



OPERATING INSTRUCTION MANUAL

Manual No. 313
Revision 2-584

MODEL 11
LIQUID LEVEL CONTROL SYSTEMS

GLI International, Inc.
Great Lakes Instruments
9020 West Dean Road
Milwaukee, Wisconsin 53224

Phone: [414] 355-3601
Fax: [414] 355-8346

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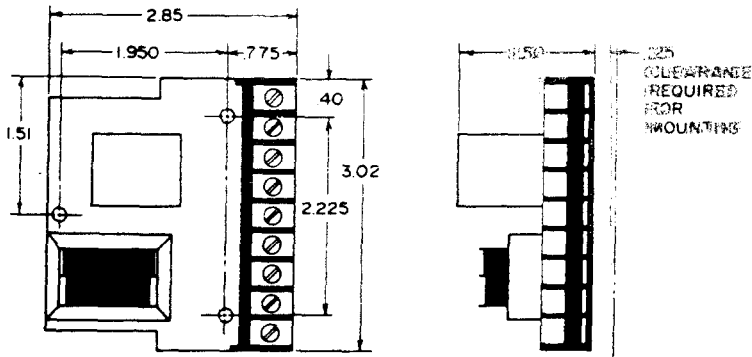


FIGURE 3-1
Controller Outline -
No Enclosure

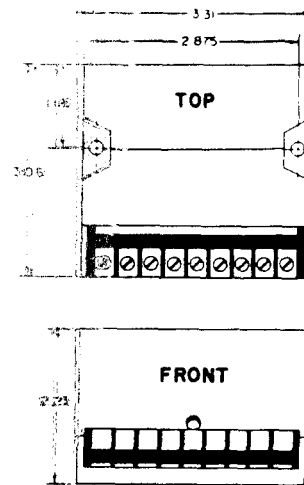


FIGURE 3-2
Controller Outline -
Plastic Enclosure

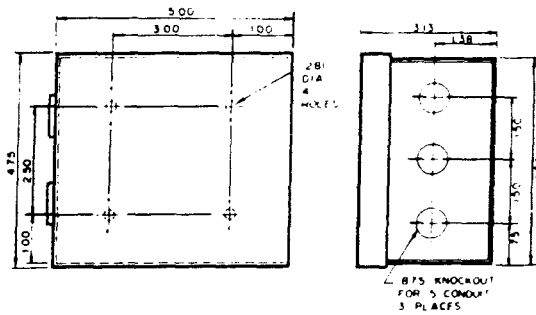


FIGURE 3-3
Controller Outline - Steel Enclosure

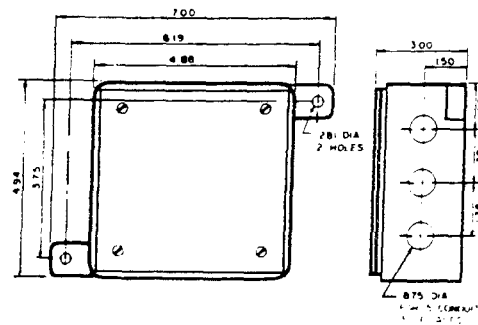


FIGURE 3-4
Controller Outline - Cast Aluminum Enclosure

3.2 ELECTRODES

3.2.1 It is recommended to install the electrodes vertically. It is possible to install electrodes in the side of a tank, but it may be impractical since the tank must be drained to a level below the electrode to remove the electrode.

3.2.2 Each electrode is mounted with a Teflon-insulated, stainless steel electrode holder (see Figure 4-5). When an optional cast aluminum electrode mounting hardware enclosure is supplied, the electrode holder(s) is factory-installed. To install an electrode holder directly into a tank, drill an 11/16" dia. clearance hole, insert the electrode holder and fasten it with a 3/8"-18 NPT nut.

NOTE: If a pressure seal is required, it is recommended to use Teflon tape on the mounting threads.

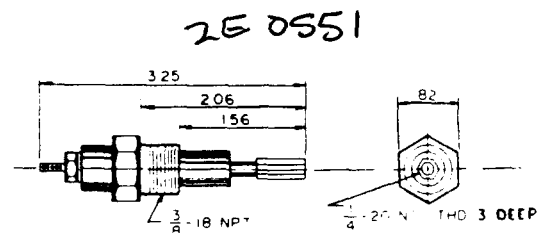
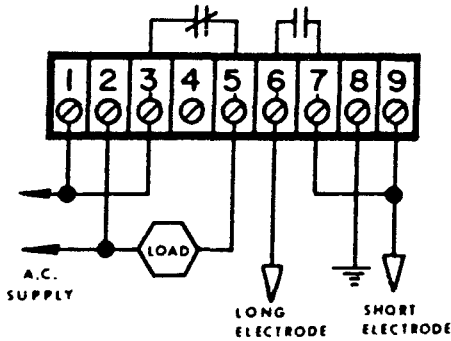


FIGURE 3-5
Electrode Holder

EXTERNAL WIRING DIAGRAMS

DIAGRAM A

Differential level service. Pump up.

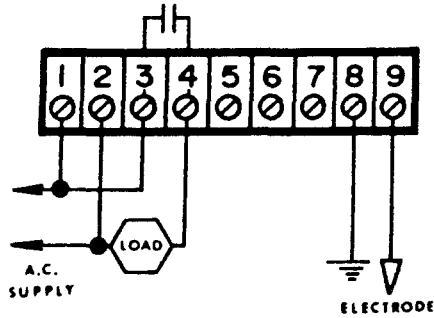


Load contacts 3-5 open when the level rises to the short electrode connected to terminal 9. They close when the level recedes below the long electrode connected to terminal 6.

Terminal 8 is grounded and tank is assumed metallic and grounded. If tank is insulated a third electrode is required and is connected to terminal 8. This electrode must be immersed at all times.

DIAGRAM C

Single level service. High level alarm or low level cutoff.

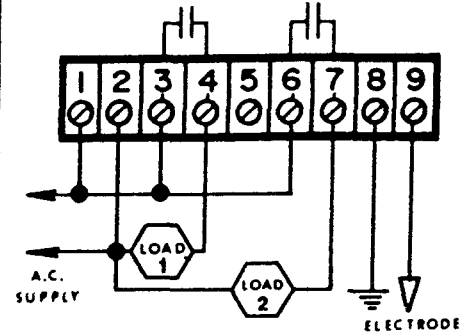


Load contacts 3-4 close when level reaches the electrode and open when level drops below the electrode.

Terminal 8 is grounded and tank is assumed metallic and grounded. If tank is insulated a second electrode is required and is connected to terminal 8. This electrode must be immersed at all times.

DIAGRAM E

Single level service. High level alarm or low level cutoff.

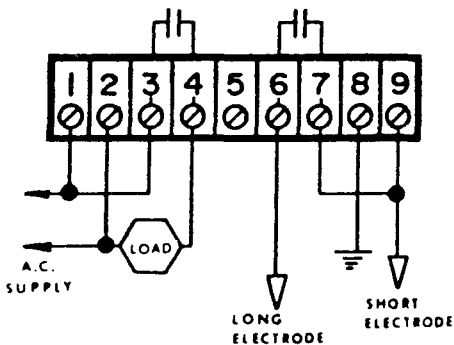


Load contacts 3-4 and 6-7 close when level reaches electrode. They open when level drops below the electrode.

Terminal 8 is grounded and tank is assumed metallic and grounded. If tank is insulated a second electrode is required and is connected to terminal 8. This electrode must be immersed at all times.

DIAGRAM B

Differential level service. Pump down.

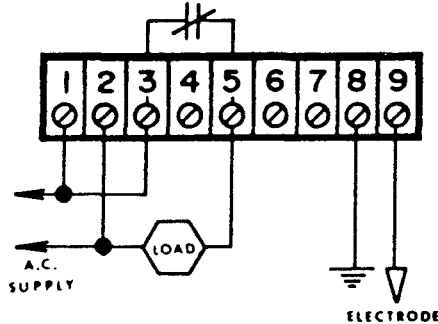


Load contacts 3-4 close when the level rises to the short electrode connected to terminal 9. They open when the level drops below the long electrode connected to terminal 6.

Terminal 8 is grounded and tank is assumed metallic and grounded. If tank is insulated a third electrode is required and is connected to terminal 8. This electrode must be immersed at all times.

DIAGRAM D

Single level service. Low level alarm or high level cutoff.

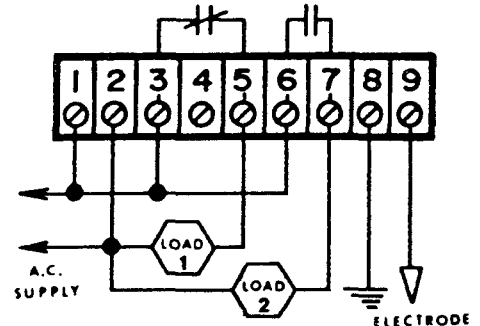


Load contacts 3-5 open when level reaches the electrode and close when level drops below the electrode.

Terminal 8 is grounded and tank is assumed metallic and grounded. If tank is insulated a second electrode is required and is connected to terminal 8. This electrode must be immersed at all times.

DIAGRAM F

Single level service. High or low level cutoff alarm.



Load contacts 3-5 open when level reaches electrode and load contacts 6-7 close when level reaches electrode. Load contacts 3-5 close when level drops below electrode and load contacts 6-7 open.

Terminal 8 is grounded and tank is assumed metallic and grounded. If tank is insulated a second electrode is required and is connected to terminal 8. This electrode must be immersed at all times.

