ISEN-FQ30/31
Side-Mounted Float Level Switch

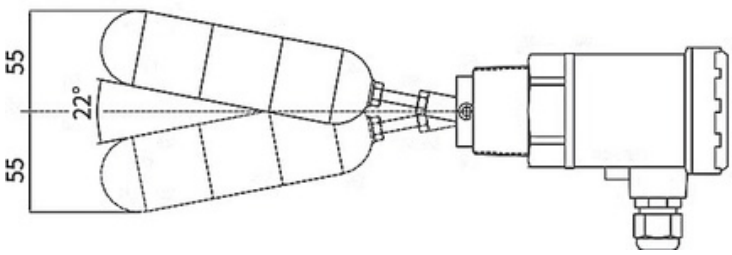
Theside-mounted float level switch utilizesafloat ball that rises or falls with the liquid level due to buoyancy.When the float ball reaches an angle of approximately 20 degrees from the horizontal plane, the lever arm swings, thereby activating the microswitch inside the junction box to close or open the circuit. Its features include ease of use, simple structure, safety and reliability, long service life, compact size, fast response, durability, and a contact action lifespan of up to 1 million cycles.

Product Feature

1. Can be installed horizontally on the side wall of the tank or vertically on the top of the tank. 2. Simple structure, stable and reliable performance, easy to install. 3. The control part is completely isolated from the measured liquid medium and can beused in high-temperature and high-pressure environments. 4. Multiple materials and connection methods can meet different environmental requirements. 5. Not easily affected by viscous liquids.

Working Principle

When the float ball moves up and down under the action of liquid buoyancy, the reed switch (or microswitch) in the junction box interacts with the magnet at the end of the arm, causing the reed switch (or microswitch) to activate. At the same time, it outputs anON (ON) or OFF (OFF) signal foralarm prompts or remote control.



Application

Side-mounted float switches are available in single-contact and multi-contact plastic float switches (PP foam and NBR) and fully stainless steelfloat switches. The side-mounted float level switch detects liquid level by sensing the up-and-down movement of the float. Its application scope is extremely broad, covering multiple industries and specific application scenarios, and is widely applicable in petrochemicals, power generation equipment, food industry, water treatment, electrical engineering, and other sectors. For example, in the petrochemical industry, it can be used for liquid level detection in petrochemical storage tanks, liquid level control in various chemical storage tanks and reactors; in the power industry, it is used for liquid level monitoring in boilers, towers, and other equipment.

Product

1 ISEN-FQ30-10 Side-mounted standard thread type

2 ISEN-FQ30-20 Side mounted standard flange type

3 ISEN-FQ30-20F Side mounted square flange

4 ISEN-FQ30-20A Side-mounted duckbill flange type

5 ISEN-FQ30-10A Side-mounted duckbill thread type

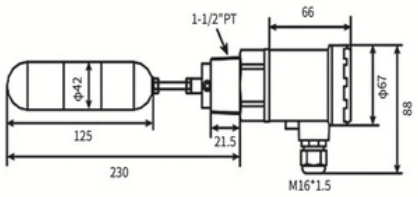
6 ISEN-FQ30-10B Side-mounted, fully PP type

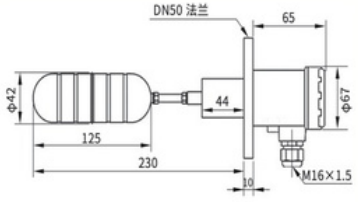
7 ISEN-FQ31-20 Top-mounted flange type

8 ISEN-FQ31-10 Top-mounted threaded type

9 ISEN-FQ30-20E Side Mount Flange Type, All Stainless Steel

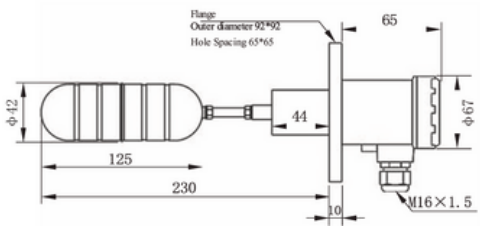
Technical Specifications and Dimensions (reference)



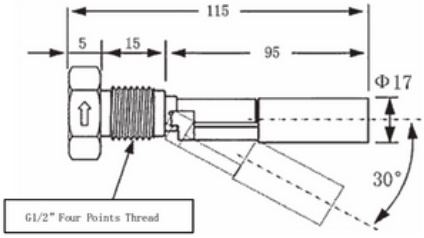


Technical Specifications and Dimensions (continued)

Model	ISEN-FQ30-10
Type	Side-mounted standard thread type
Junction Box	ABS Aluminum
Product Material	SUS304 Or SUS316L
Connection Method	1-1/2"PT Thread
Temperature Resistance	-20~100℃（customizable for 350℃ high temperature type）
Output Contact	5A/220VAC
Contact Form	SPDT
Applicable Specific Gravity	0.55g/cm3
Installation Method	Horizontal Installation

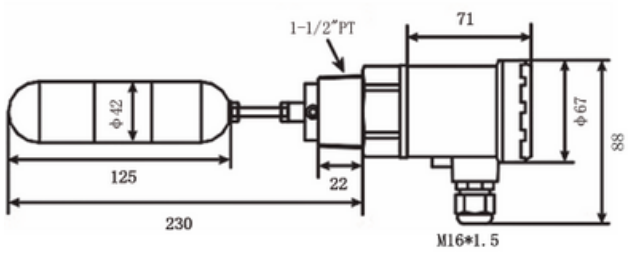


Model	ISEN-FQ30-20
Type	Side-mounted standard flange type
Junction Box	ABS Aluminum
Product Material	SUS304 Or SUS316L
Connection Method	DN50 flange (customizable)
Temperature Resistance	-20~ 80℃
Output Contact	5A/220VAC
Contact Form	SPDT
Applicable Specific Gravity	0.55g/cm3
Installation Method	Horizontal Installation



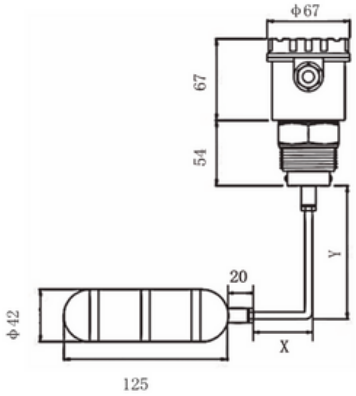
Model	ISEN-FQ30-20F
Type	Side Mount Flange Type
Junction Box	ABS ALUMINUM
Product Material	SUS304 Or SUS316L
Connection Method	Flange (customizable)
Temperature Resistance	-20~ 80℃
Output Contact	5A/220VAC
Contact Form	SPDT
Applicable Specific Gravity	0.55g/cm3
Installation Method	Horizontal Installation

Model	ISEN-FQ30-10A
Type	Side-mounted duckbill thread type
Junction Box	ABS ALUMINUM
Product Material	SUS304Or SUS316L
Connection Method	G 1 / 2 " Thread
Temperature Resistance	-20~ 80℃
Output Contact	5A/220VAC
Contact Form	SPDT
Applicable Specific Gravity	0.55g/cm3
Installation Method	Horizontal Installation

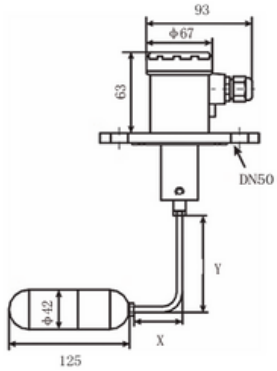


Model	ISEN-FQ30-10B
Type	Side-mounted float ball, all PP type
Junction Box	Polypropylene PP
Product Material	Polypropylene PP
Connection Method	1-1/2"PTThread
Temperature Resistance	-20~100℃（customizable for 350℃ high temperature type）
Output Contact	5A/220VAC
Contact Form	SPDT
Applicable Specific Gravity	0.55g/cm3
Installation Method	Horizontal Installation

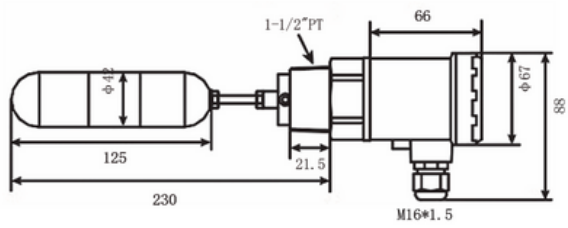
Technical Specifications and Dimensional Drawings (Continued)



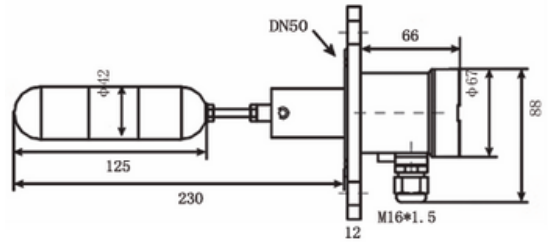
Model	ISEN-FQ31-10
Type	Top-mounted threaded type
Junction Box	ABS ALUMINUM
Product Material	SUS304Or SUS316L
Connection Method	1-1/2"PTthread (customizable)
Temperature Resistance	-20~ 80℃
Output Contact	5A/220VAC
Contact Form	SPDT
Applicable Specific Gravity	0.55g/cm3
Installation Method	Vertical installation



Model	ISEN-FQ31-20
Type	Top-mounted flange Type.
Junction Box	ABS ALUMINUM
Product Material	SUS304 Or SUS316L
Connection Method	DN50 flange (customizable)
Temperature Resistance	-20~ 80℃
Output Contact	5A/220VAC
Contact Form	SPDT
Applicable Specific Gravitv	0.55g/cm3
Installation Method	Vertical installation



Model	ISEN-FQ30-10E
Type	Side-mounted threaded all-stainless-steel type
Junction Box	Stainless steel
Product Material	SUS304 Or SUS316L
Connection Method	1-1/2"PTthread (customizable)
Temperature Resistance	-20~ 85℃
Output Contact	5A/220VAC
Contact Form	SPDT
Applicable Specific Gravity	0.55g/cm3
Installation Method	Horizontal Installation (Explosion-proof rating E xdl I CT 6)



Model	ISEN-FQ30-20E
Type	Side-mounted flange, all stainless-steel type
Junction Box	Stainless Steel
Product Material	SUS304Or SUS316L
Connection Method	DN50flange (customizable)
Temperature Resistance	-20~ 85℃
Output Contact	5A/220VAC
Contact Form	SPDT
Applicable Specific Gravity	0.55g/cm3
Installation Method	Horizontal Installation (Explosion-proof rating E xdl I CT 6)

Installation Method

1.Installation should be away from the inlet (outlet) to prevent water fluctuations from causing false actions.

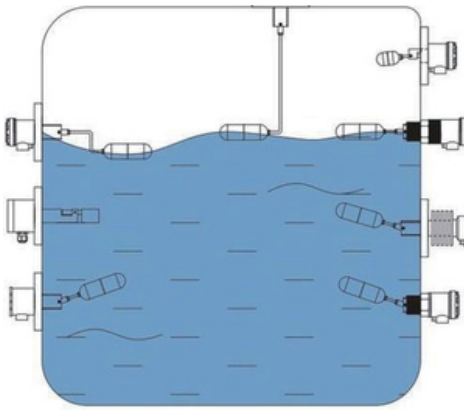
2.When installing in areas with agitation,install anti-wave pipes or baffles.

3.The control circuit load must not be over loaded (use below the contact capacity);

4.The angle of movement (relative to the horizontal line) of the float ball and its linkage mechanism is ±14 degrees.The switch actuates when the float ball is in thehorizontal position.

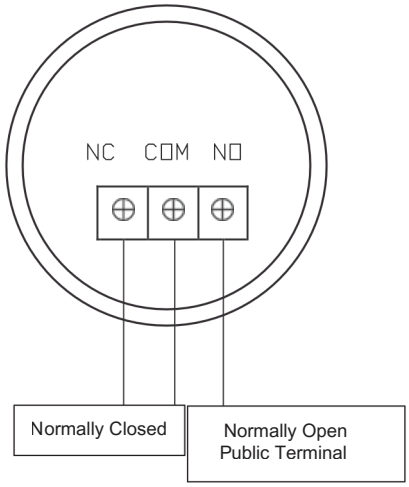
5.When installing,ensure the connecting pipe length and diameter match the float ball's floating range.

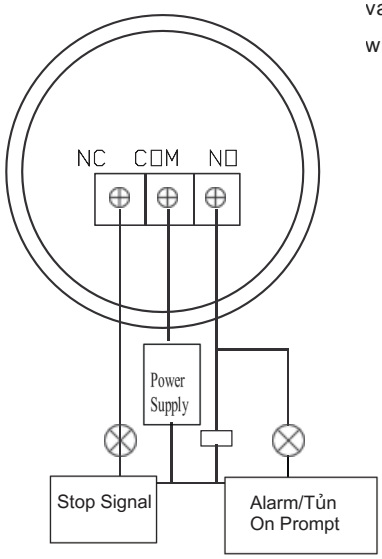
Note: The total length of the float ball and linkage mechanism may have a certain degree of tolerance.



Electrical Wiring Diagram

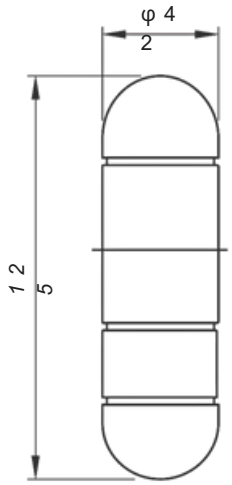
* The control method varies depending on the wiring configuration.





FloatSize(Reference)

A



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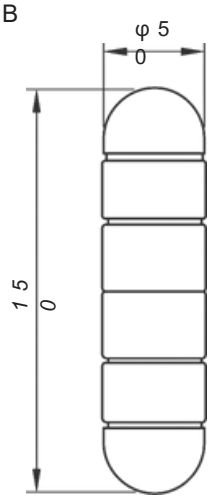

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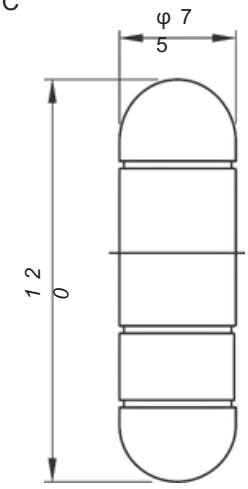

Selection Chart

Model	Product Name Side-Mounted
ISEN-FQ（）	Float Level Switch

Code	Mounting Type
30	Side-Mounted
31	Top-Mounted

	Code	Construction Type
	10	Standard Threaded Type
	10A	Flapper Valve Threaded Type
	10B	Polypropylene (PP) Type
	10T	High-Temp Threaded Type
	10E	Stainless Steel Threaded
	20	Standard Flange Type
	20A	Flapper Valve Flange Type
	20F	Square Flange Type
	20T	High-Temp Flange Type
	20E	Stainless Steel Flange

	Code	Connection Type
	S1	1-1/2"PT Thread
	S2	G1" Thread
	S3	G1/2" Thread
	F1	DN50 Flange
	F2	DN80 Flange
	F3	Square Flange
	Y	Customization

	Code	Stem Material
	4	304 Stainless Steel
	6	316L Stainless Steel
	P	PP Polypropylene

	Code	Process Temperature
	N	-20~80℃
	T	-20~200℃
	H	200~350℃

	Code	Float Material
	4	Stainless Steel 304
	6	Stainless Steel 316L
	7	Titanium Alloy Float
	8	PP Float

	Code	Float Dimension
	A	φ42*125
	B	φ50*150
	C	φ75*120

Selection Char （Continuedt)

	Code	Junction Box Material
	1	ABS
	2	Aluminum Alloy
	3	Stainless Steel 301
	4	Stainless Steel 316
	5	PP Polypropylene

	Code	Measuring Range
	xxxx	（）mm（Select Range as Required)

Selection Example

Example: ISEN-FQ30-10S14N4A2230, Side-mounted float ball level switch, installation method: side-mounted, standard threaded type, 1-1/2" PT threaded connection, rod material: 304 stainless steel, temperature range: -20~80°C, float ball material: 304 stainless steel, float ball dimensions: φ42*125, junction box: aluminum alloy, measurement range: 230mm.

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