SQUARE D
Instruction Bulletin

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Closed Tank Float Switch
Class 9037 Type HR, Series A, for Hazardous Locations – NEMA 7 & 9, Class 1 & 2 Group C - G
Class 9037 Type HW, Series A, for Water Tight Applications – NEMA 4

INTRODUCTION

This document contains installation, operation, adjustment and parts replacement information for Class 9037 Type HR and HW Series A Closed Tank Float Switches. These float switches automatically control the liquid level in closed tanks Type HR float switches are 2-pole switches with NEMA 7 & 9, Class 1 & 2, Group C through G enclosures. Type HW float switches are 2-pole switches with NEMA 4 enclosures.

⚠ CAUTION

EQUIPMENT DAMAGE HAZARD

Remove shipping bracket from mounting plate before installing switch.

Failure to observe this precaution can result in equipment damage.

EXCESSIVE PRESSURE

Avoid using the float switch where pressure within the closed tank exceeds 50 psi.

Failure to observe this precaution can result in seal leakage and equipment damage.

MOUNTING

To mount the float switch (refer to Figure 1):

1. The float switch is shipped with a bracket attached to the mounting plate. This bracket prevents the float and rod from moving in the tank during shipment. Remove and discard this clearly-marked shipping bracket before installing the float switch.
2. Loosen the nut (item C) so that the 2-1/2 inch I.P.S. threaded fitting (item D) rotates freely in the switch bracket.
3. Mount the float switch by screwing the threaded fitting directly to the tank.
4. Tighten the threaded fitting so no fluid from the tank leaks past the threads.
5. Rotate the switch case until it is horizontal and tighten the nut.

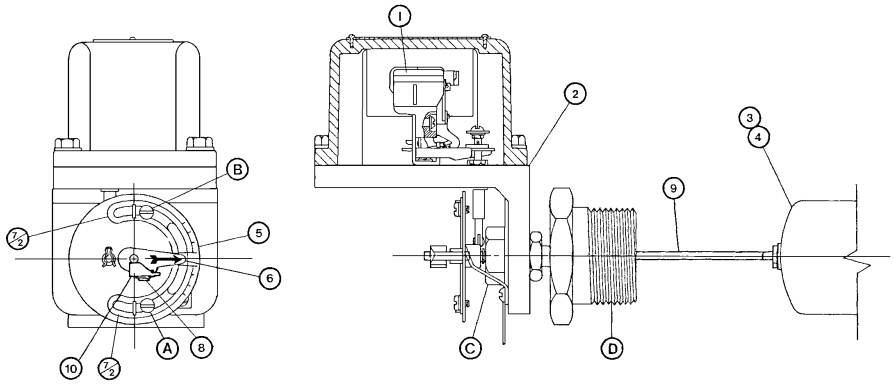

Figure 1: Class 9037 Type HR/HW Series A Float Switch

Reference No. 9037-892

ADJUSTMENT

⚠ DANGER

HAZARDOUS VOLTAGE

Disconnect all power before working on equipment.

Electrical shock will result in death or serious injury.

Float switches are shipped from the factory set for a specified float travel. Some adjustment of float travel can be made in the field. Float travel is adjusted by moving one or both of the adjusting strips (item 7 in Figure 1), held in place by screws (items A & B).

To change the upper limit of float travel:

1. Loosen screw (item B).
2. Move the upper adjusting strip (item 7) clockwise to reduce the upper limit or counter-clockwise to increase the upper limit.
3. Tighten the screw (item B).
4. To change the lower limit of float travel:
5. Loosen screw (item A).
6. Move the lower adjusting strip (item 7) counter-clockwise to reduce the lower limit or clockwise to increase the lower limit.
7. Tighten the screw (item A).

Reverse Operation

Standard float switches are shipped from the factory with the float and link positioned for contacts to close on liquid rise. Form R float switches are shipped with the float and operating link positioned for contacts to open on liquid rise. Changing Class 9037 HR/HW float switches from standard to reverse action in the field is not recommended.

MOTOR PROTECTION

This type of float switch does not provide motor protection but is frequently used as a pilot to operate a motor protective starter. For more information on the complete line of motor protective switches, contact your local Square D Sales Office.

WIRING AND ELECTRICAL RATINGS

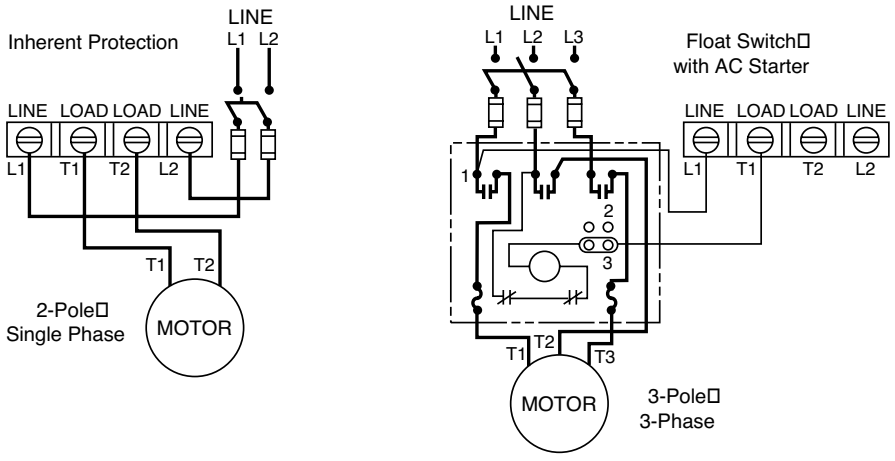

Figure 2: Wiring Diagrams

Figure 3 shows typical single phase and polyphase wiring diagrams for the float switch. The switch contact control circuit has an A600 rating. Horsepower ratings for the switch contacts are listed in Table 1.

Table 1: Switch Contact Horsepower Ratings

Voltage	Horsepower Ratings		
	Single Phase AC	Polyphase AC	DC
115	2 hp	3 hp	1/2 hp
230	3 hp	5 hp	1/2 hp
460/575	—	1 hp	—
32	—	—	1/4 hp

REPLACEMENT

Replacement parts for Class 9037 Type HR/HW Float Switches are listed in Table 1. For parts locations, see Figure 1 on page 1. When ordering parts, always give Class, Type and Form of switch.

Table 2: Replacement Parts

Item No.	Description			Quantity.	Part No.
1	Set of Moveable and Stationary Contacts			1	9998 PC-242
2	Gasket (HW)			1	2810-D21-X1
3	Float (304 SS)			1	9049 HF3
4	Float (316 SS)			1	9049 HF4
5	Adjusting Plate Assembly			1	2810-D7-G1
6	Operating Lever			1	2810-C4-X2
7	Adjusting Strip			2	2810-X8
8	Screw			1	21911-14161
9	Connector and Rod Assy.	45°	—	1	2810-C6-G5
		90° Offset	3"	1	2810-C6-G8
		90° Offset	4-1/4"	1	2810-C6-G9
		90° Offset	5"	1	2810-C6-G10
		90° Offset	7"	1	2810-C6-G1
10	Clamp			1	2810-D4-X1
—	Seal and Installation Kit (BUNA-N)			1	9998 PC-337
—	Seal and Installation Kit (VITON®)			1	9998 PC-338

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