

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.

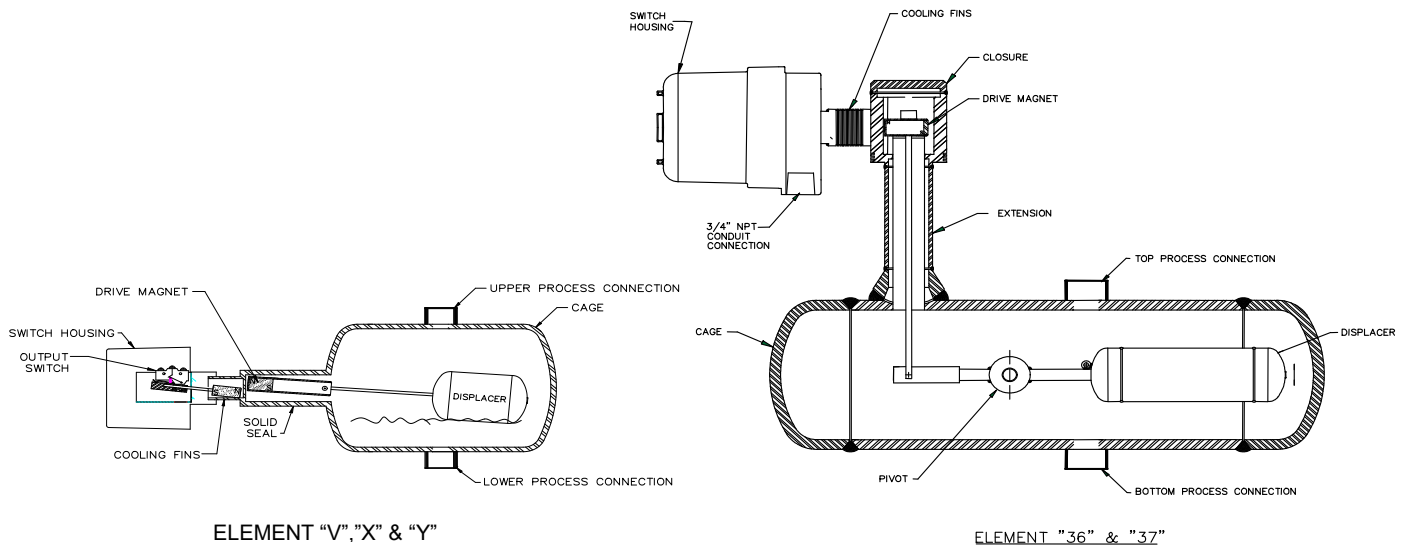
The 763 is truly a very high reliability liquid level switch which operates at high temperatures and pressures. Only a single weight, kept in position by a pivot shaft, moves. Reliable magnet lines of force penetrate the cage wall and connect up to the output switch.



Model 763-36



Model 763-Y



Delta Controls
CORPORATION

BASIC TYPE	-	SENSING ELEMENT	-	PROCESS CONN SPACING	-	PROCESS CONN SIZE & TYPE	-	SWITCHES & HOUSING	-	OPTIONS
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MODEL EXAMPLE 763 - VS - 7.3" - TB/1"SW - D1W - AA

BASIC TYPE	
M/N	DESCRIPTIONS
763	1 ALARM POINT

BASIC: 316 S.S. TRIM AND ATTRACTOR, DUAL MAGNETS

SENSING ELEMENT											
MAXIMUM SATURATED STEAM WORKING PRESSURE						WKG PSIG @ ° F VAPOR TEMP; CONTINUOUS SERVICE					
ADD\$			PROCESS CONN			2 ¼ CHROME			316		
			BASIC SPACING			MAX PSIG*			A106-B		
						1 MOLY			STAINLESS		
MODEL NO.	MATERIAL		INCHES **	SATURATED STEAM		CARBON STEEL				STEEL	
	SENSOR	CAGE		PSI	°F	-20/650	750	800	900	1000	1150
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.

** BASIC IS N/C, OTHER CONNECTION SPACING AVAILABLE, CONTACT FACTORY **OPTIONS**

PROCESS CONN SIZE & TYPE				
ELEMENT M/N	V	X	Y	36 & 37
PROCESS CONN. SIZE	1"FPT		NA	NA
	1"SW			NA
	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

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

SWITCHES & HOUSING			
NEMA 7X	MAX STEAM SERVICE °F		INTENDED SERVICE **
M/N	V,X,Y	36,37	
T1C	*1260	*1575	HIGH TEMPERATURE
T2C	*1260	*1575	
L1C	788	*1470	A.C. MOTOR LOADS
L2C	788	*1470	
D1C	683	*1260	HIGH D.C. LOADS
D2C	683	*1260	

- NOTE: ALL SWITCH STATIONS EQUIPPED WITH DUAL MAGNETS FOR HIGH VIBRATION CONDITIONS, EXPLOSION PROOF HOUSINGS AVAILABLE: C/F
- REQUIRES "HM" HIGH TEMPERATURE MAGNET OPTION, WHEN SERVICE TEMPERATURE IS ABOVE 800°F
 - HOUSING IS ALUMINUM, ADD \$45.00 FOR EPOXY COATING.
 - **SEE DATA SHEET FOR SWITCH LOAD AND SERVICE RATINGS



Engineered Reliability

585 Fortson Street
 Shreveport, La. 71107 - USA
 P: +1(318) 424-8471
 F: +1(318) 425-2421
 sales@deltacnt.com
 www.deltacnt.com