

# FL - Magnetic Float Level Sensors



The FL Magnetic level switch is designed to meet demanding customer applications for liquid level sensing in rugged hostile environments. Each FL is manufactured to the users specifications making it fit to work precisely according to the application requirements.

## Features

- Custom tailored to user specifications
- Long switch life
- Up to seven switch points

# FL General Specifications

## Performance

- FLR: 7 Switch Points  
Min. distance between levels: 1.75 in. (45mm)
- FLE: 3 Switch Points

## Connectivity

- Output: 4-20 mA, Resistive

## Environmental

- Operating Temperature:  
14° to 212°F (-10° to 100°C)

## Certification

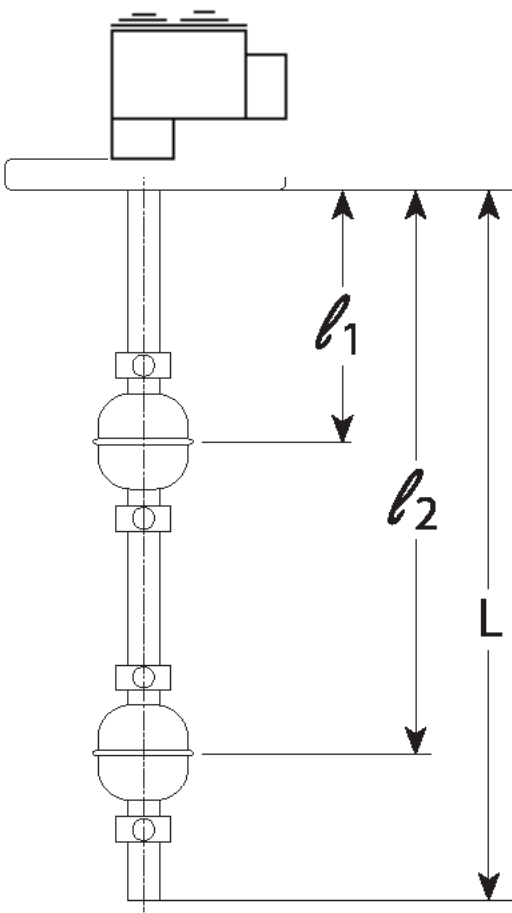
- FLE:  
NEMA 4 & 7, IP65  
IP43
- FLR:  
NEMA 4 & 7, IP65

## Electrical

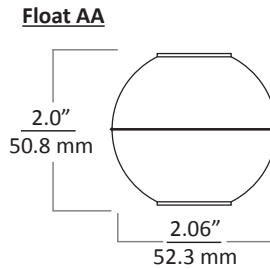
- Switch Rating:  
20 VA, 50 VA, 180 VA
- Max Current:  
0.5 A AC
- Max Voltage:  
220 VAC

## Physical

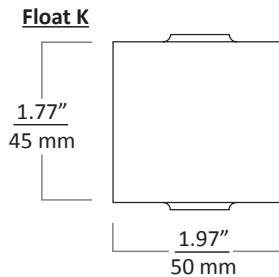
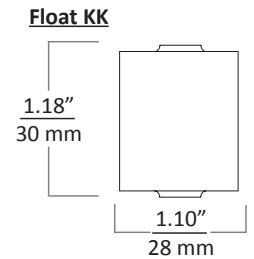
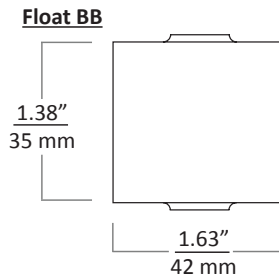
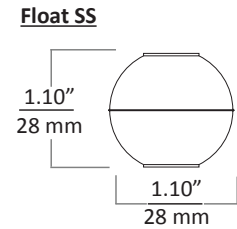
- Stem Length:  
FLE: 24 in. (610 mm)  
FLR: 153 in. (3900 mm)
- Cable Entry:  
FLE: 1/2 in. / 3/4 in.  
FLR: 1/2 in. / 3/4 in.



### FLR Floats



### FLE Floats



# Options

Part Number: FLR -      -      -      -      -      -      -      -      -     

A            B            C            D            E            F            G            H            I

## A. Mounting Type

- 0** Flat face flange
- 1** Raised face flange
- 2** Slide adapter
- 3** 3A Sanitary ferrule
- 4** Plug mounted from outside of tank
- 5** Plug mounted from inside of tank

## B. Mounting Option and Size

- A** Ansi flange 150# (size=2, 2.5, 3, 4)
- J** JIS flange 10 kg/cm2 (size=2)
- D** DIN flange 10 kg cm2 (size=50)
- SF** 3A Sanitary ferrule (size=2, 2.5, 3, 4)
- T** NPT plug (size=1.5, 2, 2.5, 3, 4)  
(inside size=0.25, 0.5, 0.75, 1, 1.5, 2)
- G** PF plug (size=2, 2.5, 3)  
(inside size=0.75, 1, 1.5, 2)
- R** RT plug (size=2, 2.5, 3)  
(inside size=0.75, 1, 1.5, 2)
- X** Other

## C. Material

- S** 304 SS
- S6** 316L SS

## D. Housing

- H1** NEMA 4 & 7, IP65 (1/2 in. canle entry)
- H3** NEMA 4 & 7, IP65 (3/4 in. cable entry)
- W** No housing, mounting option with 3/4 NPT plug and 12 in. lead wires

## E. Reed Switch

- A** 50 VA
- C** 180 VA

## F. Number of Switch Points

- 1-7** Select the number of switch points required

## G. Number of Floats

- 1-7** Select the number of floats required

## H. Float Type

- K** Buna (for A reed switch only)
- AA** 316L SS (2.06 in. diameter)
- BB** 316L SS (1.63 in. diameter)

## I. Probe Length (in./mm)

- L\_** in./mm

## Switch Point Location(s)

(Measured from process connection)

- 1** \_\_\_\_ in./mm (designate NO or NC position)
- 2** \_\_\_\_ in./mm (designate NO or NC position)
- 3** \_\_\_\_ in./mm (designate NO or NC position)
- 4** \_\_\_\_ in./mm (designate NO or NC position)
- 5** \_\_\_\_ in./mm (designate NO or NC position)
- 6** \_\_\_\_ in./mm (designate NO or NC position)
- 7** \_\_\_\_ in./mm (designate NO or NC position)

# Options

Part Number: FLE -      -      -      -      -      -      -      -      -     

A            B            C            D            E            F            G            H            I

## A. Mounting Type

- 0** Flat face flange
- 1** Raised face flange
- 3** 3A Sanitary ferrule
- 4** Plug mounted from outside of tank
- 5** Plug mounted from inside of tank
- 6** OL flange
- 7** OL housing

## B. Mounting Option and Size

- A** Ansi flange 150# (size=2, 2.5, 3, 4)
- J** JIS flange 10 kg/cm2 (size=2)
- SF** 3A Sanitary ferrule (size=2, 2.5, 3, 4)
- T** NPT plug (size=1.5, 2, 2.5, 3, 4)  
(inside size=0.25, 0.5, 0.75, 1, 1.5, 2)
- G** PF plug (size=2, 2.5, 3)  
(inside size=0.75, 1, 1.5, 2)
- R** RT plug (size=2, 2.5, 3)  
(inside size=0.75, 1, 1.5, 2)
- X** Other

## C. Material

- S** 304 SS
- S6** 316L SS

## D. Housing

- H1** NEMA 4 & 7, IP65 (1/2 in. canle entry)
- H3** NEMA 4 & 7, IP65 (3/4 in. cable entry)
- B1** Non-metallic housing, IP43  
(1/2 in. cable entry)
- B3** Non-metallic housing, IP43  
(3/4 in. cable entry)
- W** No housing, mounting option with 3/4 NPT plug  
and 12 in. lead wires

## E. Reed Switch

- A** 20 VA
- B** 50 VA

## F. Number of Switch Points

- 1-3** Select the number of switch points required

## G. Number of Floats

- 1-3** Select the number of floats required

## H. Float Type

- SS** 316L SS (1.10 in. diameter, 28mm)
- KK** 316L SS (1.18 in. x 1.10 in. cylinder)

## I. Probe Length (in./mm)

- L\_** in./mm

## Switch Point Location(s)

(Measured from process connection)

- 1** \_\_\_\_\_ in./mm (designate NO or NC position)
- 2** \_\_\_\_\_ in./mm (designate NO or NC position)
- 3** \_\_\_\_\_ in./mm (designate NO or NC position)