

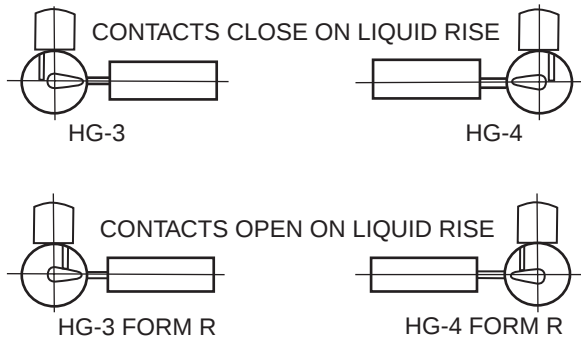


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Square D Floatswitches (9037-HG), used on many **SHIPCO®** PUMPS, can be adjusted to have the float on the right or the left, to make contact (ON) on either liquid level rise or level drop, and to raise or lower the level at which the switch turns on or off, thus making the differential adjustable as well.

FLOAT & LINK POSITIONS



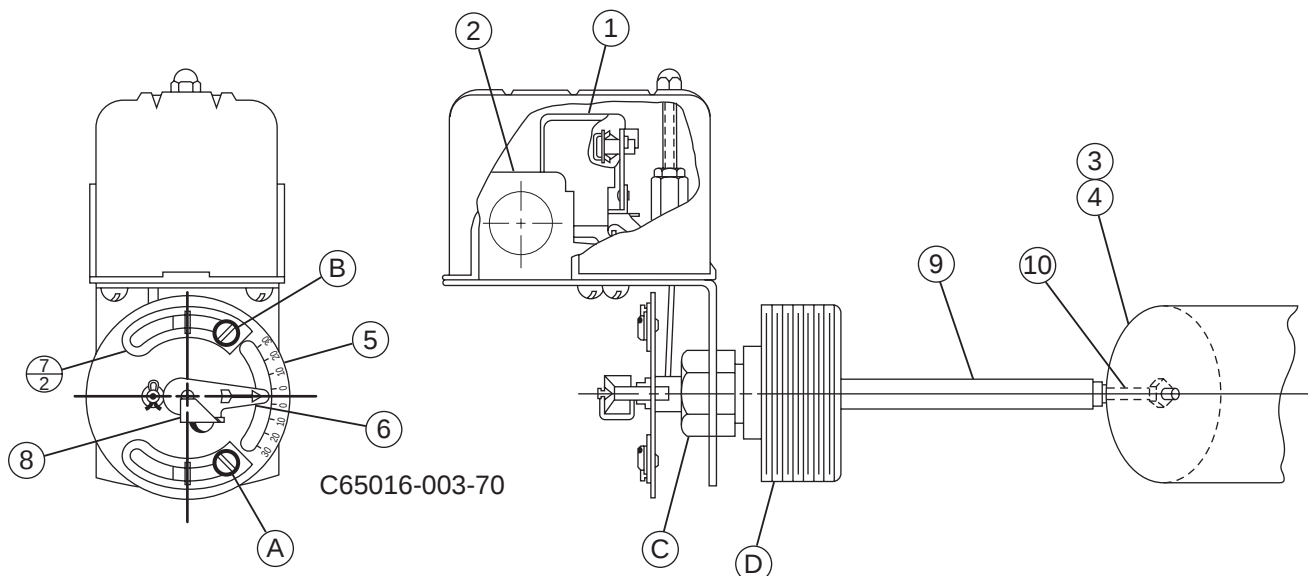
PRESSURE: In the use of any of these Float Switches, the pressure limit within the closed tank must not exceed 50 lbs.

The switch has a shaft that rotates with the rise and fall of the float, which is offset from the center of rotation by 7½ inches. (Larger offsets are used on large condensate pumps.) A wheel or quadrant with two adjustable stops pivots on the shaft, but is moved by a die cast arm (which is attached to the shaft) as it presses against the upper or lower stop.

A link connects the quadrant to the switch and it can be installed in a position either to the right or the left of the center. Shifting the link from one side to the other reverses the action of the switch (on high level or low level). With the link removed, the float can be swung to the other side (one half revolution). This reverses the action of the switch as well, so the link would have to be installed on the other side to keep the switch action the same.

The link is taken out by removing the small wire clip from the end that pivots in one of the two holes on the quadrant. The end can be slipped out of the hole, and if the link is rotated or twisted one quarter turn, it will slip down and out of the switch mechanism. The stops on the quadrant are loosened or locked with a screwdriver and can be located in the curved slots to give a wide or narrow differential as well as to raise or lower the point where the float action will trip the switch.

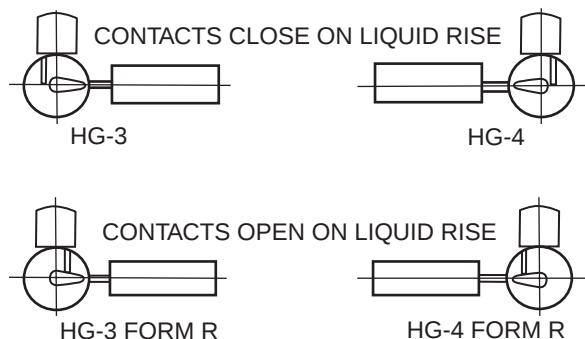
Class 9037 Type HG Series C FLOAT SWITCH



CAUTION: Switches are shipped with a bracket attached to the mounting plate. This bracket prevents the float and rod from moving in the tank during shipment. When installing the system, this clearly marked shipping bracket must be removed and discarded.

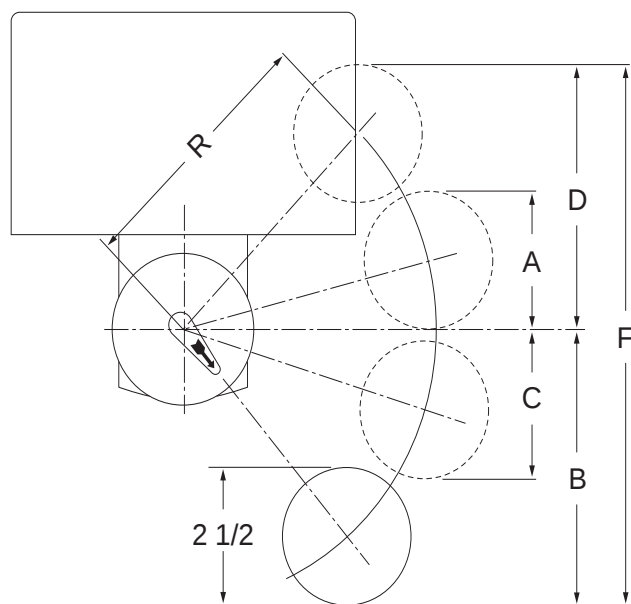
The Mechanical Alternator (9038-CG) is similar except it has two electrical switches which are actuated by one end or the other of a pivoting arm with a slotted hole in the middle.

FLOAT & LINK POSITIONS



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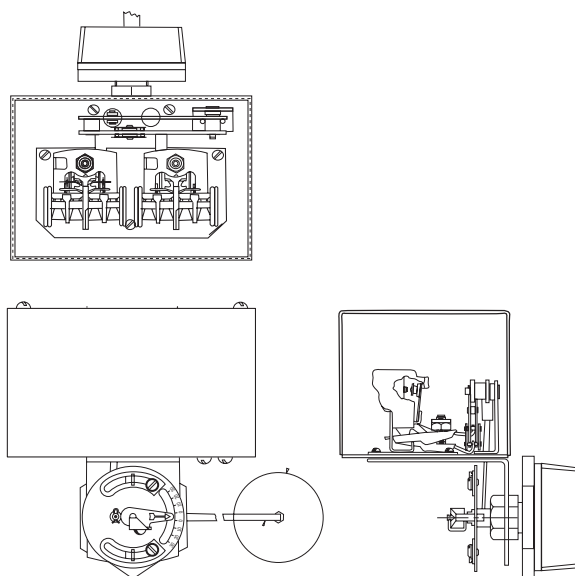
APPLICATIONS: The Class 9038 Type CG Mechanical Alternators serve to open and close an electric circuit by an upward and downward float movement. The forces are applied by means of a float operating between different liquid levels. The action is such that two switch units are alternated on successive cycles. If the liquid level continues to rise or fall with one pump in operation, the lever will continue to travel to a further position at which point the "second" switch will be operated, throwing the standby pump across the line.



A pin in the end of a vertical link lifts the arm by the slotted hole shifting from one end of the slot to the other on successive actuations, thus turning on one switch or the other.

Further movement of the link will cause the second switch to turn on also. The other end of the vertical link connects to a 4" long arm which is connected with a rod link to one of the holes in the quadrant wheel.

The float can be swung to the other side by slipping this end of the link out of the quadrant wheel. As in the float switch this reverses the switch action. To correct the switch action, or to reverse it, if not swinging the float to the other side, the 4" arm has to be removed and remounted with the end pivot bracket moved to the opposite side of the box. This enables the rod link to be installed in the other hole in the quadrant, so the switch action is reversed.



PRESSURE: In the use of the CG Alternators, the pressure limit within the closed tank must not exceed 50 PSI.

EXPLANATION OF FLOAT TRAVEL AND POSITION

NORMAL OPERATION: Switches will cut in and cut out at the high point and low point of distance A plus B, given in the tables. Under normal conditions, as long as one pump alone is able to handle the incoming water, the pumps will alternate at this distance. With the water level continuing to rise, the second switch will cut in and start the second pump when the float reaches the top of distance D. Both pumps will continue to run until the float returns to the low point of distance D plus C, where one pump will cut out. The other pump will continue until the float reaches the low point of distance B.

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