

**FLOAT SWITCH / ALARM -TOP INSERTED**  
**711A – TWO ALARM POINTS – WIDE SPACING**  
**711D – ONE STATION, ADJUSTABLE**  
**DIFFERENTIAL – WIDE SPACING**

**Model 711A**  
**711D**

The Model 711A provides two-point alarms with from 6" to 65" of elevation spacing between the two switching points. A float rides on the surface of the liquid. Its horizontal position is maintained by the stroke rod as the liquid level varies. The Model 711A produces two widely spaced switch actions. The normal application would be for high/low alarm. Note that the liquid must not leave significant coatings or deposits on the rod.

The attractor and inner works is supported at the midpoint of its travel by a spring. The float is supported by the liquid and is free to slide up and down on the rod. Rising level carries the float up until it contacts the upper stop. The rod is then lifted which carries the attractor into the field of the station magnet. The magnet pulls in against the outside of the sealing tube and the switch activates. Falling level drops the float away from the upper stop. The attractor moves down and the switch deactivates.

Similarly, falling level carries the float down until it contacts the lower stop. The weight of the float pushes the rod down, lowers the attractor so that it is in front of the magnet, and the lower switch actuates. It deactuates when the float rises above the stop and the spring pulls the attractor out of the field of the lower switch station magnet.

The Model 711A will do many jobs that would otherwise require the use of two separate conventional float switches. This results in cost savings for both the equipment and the decreased amount of installation required. The switching points may be easily changed in the field by repositioning the stops.

The Model 711D body, mechanism, and float are the same as the one used for the Model 711A. The difference is that it only has a single switching station. The station activates when the sensing float rises to the upper stop and lifts the guide rod attractor into the field of the station magnet. The station stays activated until the float moves down against the lower stop. The guide rod-attractor is then pulled down out of the magnetic field and the switch station deactivates. It remains in that condition until the float again rises up against the upper stop and activates the switch.

The Model 711D is normally used to control a pumping action in a process vessel or storage tank.



**MODEL 711A**



**DELTA CONTROLS**  
CORPORATION

**BASIC TYPE** - **SENSING FLOAT** - **INSERTION DISTANCE** - **PROCESS CONNECTION** - **SWITCH AND HOUSING** - **OPTIONS**

MODEL  
EXAMPLE: 711A - 11Y - 24" - 4" 150RS - L1W - AA

**BASIC TYPE**

M/N	DESCRIPTION
711A	2 ALARM POINT
711D	1 STA. ADJ DIFF.

BASIC: 316 S.S. TRIM WITH  
416 S.S. ATTRACTOR

**INSERTION DISTANCE**

M/N	DESCRIPTION
18"	MINIMUM INSERTION DISTANCE
*	18" TO 150" MAXIMUM INSERTION

REPLACE "\*" WITH REQUIRED INCHES OF INSERTION.  
NOTE: (A) INSERTION IS MEASURED "DRY" WITH FLOAT BEING SUPPORTED BY THE LOWER STOP.  
(B) SWITCH POINTS MAY BE SET FROM 8" BELOW THE FLANGE TO THE SPECIFIED INSERTION DISTANCE (LESS 4").

**PROCESS CONNECTION**

M/N	PROCESS CONNECTIONS
4"150R#	4" 150# ANSI FLANGE
4"300R#	4" 300# ANSI FLANGE
6"150R#	6" 150# ANSI FLANGE
6"300R#	6" 300# ANSI FLANGE
8"150R#	8" 150# ANSI FLANGE
8"300R#	8" 300# ANSI FLANGE

REPLACE "# " WITH:  
"S" FOR STEEL CONSTRUCTION,  
"B" FOR 304 SS  
"Y" FOR 316 SS  
\* OPTION "SA" REQUIRED WITH 316SS

**SENSING FLOAT**

ELEMENT (INCHES)					WKG PSIG @ °F			MINIMUM FLANGED PROCESS CONNECTION NOZZLE
M/N	MAT	SPG	O.D.	LENGTH	100°F	250°F	450°F	
11Y	316 S.S.	0.60	3.6	7.6	185	145	120	4" SCH 80
12Y	316 S.S.	0.65	5.1	BALL	450	350	290	6" SCH 160
13Y	316 S.S.	0.35	7.2	BALL	375	295	295	8" SCH 80

NOTE: LIMITED TO 250°F WITH 316 S.S. RANGE SPRING;  
UP TO 450°F WITH INCONEL RANGE SPRING

**OPTIONS**

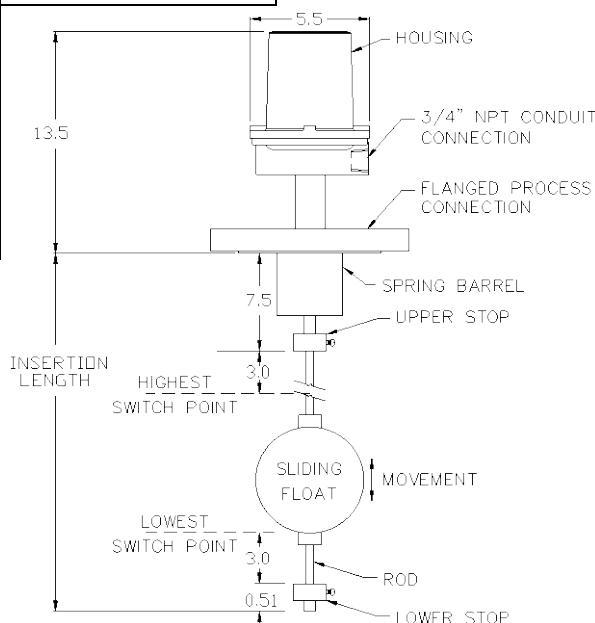
M/N	DESCRIPTION
AA	NONE
IN	INCONEL SPRING INSTEAD OF 316 S.S. FOR UP TO 500°F
SA	316 S.S. SHEATHED ATTRACTOR

**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	



**CSA Ratings:**  
Housing types 'C' and 'T'  
CI I Div 1, Gr B,C,D; CI II, Div 1 Gr E,F,G; CL III Div 1  
Class I Zone 1, Ex/AEx d IIB+H<sub>2</sub>  
Maximum contact ratings 480Vac, 15A, T5 with max ambient 80°C. T6 without heater with max ambient 60°C



SHOWN "DRY"



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