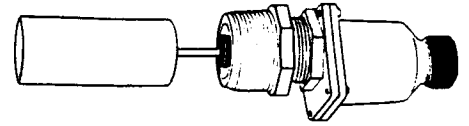




**LV-1201, LV-1202, LV-1203**  
**Non-Magnetic, Side Mount**  
**Liquid Level Switches**  
Operator's Manual: M0776/0499



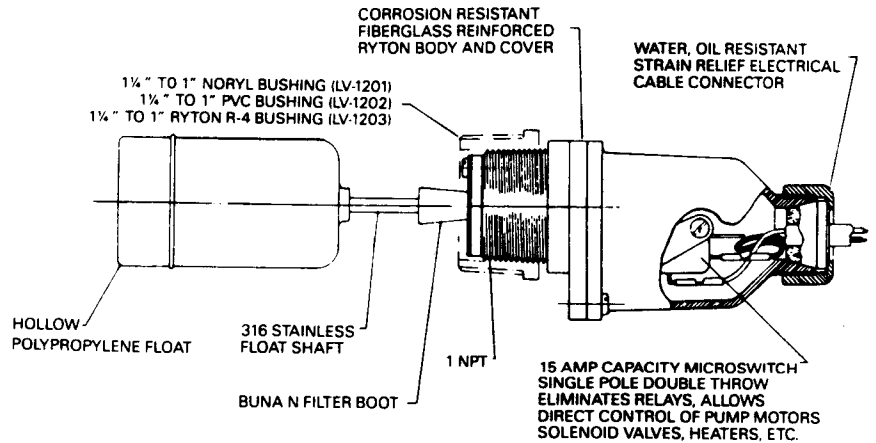
### GENERAL DESCRIPTION

The OMEGA® LV-1200 Series Level Switches feature a non-magnetic design suitable for application where magnetic particles (ie: rust) are present. The LV-1200 Series features a plastic and 316 SS construction, or a Hastelloy C construction for more corrosive applications.

The LV-1200 Series can be used in highly particle contaminated liquids such as sewage, machine cutting oils and medium slurries under conditions of crystallization below liquid surface, drying-caking at liquid-air interface, and scum formations. With the LV-1200 Series, particle contamination resistance is provided by a flexible filter boot which prevents crystallization, caking, heavy dirt concentration, slurries, scum, etc, from affecting the operation of the unit.

### FEATURES

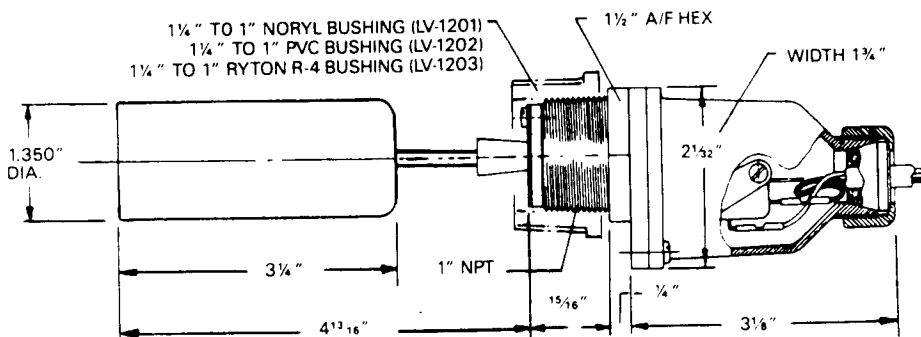
- Rugged Industrial Design
- Non-Magnetic Design Suitable for Rusty Environments
- 15A SPDT Switch Directly Controls Pump



## SPECIFICATIONS

<b>RELAY SWITCH:</b>	SPDT 15A @ 125 or 250 Vac; 10,000,000 operations medium
<b>MAX. TEMPERATURE/ PRESSURE:</b>	Model LV-1201: 75 PSIG @ 75°F, 200 PSIG @ 50°F; Models LV-1202 & LV-1203: 50 PSIG @ 200°F, 100 PSIG @ 75°F;
<b>LIQUID LEVEL CHANGE TO ACTIVATE SWITCH:</b>	¼"
<b>MIN. SPECIFIC GRAVITY:</b>	Model LV-1201: 0.6; Models LV-1202 & Model LV-1203: 0.7
<b>WETTED PARTS:</b>	LV-1201: Noryl (a phenylene oxide based resin), 316 SS, Buna N; LV-1202: Ryton, 316 SS, Buna N, PVC; LV-1203: Ryton R-4, Hastelloy C, Viton
<b>WATER RESISTANT STRAIN RELIEF FITTING:</b>	For cable diameters 0.250" ± 0.025"
<b>WEIGHT:</b>	¼ lb.

## INSTALLATION DIMENSIONS



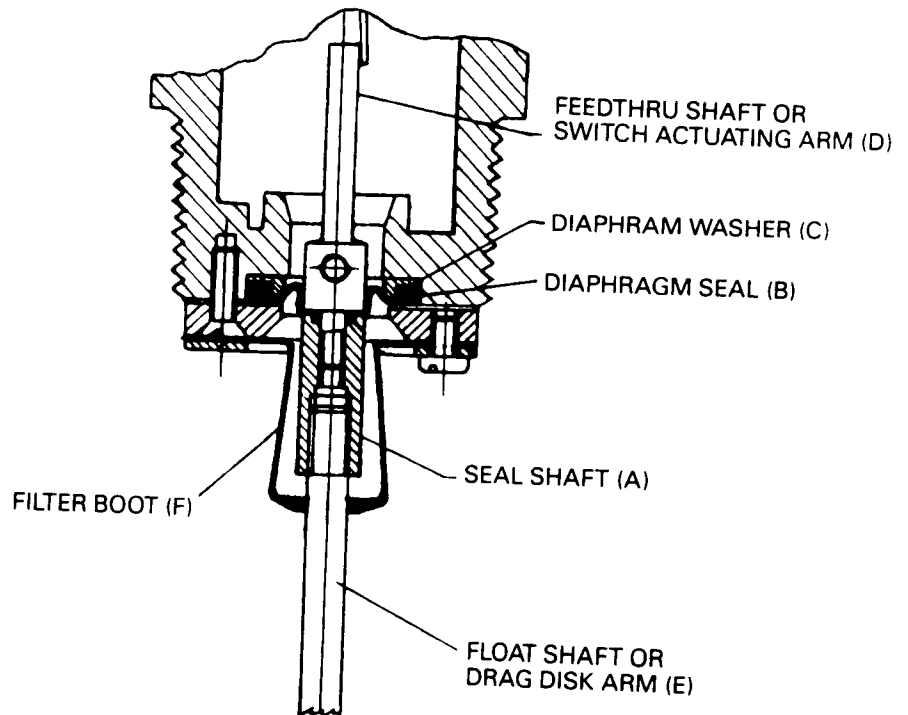
### INSTALLATION WARNING

THE 1 1/2" x 1 1/4" PVC BUSHING (WHITE OR GREY) SUPPLIED WITH THE LV-1200 SERIES CAN BE CRACKED IF THE CENTER BODY IS FIRST TIGHTENED INTO THE BUSHING. CRACKING PROBABILITY IS REDUCED IF THE BUSHING IS FIRST TIGHTENED INTO THE PIPE OR TANK FITTING AND THEN THE CENTER BODY TIGHTENED INTO THE BUSHING.

### ASSEMBLY WARNING

THE LV-1200 SERIES EMPLOY AN EXTERNAL SEAL SHAFT (A), A FLEXIBLE ELASTOMER DIAPHRAGM SEAL (B), AND AN INTERNAL FEEDTHRU SHAFT OR SWITCH ACTUATING ARM (D) — REFER TO DIAGRAM BELOW. ALL THREE ELEMENTS ARE ASSEMBLED AND LOCKED IN PLACE WITH LOCITE ADHESIVE. TO PREVENT RUPTURE OF SEAL AND LEAKAGE INTO SWITCH AREA, IT IS CRITICALLY IMPORTANT THAT TORQUE NOT BE APPLIED TO SEAL SHAFT (A), FLOAT SHAFT (E), OR DRAG DISK ARM (E), DURING CHANGE OF FLOAT OR DRAG DISK.

IF FLOAT SHAFT OR DRAG DISK ARM (E) REQUIRE REPLACEMENT, IT IS NECESSARY TO REMOVE FILTER BOOT (F). SEAL SHAFT (A) MUST THEN BE HELD FIRMLY IN A VISE OR WITH PLIERS WHILE (E) IS UN-THREADED AND A NEW SHAFT IS ASSEMBLED.



### WARNING

LV-1200 Series are NOT explosion-proof devices.

## INSTALLATION AND OPERATION

The LV-1200 Series Liquid Level Switch is for side-mounting ONLY. It is supplied with a 1 1/4" x 1" bushing (Noryl, Model LV-1201; PVC, Model LV-1202, and Ryton R-4 for Model LV-1203) threaded in place with 2 to 3 wraps of Teflon tape, which must be intact or renewed if the bushing and switch are separated before assembly in tank. Care must be exercised when threading the bushing into plastic or metal fittings. Apply a minimum of 2 to a maximum of 3 wraps of Teflon tape to the threads of the bushing. This is especially important if the unit is to be used in metal fittings where coarse metal threads could gall plastic if not lubricated. The plastic bushing CAN BE CRACKED if the main body of the level switch is tightened into it FIRST. Cracking will not occur if the bushing is FIRST tightened into the pipe or tank fitting and THEN the LV-1200 body is tightened into the bushing.

Therefore:

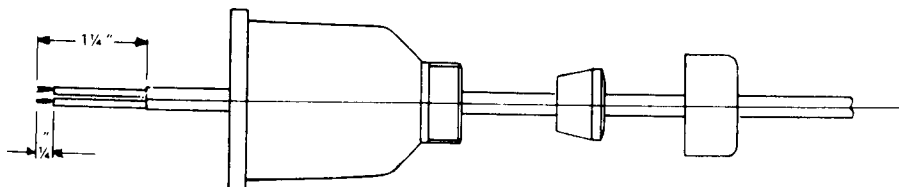
- Step 1. Teflon tape thread and tighten plastic bushing into pipe or tank fitting.
- Step 2. Teflon tape thread and tighten the LV-1200 Switch into plastic bushing by applying wrench to hexagon section. Repeat Steps 1 and 2 until the arrow on the body points UPWARD and the threads are leak tight.

### NOTE

Plumber's tools such as pipe wrenches are not recommended. If possible, use a 'Rigid' type wrench where the smooth jaws closely fit the hexagon section.

## ELECTRICAL WIRING

1. Remove the gland nut, grommet and switch cover.
2. Strip the outer jacket of the electrical cord back approximately 1 1/4". Strip the insulation from the individual conductors back approximately 1/4".
3. Slip on terminals are supplied with each switch. Remove them from the switch terminals and crimp on or solder to the electrical leads.
4. Feed the electrical cable through the gland nut, grommet and switch cover as shown below.



5. Apply slip on terminals to appropriate contacts of the microswitch.
6. Slide the cover down the cable and fasten it to the body of the switch with the 4 screws provided.
7. Slide the grommet down the cable until the outer jacket is level with the small end of the grommet and then push the grommet into the tapered end of the cover.
8. Hold the cable jacket to prevent rotation and thread the gland nut firmly onto the cover.

Figure 1: Wiring Schematic for power applied to the load when the liquid level is less than the set point (power to the load is interrupted when the level increases to above the set point).

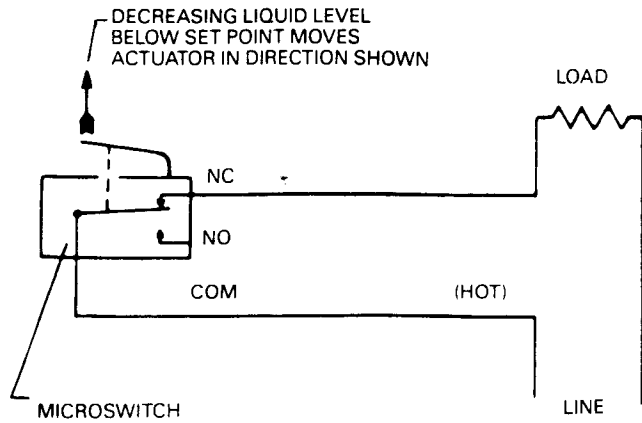
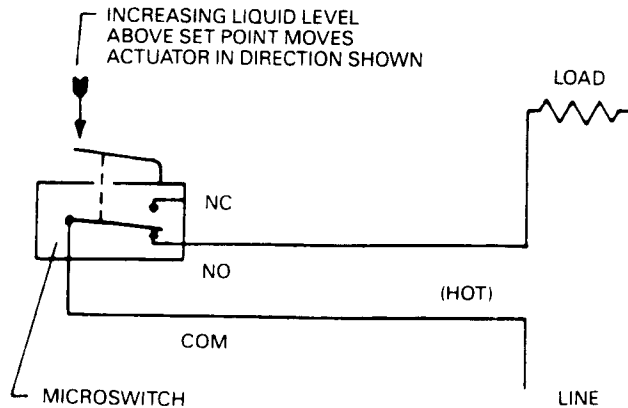
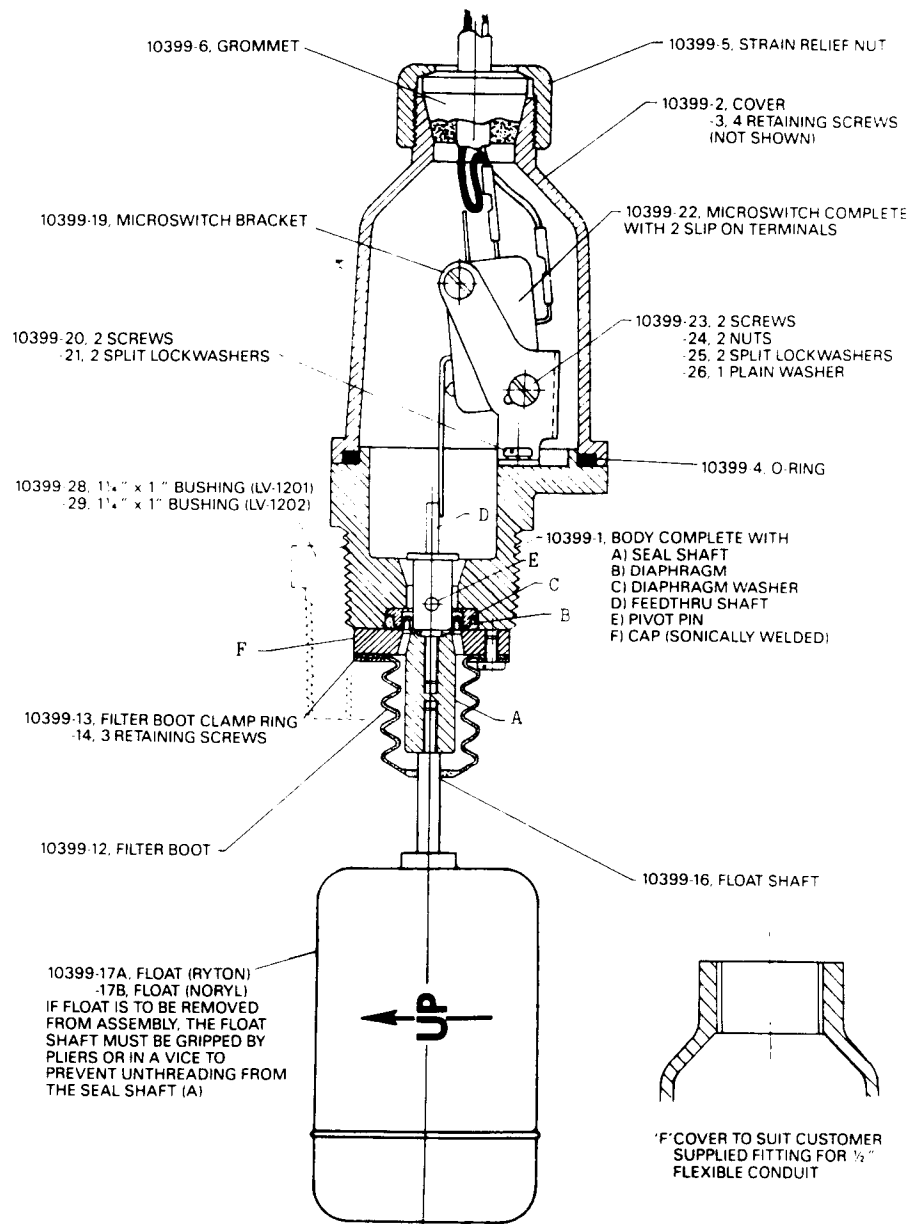


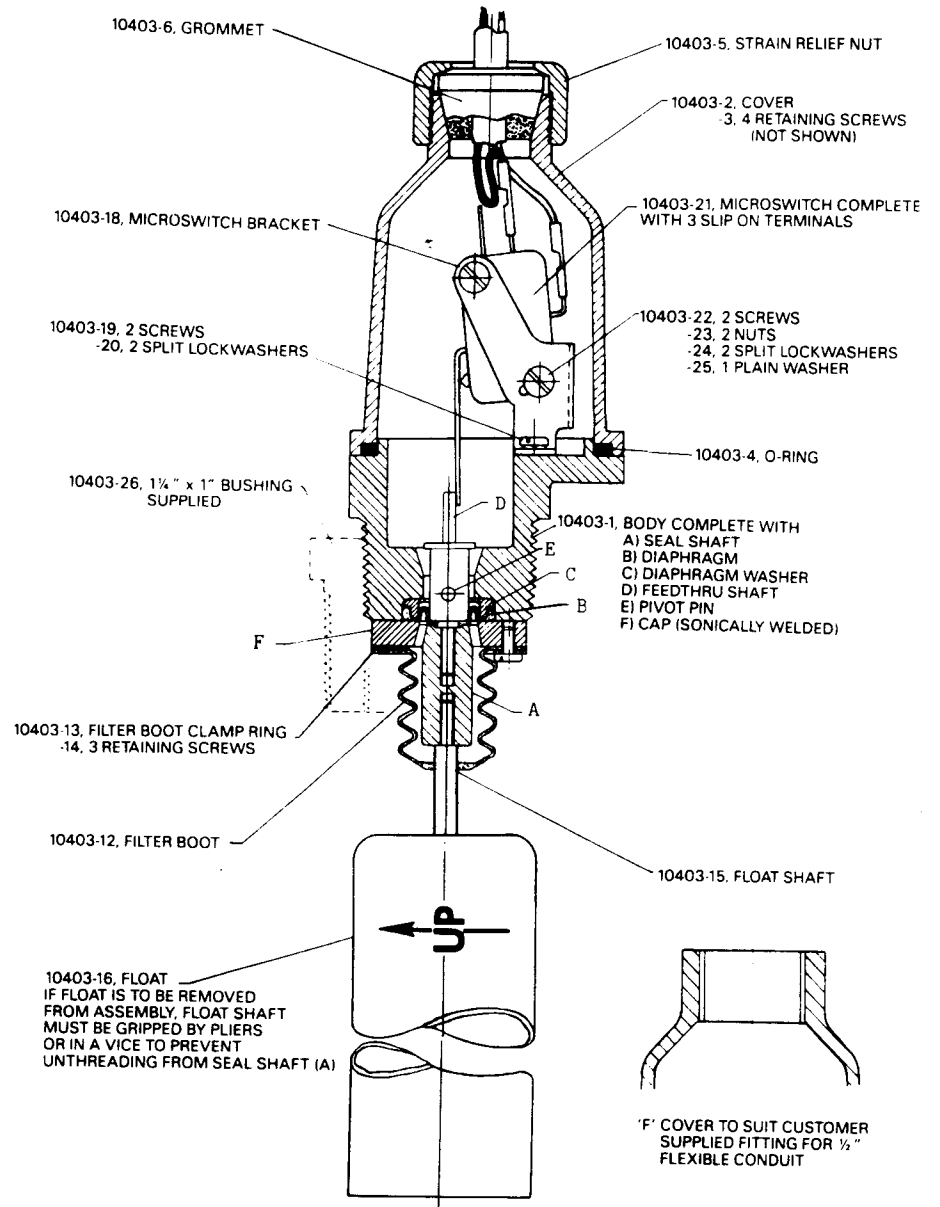
Figure 2: Wiring Schematic for power applied to the load when the liquid level is greater than the set point (power to the load is interrupted when the level decreases to below the set point).



Microswitch actuation point may be monitored by an audible click or with an OHM meter before connecting the line power to the terminal strip or by monitoring the voltage supplied to the load through the microswitch.



**LV-1201 AND LV-1202 PARTS LIST DIAGRAM**



LV-1203 PARTS LIST DIAGRAM

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 FAX: +44 (0) 161 777-6622  
 ISO 9002 Certified



**WARRANTY**

OMEGA warrants this unit to be free of defects in materials and workmanship and to give satisfactory service for a period of **13 months** from date of purchase. OMEGA Warranty adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product. If the unit should malfunction, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective it will be repaired or replaced at no charge. However, this WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of being damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components which wear or which are damaged by misuse are not warranted. These include contact points, fuses, and triacs.

**OMEGA is glad to offer suggestions on the use of its various products. Nevertheless, OMEGA only warrants that the parts manufactured by it will be as specified and free of defects.**

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**SPECIAL CONDITION:** Should this equipment be used in or with any nuclear installation or activity, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the equipment in such a manner.

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Direct all warranty and repair requests/inquiries to the OMEGA ENGINEERING Customer Service Department. **BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS).** The assigned AR number should then be marked on the outside of the return package and on any correspondence.

**FOR WARRANTY RETURNS,** please have the following information available BEFORE contacting OMEGA:

1. P.O. number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

**FOR NON-WARRANTY REPAIRS OR CALIBRATION,** consult OMEGA for current repair/calibration charges. Have the following information available BEFORE contacting OMEGA:

1. P.O. number to cover the COST of the repair/calibration,
2. Model and serial number of product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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