

## ZNC-YW3000 Ultrasonic Level Meter



### I. Product Introduction:

Ultrasonic liquid level meter is a kind of intelligent non-contact liquid (object) level measuring instrument. The product has automatic power adjustment, gain control, temperature compensation, the use of advanced detection technology and computer technology to improve the measurement accuracy of the instrument, the interference echo has a suppression function to ensure that the measurement results of the real. The products can be widely used in the measurement of the level of various liquids and the height of solid materials, and can also be used for distance measurement.

The working principle of ultrasonic level meter is that the ultrasonic transducer (probe) sends out high-frequency pulsed acoustic wave which meets the surface of the measured level (material) and is reflected back to the surface, and the reflected echo is received by the transducer and converted into an electric signal. The propagation time of the sound wave is directly proportional to the distance from the sound wave to the surface of the object. The relationship between the acoustic transmission distance  $S$  and the speed of sound  $C$  and the acoustic transmission time  $T$  can be expressed by the formula:  $S = C \times T / 2$ .

### II. Product features:

1. Good stability, fullness, zero long-term stability of up to 0.25% FS / year;
2. Reverse protection, current limit protection circuit;
3. Solid state structure, no moving parts;
4. High reliability, long service life;
5. Easy to install, simple structure, economical and durable;
6. Light weight, no fouling, no contamination of the medium.

### III. Applicable medium:

It can be used for the measurement of liquid level in many bad occasions without contacting the medium. Water and sewage treatment: pumping station, collecting well, biochemical reaction pool, sedimentation tank, electric power, mining: ash slurry pool, coal slurry pool, water treatment.

### IV. Technical Parameters

Functions	Integrated type	Split type
Range	5m, 10m, 15m, 20m, 30m, 40m, 50m, 60m	5m, 10m, 15m, 20m, 30m, 40m, 50m, 60m, 70m
Measurement accuracy	0.5%-1.0%	0.5%-1.0%
Resolution	3mm or 0.1%(whichever is greater)	3mm or 0.1%(whichever is greater)
Display	liquid crystal display	liquid crystal display
Analog output	4-wire 4~20mA/510 $\Omega$ load 2-wire 4~20mA/250 $\Omega$ load	4~20mA/510 $\Omega$ Load
Relay output	Optional 2 sets of AC 250V/ 8A or DC 30V/ 5A status programmable	(Optional) 2 groups for single channel, 4 groups for dual channel AC 250V/8A or DC 30V/5A Status programmable
Electricity supply	Standard 24VDC Optional 220V AC+15% 50Hz	Standard 220V AC+15% 50Hz Optional 24VDC 120mA customized battery power supply
Environmental temperature	Display meter -20~+60°C, Probe - 20~+80°C	Display meter -20~+60°C, Probe - 20~+80°C
Communication	Optional 485, 232 communication (factory protocol)	Optional 485, 232 communication (factory protocol)
Protection class	Display IP65, Probe IP68	Display IP65, Probe IP68
Probe Cables	NOT	Up to 100 meters, 10 meters standard
Probe Installation	Selection according to range and probe	Selection according to range and probe

## V. Instrument Selection

Type							Clarification
ZNC— YW3000-	- □	/□	/□	/□	/□	/□	
Instrument Type	A						Integrated type
	B						Split type
Output method	M						4~20mA output
	R1						Switching output
	R2						4~20mA+RS485 output
Power supply method			D				24VDC
			A				250VAC
Display Type				E			Four-digit LED display
				C			Four-digit LCD display
Explosion-proof type					N		Non-explosion-proof type
					B		Explosion-proof Ex d II CT4
Measurement range						1	5M
						2	10M
						3	15M
						4	20M (Split type)
						5	30M (Split type)
						6	40M (Split type)
						7	50M (Split type)