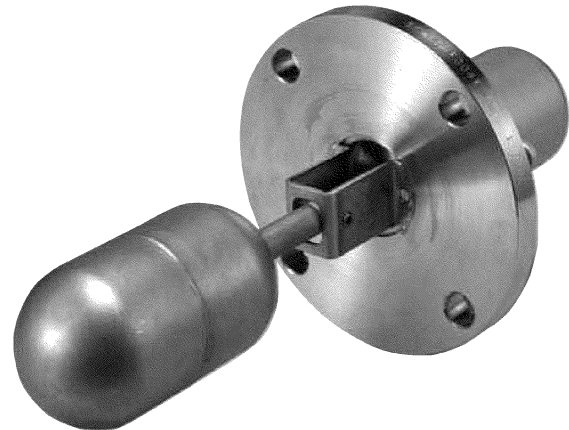
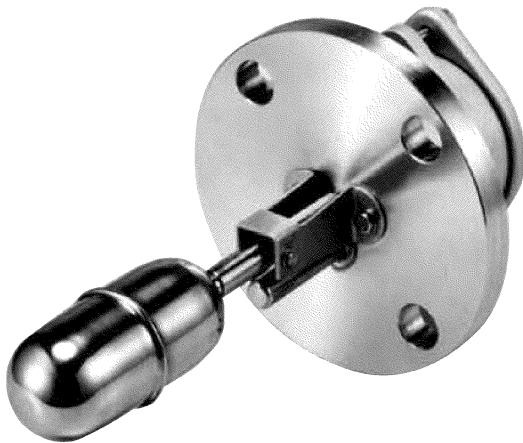


# MODEL FM, HM SIDE-MOUNTED FLOAT SENSOR



## Features

- Simple installation
- Durable Float
- Stainless steel construction
- Reliability/Long switch life

## Approval

FM-11 is approved by NK (Japanese marine engineering classification), Approval No. 97 FV 705B. The specifications are the same except the maximum switch rating, 50VA 0.5A 240V AC or 50W 0.5A 240V DC.

## General Description

The FM series, side-mounted level sensors, are manufactured specifically for level detection in clean liquids such as oils, water and chemicals. They are designed for horizontal mounting in a tank or vessel through flanged or threaded connections. To suit many different level sensing situations, a wide variety of models are available.

## Specification

Model	FM-11	FM-12
Description	Standard	Double contact
Drawing		
Mounting	JIS5K40A	
Switch Rating	50VA 0.5A 300V AC, 50W 0.5A 300V DC Max. (Resistive)	
Operating Temperature	-10 to 120°C	
Maximum Pressure	2.5 MPa	
Material	Mounting	304SS
	Shaft and Float	316SS
	Housing	ADC12
Cable Entry	G3/4	
Protection	IP44	
Minimum S.G.	0.7	
Life Expectancy	1×10 <sup>7</sup> Min. Operation	

### Operational Description

The FM series contain a hermetically sealed reed switch within the stem or flange and a permanent magnet in the end of the shaft. As the float rises or falls with the liquid level, the magnet activates the reed switch. Changing the mounting orientation can reverse switch action. They work well as high or low level alarm or control for light-duty applications.

The FM series can be used in any non-hazardous tanks or vessels. However they can be used in hazardous location by connecting with intrinsic safety barriers. (Local approval for the combination system use of Intrinsic Safety standard is required.)

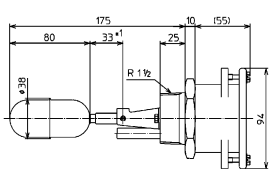
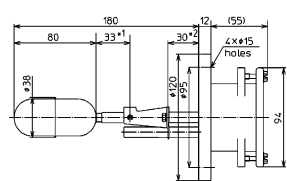
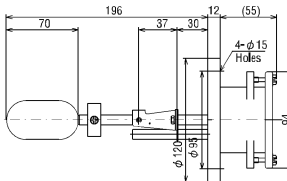
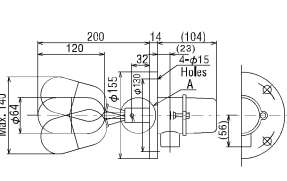
### Technical Note

To protect the reed switch against electrical surges, we recommend the use of our relay unit model RE7000. Please see the RE for details.

### Switching Level

	FM-11	FM-12		FM-13	FM-14	FM-16
ON	-3mm ± 3mm	-15mm +10mm (A, C terminal)	-10mm +15mm (B, C terminal)	-3mm ± 3mm	-3mm ± 3mm	-3mm ± 4mm
OFF	-12mm ± 3mm			-12mm ± 3mm	-12mm ± 3mm	-12mm ± 4mm

\*Distance from center line of flat.

FM-13	FM-14	FM-16	HM-10
Thread mounting	Long stem	Interface detection	Micro switch
 <p>*1: 73mm shaft available on request.</p>	 <p>*1: 73mm shaft available on request. *2: Up to 300mm available on request.</p>		
R1-1/2	JIS5K40A		JIS5K65A
50VA 0.5A 300V AC, 50W 0.5A 3 00V DC Max. (Resistive)			
-10 to 120°C		-10 to 80°C	
2.5 MPa		3 MPa	
304SS		304SS	
316SS		316SS, Epoxy resin	
ADC12		ADC12	
G3/4			
IP44			
0.7		0.72 to 1.0*	
1×10 <sup>7</sup> Min. Operation		1×10 <sup>5</sup> Min. Operation	

\*Middle S.G. of two liquids, the difference of SG is recommended more than 0.2.