

# LS31 MAGNETIC LEVEL SWITCH

## Description

The LS31 is a Liquid Level Control Device where the operation of the float can be used to sound alarms or activate various types of control equipment.

## Operation

The float, mounted to a magnetic arm, will pivot with the rising or falling liquid level. The magnetic arm will swing into the proximity of the reed switch, closing the contacts. The LS31's action can be reversed for high or low liquid level applications simply by rotating the device 180° within the mounting. The float can be designed to operate at an interface level provided the specific gravity differential is 0.1 or greater.

Due to the device's small size and ease of installation, the LS31 can provide a reliable and economical means for the control of process, and storage applications.

## Features

- No Seals to Leak
- Meets Class I, Groups A, B, C, D  
Class II, Groups E, F, G  
Class III
- Hermetically Sealed Reed Switch
- Electrically Serviceable without removal from process
- Corrosion Free Construction

## Standard Specifications

- SPST Reed Switch
- 1.5 or 2" NPT body
- Short Float Arm
- 316SS Body and Float Mechanism
- Rated to 1600 psig @ 400°F
- 12" Lead Wires
- 0.4 Specific Gravity Design

## Options

- ★ SPDT Reed Switches
- ★ Factory Welded Flange Connection
- ★ Extended Float Arms
- ★ Special Materials  
Monel, Hastelloy  
Kynar
- ★ High Pressure Floats
- ★ Low Specific Gravity Designs
- ★ External Chambers
- ★ Interface Applications
- ★ Halar Coating Available



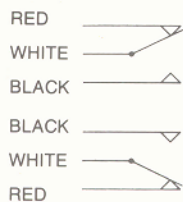
## Service Ratings

MODEL TYPE	SWITCH TYPE	MAX. PROCESS TEMPERATURE	MAX. PROCESS PRESSURE psig	MIN. SPECIFIC GRAVITY	STANDARD FLOAT DIMENSIONS*	
					LENGTH	O.D.
LS31SSH	Single pole Single Throw	-40° to 400°F	1600 @ 400°F	0.4	2.875"	1.5"
		-40° to 200°C				
LS31SDL	Single pole Double Throw	-40° to 200°F	1600 @ 400°F	0.4	2.875"	1.5"
		-40° to 94°C				

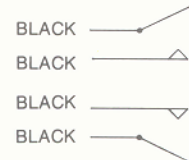
## Electrical Specifications

Model Number			LS31SSH	LS31SDL
DC Voltage Rating	Switching	Vdc Max.	250	500
AC Voltage Rating	Switching	rms Vac Max.	177	700
Current	Switching / Carry	Ampere-Max.	1.0 / 3.0	1.5 / 2.0

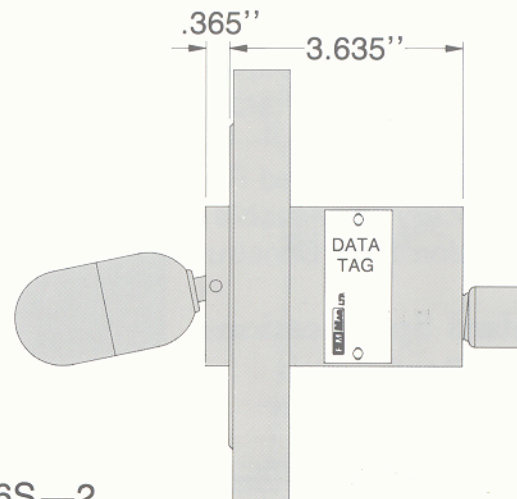
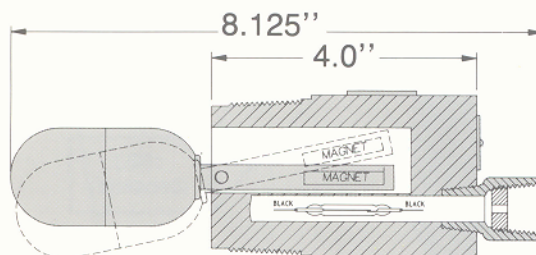
### LS31SDL SWITCH



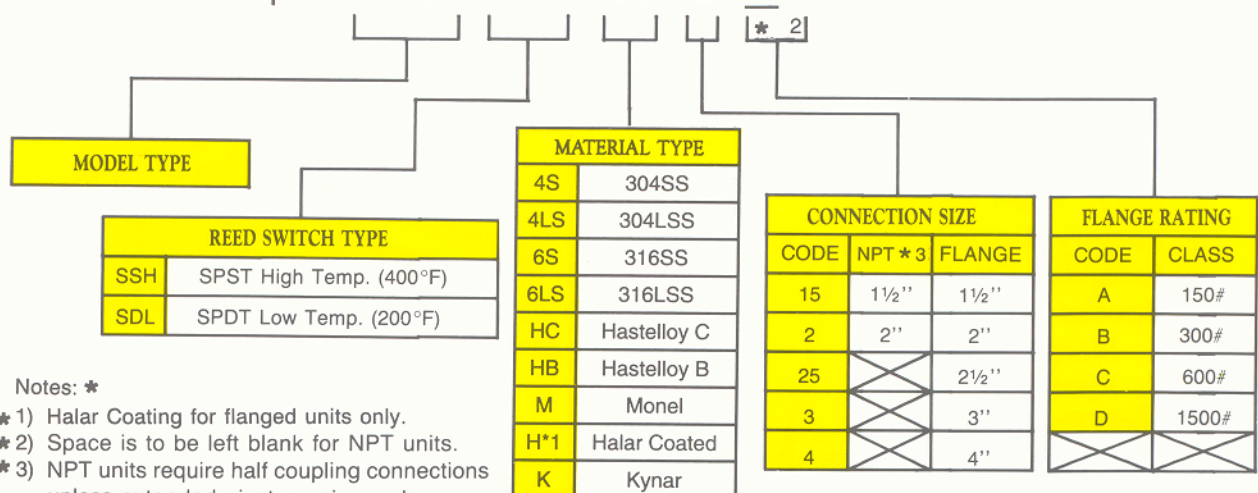
### LS31SSH SWITCH



## Model Numbers

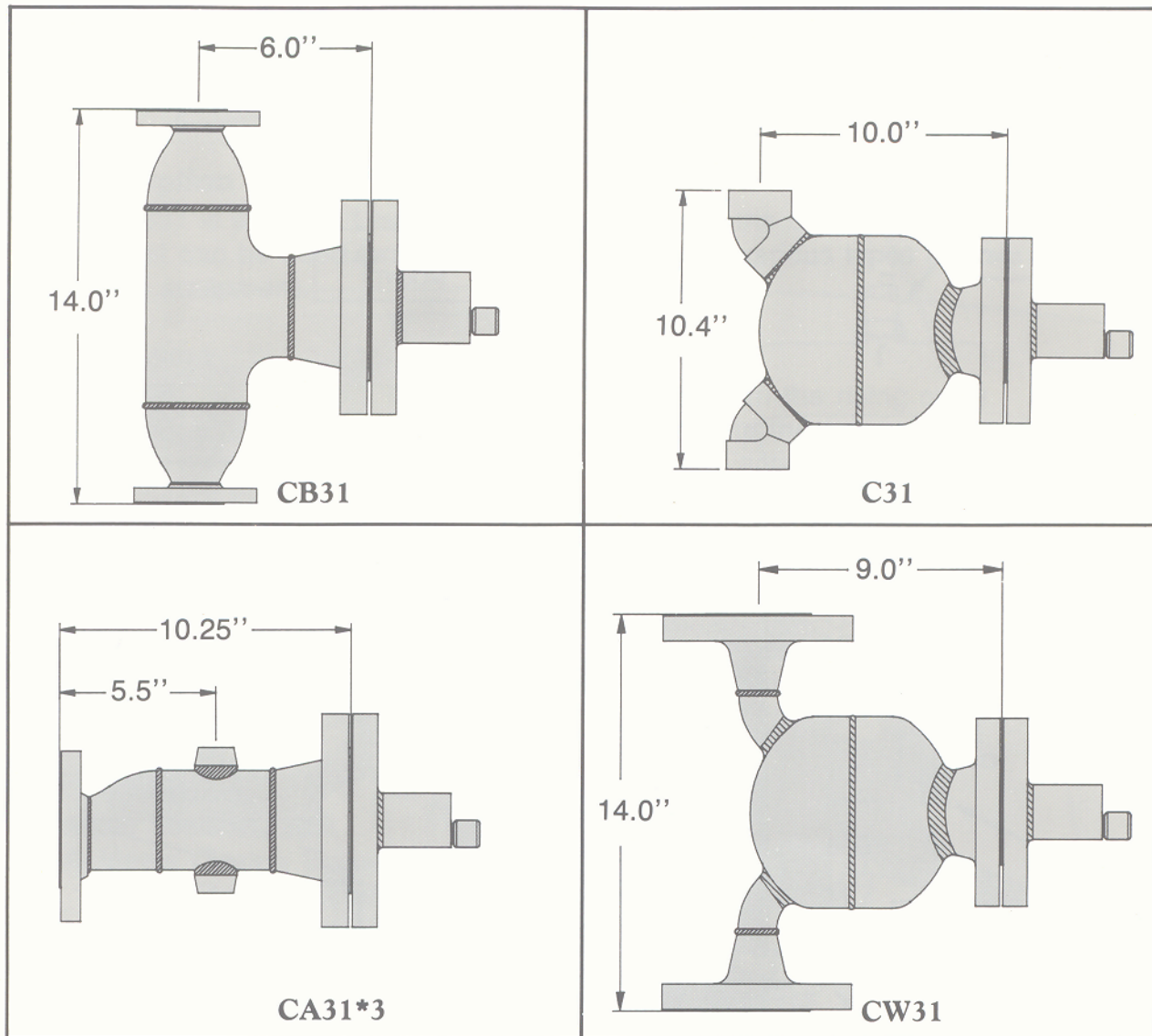


Example: LS31—SSH—6S—2





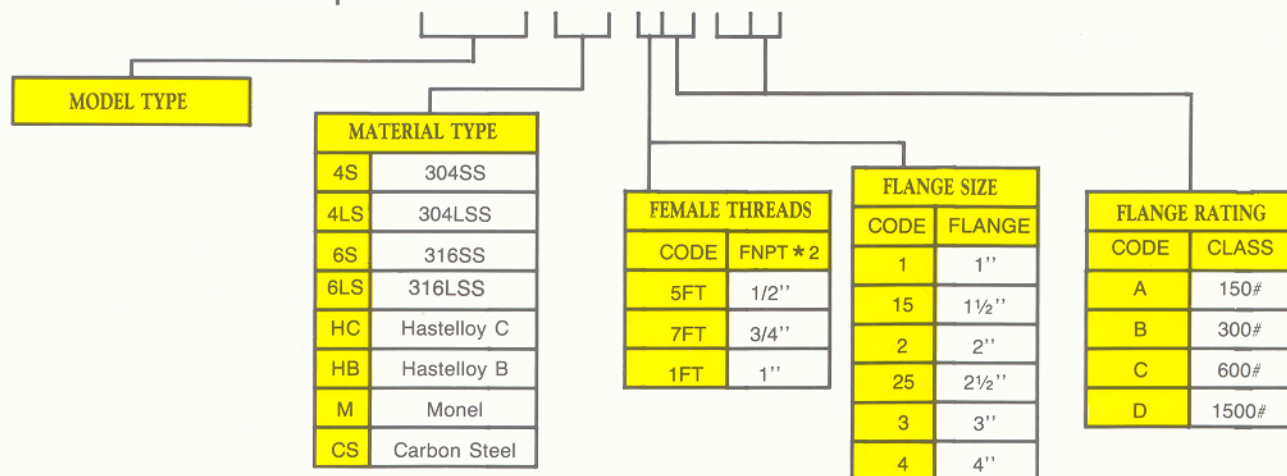
# LS31/LS32 EXTERNAL MOUNTING CHAMBERS



## Model Numbers

(Model Type) — (Material) — (Connection Size) — (LS31 Connection) \* 1

Example: CB31—CS—1A—3A

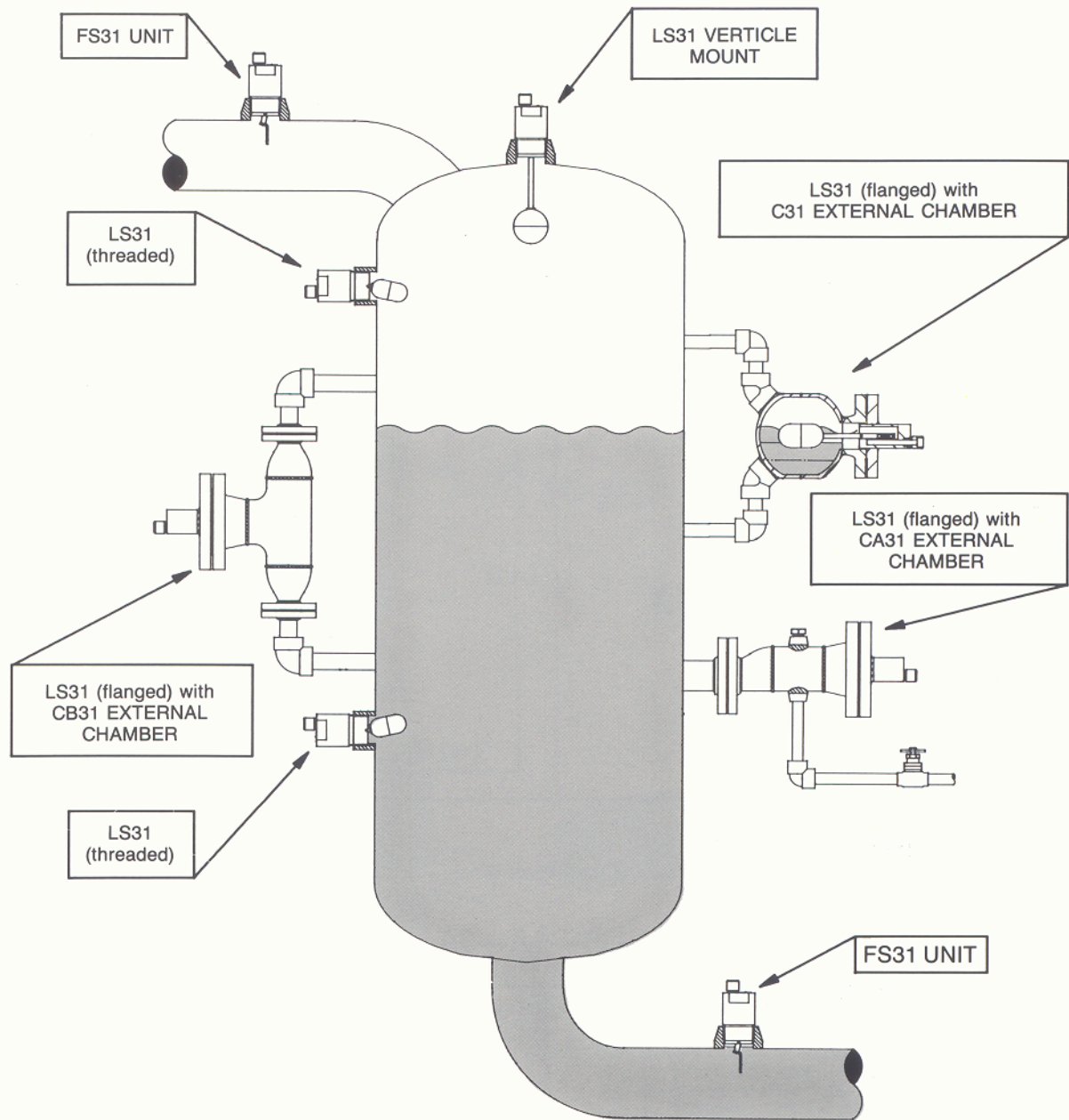


Notes: \*

\*1) C31 and CW31 Chambers will be fitted with 2" Weld Neck flanges at the Switch Connection. All others will be 3" Weld Neck Flanges.

\*2) All Threaded Fittings will be 3000#.

\*3) CA31 Chambers are fitted with 1/2" Thread-o-let Connections for vent and drain.



### Applications

- Storage Tank Liquid Level Alarms
- In Process Liquid Level Alarms and Actuators
- Liquid Sump Applications
- Overflow Protection
- Flow Protection for Pumps and Blowers
- In-Line Flow Alarms (See Bulletin No. 1001)