



# LO-FLO ALARM ROTAMETERS

The Type 20-7030 Lo-Flo Alarm Rotameter accurately measures flow rates as low as 8.0 cc/min and up to 0.5 gpm of water. It can be used to warn of abnormally high and/or low flow by activating an alarm, light or controller. The instrument incorporates the characteristics and advantages of two popular SK units; the Lo-Flo Rotameter and the Magnetic Alarm.

**LO-FLO ROTAMETER** — Lo-Flo meters offer good reproducibility and accuracy. The design allows easy change-over from one metering tube to another.

Lo-Flo Rotameters have stainless steel bodies and borosilicate glass tubes with belled ends to permit interchangeability. A unique clip-load arrangement holds the tube firmly in place, yet permits easy removal. The clip-load device has no springs and is designed to prevent “pop-out” of tube on pulsating flows or sudden flow surges. O-rings seal the tube at top and bottom. A plastic shield helps protect the tube and the operator.

**MAGNETIC ALARM SYSTEM**— The Magnetic Alarm System is mounted above the Rotameter in a weather resistant or “explosion-proof”\* housing. The metering float is connected to a rod that extends into the extension well of the alarm housing. An encapsulated magnet, attached to the rod, moves with the float as the rate of flow increases or decreases. Mounted firmly on the extension tube is a hermetically-sealed, vibration-resistant switch assembly with reed-type contacts. When abnormal flow occurs, the encapsulated magnet moves into the field of the switch, closing its contacts. The switch can operate an alarm or an “on and off” control.

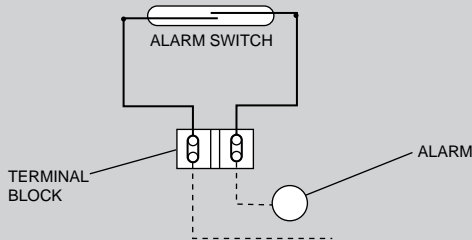
Lo-Flo Alarm Rotameters can be equipped with one or two switch assemblies. A single switch gives high or low alarm as specified, while two switches give both. Switches are adjustable over the full range of the Rotameter and reset automatically when the flow returns to normal. If a relay is required in an alarm circuit, it must be mounted remotely. Table 1 lists the various switch actions.

\*Design meets “explosion-proof” requirements of N.E.C. Class 1, Div. 1, Group D.



FIG. 1 Type 20-7030-2320 Lo-Flo Alarm Rotameter has a 3-inch scale length. All wetted metal parts of the Rotameter are made of stainless steel.

### ALARM SWITCH CIRCUIT



### TABLE 1. SWITCH ACTION

SWITCH TYPE	FLOAT POSITION	CONTACT POSITION
H	Below Switch	Closed
H	Above Switch	Open
L	Below Switch	Open
L	Above Switch	Closed



## SPECIFICATIONS

### ROTAMETER

**Range:** 10:1

**Accuracy:** ±5% of maximum flow

**Operating Press. & Temp.:** 300 psig at 200° max.

**Scale:** 3 in. long; graduated 0-10 with calibration charts standard; direct reading scale on special order

**Pipe Connection:** 1/4 in. NPT

**Mounting:** Directly in pipeline (vertical)

### ALARM

**Switches:** Type: Reed, hermetically sealed

Adjustment: Adjustable through full range of flow

Contact Rating: 50 VA resistive load 10<sup>5</sup> + closures

50 VA inductive load 5 x 10<sup>5</sup> + closures

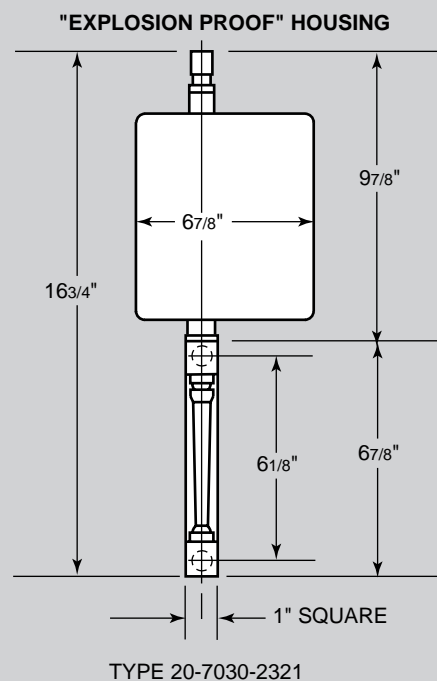
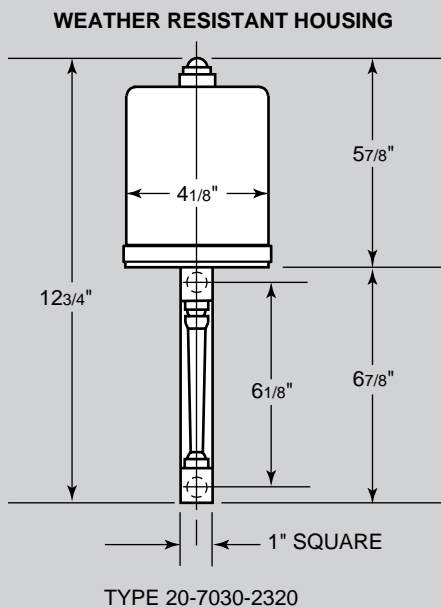
Max. voltage VAC; Max. inrush current 3.0 amps

**Housing:** Weathertight - fully gasketed and tightly sealed  
"Explosion-proof" (meets N.E.C. Class 1, Div. 1, Group D design requirements)

TUBE SIZE	AIR AT 14.7 PSIA & 70°F			WATER AT 70°F			MAX. PRESS. DROP INCHES W.C.
	ccpm	cfm	cfh	ccpm	gpm	gph	
7/32-02-P-3	3,200	.11	6.5	85	.022	1.3	15
1/4-08-P-3	15,000	.52	32	480	.125	7.5	11
1/4-15-G-3	19,000	.65	40	600	.160	9.5	12
1/4-33-G-3*	60,000	2.1	125	1,900	.500	30	28

\*NOTE: For gas service, Minimum Operating Pressure required is 20" W.C., except for tube size 1/4-33-G-3 which requires 43" W.C.

## DIMENSIONS



Specifications contained herein are subject to change without notice. Since it is impossible to anticipate or control the many different conditions under which this information and our products may be used, we cannot guarantee the applicability and accuracy of this information, or the suitability of our products in any given situation.