

Float Switch Technology

FLOAT TYPES								
plastic	N1	P0	P1	P10	P2	P3	P4	
<b>Specifications</b>								
<b>Material</b>	NBR	PP	PP	PP	PP	PP	PVDF	
<b>Specific gravity</b>	0.60 g/cm <sup>3</sup>	0.73 g/cm <sup>3</sup>	0.60 g/cm <sup>3</sup>	0.72 g/cm <sup>3</sup>	0.60 g/cm <sup>3</sup>	0.50 g/cm <sup>3</sup>	0.70 g/cm <sup>3</sup>	
<b>Temperature range</b>	-20...100 °C	-20...80 °C	-20...80 °C	-20...80 °C	-10...80 °C	-10...80 °C	-30...125 °C	
<b>Maximum pressure</b>	0 bar	5 bar	5 bar	5 bar	3 bar	3 bar	2 bar	
<b>Dimensions</b>	17.5x25 mm	19x16 mm	24x22 mm	29x11 mm	29x50 mm	38x60 mm	38x60 mm	
<b>Internal diameter</b>	10 mm	8 mm	9 mm	12 mm	14 mm	18 mm	18 mm	
<b>Weight</b>	2.5 g	2.8 g	5 g	4.4 g	14 g	23 g	37.5 g	
stainless steel	S1	S2	S3	S4	S5	S6		
<b>Specifications</b>								
<b>Material</b>	SS 316	SS 316	SS 316	SS 316	SS 304	SS 304		
<b>Specific gravity</b>	0.70 g/cm <sup>3</sup>	0.70 g/cm <sup>3</sup>	0.65 g/cm <sup>3</sup>	0.55 g/cm <sup>3</sup>	0.65 g/cm <sup>3</sup>	0.50 g/cm <sup>3</sup>		
<b>Temperature range</b>	-20...200 °C	-20...200 °C	-20...200 °C	-20...200 °C	-20...200 °C	-20...200 °C		
<b>Maximum pressure</b>	10 bar	30 bar	12 bar	30 bar	30 bar	10 bar		
<b>Dimensions</b>	28x28 mm	40x42 mm	45x55 mm	52x52 mm	73x73 mm	75x108 mm		
<b>Internal diameter</b>	9.5 mm	11 mm	15 mm	15 mm	19 mm	19 mm		
<b>Weight</b>	8 g	19 g	37 g	33 g	105 g	147 g		
stainless steel	S0	S7	S10	S20	S8	S9	S11	
<b>Specifications</b>								
<b>Material</b>	SS 316	SS 316	SS 316	SS 316	SS 304	SS 304	SS 316	
<b>Specific gravity</b>	0.72 g/cm <sup>3</sup>	0.82 g/cm <sup>3</sup>	0.82 g/cm <sup>3</sup>	0.75 g/cm <sup>3</sup>	0.5 g/cm <sup>3</sup>	0.45 g/cm <sup>3</sup>	0.45 g/cm <sup>3</sup>	
<b>Temperature range</b>	-20...200 °C	-20...200 °C	-20...200 °C	-20...200 °C	-20...200 °C	-20...200 °C	-40...200 °C	
<b>Maximum pressure</b>	8 bar	30 bar	50 bar	30 bar	30 bar	30 bar	15 bar	
<b>Dimensions</b>	25x24 mm	30x28 mm	30x32 mm	22x40 mm	100x100 mm	150x150 mm	51x61 mm	
<b>Internal diameter</b>	9.5 mm	9.5 mm	9.5 mm	8.5 mm	20 mm	30 mm	15.5 mm	
<b>Weight</b>	6 g	8 g	8.6 g	10 g	250 g	534 g	37 g	

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CHEMICAL COMPATIBILITY OF LEVEL SENSOR MATERIALS																				
Chemical	Concentration [%]	Temperature [°C]	PVC	PP	PVDF	PTFE	NBR	SS 304	SS 316	Chemical	Concentration [%]	Temperature [°C]	PVC	PP	PVDF	PTFE	NBR	SS 304	SS 316	
																				Ammonia Water NH <sub>4</sub> OH
		80		○	●	●						80								
Aqua Regia 3HCL + HNO <sub>3</sub>	10	40	□	□	●	●					13	40	●	□	●	●		X	X	
		80			●	●						80								
Benzene C <sub>6</sub> H <sub>6</sub>	pure	40	X	□	○	●				Sulfuric Acid H <sub>2</sub> SO <sub>4</sub>	10	40	●	●	●	●	●	●	●	
		80			□	●						80		●	●	●	●	○	○	○
Bleaching Liquor Ca(ClO) <sub>2</sub>	<20	40	●		●	●						30	40	●	●	●	●	●	X	X
		80			●	●						80		●	●	●	●	○	X	X
Potassium Chromate K <sub>2</sub> CrO <sub>4</sub>		40	●	●	●	●	●					50	40	●	●	●	●	○	X	X
		80		○	●	●	○					80		●	●	●	●	□	X	X
Boric Acid H <sub>3</sub> BO <sub>3</sub>	sat	40	●	●	●	●	●					60	40	●	●	●	●	●	X	X
		80		●	●	●	○					80		○	●	●	○	X	X	
Brine		40	●	●	●	●	●					70	40	●	●	●	●	○	X	X
		80		●	●	●						80		○	●	●	●	□	X	X
Butadiene CH <sub>2</sub> =CH <sub>2</sub> =CH <sub>2</sub> =CH <sub>2</sub>	gas	40	●		●	●					80	40	●	●	●	●	●	X	X	
		80			●	●					80		○	●	●	●	□			
Butane CH <sub>3</sub> (CH <sub>2</sub> ) <sub>2</sub> CH <sub>3</sub>	gas	40	●	●	●	●					90	40	○	●	●	●	□	X	X	
		80		●	●	●					80		○	●	●	●	□			
Nitric Acid HNO <sub>3</sub>	10	40	●	●	●	●	●	●	●	Chlorine gas Cl <sub>2</sub>	wet	40	○		●	●				
		80	X	○	●	●		●	●											
	30	40	●	●	●	●		●	●		dry	40	●		●	●				
		80	X	○	●	●		●	●											
	50	40	○	○	●	●		●	●		10	40	●		●	●				
		80	X	X	○	●		○	●											
70	40	○	X	○	●			○	30	40	□		●	●						
	80	X			○	○														
98	40				○	○			50	40	X		●	●						
	80					□														
Oxalic Acid HOOC <sub>2</sub> COOH	<50	40	●	●	●	●			10	40	●		●	●						
		80		●	●	●			80				●	●						
Kerosene		40	●	○	●	●			□	Gasoline	10	40	●		●	●				
		80			●	●														
Phosphoric Acid H <sub>3</sub> PO <sub>4</sub>	10	40	●	●	●	●	●	●	●	Diesel Fuel		40			●	●		●	●	
		80		○	●	●	●	□	●			●								
	50	40	●	●	●	●	●	●	●	Ethyl Alcohol C <sub>2</sub> H <sub>5</sub> OH	pure	40	●	●	●	●	●	○	○	
		80		□	●	●	X	●	●											
80	40	●	●	●	●	○	●	●	Formic Acid HCOOH	90	40	○	○	●	●					
	80		□	●	●		●	●												
Toluene C <sub>6</sub> H <sub>5</sub> CH <sub>3</sub>		40		□	□	●			Hydrofluoric Acid HF	dilute	40	●	○	●	●					
	80				○															
Sodium Hydroxide NaOH	15	40	●	●	●	●	●	●		30	40	○	○	●	●	●	●			
		80		○	□	●	●	□			X	X								
	30	40	●	●	●	●	●	●		50	40	□	○	●	●	●	●			
		80		○	□	●	●	X			X									
50	40	●	●	○	●	●	●	●	70	40	○	○	○	●						
	80		○	X	●	●	X	X												
Hydrochloric Acid HCl	15	40	●	●	●	●	○		Hydrogen Peroxide H <sub>2</sub> O <sub>2</sub>	5	40	●	●	●	●		○	●		
		80		●	●	●	●													
	25	40	●	●	●	●	X			30	40	○	○	●	●					
		80		●	●	●														
	38	40	●	●	●	●	X			90	40			●	●					
		80		○	●	○														
Citric Acid C <sub>6</sub> H <sub>8</sub> O <sub>7</sub>	10	40	●	●	●	●	●	●	Isopropyl Alcohol (CH <sub>3</sub> ) <sub>2</sub> CHOH	pure	40	●	●	●	●	○				
		80		○	●	●	●													
Sea water		40	●	●	●	●	●	□	□	Methyl Alcohol CH <sub>3</sub> OH		40	○	●	●	●	□			
		80		●	●	●	●	□	□											
		40	●	●	●	●	●	□	□	Urea CO(NH <sub>2</sub> ) <sub>2</sub>		40	X	●	●	●	○	○	○	
		80		●	●	●	●	□	□											

● excellent ○ good □ fair X corroded

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