

# MODEL 409D

# Liquid Level Controller

- Automatic control of liquid level
- Solid-state sensing circuit
- Adjustable sensitivity
- 5-Year Unconditional Warranty



FRONT VIEW



TOP VIEW

## DESCRIPTION

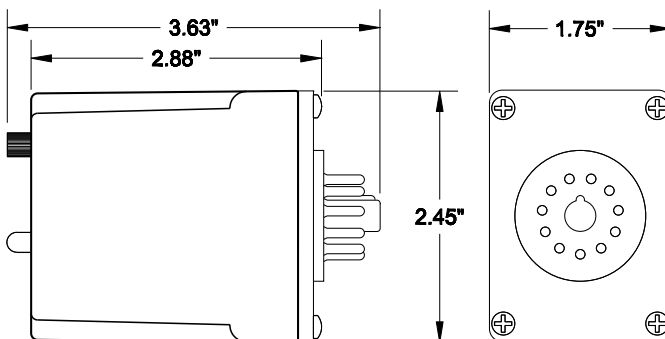
The Model 409D is a compact, socket-mount device for level control of conductive liquids. The internal relay is energized when operating power is applied. When the liquid level reaches the probe, the relay de-energizes. When the level drops below the probe, the relay will reset. A fixed, 300 millisecond time delay prevents oscillation due to wave action. Probe cables may be shielded or unshielded. If the liquid container is made of a non-conductive material, a common electrode is required. Other features include an LED indicator to show the output relay status and an adjustable sensitivity setting. Requires a standard 11-pin octal socket (such as the Time Mark model 51X016).

## SPECIFICATIONS

Model	409D	
Operating voltages	24 VAC:	20-30 VAC, 50-400 Hz
	120 VAC:	90-140 VAC, 50-400 Hz
	230 VAC:	200-250 VAC, 50-400 Hz
Power consumption	2.5W	
Transient Protection	2500VRMS for 10ms	
Probe voltage (open circuit)	15 VRMS	
Probe current	5mA maximum	
Sensitivity adjust	1K ohms-100K ohms	
Contacts	DPDT	
Contact Rating	7.5A @ 240 VAC resistive	
Expected Relay Life	Mech:	10,000,000 operations
	Elec:	100,000 at rated load
Response Time	300ms	
Reset Time	<1 second	
Reset Method	Automatic	
Time delay accuracy	±5%	
Operating Temp	- 20° to 60° C	
Humidity Tolerance	0-97% w/o condensation	
Case Material	NORYL	
Mounting	11-Pin Socket ( **sold separately)	
Weight	4.5 oz. Max.	

\*\* Order 11-pin socket number 51X016

## DIMENSIONS



(dimensions have a tolerance of ± 0.06)



**TIME MARK**  
CORPORATION

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# MODEL 409D Liquid Level Controller

READ ALL INSTRUCTIONS BEFORE INSTALLING, OPERATING OR SERVICING THIS DEVICE.  
KEEP THIS DATA SHEET FOR FUTURE REFERENCE.

## GENERAL SAFETY

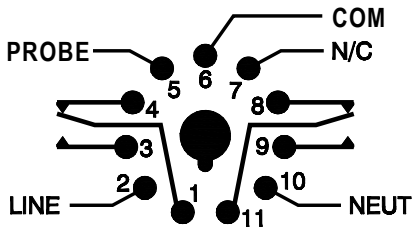
POTENTIALLY HAZARDOUS VOLTAGES ARE PRESENT AT THE TERMINALS OF THE MODEL 409D.  
ALL ELECTRICAL POWER SHOULD BE REMOVED WHEN CONNECTING OR DISCONNECTING WIRING.  
THIS DEVICE SHOULD BE INSTALLED AND SERVICED BY QUALIFIED PERSONNEL.

## Installation Instructions

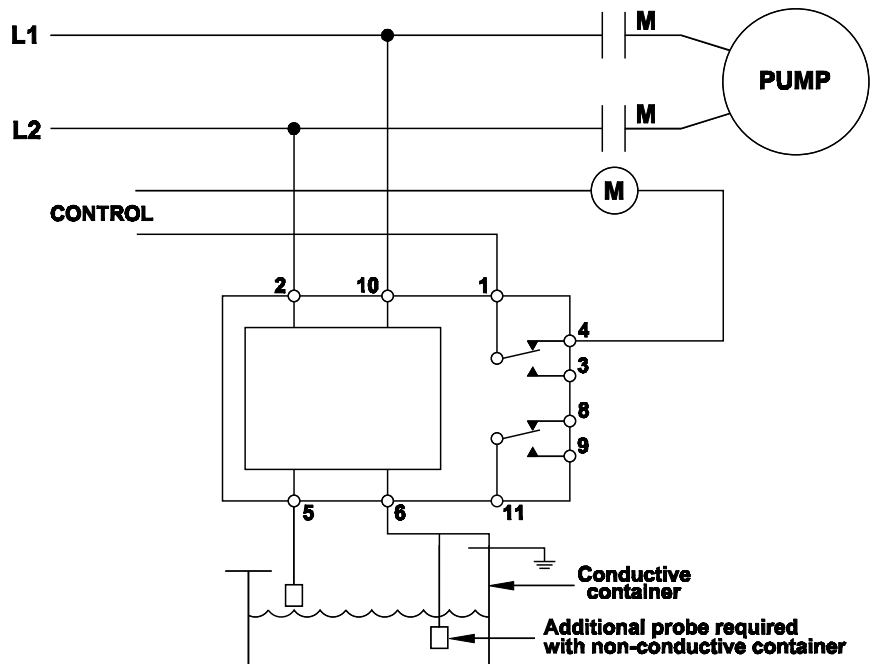
### INSTALLATION

Mount the 11-pin socket in a suitable enclosure. A NEMA-1 rated enclosure, designed for socket-mounted relays, is available from Time Mark (part no. 980498).

Referring to the pin diagram on this page or on the unit connect appropriate AC operating power. Connect the probes as needed, and connect the output relay as appropriate.



### TYPICAL APPLICATION



### ADJUSTMENT

Adjust the sensitivity as needed.

### WARRANTY

This product is warranted to be free from defects in materials and workmanship, and is covered by our exclusive 5-year Unconditional Warranty. Should this device fail to operate for any reason, we will repair it for five years from the date of manufacture. For complete warranty details, see the Terms and Conditions of Sales page in the front section of the Time Mark catalog or contact Time Mark at 1-800-862-2875. .



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