

2557 Alarm Limit Switch

Trip alarms or relays using cam-operated switches that help prevent tank overfills

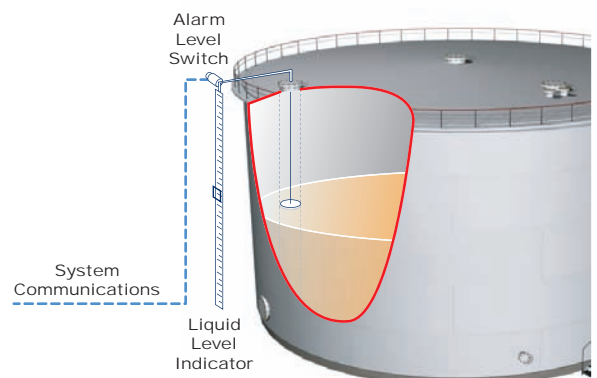


Benefits

- Mounts directly to 2500 ATG
- Two SPDT cam-operated switches UL approved
- Four SPDT cam-operated switches UL/CSA approved
- Cast aluminum enclosure with o-ring seal
- Switches operable in any desired sequence
- Independent adjustment of each switch in unit

Application

The 2557 Alarm Limit Switch (ALS) provides 2 or 4 cam-operated switches for the indication of alarms or relays. It is designed to mount directly to Automatic Tank Gauges (2500 ATG) or gauge boards (6700 LLI) with an optional drive elbow. Each switch provides a contact closure (or opening) at a user-selectable position that can be used to activate alarms or relays to prevent overfills. The 2557 ALS is also designed and manufactured to provide accurate and reliable operation without an intensive maintenance schedule.



Function and System Design

The primary issues to consider when selecting the options to be used involve the number of switch points to be initiated and the height of the tank. The switches may be used to operate lamps, relays, motors or solenoid valves providing the load does not exceed ½ HP at 250 volts AC.

Typically, the unit must operate over the range denoted by the height of the tank. Therefore, in most cases, the range of the unit selected is equal or greater than the tank height. An application involving the closure of limit switches upon reaching high and low limits of tank capacity would involve two switches – one for the high set point and one for the low. The requirement for additional measurement points involves the subsequent use of additional limit switches.

The range is determined by the gear ratio. The three ranges available – 16, 32 and 64 ft (4.87, 9.75 and 19.50 m) correspond to gear ratios of 25:1, 50:1 and 100:1 respectively. Each revolution of the drive shaft is equal to one foot of gauge travel. Therefore, with a 25:1 gear ratio, 25 ft (7.62 m) of gauge travel is equal to one revolution of the cam. The cam has 235 degrees of

travel between switch points and 125 degrees of dwell. With a 25:1 gear ratio, 235 degrees results in 16 ft (4.87 m) of travel. 125 degrees is equal to 9 ft (2.7 m) of dwell. Varec strongly recommends using the 2557 with a redundant independent alarm system.



2557 ALS shown with 4 contacts

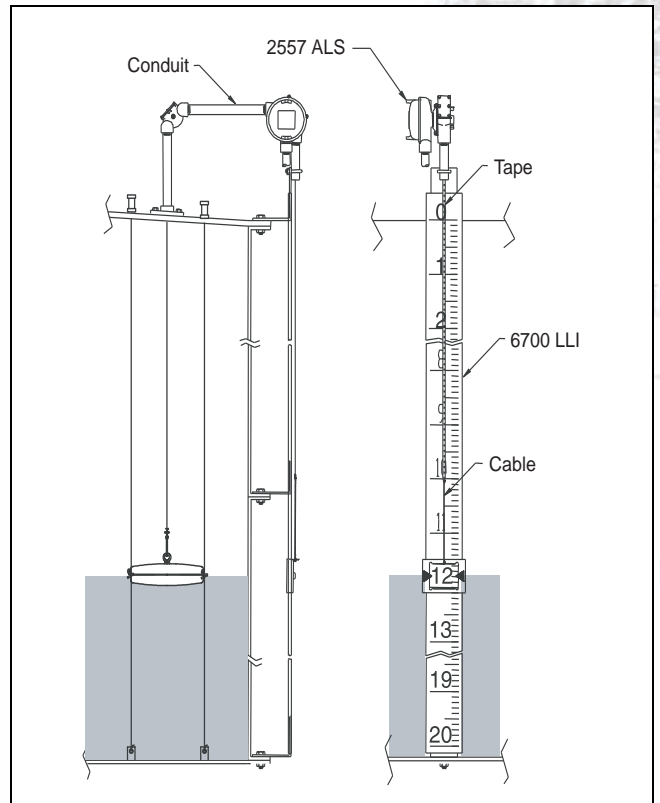
Installation Guidelines

The 2557 ALS bolts directly to the back of the 2500 ATG (shown on front cover) or to the 2520 High Pressure Automatic Tank Gauge (ATG) fitted with a 2581 Oil Tight Adapter. Adapters are also available for mounting to other float gauges. When used with the 6700 LLI, the 2557 ALS is bolted to the elbow drive assembly located at the top of the tank. The elbow drive may also be used with the 2500 ATG and the 2557 ALS used as secondary output.

Adjustment

Once the unit is installed, the gauge must be set to the level of the tank. The gauge must then be moved either by pulling in or releasing tape or by filling or emptying the tank to obtain readings that correspond to the proper trip point for each switch. If the tape is pulled out, extreme caution must be observed to prevent accidental release which might damage the spring motor drive in the gauge.

Once the gauge is at the proper position for the desired tip point, merely rotate the cam to the correct position for the desired switch transfer point. The cam is spring-held and can be readily set by inserting a screwdriver between the lugs and rotating the cam in the proper direction.



2557 ALS shown installed on a Varec 6700 Liquid Level Indicator

Technical Specifications

The following specifications apply to the model 2557 ALS over the normal (ambient) operating temperature range.

Environmental

Enclosure	NEC Article 500 Class I, Group D
Electrical ratings	20 Amps 125, 250 or 480 V AC • 10 Amps 125 Volts when controlling tungsten filament • lamp loads on AC circuits • 1 HP 115/125 V AC, 2 HP 230/250 V AC • 1/2 Amp 125 V DC, 1/4 Amp 250 V DC

Note! Field-Installed Conductors To Have Temperature Rating of 60 / 75°C (Cu).

Physical

Material	Cast 356 aluminium base and cover
O-ring	Buna N (Nitrile)

Functional

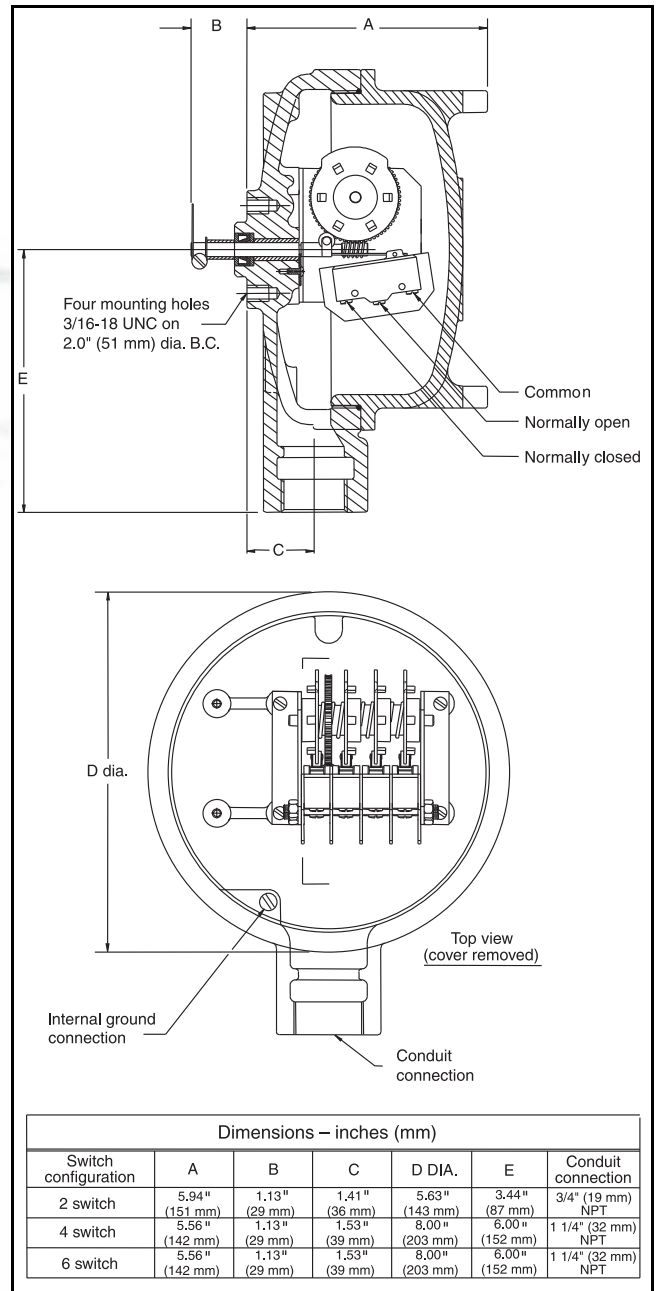
Hazardous location approvals	UL, File No. E23827 – (2, 4 and 6 switches) CSA, File No. LR40894 – (4 and 6 switches)
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Note! Interposing relays may be required to maintain the circuit in pumping operations.

Mounting Adapters

Part#	Tank gauge
13-05956-102	Adapter kit for mounting to Whessoe Varec/S&J/ GPE 92513, 92514, 92020 and 92030
13-05956-202	Adapter kit for mounting to Whessoe Varec/S&J/ GPE 92006, 2006

Product Dimensions



Order Codes

2557 Alarm Limit Switch

Level Range	
A	Level Range: 0 to 32 feet/0 to 9.7 m
B	Level Range: 0 to 60 feet/0 to 18.3 m
G	Level Range: 0 to 16 feet/0 to 4.8 m
Type of Switches SPDT	
B	Two Switches SPDT UL Listed
D	Four Switches SPDT UL Listed + CSA Cert.
F	Six Switches SPDT UL Listed + CSA Cert.
2557 -	Product designation



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