

Two wire external liquid level gauge



1. Advantage

External level measurement with safety

Global First Two-Wire System

Easily installation, Trial run and Maintenance

Auto-diagnosed and collation

Video display and remote on the spot

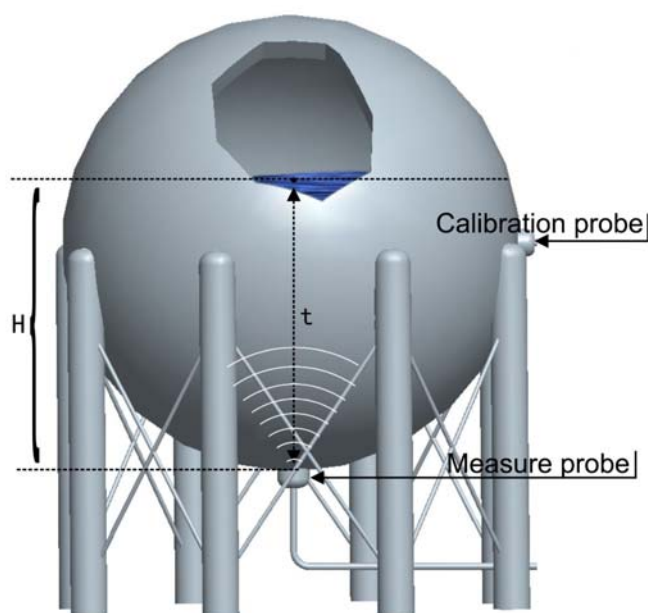
The Sonar Technology

2. Work Principle

External liquid level indicator with sonar ranging principle, using the special probe gets the sonar signal; the probe has been pasted in the outer wall of the tank. Main system is special sonar wave processing technology, using the SK Method to calculate the level value and output

of remote signal. Instrument can through the (4-20)mA analog signal, HART, RS-485, Ethernet, transfers the measurements to the control center, meanwhile can through the wi-fi,Bluetooth,HART,RS-485, infrared, Ethernet debug the controller online.

Like the picture, Measure the liquid level, the sonar wave signal from the probe to launch out, after liquid level reflected, the probe detects echo signal. Echo signal by proprietary algorithm to calculate the time (t), system can calculate the liquid level value according to the formula.



3.Performance Index

External level Gauge	Two-wire type	Four-wire type
Measuring range	(0.2~3)m,(0.3~5)m,(0.4~10)m,(0.5~15)m,(0.6~20)m,(0.7~30)m,(0.8~50)m	
Preview resolution	1mm	
Repeatability in short time	1mm	
Measuring error	$\pm 1\%$ FS	
Transfer volume	$\pm 100\text{m}$	
Signal output	(4~20) mA, HART,MAX 500 Ω	(4~20) mA, HART,MAX 1000 Ω
Power	<80mw	10w
Communication	RS-485,IR,HART,	RS-485,IR,HAT,Modbus, Wi-Fi,Bluetooth,Ethernet
Relay alarm output		AC 250V 5A,DC 30V 5A
Environment temperature in using lever gauge	-20 $^{\circ}\text{C}$ ~+70 $^{\circ}\text{C}$, -40 $^{\circ}\text{C}$ ~+70 $^{\circ}\text{C}$	
Environment	-50 $^{\circ}\text{C}$ ~+100 $^{\circ}\text{C}$, 60 $^{\circ}\text{C}$ ~330 $^{\circ}\text{C}$	

temperature in using probe		
Ambient humidity	(0~100%)RH	
Explosion-proof sign	Exd II CT6,Intrinsic safety	
Enclosure protection grade	IP65,IP67	
Liquid level indication	6 128*64 liquid crystal display	
Dead zone	It will show “Dead” when liquid level in dead zone, the output will be 4mA in signal	
Power supply	DC 24V	DC 24V,AC 220V
Electrical interface	M20*1.5	
The cable length from probe to main engine	5m,10m,15m,20m,25m,30m	
Weight of mainframe	2.9KG	
Size of mainframe	217mm(length)*160mm(width)*185mm(height)	
The diameter of the base hole in mainframe	6mm	

4. Fig ①. Terminal Blocks Instruction(two wire liquid level gauge)

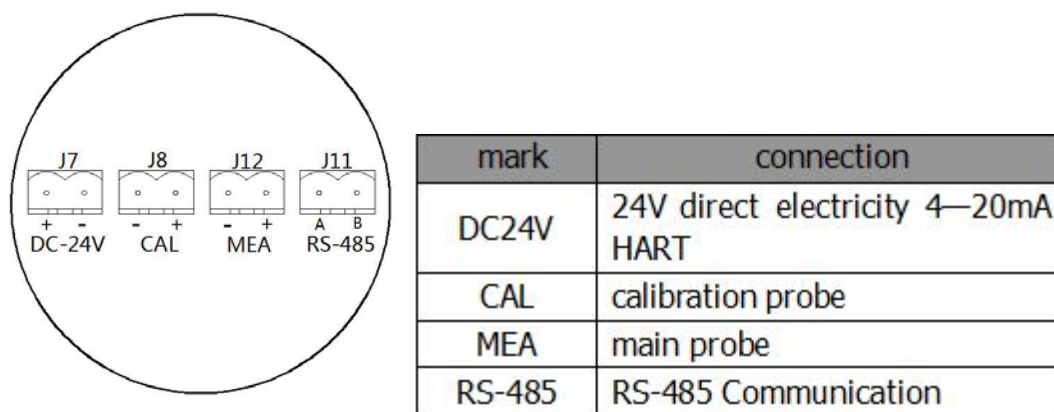
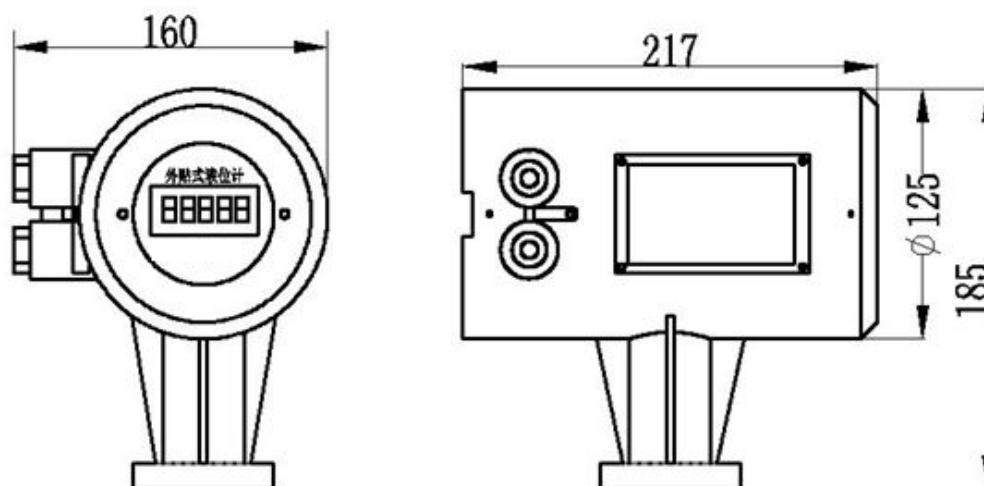


Fig ②. Dimensions of process connections



5.Selection

SK-WY	
Explosion type	A:Normal B ExdIICT6 C EExi
Wire Connection type	L: two-wire S:four-wire
Tank type	Q:spherical tank W:horizontal tank L:Vertical tank
Measuring range	3.5.1.15.20.30.50(M)
Measuring Accuracy	G:high accuracy D:low accuracy
J(N)	Relay output alarm module and output number
H	Hart
M	Modbus
W	WI-FI
B	Bluetooth
R	Infrared
C	The magnetic pen debugging module
E	Ethemet

For example: SK-WYLQ20GH is ExdIICT6 two wire spherical tank high accuracy external level gauge with Hart

6. Installation

