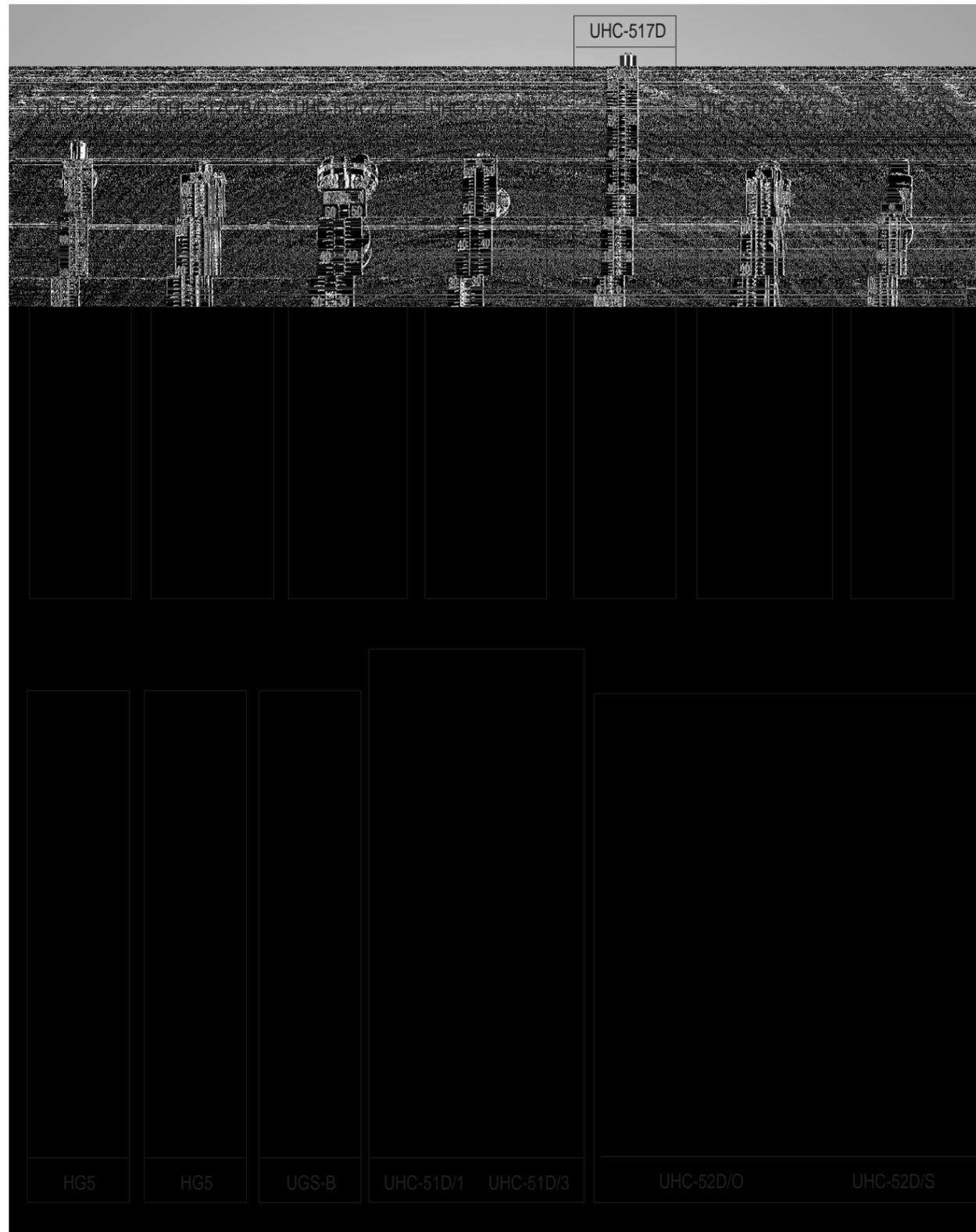


Confluence drawing of level meter products



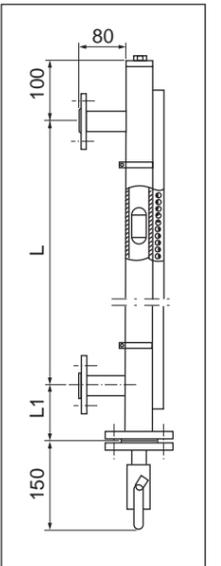
Summary

UHC-517 Series magnetical float level meters are suitable for measuring the liquid in open vessel or pressure vessel. With the features of tight sealing and leak proof, the meters can measure safely and reliably the liquid level in the severe conditions, such as: high temperature, high pressure, high viscosity, strong corrosion. The meters are featured also without blind zone, distinct indication, easy reading and wide measuring range.

With liquid level switch as optional part, the meter can realize liquid level upper and lower limit alarm and control. With liquid level transmission sensor as optional part, the meter can convert the liquid level signal into two-wire system (4-20)mA standard signal, realizes long distance detection, indication, recording and controlling. This series meters are widely used in the liquid level measurement and control of electricity, petroleum, chemical industry, metallurgy, environment protection, ship building, civil construction, food and other industries.

Working Principle

Level meter structure bases on the principle of bypass, the liquid lever in the main pipe is as same as that in the vessel device. According to Archimedes Theorem, the buoyancy force of magnetic float in the liquid is equal to the floater weight, floater floats on the surface of liquid, the floater in the main pipe of level meter will move up and down with the movement of level in the vessel measured. The permanent steel magnet in the floater will turn 180° through the red-white turn post in the magnetic coupling drive indicator. When liquid lever rises, the turn post turns white side to red one, when the lever lowers, turn post turns red side to white one. The red and white interface of indicator is the actual height of media level in the vessel. Thus the level indication is realized.



Technical parameters and requirement

Main technical parameters	Technical requirement
Measuring range(300 15000)mm	1.The heating jacket level meter is proper for the media with large viscosity or easy crystallization in low temperature. .
Measuring accuracy: 10mm	
Media density: 0.45g/cm³	2 When the side mounted level meter length in the order is 4000mm, the support flange shall be added in the center.
Working pressure:0.6 1.6 2.5 6.3 32MPa	
Working temperature:-90 480	3 The connection flange of bottom mounted or top mounted level meter shall be 80mm.
Connection flange:HG20592-20635-97	
The user shall give clear indication of other standards.	Note: The special requirement can be indicated separately when placing an order.

Main technical parameters of transmitter

- Power supply: 24V DC
- Output signal: (4 20)mA
- Working temperature: -20 65
- Explosion-proof sign: Intrinsic safety :ib CT5
Flameproof enclosure :d BT5
Maximum load resistance: 270

BK-1 Cam magnetic - driven level switch

Summary

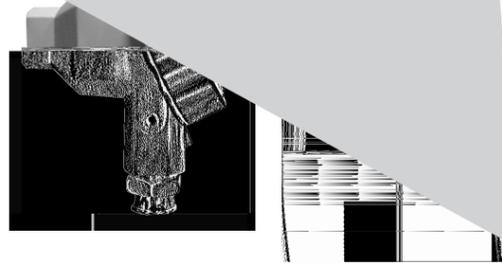
BK-1 cam magnetic - driven level switch(called level switch hereinafter) is used together with UHC-517 series magnetic turn post level meter, it's installed on the indication panel of magnetic turn post level meter to control or alarm the liquid level in the vessel. When the liquid lever reaches the control or alarm position, the level switch movement issues on/off signals. The level switch works reliably and doesn't contact with process media, won't be influenced by technical situation, it's featured with functions of high temperature resistance, anti-explosion and shockproof protection so that can be widely used in various industry occasions.

Working Principle

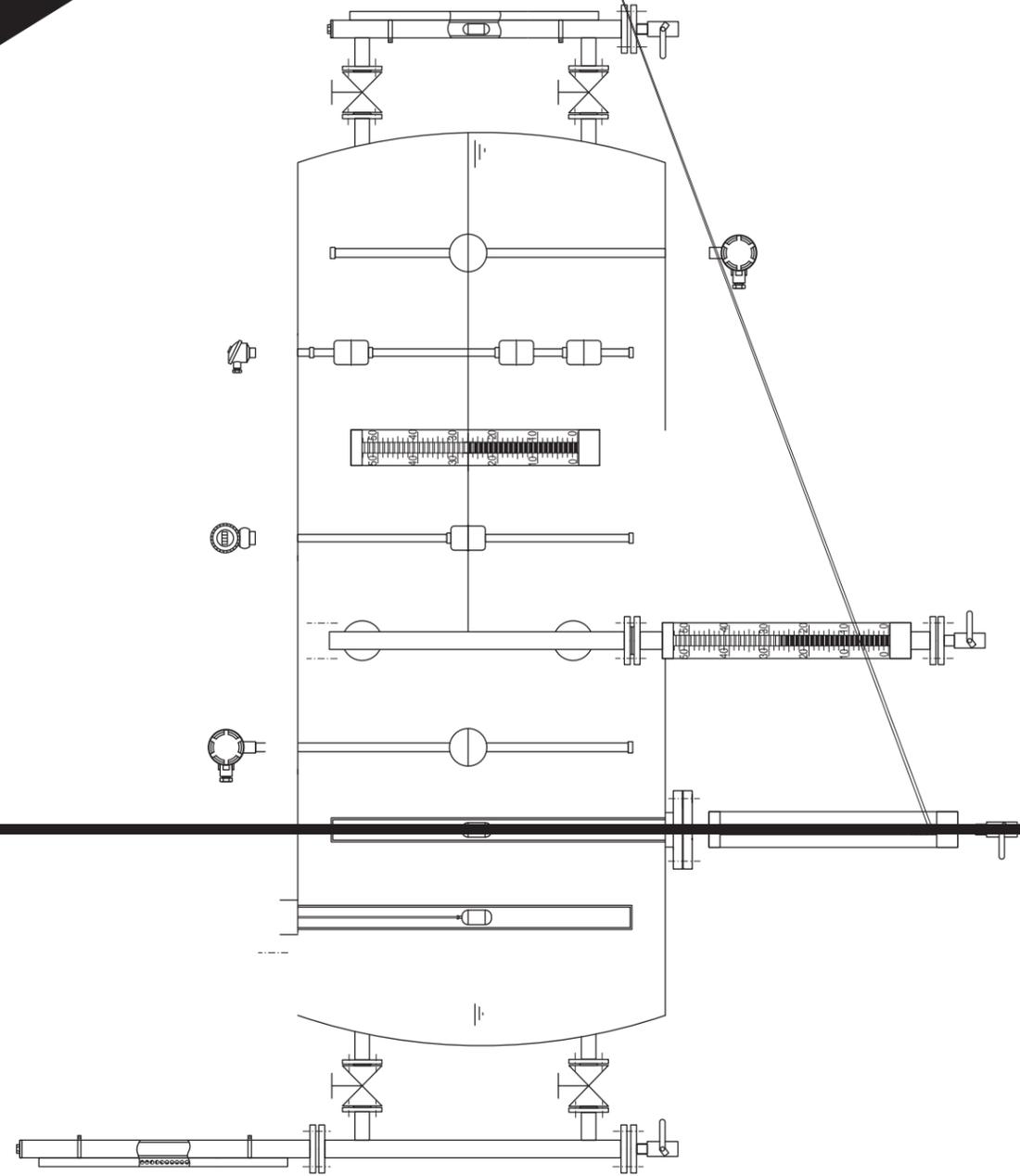
The level switch installed on the panel of magnetic turn post level meter and level meter are at the same magnetic coupling system. Floater in the main pipe of level meter moves from bottom to top with the changed level. When floater flows near the level switch, magnetic field generated by alnico in the floater repels magnetic field generated by alnico in the level switch to drive movement of switch through alnico in the level switch and the connected cam sway. Floater goes on rising and the switch maintains the state. When floater moves near the level switch from top to bottom, the magnetic repulsion promotes conversion of level switch and keeps it. Therefore, the switch features with bistable memory function. Special switch used in magnetic turn post level meter is the most practical and most reliable additional control or alarm device which has large contact capacity and can drive high-power equipment directly.

or
 or 100V
 or SPDT
 AC 0.1A
 AC 0.1A
 :220V
 : 220V

Switch type: dry reed switch, SPST
 Contact capacity: SPST
 Working temperature: Electrical interface: M20*1.5 internal thread
 W
 Explosion-proof class: Flameproof enclosure
 Intrinsic safety
 Protection class: IP65



The installation schematic diagram



* UHC-517C side mounted
 * UHC-517D top mounted
 * UHC-517DA side mounted top display
 * UHC-517DB side mounted bottom display
 * UHC-517E side mounted

Type selection chart

UHC-517C	V	Plastic turn plate indication	Indication type
UHC-517D	Z	Plastic turn post indication	
UHC-517DA	G	Fluorescence turn post indication	
UHC-517DC	B	Aluminium alloy turn plate indication	
UHC-517DB	O	Nil	Electric transmission device
	D	Output (4-20)mA DC	
	O	Nil	Switch type
	C	BK-1 Cam-driven level switch	
	E	CK-1 Dry reed level Switch	
	F	EK-1 Dry reed level Switch	
		Switching points(digital indication)	Switching points
Q	Intrinsic safety ibIICt5		Explosion-proof type
B	Flameproof enclosure dIIBT5		
T	With isolation safety barrier		
P	1Cr18Ni9Ti stainless steel		The material touching the fluid
R	316L stainless steel		
L	Stainless steel with inner lining of PTFE		
N	Polyvinyl chloride PVC		
Z	Polypropylene PP		
M	Electric heat tracing device		Attachments
W	heating/interface DN20 or G1/2 external thread		
X	Vacuum jacket		
		With fluorescence post display adjusting alarm(vertical type)	
		With fluorescence post display adjusting alarm(horizontal type)	
		With other digital indicating meters	
		(-90 480)	Working temperature
		32MPa	Working pressure
		Unit:g/cm ³	Media density
		Unit:L=mm	Flange center distance
			Flange specification
UHC-517(-)			

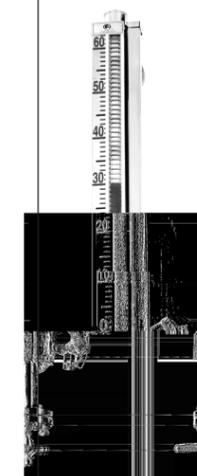
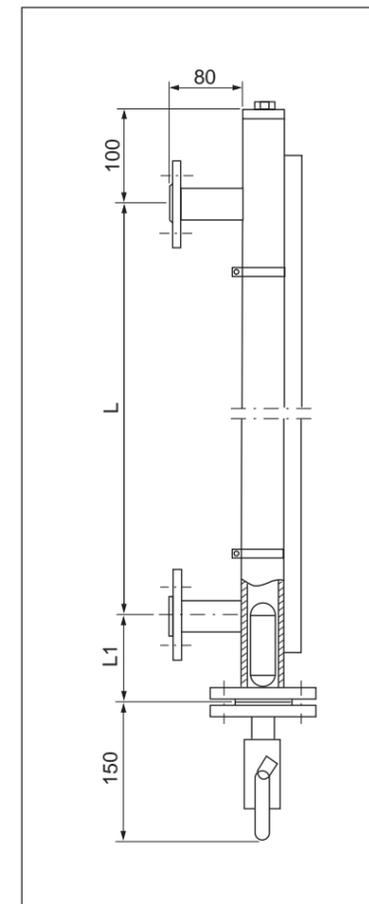
UHC-517C magnetical float level meter

Sphere of application

UHC-517C is the most common used magnetical float level meter with side mount. It's used to measure the level of liquid media when the working pressure 6.4MPa, working temperature 480

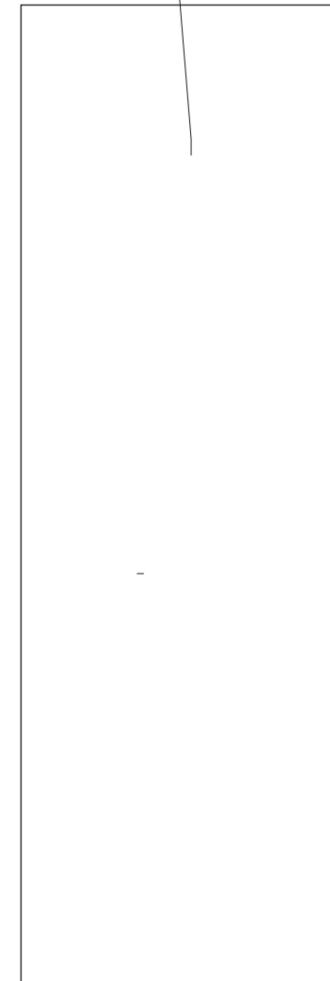
Technical parameters

Measuring range: (300 15000)mm						
(Center distance between the two flanges)						
Working pressure: 6.4MPa						
Working temperature: 480						
Media density: (0.45 2.0)g/cm ³						
Flange standard: HG20592-20635-97						
If other flange standard is required, users should note it.						
Material: Conventional type: stainless steel 304 316L						
Floater: 304 316L						
If other material is required, users should note it.						
Connection mode: Bypass side mounted flange						
DN	20					
PN	0.6	1.0	1.6	2.5	4.0	6.4
Options						
UHC-517C-	D Output (4 20)mA two-wire system transmitter					
	Level switch: C E F can be choosed any one as options					
	Q Intrinsic safety: ibIICt5					
	B Flameproof enclosure: dIIBT5					
	T With isolation safety barrier					
	M Electric heat tracing device					
	A With fluorescence post display instrument(vertical type)					
	B With fluorescence post display instrument(horizontal type)					
	Working pressure MPa					
	Media density g/cm ³					
	Measuring range L=mm					



UHC-517D Magnetical float level meter

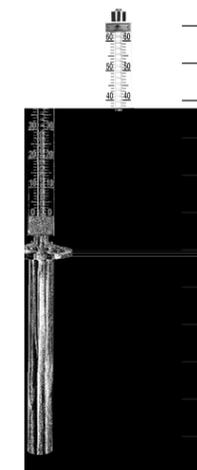
UHC-517D magnetical float level meter is mainly used to measure the level of various underground storage tanks and vessels with side sealed .In respect of structure,there exists blind zone when measures whose value will be different corresponding to different media density.The zero position of the scale calibration has been moved to the actual value when our products can be sold.



Measuring range: 5000mm
Working pressure: 2.5MPa
Working temperature: (-20 200)
Media density: (0.5 2.0)g/cm ³
Note: When media density 0.8g/cm ³ choosing flange DN100
Flange standard: HG20592-20635-97
If other flange standard is required,users should note it.
Material:Top catheter: 304L or 316L
Floater: stainless steel

Options

UHC-517D-	D	Output (4~20)mA two-wire system transmitter
		Level switch:C E F can be choosed any one as options
	Q	Intrinsic safety: ibIICT5
	B	Flameproof enclosure: dIIBT5
	T	With isolation safety barrier
	W	Steam jacket water circulation heating jacket
	X	Vacuum jacket
	M	Electric heat tracing dej (c)Tj (i)Tj (n)Tj (g)Tj ()9trus (r)Tj (i)Tj (c)Tj



UHC-517DA/DB/DC magnetical float level meter(Other installations)

UHC-517DA/DB/DC magnetical float level meters include several other installations for users to choose. When choosing,please refer to the front "The installation schematic diagram"and "Type selection chart".

