

# LIQUID LEVEL FLOAT SWITCHES

## PRODUCTS GUIDE

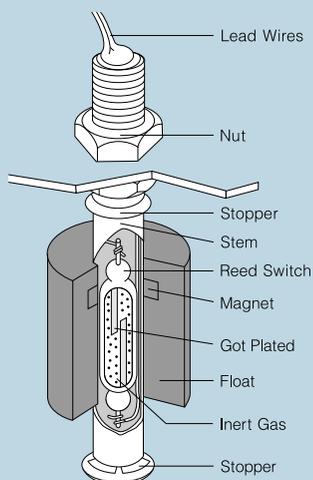
**CAUTIONS!** Please pay attention to the following condition and handling in order to apply level switches correctly.

NO Shock	NO Magnet	NO Stretch	NO Magnetic Materials	NO Slant Way	NO sink whole part	NO Vapor on Cables	NO Close to Over Current	NO Vibration	NO Corrosive Liquid
Please do not drop, otherwise the characteristic might be changed.	Please do not dip cables potting points into liquids, otherwise insulation problem may cause.	Please keep away from magnetic field, otherwise it might be misoperated.	In case vapour splash cable potting points, insulation problem may cause.	Please do not pull cables strongly, otherwise the characteristic might be changed.	In case connecting with motors directly, over ampere cause switching problem.	Please keep away from magnetic materials like iron board, otherwise the characteristic might be influenced.	Vibration may cause chattering.	Please do not mount slant way, otherwise floats do not work correctly.	Please avoid using with liquids which damage materials of parts, otherwise quality can not be maintained accurately.

Exact detections of the Liquid Levels will realize the maximum economic effects in the wide range of the applications with decent costs.

**The Safe Level Switches derive from the credible basic structure.**

RIKO Liquid Level Switches have proven their reliabilities and broad capabilities over years of services in meeing with the most rigid requirements. There is RIKO design for almost any liquid level sensing need...from miniaturized, standard single station models to customized, multi-station units. The rugged simplicity, accuracy and built in quality are supported by our long engineering experience in every aspect of liquid level monitoring. Inert gas is sealed up inside the reed switch in order to prevent the activation, and the contacts have been plated.



**■ Features of Level Switch**

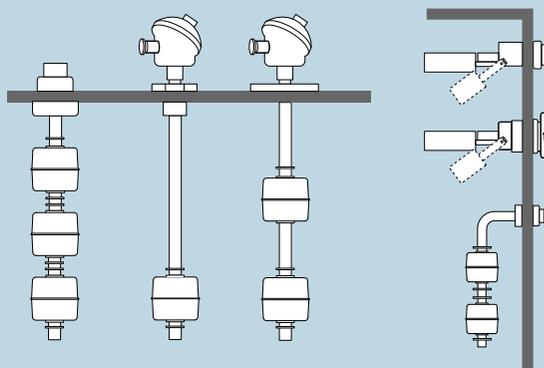
1. Very simple structure and almost free from troubles.
2. Very small and compact.
3. Long life span is expected with Reed Switch.
4. Maintenance cost is very limited after setting.
5. Float type can be applied to non-conductive liquids.
6. Stable in working points without big variations.
7. Lower costs than other methods.

**We are ready for Special types and OEM products, with various kinds of experiences and know-hows.**

Length of the Stem, Number of Floats, Size of Floats, Terminal Box, Flange Types, Side-mount type... Materials, Structures and Costs can be arranged to your needs.

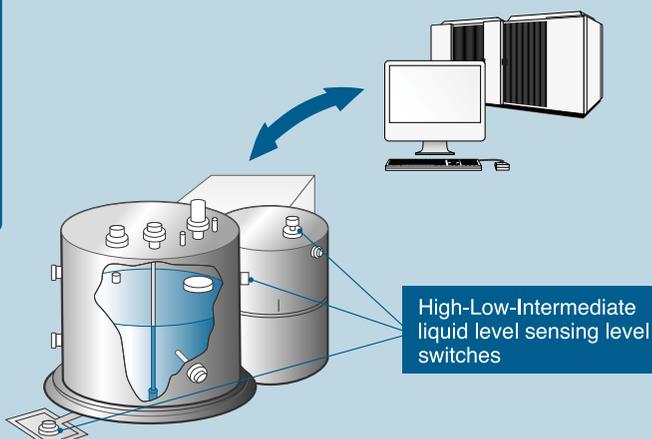
**■ Wide Range of Production Line-up for Materials, Specs and Applications**

example



**From World smallest level switch to large types can be set as a stand-alone and also as systematic applications.**

**■ Can be applied to state-of-the-art systems**



# Wide Variety of Production lineup for Materials, Specs and Applications

MFS Standard Types (RESIN)												
Model	MFS9-N1	MFS10-N1	MFS9-N2	MFS10-N2	MFS17-A	MFS17-B	MFS17-C	MFS17-D	MFS21-E	MFS21-K	MFS25-J	
Out side view												
Material	P.P.				POM				P.P.		P.P.	
Float	P.P.Foamed				NBRFoamed				NBRFoamed		P.P.Foamed	
Stopper	-				-				-		-	
Nat	-				-				-		-	
Temp. Range(Amb. Pressure)	-10°C~+80°C				-10°C~+110°C				-10°C~+80°C		-10°C~+80°C	
Pressure Resistance(Room Temp.)	0.2MPa				0.2MPa				0.2MPa		0.2MPa	
Specific Gravity of the Liquid	Heavier than 0.8				Heavier than 0.83				Heavier than 0.57		Heavier than 0.75	
Max. Contact Capacity	50W DC/AC				50W DC/AC				300V DC/AC		300V DC/AC	
Max. Voltage	300V DC/AC				300V DC/AC				300V DC/AC		300V DC/AC	
Max. Current	0.5A DC/AC				0.5A DC/AC				0.5A DC/AC		0.5A DC/AC	
Dimension												

MFS Union - Standard Types (RESIN)				
Model	MFS17-A (Union)	MFS17-B (Union)	MFS17-C (Union)	MFS17-D (Union)
Out side view				
Material	POM		P.P.	
Float	NBRFoamed		P.P.Foamed	
Stopper	SUS304 (P.P.)		SUS304 (P.P.)	
Nat	POM		P.P.	
Union Nat	POM		P.P.	
Union Sleeve	POM		P.P.	
Temp. Range(Amb. Pressure)	-10°C~+80°C			
Pressure Resistance(Room Temp.)	0.2MPa			
Specific Gravity of the Liquid	Heavier than 0.83	Heavier than 0.57	Heavier than 0.8	
Max. Contact Capacity	50W DC/AC			
Max. Voltage	300V DC/AC			
Max. Current	0.5A DC/AC			
Dimension				

RFS Standard Types (STAINLESS/STEEL)																
Model	RFS-2	RFS-2R	RFS-2Z	RFS-4	RFS-6	RFS-16	RFS-8	RFS-9	RFS-11A	RFS-12	RFS-12P	RFS-11H	RFS-12H	RFS-13	RFS-14	
Out side view																
Material	SUS304 (316)					SUS316	SUS304 (316)		SUS304			SUS304				
Float	SUS304 (316)					SUS316L	SUS304 (316)		SUS304			SUS304				
Stopper	SUS304 (316)					SUS316	SUS304 (316)		SUS304			SUS304				
Nat	SUS304 (316)					SUS316	SUS304 (316)		SUS304			SUS304				
Temp. Range(Amb. Pressure)	-40°C~+120°C					-40°C~+200°C	-40°C~+120°C		-40°C~+120°C			-40°C~+180°C		-40°C~+120°C		
Pressure Resistance(Room Temp.)	1MPa		2MPa		1MPa	1MPa	4MPa		Heavier than 0.8			0.5MPa		Heavier than 0.9		
Specific Gravity of the Liquid	Heavier than 0.8					Heavier than 0.65	Heavier than 0.7		Heavier than 0.8			0.5MPa		Heavier than 0.9		
Max. Contact Capacity	50W DC/AC					50W DC/AC		50W DC/AC			1W DC/AC		1W DC/AC			
Max. Voltage	300V DC/AC					300V DC/AC		300V DC/AC			24V DC/AC		24V DC/AC			
Max. Current	0.5A DC/AC					0.5A DC/AC		0.5A DC/AC			0.1A DC/AC		0.1A DC/AC			
Dimension																

TFS Standard Type(TITANIUM)	
Model	TFS-8
Out side view	
Material	TP340 (TITANIUM)
Float	TP340 (TITANIUM)
Stopper	TP340 (TITANIUM)
Nat	TP340 (TITANIUM)
Temp. Range(Amb. Pressure)	-40°C~+200°C
Pressure Resistance(Room Temp.)	5MPa
Specific Gravity of the Liquid	Heavier than 0.74
Max. Contact Capacity	50W DC/AC
Max. Voltage	300V DC/AC
Max. Current	0.5A DC/AC
Dimension	

# Wide Variety of Production lineup for Materials, Specs and Applications

		Made of Stainless Steel					Made of PVC			
		RFS-2 Type Straight Type	RFS-3 Type Terminal Head	RFS-4 Type L Type	RFS-5 Type Flange Type	RFS-6 Type High Temp Type	PVC-2 Type Straight Type	PVC-3 Type Terminal Head	PVC-5 Type L Type	
Out side view										
Max. Switching Points		4	4 (5)	3	4 (5)	5	4	4 (5)	4 (5)	
Electric Specs		Max. Contact Capacity (50W DC/AC) / Max. Voltage (300V DC/AC) / Max. Current (0.5A DC/AC)								
Types of Floats	1	RF-SS1 (φ28×φ9.5×27L)	○	○	○	○	○	○	○	○
	2	RF-SS2 (φ43×φ10.4×42L)	○	○	○	○	○	○	○	○
	3	RF-SS3 (φ50×φ15.4×48L)	×	○	×	○	○	○	○	○
	4	RF-SS4 (φ30×φ9.4×29L)	○	○	○	○	○	○	○	○
	5	RF-SS6 (φ40×φ15.4×50L)	×	○	×	○	○	○	○	○
	6	RF-A16 (φ26.5×φ9×25L)	○	○	○	○	×	○	○	○
	7	RF-PP1 (φ25×φ9×25L)	○	○	○	○	×	○	○	○
	8	RF-PV1 (φ38×φ16×100L)	×	×	×	×	×	○	○	○
	9	RF-PV2 (φ48×φ20×70L)	×	×	×	×	×	○	○	○

		1 RF-SS1	2 RF-SS2	3 RF-SS3	4 RF-SS4	5 RF-SS6	6 RF-A16	7 RF-PP1	8 RF-PV1	9 RF-PV2
Floats Dimensions to be set to Special Types										
Temp Range	Stainless Steel Types	-40°C~+120°C	-40°C~+120°C	-40°C~+200°C	-40°C~+120°C	-40°C~+200°C	-10°C~+100°C	-10°C~+100°C	×	×
	PVC Types	×	×	×	×	×	0°C~+60°C	0°C~+60°C	0°C~+60°C	0°C~+60°C
Pressure Range(Room Temp)		1MPa	4MPa	1MPa	2MPa	1MPa	0.2MPa			
Specific Gravity of the liquid		Heavier than 0.8	Heavier than 0.7	Heavier than 0.65	Heavier than 0.8	Heavier than 0.65	Heavier than 0.57	Heavier than 0.8	Heavier than 0.96	Heavier than 0.77
Materials of Floats		SUS304 (316)	SUS304 (316)	SUS304 (316)	SUS304 (316)	SUS316L	NBR Foamed	P.P.Foamed	PVC	PVC

Others (Various kinds of Floats)										
		RF-A13	RF-PP2	RF-PP3	RF-PP4	RF-PP4W	RF-PP6	RF-SS1 (without Mg.)	RF-SS5	RF-TS1
Dimension										
Pressure Range(Room Temp)		0.2MPa					1MPa			
Specific Gravity of the liquid		Heavier than 0.83	Heavier than 0.8	Heavier than 0.75	Heavier than 0.88	Heavier than 0.76	Heavier than 0.9	Heavier than 0.64	Heavier than 0.55	Heavier than 0.74
Materials of Floats		NBR Foamed		P.P.Foamed			SUS304 (316)			
Magnets		φ13.5×φ8.5×4t Axially magnetized	φ12.4×φ9×3.3t Axially magnetized	φ11×φ8×3.8t Axially magnetized	φ11×φ8×4.3t Axially magnetized	φ11×φ8×4.3t Radially magnetized	φ15×φ10.2×2.9t Axially magnetized	—	φ27×φ16×5t Axially magnetized	φ27×φ16×5t Axially magnetized