

Warrick® Series 19MR Controls

Installation and Operation Bulletin

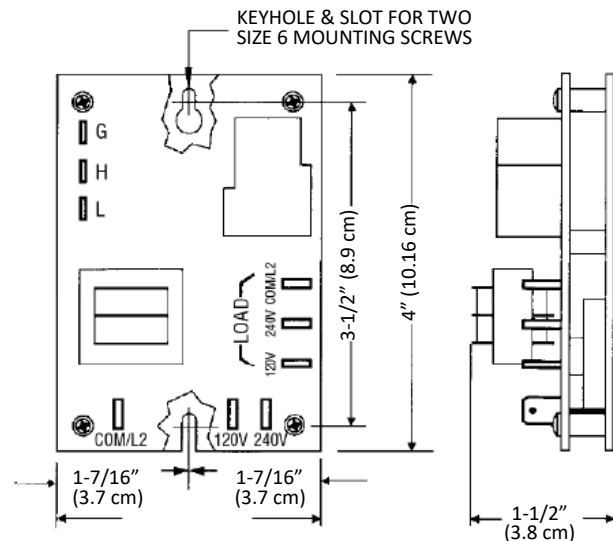
This bulletin should be used by experienced personnel as a guide to the installation of series 19MR controls. Selection or installation of equipment should always be accompanied by competent technical assistance. We encourage you to contact Gems Sensors or its local representative if further information is required.

Installation

1. Install the control in an appropriate enclosure using two size six screws.
2. Wire control per diagram, following N.E.C. and local codes. Use appropriately sized spade terminals. For 120 VAC operation, wire the "COM/L2" to the spade lug marked "COM/L2". Wire the 120 VAC wire to the "120V" spade lug.
3. For 240 VAC operation, wire the "C" COM/L2 to the spade lug marked "COM/L2". Wire the 240 VAC wire to the "240V" spade lug.
4. Wire the load per diagram on next page. Be sure the load is wired to the proper terminal: 120V loads wired to the "120V" terminal and COM, "240V" loads wired to "240V" terminal and COM.

Applications

Series 19MR performs **pump-up motor control for carbonators**. When the liquid level in the carbonator falls below the low probe, Series 19MR turns on the motor to pump up the liquid. The control eliminates the need for contactors because it can handle the motor load directly. Series 19MR provides level control in applications for which pump-up or pump-down service is necessary, or where the motor load must be handled directly. **Consult factory for recommendations for your system.**



Specifications

Control Design:	Open Circuit Board
Contact Design:	SPST: One Normally Open (N.O.) Powered Contact
Contact Ratings:	30 Amp @ 240 VAC, Resistive
Contact Life:	Mechanical - 10,000,000 Operations Electrical - 250,000 Operations Minimum at Rated Load
Supply Voltage:	120 or 240 VAC +10% -15% 50/60 Hz
Supply Current:	Relay Energized at 4.4 VA
Secondary Circuit:	11 VAC RMS Voltage on Probes. 1.5 milli-amp Current.
Sensitivity:	Models Operate from 4.7K to 100K Maximum Specific Resistance
Temperature:	0° to 150°F Ambient
Terminals:	Probe Connections 3/16" Spade: Line and Power Connections 1/4" Space
Status Indicator:	LED Indication for Pump Off. LED Off When Pump is On.

Operation of Series 19MR Controls

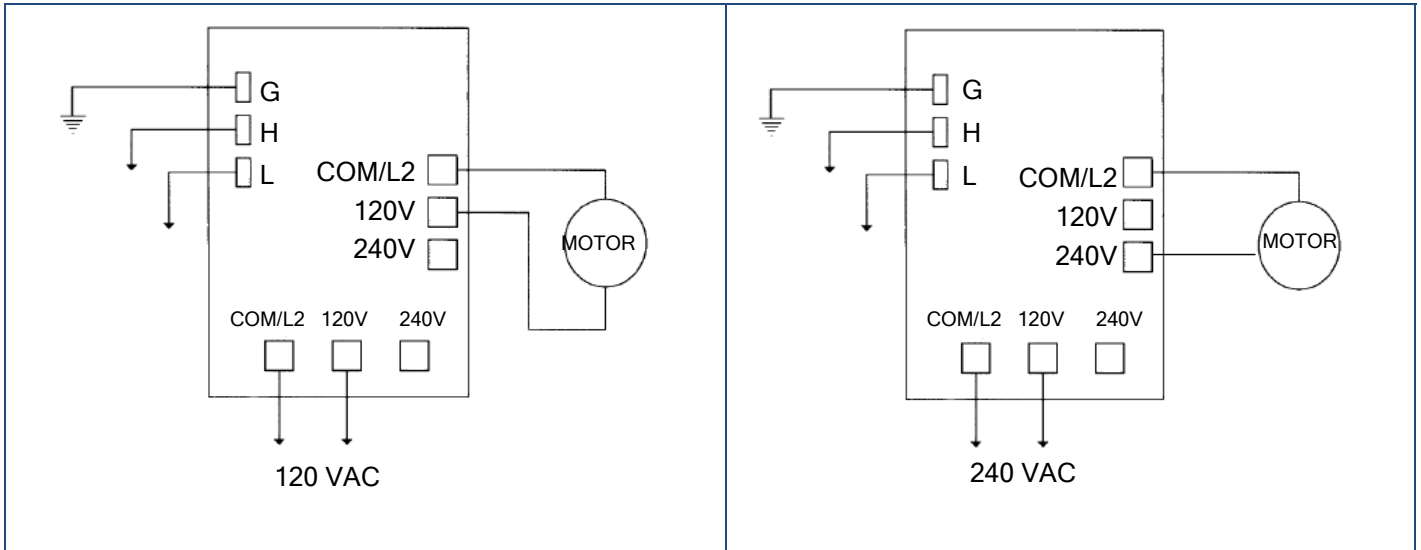
Differential Service

Inverse Mode, Pump-Up: When the liquid rises to the high electrode (“H” probe), the control de-energizes the relay. The pump turns off the LED is off. The control remains de-energized until the liquid recedes below the long probe (“L” probe).

Direct Mode, Pump-Down: When the liquid rises to the high electrode (“H” probe), the control energizes the relay. The pump turns on the LED is on. The control remains energized until the liquid recedes below the long probe (“L” probe).

Single Level Service

Place jumper between the “H” and the “L” terminals. Use terminals “G” and “H” for the probe connections.



19MR X X

- Enclosure Option
0-None, 1-NEMA 1, 4-NEMA 4
- Mode of Operation
A-Direct Mode: 11,000 Ohms
B-Direct Mode: 19,000 Ohms
C-Inverse Mode: 11,000 Ohms
D-Inverse Mode: 19,000 Ohms

Caution: 19MR contacts are powered contacts. When power is applied to the 19MR controller, power may be present on relay output connections. Output voltage will be same as input voltage.