

Warrick® Series 16M Submersible Pump Control Installation and Operation Bulletin

Series 16M Submersible Pump Control For Automatic Low Water Cut-Off and Reset Protection

General

The submersible pump control system consists of a Series 16M Liquid Level control system which operates from two Series 3W Electrodes, suspended at desired levels in the well. Properly installed, the control system will provide reliable automatic low level cut-off and reset for submersible pumps and deep well turbines. The well may be operated at full capacity without the danger of pumping air or sand. Bearings are protected against burn-out as the control system only allows operation when there is a constant supply of water over the intake of the pump or turbine.

Operation

The illustration to the left shows a typical installation. The pressure switch, with its contacts wired in series with the liquid level load contacts, will control the starting and stopping of the pump as required by the demand of water flowing out of the pressure tank.

The well pump cut-off electrode, suspended just above the pump, will interrupt the control circuit to automatically cutoff the pump in the event the water is pumped below this level. The pump will reset for further operation once the level is safely restored above the upper electrode.

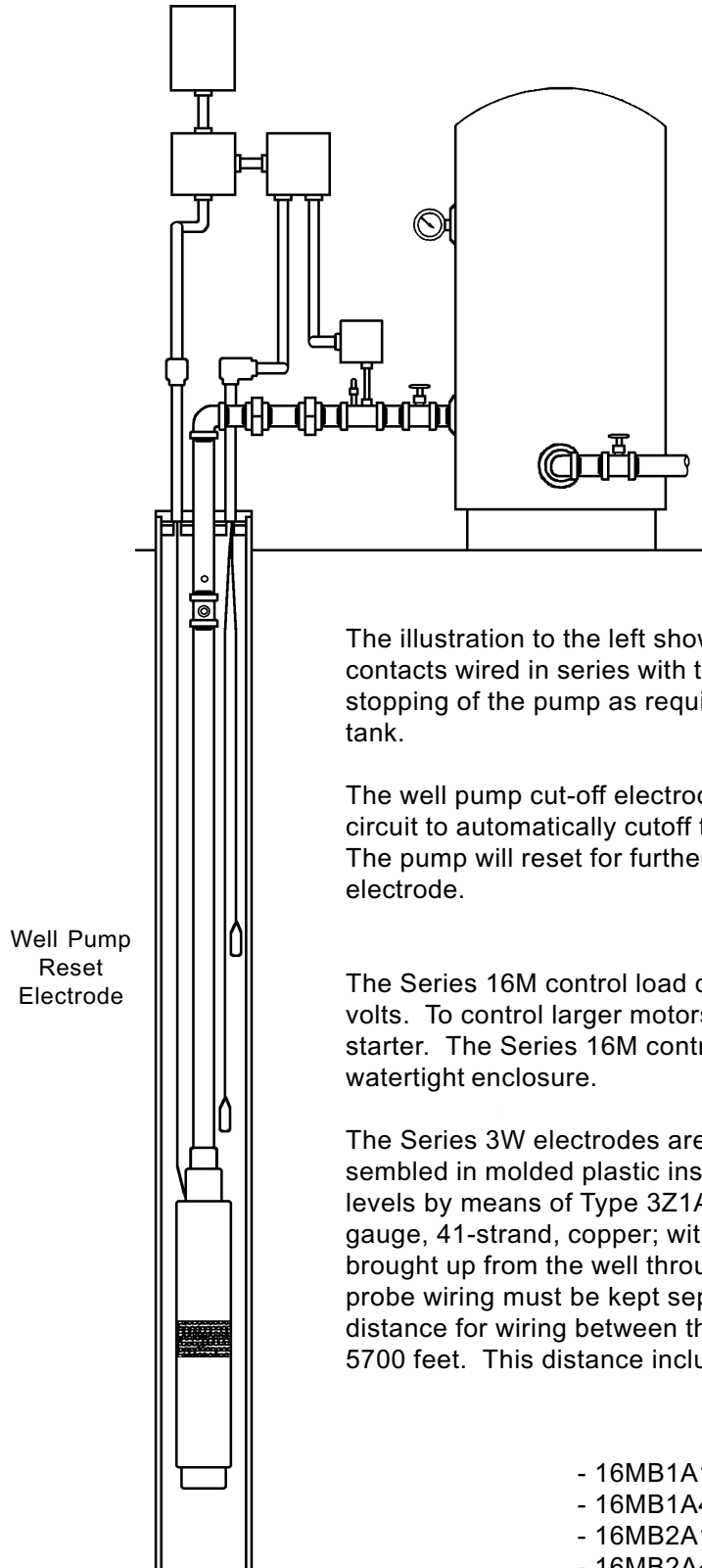
Specifications

The Series 16M control load contacts are rated 1/3 horsepower, single phase, 120 or 240 volts. To control larger motors, the Series 16M control must pilot a contactor or magnetic starter. The Series 16M controls are available in a NEMA 1 general purpose or NEMA 4 watertight enclosure.

The Series 3W electrodes are available in either brass or stainless steel and are assembled in molded plastic insulating shields. They are suspended in the well at desired levels by means of Type 3Z1A suspension wire. This wire is a single conductor, 18-gauge, 41-strand, copper; with 4/64 inch PVC insulation. The electrode wire may be brought up from the well through one of the holes in the sanitary well seal; however, the probe wiring must be kept separate from the well pump motor cable. The maximum distance for wiring between the control and the 3W electrodes in the well must not exceed 5700 feet. This distance includes the setting of the longest electrode.

Ordering Information

- 16MB1A1, 120 VAC, 50/60 HZ, NEMA 1 Enclosure
- 16MB1A4, 120 VAC, 50/60 HZ, NEMA 4 Enclosure
- 16MB2A1, 240 VAC, 50/60 HZ, NEMA 1 Enclosure
- 16MB2A4, 240 VAC, 50/60 HZ, NEMA 4 Enclosure
- 3W1, Brass Electrode
- 3W2, Stainless Steel Electrode
- 3Z1A, Suspension Wire



Well Pump
Reset
Electrode



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