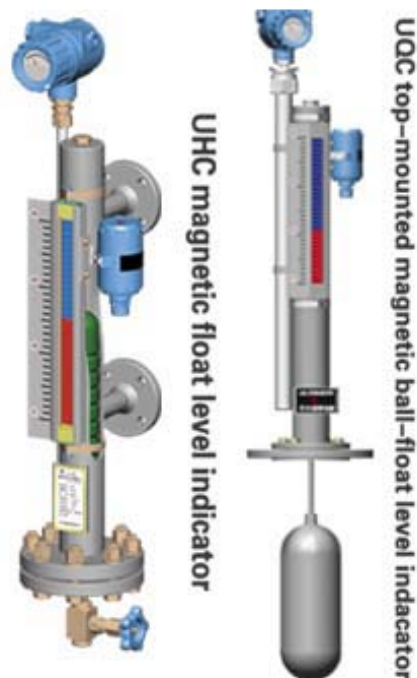


**UHC, UQC Series Magnetic Float Liquid Level Transmitters**
**Summary**

UHC series magnetic float liquid level transmitters and UQC series magnetic ball float liquid level transmitters are new designed generation liquid level indicator according to magnetic coupling principle. They present the level indication directly and clearly because of the advanced technology and the proper structure and are suitable for liquid level measurement in petroleum, chemical, power, light industry and pharmaceutical industrial field, etc. UHC series magnetic float liquid level indicators are mounted on side of vessels, while UQC series magnetic ball float liquid level indicators are mounted on the top of vessels especially for the measurement of the underground storage tanks.

**Main Technical Parameters**
**For local indication**


Contents	Model	
	UHC series magnetic float level indicator	UQC series top-mounted magnetic ball-float level indicator
Measuring range	0 ~ 6000mm (>6000mm tailor made on request)	0 ~ 4000mm (>4000mm tailor made on request)
Nominal pressure	1.0 ; 1.6 ; 2.5 ; 4.0MPa	1.0 ; 1.6 ; 2.5MPa
Nominal diameter	DN40	DN150
Ambient temperature	-40 ~ 80	-40 ~ 80
Operation temperature	-40 ~ 120 (120 <T<250 for tailor made on request only for local indicating)	-40 ~ 120 (120 <T<250 for tailor made on request only for local indicating)
Measuring accuracy	± 10mm	± 10mm
Fluid density	Liquid level: $\rho \geq 0.5\text{g/cm}^3$ Interface: $\rho_1 - \rho_2 \geq 0.25\text{g/cm}^3$	Liquid level: $\rho \geq 0.5\text{g/cm}^3$ Interface: $\rho_1 - \rho_2 \geq 0.25\text{g/cm}^3$
Wetted material	1Cr18Ni9Ti	1Cr18Ni9Ti
flange standard	On request	On request
Tracing steam jacket joint	ZG1/2" ( external thread )	ZG1/2" ( external thread )

**For remote transmission**

Contents	Model	
	UHC series magnetic float liquid level indicator	UQC series top-mounted magnetic ball-float liquid level indicator
Measuring range	0 ~ 6000mm (>6000mm tailor made on request)	0 ~ 4000mm (>4000mm tailor made on request)
Power supply	24V DC	24V DC
Output signal	4 ~ 20mA DC	4 ~ 20mA DC
Load characteristic	See appendix	See appendix
Ambient temperature	-40 ~ 80	-40 ~ 80
Operating temperature	-40 ~ 120	-40 ~ 120
Measuring accuracy	± 10mm	± 10mm
Associated equipment	Guard grating (see appendix)	Guard grating (see appendix)
Protection class	IP65	IP65
Power supply inlet	M20×1.5 ( female thread )	M20×1.5 ( female thread )

**The upper limit and lower limit alarm (they can be fitted at any position within the measuring range)**

Output signal: one normal open; one normal close;

Ambient temperature: -40 ~ 80 ;

Measuring accuracy: ±10mm;

Service life: ≥10<sup>5</sup> times

Protection class: IP65;

Power supply inlet: M20×1.5 (female thread)

Contact capacity: AC200VA , DC50W

**Explosion-proof**

Model	UHC magnetic float liquid level indicator			UQC magnetic ball float liquid level indicator		Upper, lower limits alarm
Type	Isolating explosion (local)	Isolating explosion (remote)	Intrinsically Safe (remote)	Isolating explosion	Intrinsically safe	Isolating explosion
Explosion sign	d BT <sub>4</sub>	d BT <sub>4</sub>	ia CT <sub>5</sub>	d BT <sub>4</sub>	ia CT <sub>5</sub>	d BT <sub>4</sub>
Explosion certificate number	GYB98282	GYB98289	GYB02469	GYB98274	GYB02469	GYB98287

**Structure Principle**

UHC series magnetic float liquid level indicators and UQC series magnetic ball float liquid level indicators are composed of body part, local indicator, remote transducer, upper limit and lower limit alarms. UHC series magnetic

float liquid level indicators are mounted and connected on the side of vessels. When the float moves up and down with the liquid level (interface level) changing, the magnet steel inside the float drives the magnetic flakes inside of the indicator to roll over according to magnetic coupling principle. All the magnetic flakes are coated with red one side and blue other side. The continuous red or blue zone (red represents the liquid, while blue represents air or gas) can clearly indicate actual liquid level or interface level inside of vessels. While UQC series magnet ball float liquid level indicators are mounted on the top of vessels. With the liquid or interface level changing, the ball float will move up and down and drive the magnetic connecting rod goes up and down. The magnet steel inside of the connecting rod drives the magnetic flakes inside of the indicator to roll over according to magnetic coupling principle. All the magnetic flakes are coated with red one side and blue other side. The continuous red or blue zone (red represents the liquid, while blue represents air or gas) can clearly indicate actual liquid level or interface level inside of vessels. With remote transducers and upper, lower alarms equipped, the UHC, UQC series indicators can realize to remotely transmit the liquid level signal and perform automatic control.

### Mode Selection Table

Model	Code						Code meaning	
UHC-							Magnetic float level indicator	
UHC-							Magnetic float liquid level indicator	
UQC-							Magnetic ball float liquid level indicator	
	M						With local indicator	
	N						Without local indicator	
	S	T					With remote transducer	
							Without remote transducer	
	A	B	C	D			With upper limit alarm	
							With lower limit alarm	
							With upper and lower limit alarms	
							Without alarm	
	E	F	G	J			PN1.0MPa	
							PN1.6MPa	
							PN2.5MPa	
							PN4.0MPa ( only for UHC)	
	*						level $\rho$ or the interface $\rho_1 / \rho_2$	
			-					
					*			Measuring range. For UQC, please note the neck length
					d			Isolating explosion
				i			Intrinsically safe explosion-proof	
				W			With steam jacket	
-						-		

### Model Selection Example

UHC-MSBF0.8/0.5-1800dW is with local indicator, with remote transducer, with lower limit alarm, nominal pressure 1.6MPa, measuring interface, fluids densities  $0.8\text{g/m}^3$  and  $0.5\text{g/m}^3$ , measuring range 1800mm, isolating explosion, with tracing steam jacket magnetic float liquid level indicator.

UQC-MTAG1.05-2000d (neck length: 500mm) is with local indicator, without remote transducer, with upper limit alarm, nominal pressure 2.5MPa, measuring level, fluid density is  $1.05\text{g/m}^3$ , measuring range 2000mm, isolating explosion, neck length 500mm top-mounted magnetic ball float liquid level indicator.

UHC magnetic float liquid level indicator outline sketch and installation dimensions

UQC top-mounted magnetic ball float liquid level indicator outline sketch and installation dimensions

Note: L (neck length) is the distance between the liquid level and flange surface when the ball float reaches the highest position.

### Outline and Installation Dimensions

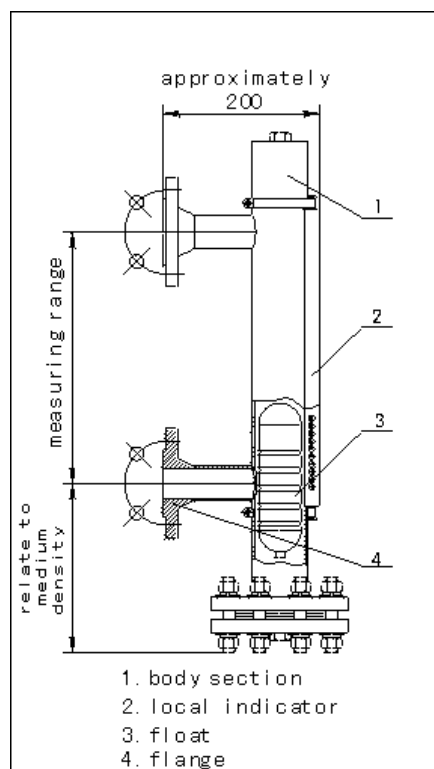


Figure 1

Figure 1 UHC magnetic float local indicating

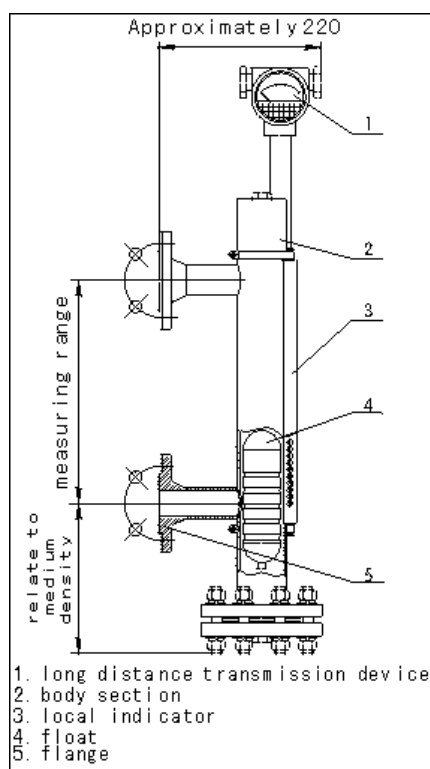


Figure 2

Figure 2 UHC magnetic float local indicating long distance transmission device

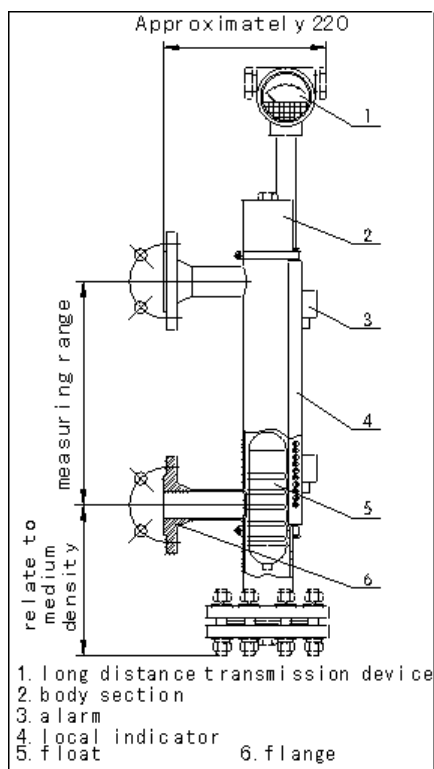


Figure 2

Figure 3 UHC magnetic float local indicating long distance transmission device alarm

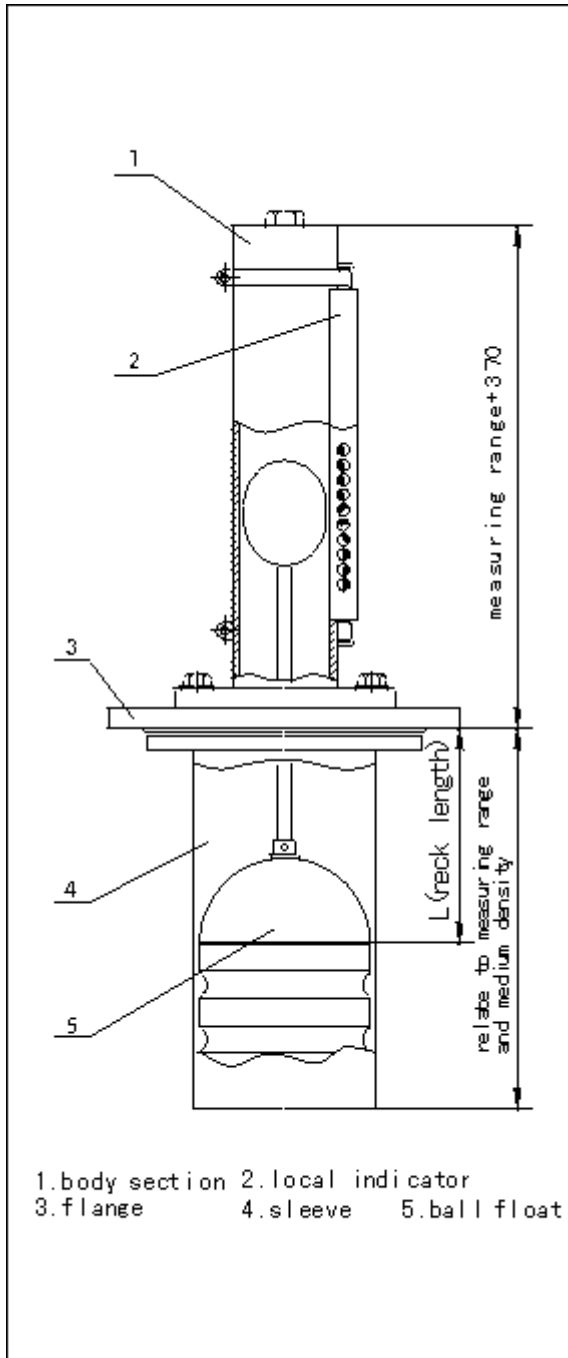


Figure 1

Figure 1 UQC magnetic ball-float local indicating

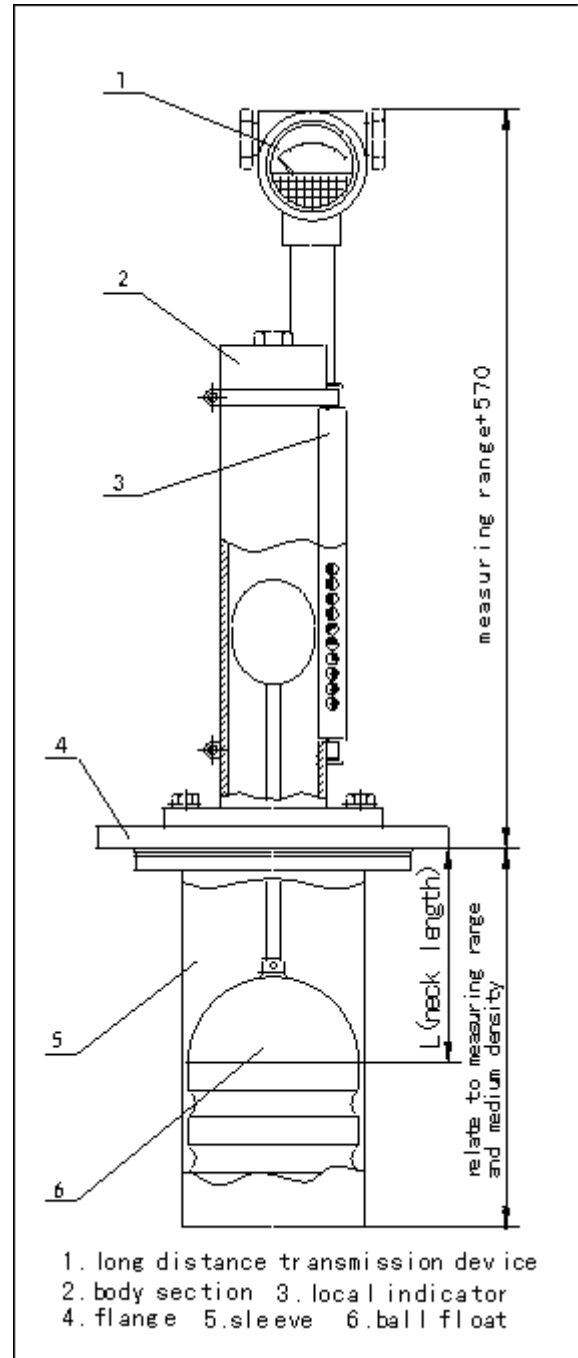


Figure 2

Figure 2 UQC magnetic ball-float local indicating long distance transmission device

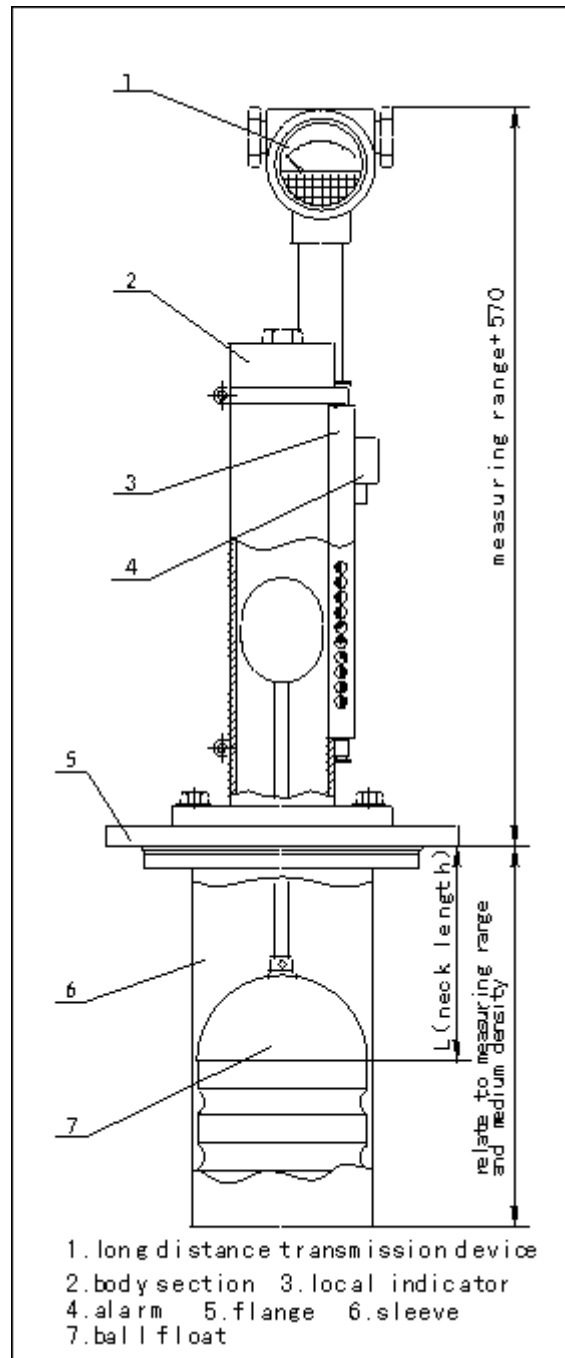


Figure 3 UQC magnetic ball-float local indicating long distance transmission device alarm

**Note:** L(neck length) is the distance between the liquid level and flange surface when the ball float reaches the highest position.