

Model 763

EXTERNAL CAGE FOR STEAM AND DOWTHERM, FOR UP TO 3000 PSI STEAM WITH 1000°F SUPERHEAT

The Series 763 condensate level switch produces a switching action when a liquid level passes a selected elevation. The sensing element is mounted in an external cage. An external cage is utilized to minimize the effects of turbulence, boiling, and splashing on the measurement. This cage design can also be valved off from the process, cooled and depressurized; allowing inspection, testing, maintenance, etc. of the 763. The output signal from the 763 consists of 1 or more heavy SPDT dry contacts.

The unit has a strong heavy wall displacer sensing element. The weight of this element is partially offset by a pivoted counterweight. The displacer net weight is strictly a function of the earth's gravity. Switch action is unaffected by process temperature and other variables. This design allows the 763 to work reliably at temperatures over 1500°F (815°C).

The displacer is buoyed upwards by the liquid as the level rises. The counterweight is equipped with an embedded magnet which is rotated downward as the displacer rises. A second magnet, connected to the output switch, is located on the outside of the pressure containing cage wall. This magnet is in opposition to the counterweight magnet and is continuously engaged with the embedded magnet. The switch magnet field goes over center and the magnet is forced against the upper stop as the displacer passes the centerline of the cage. The output switch has been activated and is now positively held in the up position. It will not false switch because of vibration, shock loads, etc. Conversely, the switch magnet is forced against the lower stop and the output switch deactivates as the liquid level drops below the centerline of the cage. There are no cams, rollers, temperature sensitive springs, etc. to limit reliability.

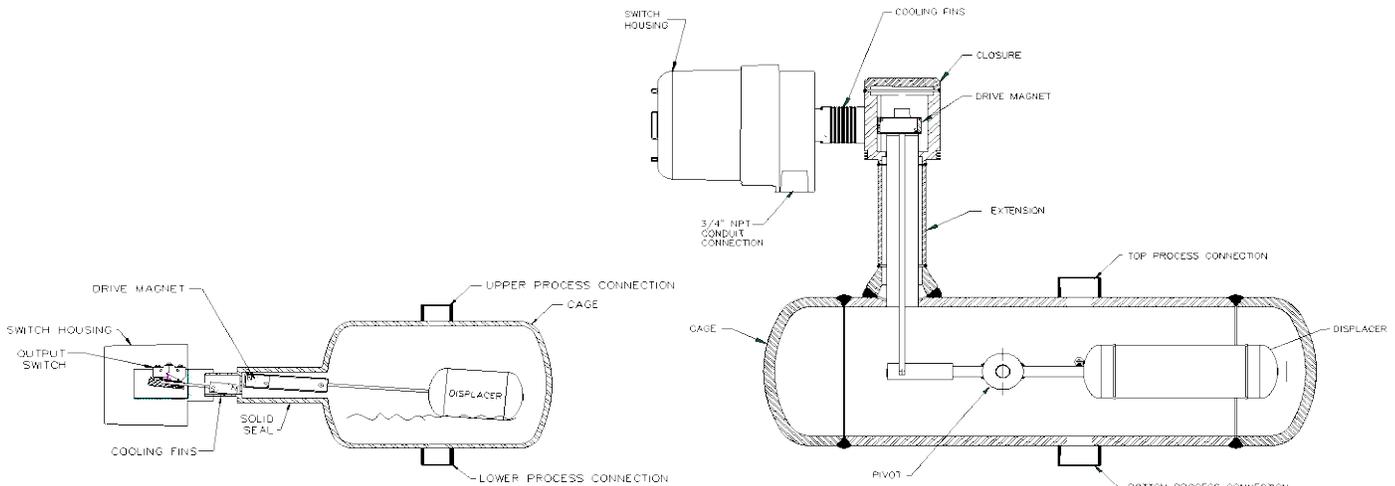
The 763 is truly a very high reliability liquid level switch which operates at high temperatures and pressures. Only a single weight, kept in position by a pivot shaft, moves. Reliable magnet lines of force penetrate the cage wall and connect up to the output switch.



Model 763-36



Model 763-Y



ELEMENT "V", "X" & "Y"

ELEMENT "36" & "37"



DELTACONTROLS
CORPORATION

BASIC TYPE -
 SENSING ELEMENT -
 PROC CONN SPACING -
 PROCESS CONNECTION -
 SWITCH AND HOUSING -
 OPTIONS

MODEL
 EXAMPLE: 763 - VS - 7.3" - TB/1"SW - D1W - AA

BASIC TYPE

M/N	DESCRIPTION
763	1 ALARM

316 S.S. TRIM AND ATTRACTOR
 DUAL MAGNETS

OPTIONS

M/N	DESCRIPTION
AA	NONE
HM	HIGH TEMPERATURE MAGNET REQUIRED ABOVE 800°F, C/F ABOVE 1000°F

SENSING ELEMENT

MINIMUM SPECIFIC GRAVITY LIMITATIONS FOR STEAM					WORKING PSIG @ °F VAPOR TEMP						
MODEL NO.	MATERIAL		PROCESS CONNECTION SPACING INCHES **	SERVICE PSIG* SATURATED STEAM		A106 CARBON STEEL		2 ¼ CHROME 1 MOLY		316 STAINLESS STEEL	
	SENSOR	CAGE		PSI	°F	-20/650°F	750°F	800°F	900°F	1000°F	1150°F
VS	316 SS	STEEL	7.3 SW OR NPT	250	406	240	225	-	-	-	-
VY	316 SS	316 SS	7.3 SW OR NPT	250	406	240	225	205	195	185	150
XS	316 SS	STEEL	8.3 SW	700	500	600	650	-	-	-	-
XH	316 SS	CR-MOLY	8.3 SW	700	500	-	-	565	530	-	-
XY	316 SS	316 SS	8.3 SW	700	500	-	-	-	-	515	410
YS	316 SS	STEEL	8.9 BW	1000	545	1050	1000	-	-	-	-
YH	316 SS	CR-MOLY	8.9 BW	1000	545	-	-	870	550	-	-
YY	316 SS	316 SS	8.9 BW	1000	545	-	-	-	-	875	700
36S	316 SS	STEEL	8.0 BW	2000	636	1800	1550	-	-	-	-
36H	316 SS	CR-MOLY	8.0 BW	2000	636	-	-	1770	1610	-	-
36Y	316 SS	316 SS	8.0 BW	2000	636	-	-	-	-	3000	2500
37S	316 SS	STEEL	11.9 BW	3000	695	3000	2670	-	-	-	-
37H	316 SS	CR-MOLY	11.9 BW	3000	695	-	-	3000	2630	-	-
37Y	316 SS	316 SS	11.9 BW	3000	695	-	-	-	-	3000	2500

- MIN SPG REQUIREMENT OCCURS WHEN PRESURIZED STEAM IS AT ITS SATURATION TEMPERATURE. THE ELEMENT IS SUITABLE FOR SUPERHEATED STEAM AND FOR HIGHER PRESSURES
- CONTACT FACTORY WITH SERVICE CONDITIONS.
- ** OTHER CONNECTION SPACING AVAILABLE, CONTACT FACTORY

SWITCH AND HOUSING

M/N FIRST CHARACTER	SWITCH TYPE - SERVICE AND LOAD RATINGS	Switch Temp Rating
S	GENERAL USE, COMPACT, 4 AMP @ 28VDC, 5 AMP @ 125VAC, 250VAC	-65 to 250°F (-54 to 121°C)
T	HIGH TEMPERATURE; 5 AMP @ 125VAC, 250VAC; 0.5A@125VDC; 0.25A@250VDC	-65 to 400°F (-54 to 204°C)
H	SEALED SWITCHES, 15 AMPS @ 125/250VAC, 0.5 AMPS @ 125 VDC, 0.25A @ 250VDC, 1/8HP 125VAC, 1/4HP 250VAC	-67 to 185°F (-55 to 85°C)
L	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	-67 to 185°F (-55 to 85°C)
D	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.)	-67 to 180°F (-55 to 82°C)
M/N SECOND CHARACTER	NUMBER OF CONTACTS	
1	1 SPDT CONTACT	
2	2 SPDT CONTACTS	
4	4 SPDT CONTACTS (TYPE S ONLY)	
M/N THIRD CHARACTER	HOUSING RATING	
W	Type 4X, IP65	
X	TYPE 4X, IP65 (EPOXY COATED)	
C	ALUMINUM – FOR HAZARDOUS LOCATIONS; SEE CSA RATINGS	
T	300 STAINLESS STEEL – FOR HAZARDOUS LOCATIONS; SEE CSA RATINGS	

PROCESS CONNECTION

ELEMENT M/N	PROCESS CONN. SIZE
	1"NPT
	1" SW
	1" BW

FLANGES METRIC SIZES, ETC. = C/F
 * CONNECTION MATERIAL IS SAME AS BODY/CAGE MATERIAL
 NOTE: SPECIAL CONNECTIONS & ARRANGEMENTS AVAILABLE; CONSULT FACTORY
 OTHER CONFIGURATIONS, SUCH AS SS, SB & SSD CONNECTION ORIENTATION AVAILABLE; C/F



CSA Ratings:
 Housing types 'C' and 'T'
 Cl I Div 1, Gr B,C,D; Cl II, Div 1 Gr E,F,G; Cl III Div 1
 Class I Zone 1, Ex/AEx d IIB+H₂
 Maximum contact ratings 480Vac, 15A, T5 with max ambient 80°C. T6 without heater with max ambient 60°C



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