



One Omega Drive, Box 4047  
Stamford, Connecticut 06907-0047  
(203) 359-1660 Telex: 996404 Cable: OMEGA  
FAX: (203) 359-7700

## INSTALLATION OF LVC512 STANDARD RELAY ELECTRONICS

This bulletin should be used by experienced personnel as a guide to the installation of LVC512 modules. Selection or installation of equipment should always be accompanied by competent technical assistance. We encourage you to contact OMEGA if further information is required.

### SPECIFICATIONS

**CONTROL DESIGN:** Solid state components enclosed in a clear Lexan plug-in style housing. Housing carries no NEMA rating.

**CONTACT DESIGN:** SPDT (1 form C): one normally open (N.O.) and one normally closed (N.C.), non-powered contacts.

**CONTACT RATINGS:** 10A @ 120, 240 VAC resistive, 1/3 H.P. @ 120, 240 VAC.

**CONTACT LIFE:** Mechanical - 5 million operations. Electrical - 100,000 operations minimum at rated load.

**SUPPLY VOLTAGE:** Standard 120 VAC, optional 24, 240 VAC models, plus 10%, minus 15%, 50/60 Hz.

**SUPPLY CURRENT:** 120, 240, 24 VAC, Relay energized 4.4 VA.

**SECONDARY CIRCUIT:** 12 VAC RMS voltage on probes, 1.5 milli-amp current.

**SENSITIVITY:** Models operate from 0-1,000,000 OHM maximum specific resistance. Field Adjustable.

**TEMPERATURE:** -40 to 150 degrees F. ambient.

**TERMINALS:** All connections #6-32 screw type terminals with pressure clamps.

**TIME DELAYS:** Standard, .5 seconds on rising level.

**LISTING:** U.L. listed, Industrial Motor Control (508).

### INSTALLATION

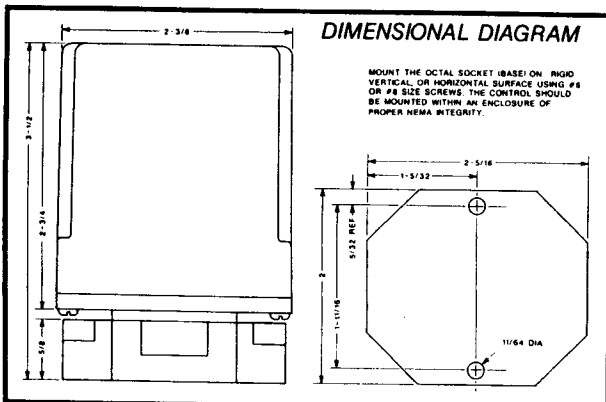
- 1) Install octal socket in appropriate enclosure using two (2) #6 or #8 metal screws.
- 1A) Install rail mount socket on appropriate rail (DIN mount) in appropriate enclosure.
- 2) Wire control per wiring diagram, following N.E.C. and local codes.
- 3) Install control module in socket.

**NOTE:** Be sure that the two set-point resistors are installed in proper location. To change sensitivity, use two 1/2 watt resistors of a value as shown on Set Point Resistor Values chart.

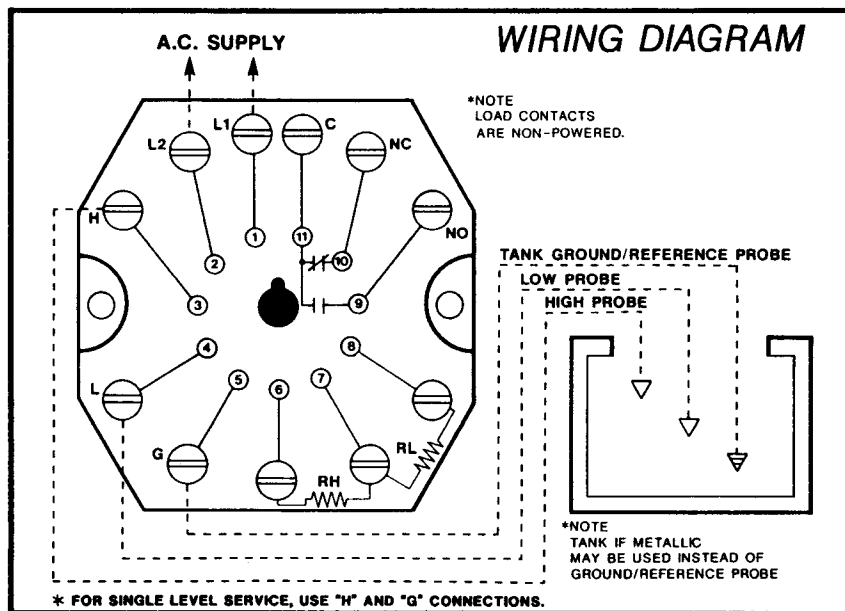
### SENSITIVITIES VS MAXIMUM PROBE WIRE DISTANCE\*

SENSITIVITY (KOHMS)	DISTANCE (FT)
4.7	10,000
10	5,700
26	2,200
50	1,075
100	570
470	270
1,000	38

\*Based on type MTW or THHN wire, #14 or #16 AWG



## OPERATION OF LVC512 STANDARD RELAY ELECTRONICS



### OPERATION

**DIRECT MODE; SINGLE LEVEL SERVICE:** Using high probe (3) and reference probe (5) terminals. When the liquid rises to the electrode on terminal 3, the control energizes, changing state of the load contacts. (LED will be lit). The control remains energized until the liquid level recedes below electrode on terminal 3. The control then de-energizes, (LED will not be lit) returning load contacts to original state.

**INVERSE MODE; SINGLE LEVEL SERVICE:** Using high probe (3) and reference probe (5) terminals. Control energizes with power, changing the state of the load contacts. (LED will be lit). When the liquid rises to the electrode on terminal 3, the control de-energizes, returning load contacts to shelf state. (LED will not be lit). The control remains de-energized until the liquid level recedes below electrode on terminal 3. The control then energizes.

**DIRECT MODE; DIFFERENTIAL SERVICE:** When the liquid rises to the electrode on terminal 3, the control energizes, changing the state of the load contacts. (LED will be lit). The control remains energized until the liquid level recedes below electrode on terminal 4. The control then de-energizes, (LED will not be lit) returning load contacts to original state.

**INVERSE MODE; DIFFERENTIAL SERVICE:** Control energizes with power, (LED will be lit) changing the state of the load contacts. When the liquid rises to the electrode on terminal 3, the control de-energizes, returning load contacts to shelf state. (LED will not be lit). The control remains de-energized until the liquid level recedes below electrode on terminal 4. The control then energizes.

### OPTIONAL:

**Time Delays:** With time delay on increasing level, the liquid must be in contact with the short electrode for the full duration of the time delay before control will operate. With delay on decreasing level, the liquid must be below long electrode for the full duration of the time delay before control will operate. In single level service, 3 and 4 terminals must be jumpered together to achieve time delays on both increasing and decreasing levels or just decreasing level.

<b>SET POINT RESISTOR VALUES</b>	
<b>SENSITIVITY DESIRED (KOHM)</b>	<b>RESISTOR VALUE (KOHM)</b>
4.7	4.7
10	10
26	24
50	51
100	91
470	330
1000	620