

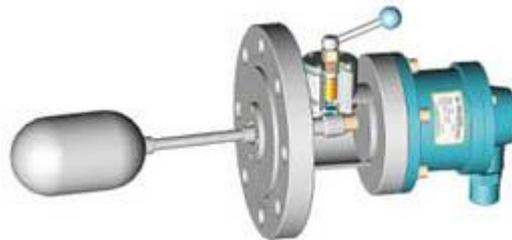
UQK(S)-100 FLOAT LEVEL SWITCH

Summary

UQK(S)-100 float level switch is suitable for fluid level or interface controlling and alarm for different kinds of open or pressurized vessels in production processes in petroleum, chemical, power, paper-making, and food industries, etc.



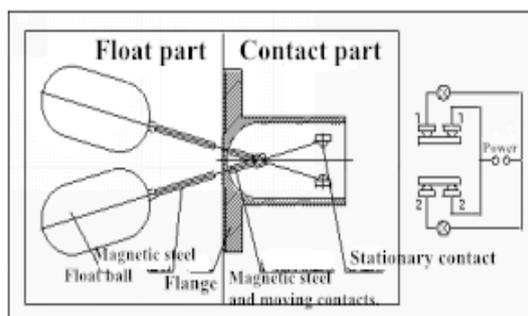
UQK-100type



UQKS-100type

Operating Principle

UQK(S)-100 float level switch belongs to two position level instruments. It consists of float and contact part. When the level changes, the float position changes correspondingly and makes the magnetic steel at the end of the ball rod to float up and down. According to magnetic repulsion principle, the magnetic steel mounted in contact part goes up and down at reverse direction. Moving contact switches on or off with the fixed contacts 1-1 and 2-2 to make alarm system alarm or pump start and stop. According to different structure, it can be divided into common type (UQK) and self-test type (UQKS). UQKS float level switch can detect whether the internal float is moving or not through the external handle, which is very convenient for adjustment and maintenance. UQK (S) -105 float level switch can move in the tank pilot pipe and adapt to the internal floating top tank.



UQK(S)-100 float level switch structure schematic diagram

Technical Parameters

Contact capacity: AC220VA、DC50W (intrinsically safe type is only for 24V);
 Power supply: AC220V、DC24V
 Permissible current: AC1A、DC2A
 Contact type: SPDT (Single Pole Double Throw), DPDT (Double Pole Double Throw)
 Ambient temperature: -40°C ~ +80°C
 Medium temperature: -40°C ≤ T ≤ +135°C (High temperature type: T ≤ 450°C)
 Medium density: ≥ 0.45g/cm³
 Wetted material: 304, 316L or on request
 Flange standard: HG/T20592-2009, HG/T20615-2009 or on request
 Power supply inlet: M20×1.5 (female thread) or on request
 Explosion-proof: Exd II CT1 ~ CT5/T6 Gb; Exia II CT1 ~ CT5/T6 Ga
 Safety Integrity Level: SIL II
 IP Rating: IP66
 Relative equipment: Safety barrier (see safety barrier recommendation sheet)

Technical parameter table for different models

Model	Nominal diameter (DN)	Nominal pressure (MPa)	Action range (mm)	Adjustment mode	Mounted type
UQK(S)-101	DN80、DN100	≤ 5.0MPa	10	Non-adjustable	Horizontal
UQK(S)-1011			60		
UQK(S)-1012			40		Vertical
UQK(S)-102			45 ~ 550	Step adjustable	Horizontal
UQK(S)-103			10 ~ 1000	Stepless adjustable	Vertical
UQK(S)-104	DN20~DN50		10	Non-adjustable	Outside horizontal
UQK(S)-105	DN100		10	Non-adjustable	Horizontal

Model Selection Table

Model	Code	Code meaning
UQK-		Common float level controller
UQKS-		Self-checking float level controller
	1	101type
	2	102 type (neck length is no more than 70mm for self-checking))
	3	103 type (neck length is no more than 70mm for self-checking)
	4	104type
	5	1011type
	6	1012type
	F	105type

		A					1.0MPa
		B					4.0MPa
		C					Other pressure class
							Neck length $70 \leq L \leq 200\text{mm}$ ($L=70\text{mm}$, no need to mark)
							Medium density (g/cm ³)
							d Explosion isolating
							i Intrinsically safe
UQK	<input type="checkbox"/>						
UQKS	<input type="checkbox"/>						

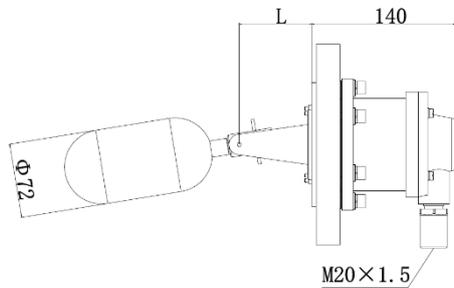
Example

UQK-1B150-0.8d is common type UQK-101, nominal pressure 4.0MPa, neck length 150mm, medium density 0.8g/cm³, explosion isolating.

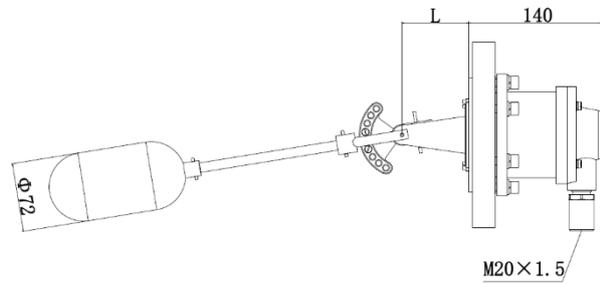
UQKS-1B150-0.8d is self-checking type UQKS-101, nominal pressure 4.0MPa, neck length 150mm, medium density 0.8g/cm³, explosion isolating.

Outline and Installation

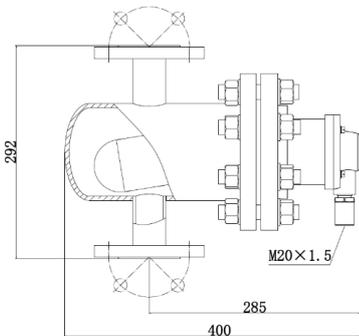
1. Common type UQK-100 series



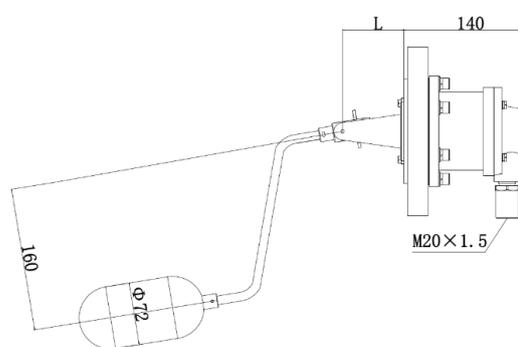
UQK-101 type



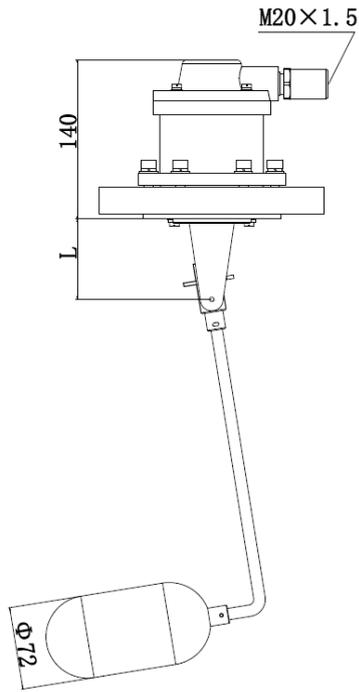
UQK-102 type



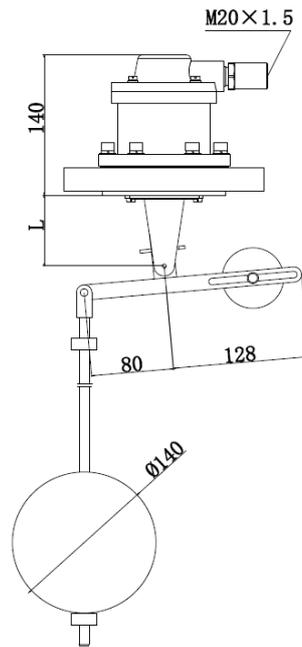
UQK-104 type



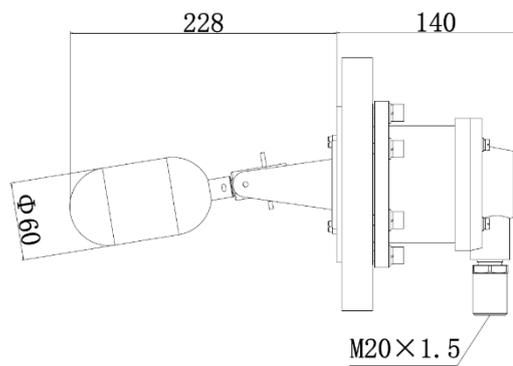
UQK-1011 type



UQK-1012 type



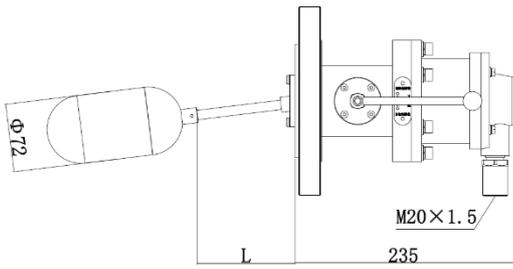
UQK-103 type



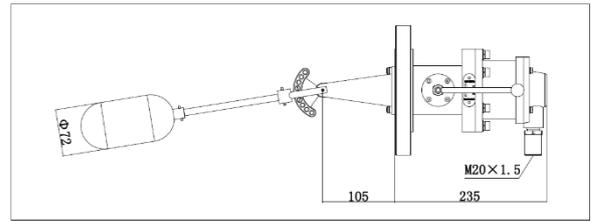
UQK-105 type

Note: For UQK-103, as the size of float is $\Phi 140$, so need removable top cap and can only control upper and lower limit.

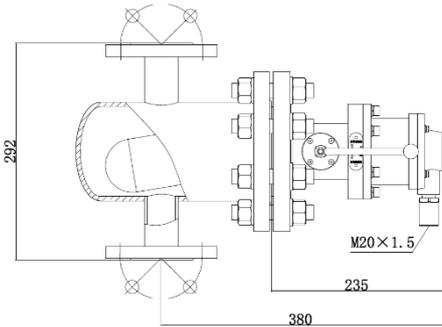
2. Self-checking type UQKS-100 series



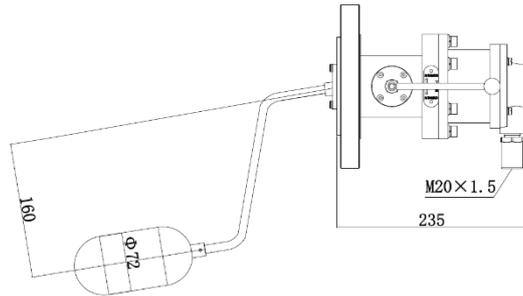
UQKS-101 type



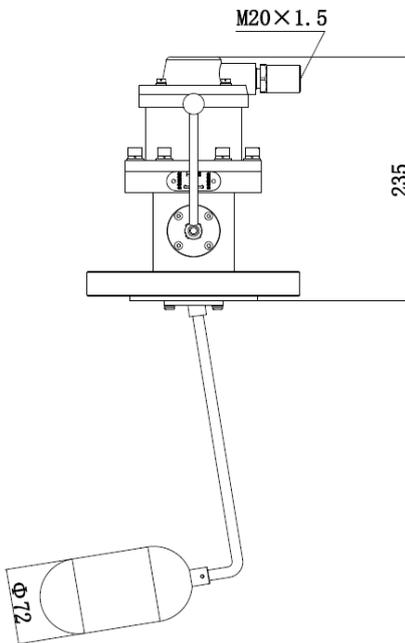
UQKS-102 type



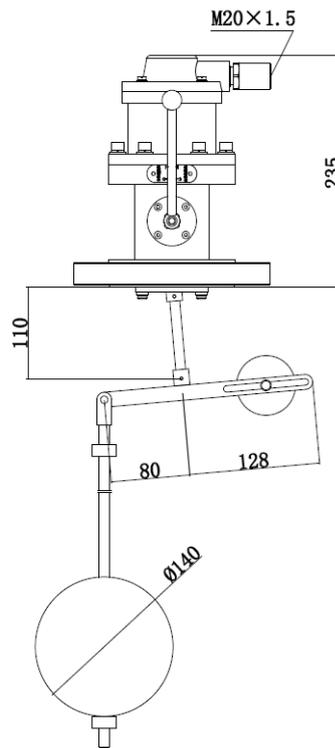
UQKS-104 type



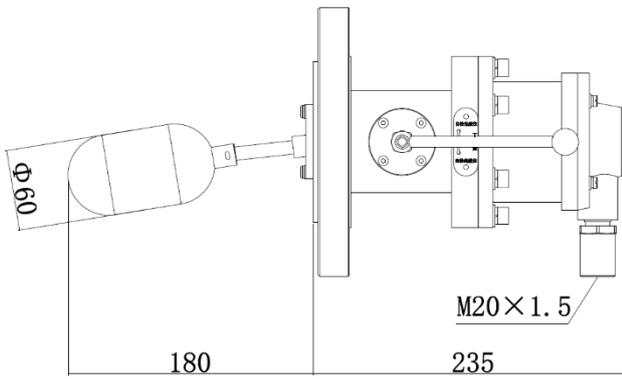
UQKS-1011 type



UQKS-1012 type



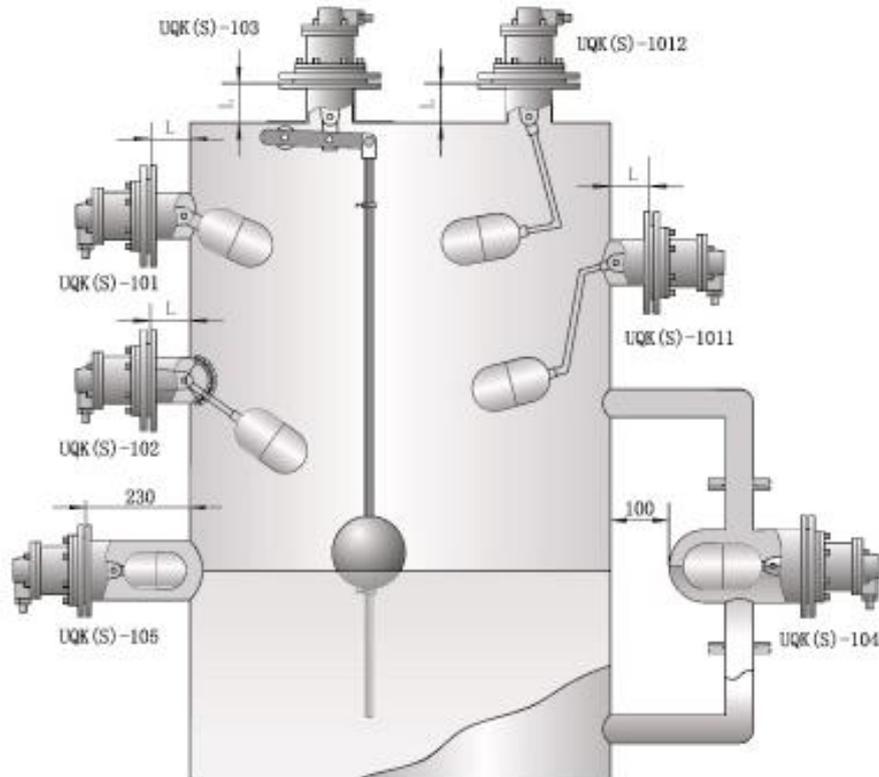
UQKS-103 type



UQKS-105 type

Note: For UQKS-103, as the size of float is $\Phi 140$, so need removable top cap and can only control upper and lower limit.

3. Installation Instruction



4. Safety Barrier Recommendation Sheet

Dandong Top Electronics Instrument (Group)Co., Ltd	TP5041 – EX TP5045-EX
Shanghai Automation Instrument Institute	CS8041-EX CS8045-EX

Ordering Information

- Model specification
- Mounted type
- Operating medium
- Operating pressure
- Operating temperature
- Flange standard
- Wetted material
- Medium density
- Neck length
- Other special requirements