

Installation, Operation and Maintenance Instructions for TLM series Holding Tank Level Monitor

GROCO®

This package includes:



TLM series Holding Tank Level Monitor

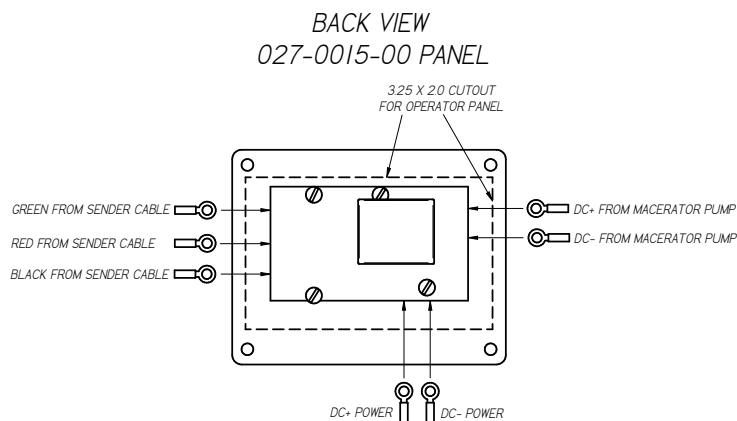


Figure-1 - Back View of Operator Panel

INSTALLATION, OPERATION AND MAINTENANCE

Concept: TLM uses simple and reliable sensing technology (floats) to indicate level in fresh water, gray water or black water tanks. The operator panel indicates 1/4 full and 3/4 full, and a push button offers momentary on/off control of a discharge pump, purchased separately. TLM is offered to fit tank depths up to 36" (1 inch increments). The number after 'TLM' specifies tank depth. Example: TLM-10 fits tanks 10" deep (top outside to bottom inside).

Installing the Sending Unit: The sending unit screws (hand tight only) into any 1-1/2" NPT threaded opening in the tank-top. If your tank does not have a threaded opening order GROCO TLM Kit. If replacing a 450 sender (3 rods) order GROCO 450 cable adaptor to complete the electrical connection.

Sending Unit Note: The blue dot on the threaded portion of the sending unit shows the orientation of the floats. Hand-tighten the sending unit so the blue dot points toward the center of the tank, and away from the sides of the tank and away from internal plumbing that would interfere with the free movement of the floats.

Installing the Operator Panel: The gasketed operator panel is suitable for wet locations such as a shower stall or head compartment. Cut a 3-1/4" wide x 2" high hole – 2" clearance behind the wall is required.

Electrical Hookup:

Sender to Panel: A 25-foot cable is supplied. Refer to Figure-1 for correct connections.

Macerator/Discharge Pump to Panel: The operator panel has a relay (25-amps max @ 12VDC (15-amps @ 24VDC). Refer to the instructions for the macerator/discharge pump (if used) for proper wire size. Refer to Figure-1 for proper DC+ and DC-pump connections. Use the ring terminals provided.

Power: Wire size for power connection to the operator panel depends on whether you are connecting a macerator/discharge pump. If no pump is connected use 14 gage wire for power connections. If a macerator/discharge pump is used, refer to the wire size selection chart below.

Operation: If the tank is 1/4 or more full, tank level will show continuously. To display tank level on demand only, cut the jumper on the back of the panel that is marked by a small yellow wire. Press 'SHOW LEVEL' to momentarily see tank capacity.

Maintenance: Periodically remove and rinse the sender.

WIRE SIZE SELECTING TABLE

1. Identify the fuse capacity required for the device.
Locate this value in the left column below **FUSE**.
2. Measure the distance from the power source to the device and back. Locate this value in the row next to **FUSE**.
3. Find fuse size, then read across to find the minimum wire size.

12V Systems

<i>12V DC SYSTEMS - DISTANCE IN FEET FROM POWER SOURCE TO MOTOR AND BACK</i>																			
FUSE	10	15	20	25	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170
5	18	16	14	12	12	10	10	10	8	8	8	6	6	6	6	6	6	6	6
10	14	12	10	10	10	8	6	6	6	6	4	4	4	4	2	2	2	2	2
15	12	10	10	8	8	6	6	6	4	4	2	2	2	2	2	1	1	1	1
20	10	10	8	6	6	6	4	4	2	2	2	2	1	1	1	0	0	0	2/0
25	10	8	6	6	6	4	4	2	2	2	1	1	0	0	0	2/0	2/0	2/0	3/0
30	10	8	6	6	4	4	2	2	1	1	0	0	0	2/0	2/0	3/0	3/0	3/0	3/0
40	8	6	6	4	4	2	2	1	0	0	2/0	2/0	3/0	3/0	3/0	4/0	4/0	4/0	4/0
50	6	6	4	4	2	2	1	0	2/0	2/	3/0	3/0	4/0	4/0	4/0				

24V Systems

<i>24V DC SYSTEMS - DISTANCE IN FEET FROM POWER SOURCE TO MOTOR AND BACK</i>																			
FUSE	10	15	20	25	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170
5	18	18	18	16	16	14	12	12	12	10	10	10	10	10	8	8	8	8	8
10	18	16	14	12	12	10	10	10	8	8	8	6	6	6	6	6	6	6	6
15	16	14	12	12	10	10	8	8	6	6	6	6	6	4	4	4	4	4	2
20	14	12	10	10	10	8	6	6	6	6	4	4	4	4	2	2	2	2	2
25	12	12	10	10	8	6	6	6	4	4	4	4	2	2	2	2	2	2	1
30	12	10	10	8	8	6	6	4	4	4	2	2	2	2	2	1	1	1	1

These tables allow for a 3% voltage drop and are intended to identify the minimum safe and efficient wire size to use for motorized equipment.