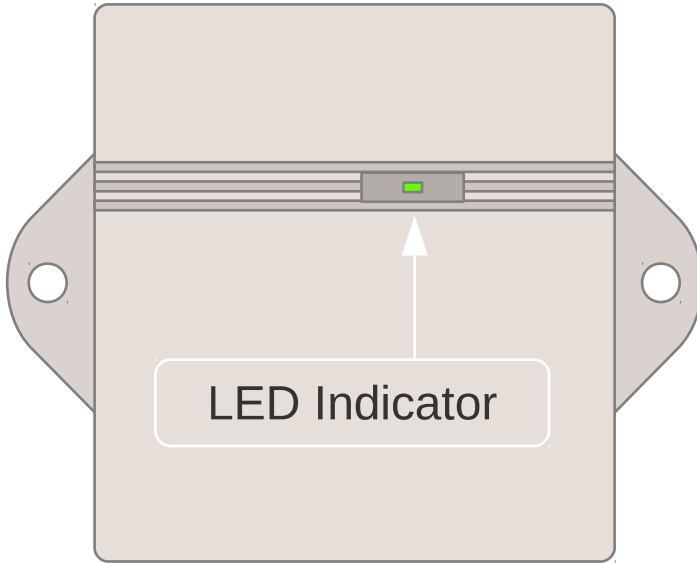
Dimensions	Height (H): 2.97 in. (75.4 mm) Width (W): 2.77 in. (70.4 mm) Depth (D): 1.38 in. (35.2 mm)
Mounting Holes	0.2 in. (5.0 mm) apart 3.31 in. (84 mm)

Environmental

Enclosure	ABS-VO Plastic
Operating Temperature	-20°F to 145°F / -28°C to 63°C
Storage Temperature	-40°F to 176°F / -40°C to 80°C
Operating RH	5-95% Non-Condensing
Storage RH	5-95% Non-Condensing

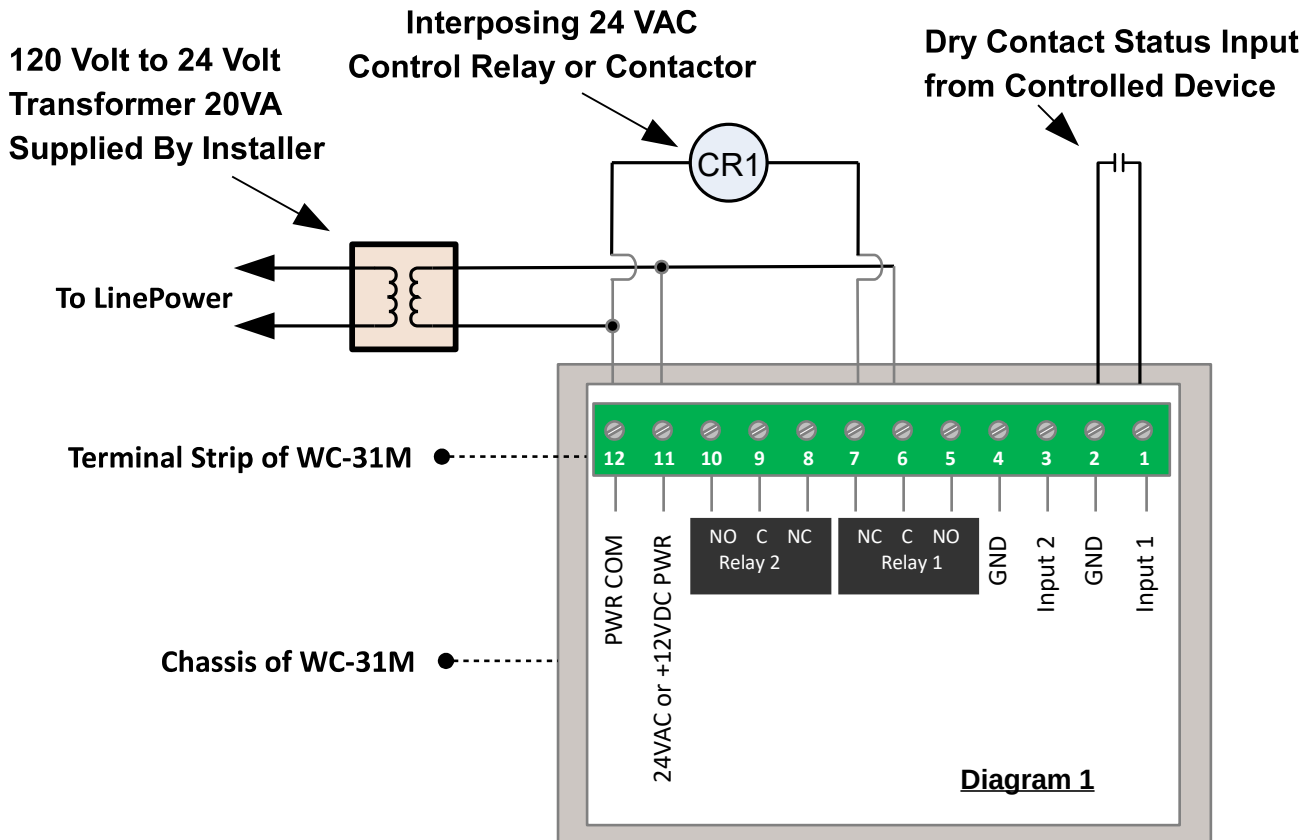
Product front view

Product back view

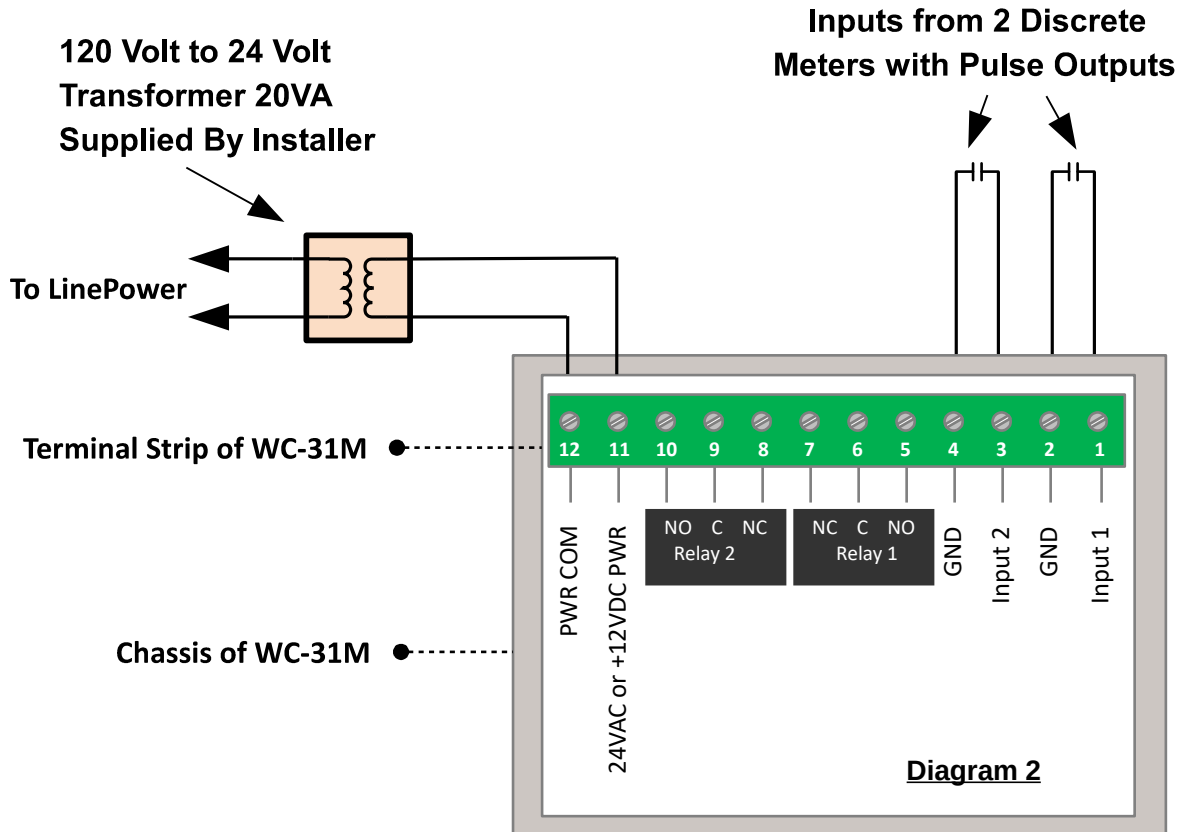


Application Example

In the Diagram 1, the Dry Contact Status Input from the Controlled Device is connected to Input 1 of the WC-31M Controller. Relay 1 from the WC-31M Controller is connected to the Control Relay or Contactor.



In the Diagram 2, Inputs of the WC-31M are configured as Dry/Contact – Pulse Inputs connected to two separate meters with Pulse Outputs. The WC-31M provides 8 interval storage bins per Input configurable between 60-3,600 seconds per bin, as well as total pulse accumulation.



In this example, WC-31M is used to monitor water usage and leakage. In the Diagram 3, Inputs of the WC-31M are configured as Dry/Contact – as illustrated in the diagram, Water Pulse Meter sends pulse to Input 2 while Input 1 listens to status from Leak Sensor and Manual Switch. If Leak Sensor is activated by Water Leakage or Manual Switch is close, WC-31M will send signal to turn off Water Valve.

