

FLOAT SWITCH / ALARM -TOP INSERTED
710A – TWO ALARM POINTS
710D – ONE STATION, ADJUSTABLE
DIFFERENTIAL

Model 710A
710D

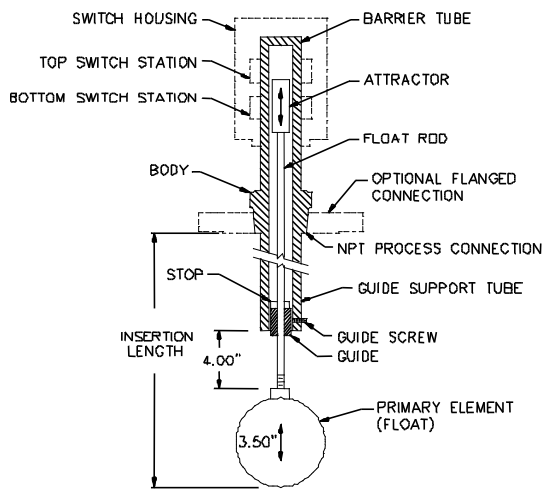
The Model 710A is similar to the Model 709. The principal difference is that it has more float movement and the power needed to reliably operate two switch stations. The upper switch is activated about two inches above the elevation at which the lower switch activates.

The 710A is commonly used for high level shutdown with a preliminary high level warning which announces that "Shutdown" may soon occur and remedial action should be taken at once.

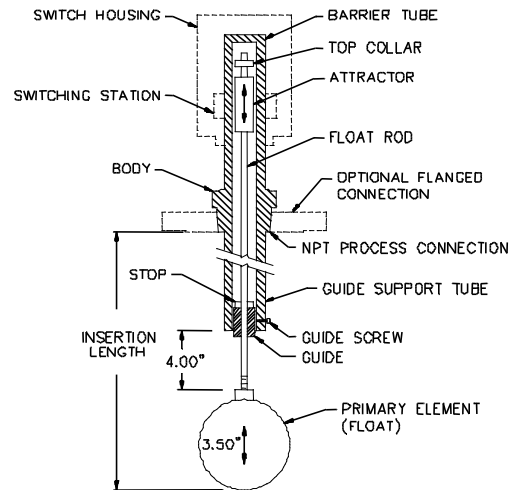
A stainless housing is available for use with the SPDT and DPDT versions of the small "S" model switch stations. This housing is both watertight and for Class 1, Div 1 hazardous areas. It proves good protection in extremely corrosive locations such as sulfuric acid plants and offshore oil production platforms. It is also available in a polished version for use in pharmaceutical and food plants.

The Model 710D body, mechanism and float are the same as the one used for the Model 710A. The difference is that it only has a single switch station and is equipped with a differential device. The station activates at a "High" level and remains activated until the liquid level falls to a lower elevation. The additional amount that it must fall, before the station deactivates, is called the "Differential". This amount is adjustable from about 1.0" to about 2.5", depending upon the Specific Gravity (SPG) of the liquid.

The Model 710D is commonly used where a considerable amount of surface agitation or splashing is expected to occur. This design results in a more stable and reliable alarm action, particularly as the level approaches the switching point. It can also serve as a pump control in large tanks.



MODEL 710A



MODEL 710D



BASIC TYPE	-	SENSING FLOAT	-	INSERTION DISTANCE	-	PROCESS CONNECTION	-	SWITCH & HOUSING	-	OPTIONS
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MODEL EXAMPLE 710A - TY - 24.0" - 4"/150RS - S1W - AA

BASIC TYPE	
M/N	DESCRIPTION
710A	2 ALARM POINTS
710D	1 STA., ADJ DIFF

316 S.S. SPRING: 300°F MAXIMUM;
INCONEL SPRING TO 500°F
BASIC: 316 S.S. TRIM,

SENSING FLOAT																			
ELEMENT (INCHES)				WKG PSIG @ °F			MIN PROCESS CONNECTION		TYPE ACTION	MINIMUM SPG @ INSERTION DISTANCE (INCHES)									
M/N	MATERIAL	O.D.	LENGTH	100	450	750	NPTF	FLANGED NOZZLE		13	18	24	36	48	60	72	96	120	150
TY	316 S.S.	2.6	7.0	275	185	160	2.5"	3" S160	A.D.	0.79	0.80	0.82	0.84	0.88	0.91	NA	NA	NA	NA
									2 STA	0.89	0.91	0.93	NA	NA	NA	NA	NA	NA	NA
14Y	316 S.S.	3.5	7.0	265	175	145	NA	4" S120	A.D.	0.62	0.63	0.65	0.66	0.69	0.71	0.74	0.79	0.85	0.92
									2 STA	0.70	0.71	0.72	0.74	0.76	0.79	0.82	0.87	0.92	NA
15Y	316 S.S.	5.5	BALL	425	300	250	NA	6" S80	A.D.	0.43	0.44	0.45	0.45	0.47	0.48	0.50	0.52	0.55	0.58
									2 STA	0.49	0.50	0.51	0.51	0.53	0.55	0.55	0.58	0.61	0.64
PY	316 S.S.	7.0	BALL	425	275	235	NA	8" S120	A.D.	0.57	0.58	0.58	0.58	0.59	0.60	0.60	0.62	0.63	0.65
									2 STA	0.61	0.61	0.61	0.62	0.62	0.63	0.64	0.65	0.66	0.68
# INTERFACE SERVICE														0.50 FOR ADJUSTABLE DIFF.; 0.125 UNITS					
ITY	316 S.S.	7.0	BALL	730	475	400	NA	8" S120	0.52 FOR 2 STATION ALARM; DIFFERENTIAL										

- (1) # MINIMUM DIFFERENCE BETWEEN THE SPECIFIC GRAVITIES OF THE TWO LIQUIDS: 0.125 UNITS
- (2) # MINIMUM SPG OF THE HEAVIER LIQUID: 0.50 UNITS
- (3) ALLOWED INSERTION: ANY FROM 12" (BOTTOM OF FLOAT HANGING FREE)
- (4) CENTERLINE OF SWITCH BAND: 4" ABOVE INSERTION DEPTH

INSERTION DISTANCE		
M/N	DESCRIPTION	/INCH
13"	MINIMUM INSERTION DISTANCE	N/C
#	13" TO 150" MAXIMUM INSERTION	(OVER 13")

REPLACE "#" WITH REQUIRED INSERTION (INCHES).

PROCESS CONNECTION		
M/N	ANSI SIZE	
	STEEL	316 S.S.
1"MPT#		
3"MPT#		
3"/150R#		
4"/150R#		
4"/300R#		
6"/150R#		
6"/300R#		
8"/150R#		
8"/300R#		

REPLACE "#" WITH "S" FOR STEEL OR "Y" FOR 316 S.S.

** ADD 20% TO 304 S.S. PRICE FOR 316 S.S. MATERIAL

SWITCH & HOUSING						
▲ SWITCH STATION DESCRIPTIONS -						INTENDED SERVICE **
W/P-N4	710A	710D	E/P-7CD,9	710A	710D	
S1W	NA		* S1C	NA		GENERAL USAGE
S2W	NA		* S2C	NA		
S4W			S4C			
T1W			T1C			HIGH TEMPERATURE
T2W			T2C			
H1W			H1C			ENVIRONMENTALLY SEALED
H2W			H2C			
L1W			L1C			A.C. MOTOR LOADS
L2W			L2C			
D1W			D1C			HIGH D.C. LOADS
D2W			D2C			

▲ FOR NEMA 4X (EPOXY): ADD \$ AND CHANGE "W" TO "X"

FOR NEMA 7, GROUP B: ADD \$ AND CHANGE "C" TO "B"

* FOR ALL 300 S.S. NEMA 7B HOUSING: ADD \$ AND CHANGE "C" TO "T"

**SEE DATA SHEET FOR SWITCH LOAD AND SERVICE RATINGS

M/N	HOUSING EXTENSION	MAX PROCESS TEMP (°F) - SWITCHES						ADD \$
		CONDENSING SERVICE (STEAM, DOWTHERM)			NONCONDENSING (GAS, HYDROCARBONS)			
		D	S,L	H,T	D	S,L	H,T	
AA	NONE	400	500	750	500	600	850	
T1	6"	500	575	950	600	700	1100	
T2	12"	600	650	1250	800	925	1500	
SA	316SS SHEATHED ATTRACTOR (REQ'D FOR 316SS BODY)							
HH	120VAC HOUSING HEATER. PREVENTS CONDENSATION & ICING; INSULATE HOUSING FOR LOW AMBIENT CONDITION							
HBKT	SUPPORT BRACKET, HORIZONTAL LEDGE MOUNT							
VBKT	SUPPORT BRACKET, VERTICAL WALL MOUNT							



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