

## **FILL WITH LOW LEVEL SET POINT – WITH INTERNAL DIAGNOSTIC TEST SYSTEM**

WaterLine Controls™ Model WLC-4500-XXX (50, 100, 150 or 200 depending on Sensor wire length) Specification  
Electronic Water Level Controls by Levolor®

The Model WLC-4500 WaterLine Controls as supplied by System Dynamics, Inc (WLC-4000-XXX) shall be supplied as a unit, including sensor with wire, controller and a Solenoid Valve ASCO 8221 Slow-Closing. The system shall be solid state, with non-corrosive components, NEMA 4 enclosure with all components suitable for use outdoors in an Industrial Application or mechanical room environment. The system will provide automation monitoring, fine control, ease of operation, ease of service and accessibility.

The environment water level shall be controlled automatically within a 1-1/2” range identified as “the operating range”. It will also monitor a Low Water set-point and act upon it.

Water level control system shall be comprised of a sensor and sensor housing with wire attached and installed at water level, control panel mounted at a convenient location and a solenoid valve in-line with make-up water. A second relay system shall operate a Low Water Level Alarm.

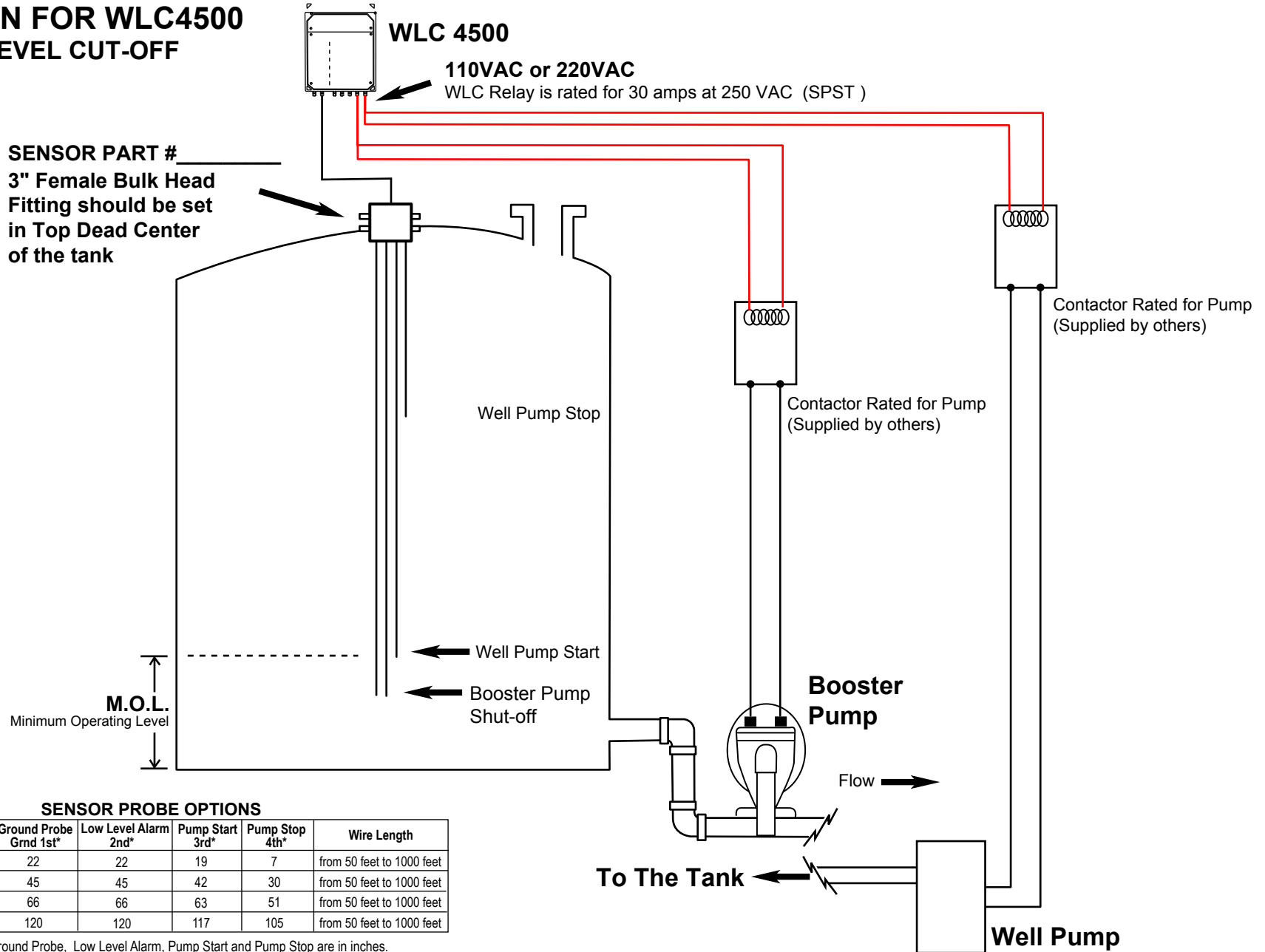
The 3” sensor housing shall be installed according to the drawings. The sensor shall be mounted at water level in a safe and convenient location according to the drawings using the “U” bolts provided. The sensor assembly shall be of solid state construction and contain four sensing probes made of stainless steel. Units with floats or moving parts will not be considered as approved equals and shall be rejected.

The Sensor shall be connected to the control panel with a maximum of 200 ft of wire provided as part of the sensor. The wire comes in 50ft increments up to 200ft and cannot be spliced to extend it. Specify wire length by the ending three digits of the part number.

The control panel shall be solid state construction and approved for installation by applicable regulations and draw no more than 0.25 Amps at 110VAC and 0.125 Amps at 220VAC. All internal power relays are rated at 30Amps at 250VAC. Each output function shall have a corresponding set of normally open dry contacts rated at 0.5Amps at 60Volts to be connected to the building automation system.

Control Panel shall feature displays indicating Power, Filling, Low Water Level Alarm, a fault indicator and a test system to test the electronics portion of the controls without removing or disconnecting the probes. The system shall have a time delay between sensing and filling before initializing the solenoid valve. The system shall have a time delay between sensing and the Low Water Level Alarm before initializing the relay to activate the Low Water Level Alarm. The system will have a switch to activate the test process and it will automatically cycle through the Filling process and Low Water Level

# SPECIFICATION FOR WLC4500 FILL WITH LOW LEVEL CUT-OFF



### SENSOR PROBE OPTIONS

| Part No. | Tank Height* | Ground Probe Grnd 1st* | Low Level Alarm 2nd* | Pump Start 3rd* | Pump Stop 4th* | Wire Length               |
|----------|--------------|------------------------|----------------------|-----------------|----------------|---------------------------|
| P340-WS5 | 42 to 64     | 22                     | 22                   | 19              | 7              | from 50 feet to 1000 feet |
| P340-WS6 | 65 to 85     | 45                     | 45                   | 42              | 30             | from 50 feet to 1000 feet |
| P340-WS7 | 86 to 149    | 66                     | 66                   | 63              | 51             | from 50 feet to 1000 feet |
| P340-WS8 | 150 to 185   | 120                    | 120                  | 117             | 105            | from 50 feet to 1000 feet |

\*Tank Height, Ground Probe, Low Level Alarm, Pump Start and Pump Stop are in inches.

|  |             |                                 |            |              |  |  |  |  |             |          |
|--|-------------|---------------------------------|------------|--------------|--|--|--|--|-------------|----------|
| Blue lines are low voltage<br>Red lines are high voltage |             | <b>ELECTRONIC LEVEL CONTROL</b> |            |              | This document contains information Proprietary and confidential to SYSTEM DYNAMICS INC. It shall not be reproduced, copied or made available to others without prior written consent from SYSTEM DYNAMICS INC. |  | SYSTEM DYNAMICS, INC.<br>PO Box 12544 Scottsdale, Arizona 85260<br>1-888-905-1892<br>www.waterlinecontrols.com |  | DRAWING NO. | REV.     |
| DATE   | REVISION BY | APPROVED:                       | DWG. REF.: | NOT TO SCALE | S.O. #   |  |  |  |             |          |
|  |             | CHECKED:                        | DRAWN:     | DATE:        | P.O. #   |  |  |  |             | SHEET OF |

Alarm. The system will have a light to indicate that it is in the test mode. The “Fault” indicator will change the power LED (green) to red when the “fill” command has been “ON” for greater than six hours. After one minute it will turn back to green and the system will function normally. The system is available in 110VAC or 220VAC 50/60Hz and is hard wired into a panel for permanent installation.

Solenoid valve shall be brass and shall be sized according to the drawings and shall be normally closed, 110VAC at 0.6Amps at a peak, supplied with the level control system.

**Dimensions:**

**Enclosure:** 8-3/4” X 10-1/2” X 6” including the hinge and the latch

**Sensor assembly:** 3” diameter and 20” long

**Solenoid Valve:** 1” NPT and 110VAC made by ASCO 8221

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