LEVEL SWITCHES · FOR TANKS AND VESSELS

SNAPTRIP™

Float and displacer level switches

SnapTrip™ is a range of flanged float and displacer level switches, supplied by Lamont Controls for high and low level alarms on tanks and vessels, in three models: side-mount float, top-mount float and top-mount displacer. Wetted parts and the process flange are 316L stainless steel. The contact is a snap-action micro switch, DPDT or SPDT, in a weatherproof housing outside the process.

WETTED PARTS	CONTACT RATING	TEMPERATURE
316L SS	**to 15** A	**to 248** °F
flange in 316L	250 VAC · DPDT or SPDT	120 °C · process

01 KEY HIGHLIGHTS

- Flanged level switches for high and low level alarms on tanks and vessels
- SN-100 side-mount float, SN-200 top-mount float, SN-300 top-mount displacer
- Class 150 RF flange: 2 in (SN-100), 4 in (SN-200) or 3 in (SN-300)
- Wetted parts and flange in 316L stainless steel; forged 316L flange on request
- Snap-action micro switch, DPDT or SPDT, rated to 15 A at 250 VAC, by model
- Process temperature to 248 °F (120 °C); operating pressure to 142 psig (9.8 bar)
- Weatherproof housings, IP65 or IP66; ambient from −4 °F (−20 °C)
- Length to the order: insertion, switch point below the flange or suspension

02 KEY BENEFITS

- Low alarm from a top nozzle: the SN-300 displacer hangs on a standard 2,000 mm (78.7 in) suspension, for a deep tank or sump
- High alarm with no side nozzle: the SN-200 switch point is 300 mm (11.8 in) below the flange as standard
- Side-mount: the 41 mm SN-100 float passes a 2 in Schedule 40 or 80 nozzle
- Pumps and valves: a dry contact to start or stop a pump or open a valve
- Switch outside the process: the micro switch sits in the housing

Supplied by Lamont Controls. For ordinary (non-hazardous) locations. Not for use as a boiler low-water cut-off or in a safety instrumented function. Standard construction, confirmed on each quotation.



TOP-MOUNT FLOAT SWITCH PHOTOGRAPH



PRINCIPLE OF OPERATION RENDER

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Technical specifications

SNAPTRIP FLOAT AND DISPLACER LEVEL SWITCHES

CATEGORY	OPTIONS / SPECIFICATIONS	
Operating principle	Float switch	A float rides on the liquid; at the switch point, its movement operates the micro switch in the housing, outside the process.
	Displacer switch	A displacer hangs at the switch point; as the liquid covers it, its apparent weight falls and the switch operates. The suspension length sets the switch point.
Models and mounting	SN-100	Side-mount float switch, in a flanged nozzle on the vessel wall at the alarm height
	SN-200	Top-mount float switch, on a nozzle on the vessel top
	SN-300	Top-mount displacer switch, on a nozzle on the vessel top
Typical uses	High and low level alarms on storage tanks, day tanks and process vessels; a dry contact to the plant control system to start or stop a pump or open a valve; a low switch point in a deep tank or sump.	
Process connection	SN-100	2 in Class 150 RF flange
	SN-200	4 in Class 150 RF flange
	SN-300	3 in Class 150 RF flange
Materials	Wetted parts	316L stainless steel
	Flange	316L stainless steel plate (ASTM A240); forged 316L (ASTM A182) on request
	Housing	SN-100: aluminum. SN-200 and SN-300: carbon steel and aluminum
Float or displacer	SN-100	Float 41 × 100 mm; insertion 185 mm, longer to suit the nozzle on request
	SN-200	Float, 90 mm; switch point 300 mm (11.8 in) below the flange, standard
	SN-300	Displacer 76.3 × 150 mm; suspension 2,000 mm (78.7 in) standard
Nozzle bore	The float or displacer passes through the process nozzle, so the nozzle bore must be larger than it: 41 mm for the side-mount switch, 76.3 mm for the displacer and 90 mm for the top-mount float. The 41 mm float of the SN-100 passes a 2 in Schedule 40 or 80 nozzle.	
Switch and contact rating	SN-100	Snap-action micro switch, 1 × DPDT; 10 A at 250 VAC, 5 A at 30 VDC
	SN-200 · SN-300	Snap-action micro switch, 1 × SPDT; 15 A at 250 VAC, 0.5 A at 125 VDC
Enclosure	SN-100	Weatherproof, IP66; ½ in NPT (F) cable entry, by adapter
	SN-200 · SN-300	Weatherproof, IP65; ¾ in NPT (F) cable entry, by adapter
Temperature and pressure	Process temperature	To 248 °F (120 °C)
	Operating pressure	To 142 psig (9.8 bar)
	Ambient	−4 to 140 °F (−20 to 60 °C), SN-100 −4 to 176 °F (−20 to 80 °C), SN-200 and SN-300
Specific gravity	Confirmed for each order from the fluid data.	
Location	Ordinary (non-hazardous) locations. Not for use as a boiler low-water cut-off or in a safety instrumented function.	
Options	F	Forged 316L flange (ASTM A182) in place of the standard plate flange (ASTM A240)
	H · L	High or low level alarm, stated for each SN-300 displacer switch
Ordering code	SN-x00 – Connection – Flange – Length – Action. Example: SN-300-30-P-2000-L.	
	Model	SN-100 side-mount float · SN-200 top-mount float · SN-300 top-mount displacer
	Connection 20 · 40 · 30	2 in (SN-100) · 4 in (SN-200) · 3 in (SN-300), Class 150 RF
	Flange P · F	316L plate, ASTM A240 (standard) · 316L forged, ASTM A182
	Length, mm	Insertion (SN-100), switch point below the flange (SN-200) or suspension (SN-300)
	Action H · L	High or low level alarm (SN-300)
Ordering	Request a quotation at lamontcontrols.com/request-a-quote with the switch type and quantity; the nozzle size, flange class and schedule; the fluid, specific gravity, operating pressure and temperature; high or low alarm and the switch point; and the electrical load. The process data go on the order datasheet, not in the model code. One request can cover several switches, with a tag number for each.	
On a magnetic level gauge	For alarm points on a Lamont magnetic level gauge, SurePoint™ clamp-on switches mount outside the gauge chamber and need no process connection.	

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