



DELTA CONTROLS

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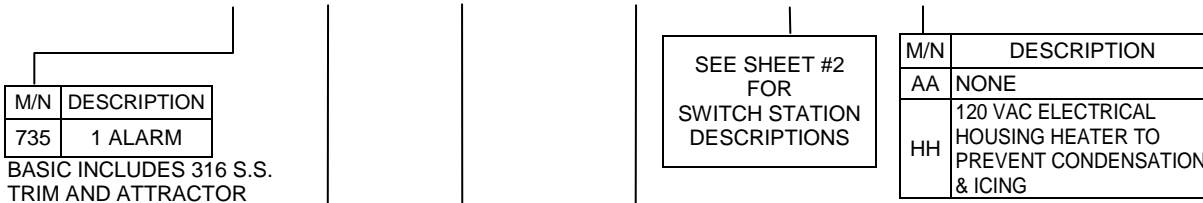
Side Inserted Float
 Level Switch

735

**SIDE INSERTED FLOAT TYPE LEVEL SWITCH, ONE ALARM POINT,
 BALANCED FLOAT, DUAL MAGNET, POSITIVE SWITCHING**

BASIC TYPE	SENSING FLOAT	INSERTION DISTANCE	PROCESS CONN SIZE & TYPE	SWITCH & HOUSING	OPTIONS
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MODEL EXAMPLE 735 - VY - 12" - 2" NPTS - L1W - AA



M/N	DESCRIPTION
735	1 ALARM

BASIC INCLUDES 316 S.S. TRIM AND ATTRACTOR

SEE SHEET #2 FOR SWITCH STATION DESCRIPTIONS

M/N	DESCRIPTION
AA	NONE
HH	120 VAC ELECTRICAL HOUSING HEATER TO PREVENT CONDENSATION & ICING

INSERTION	MINIMUM SPG @ INCHES					
	M/N	30,31,32,VG	VY	16	X	D
MINIMUM	SEE ABOVE	0.50	0.50	0.45	0.35	
18"	NA	0.50	0.75	0.70	0.40	
24"	NA	0.60	0.85	0.80	0.45	

SENSING FLOAT/DISPLACER				MINIMUM SPG & INSERTION DISTANCE		WKG PSIG @ °F			MINIMUM ANSI PROCESS CONN	
M/N	MAT **	O.D.	LENGTH	SPG	INCHES	100	450	750	NPT	NOZZLE
30Y	316 S.S.	1.0	12.0	0.60	15	275	175	155	1"	NA
31P	POLYPRO	1.0	12.0	0.60	15	2200	▲	▲	1"	NA
32P	POLYPRO	1.6	7.0	0.60	14	2200	NA	NA	2"	2" SCH 160
VY	316 S.S.	2.0	3.5	0.50	12	375	245	210	2"	2" SCH 40
VG	HAST "C"	1.9	3.5	0.75	12	100	65	60	2"	2" SCH 80
16Y	316 S.S.	2.5	BALL	0.50	12	860	550	500	2.5"	3" SCH 160
XY	316 S.S.	3.0	BALL	0.45	12	965	630	530	3"	3" SCH 40
CY	316 S.S.	3.5	BALL	0.35	12	965	630	530	NA	4" SCH 120
INTERFACESERVICE										
IHY	316 S.S.	5.0	BALL	*	13.5	950	625	550	NA	6" SCH 160

* MINIMUM DIFFERENCE BETWEEN THE SPECIFIC GRAVITIES OF THE TWO LIQUIDS IS 0.10 SPG UNITS. MINIMUM SPG OF THE HEAVIER LIQUID IS 0.47 SPG UNITS.

▲ MAXIMUM OPERATING TEMPERATURE IS 220°F

** 735-VG HAS ALL WETTED PARTS OF HASTELLOY "C"

M/N ANSI SIZE	A105 STEEL BODY & PROCESS CONNECTION							(#)304 S.S. BODY & PROCESS CONNECTION					
	30,31	32,V	VG	16	X	C	I	30,31	32,V	16	X	C	I
1" NPT*	OK	NA	NA	NA	NA	NA	NA	OK	NA	NA	NA	NA	NA
2" NPT*	NA	OK	OK	NA	NA	NA	NA	NA	OK	NA	NA	NA	NA
2.5" NPT*	NA	N/A	C/F	OK	NA	NA	NA	NA	NA	OK	NA	NA	NA
3" NPT*	NA	N/A	C/F	OK	OK	NA	NA	NA	NA	OK	OK	NA	NA
2" 150R*	NA	OK	C/F	N/C	NA	NA	NA	NA	OK	OK	OK	NA	NA
2" 300R*	NA	OK	C/F	N/C	NA	NA	NA	NA	OK	OK	OK	NA	NA
2" 600R*	NA	OK	C/F	N/C	NA	NA	NA	NA	C/F	OK	OK	NA	NA
3" 150R*	NA	OK	C/F	OK	OK	NA	NA	NA	OK	OK	OK	NA	NA
3" 300R*	NA	OK	C/F	OK	OK	NA	NA	NA	OK	OK	OK	NA	NA
3" 600R*	NA	OK	C/F	OK	OK	NA	NA	NA	C/F	C/F	C/F	NA	NA
4" 150R*	NA	OK	C/F	OK	OK	OK	NA	NA	OK	OK	OK	OK	NA
6" 150R*	NA	OK	C/F	OK	OK	OK	OK	NA	OK	OK	OK	OK	OK

REPLACE "*" WITH "S" FOR STEEL, "B" FOR 304 S.S., OR "Y" FOR 316 S.S.

NA = NOT AVAILABLE. C/F = CONSULT FACTORY

NOTE: OTHER PRESSURES, RATINGS, & MATERIALS ARE AVAILABLE; C/F



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SIDE INSERTED FLOAT SWITCH, ONE ALARM POINT

The Model 735 design provides significant advantages over the older Model 740 design. The 735 is smaller, easily handles high pressures and temperatures, and is immune to most heavy vibrations. It is also extremely reliable.

This unit provides switch action as the liquid moves past a fixed point on the side of the vessel or tank. The float is inserted into the vessel through a flanged or threaded connection. The vessel connection must be located at the elevation where switch action is to occur; the position is relatively fixed and little adjustment is possible.

This type level switch uses a counterbalance principal, which allows the use of smaller, heavy wall floats. The use of these heavy-duty floats significantly improves the safety and reliability of the switch. The older designs used thin, lightweight floats, which were subject to corrosion failure and were easy to collapse.

The purpose of the counterweight is to offset the extra weight of the heavy-duty float. This results in the element only having to provide enough floatation to operate the switch magnet. In addition, the element is smaller, which allows the use of less expensive and smaller process connections.

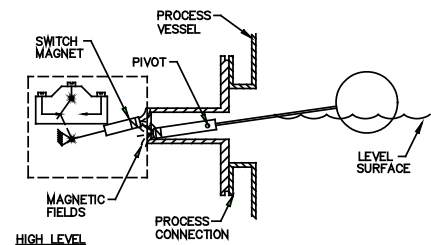
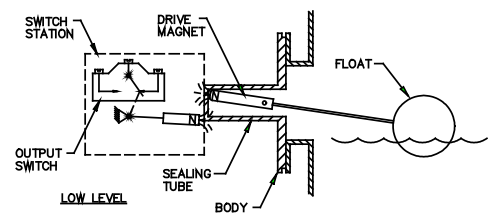
A counterbalanced float is held in a horizontal position by a pivot mechanism. As the liquid level rises, the float moved upwards. This movement results in a rotary motion of the drive magnet, which carries it into the field of the switch station magnet. The switch station magnet is driven against the outside of the sealing tube and the output switch is actuated.

Similarly, as the liquid level falls, the sensing element moves downward. The drive magnet is rotated back through the field of the switch station magnet. The switch station magnet is operated, returns to its original position, and the output is deactivated.

This dual opposed magnet design provides snap action, immunity from vibration, and greatly improves reliability.

▲ SWITCH STATION DESCRIPTIONS		DESCRIPTION OF INTENDED SERVICE LOAD RATING
W/P-N4	E/P-7CD,9	
S4W.	S4C	GENERAL USAGE, COMPACT, 4 AMP @ 28VDC, 5 AMP @ 125VAC, 250VAC -65 to 250°F (-54 to 121°C)
T1W T2W	T1C T2C	HIGH TEMPERATURE; 5 AMP @ 125VAC, 250VAC; 0.5A @ 125VDC; 0.25A @ 250VDC -65 to 400°F (-54 to 204°C)
H1W H2W	H1C H2C	ENVIRONMENTALLY SEALED, 15 AMPS @ 125/250VAC, 0.5 AMPS @ 125 VDC, 0.25A @ 250VDC, 1/8HP 125VAC, 1/4HP 250VAC
L1W L2W	L1C L2C	A.C. MOTOR LOADS; 15 AMP @ 125,250,480VAC, 0.25 HP @ 250VAC, 1/8HP @ 125VAC; 1/4HP @ 250VAC; 0.5A @ 125VDC; 0.25A @ 250VDC
D1W D2W	D1C D2C	HIGH D.C. LOADS; 10 AMP @ 125VAC/DC; 0.25 HP @ 125VAC/DC; 3A(resistive) @ 250VDC; 1/2HP @ 125VDC POLARIZED (i.e., with negative side connected to common.)

▲ FOR NEMA 4X (EPOXY): CHANGE "W" TO "X";
 FOR NEMA 7, GROUP B: CHANGE "C" TO "B"
 * FOR ALL 300 S.S. NEMA 7B HOUSING: CHANGE "C" TO "T"
 NOTE: TYPE 'H','L', AND 'D' SWITCHES -67 to 185°F (-55 to 85°C)
 ALL SWITCHES ARE SUITABLE FOR UP TO +750°F PROCESS TEMP & 125°F AMBIENT
 NOTE: CONSULT FACTORY FOR TEMPERATURES TO 1250°F





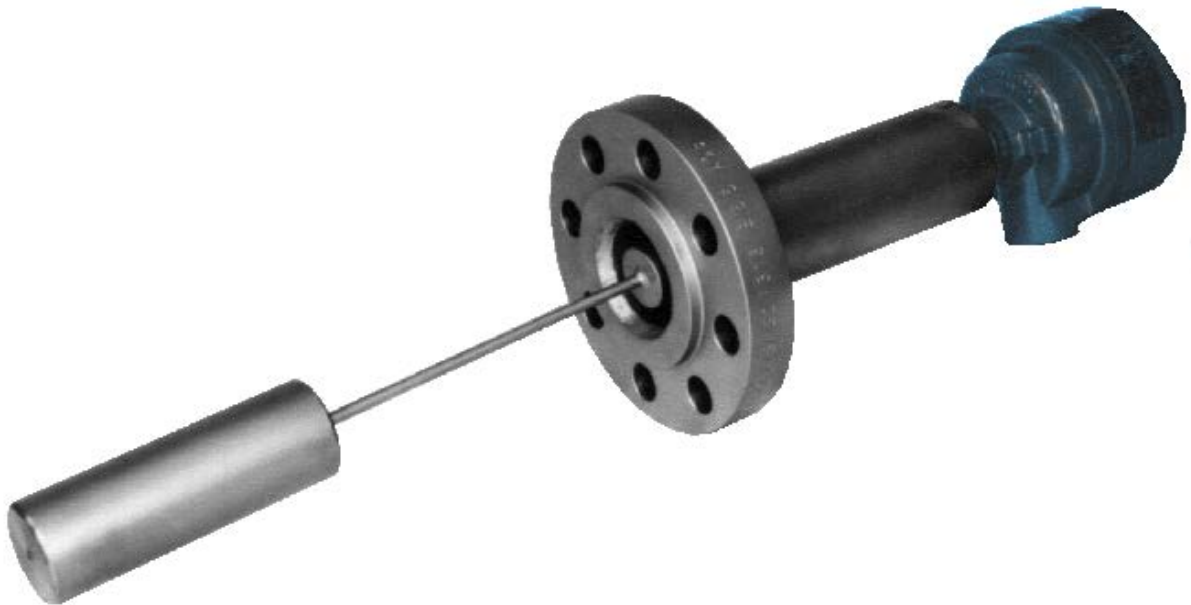
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735 WITH NPT PROCESS CONNECTION



735 WITH FLANGE PROCESS CONNECTION