



# PRODUCT OVERVIEW

# LEVEL MEASUREMENT

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# LC12 Series Smart Capacitance Level Sensors



## Characters:

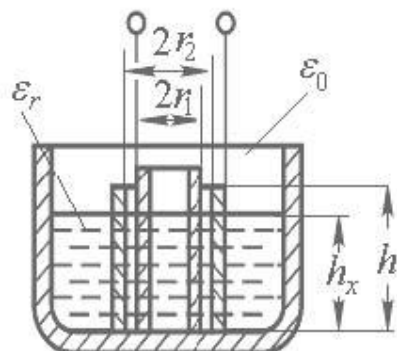
- ☆ Accuracy:  $\leq \pm 1.0\%F.S.$
- ☆ good stability and reliability
- ☆ Precise linear and temperature compensation
- ☆ Support local ZERO and SPAN calibration
- ☆ Adjustable damp output time
- ☆ Probe cut off available
- ☆ Strong shock resistance

## Applications:

- ★ Diesel Tank Level Measurement
- ★ Non conductive Liquid level measurement
- ★ Gasoline level measurement
- ★ truck fuel tank level measurement
- ★ Bus fuel tank level Measurement
- ★ Sealed tank liquid level measurement
- ★ And so on

## I . Profiles:

LC12 Capacitance fuel level sensors operate on the basic principle of the linear variation of the electrical capacity formed between the inner and outer shell with the content shifty, transformed variation of the content level to 4~20mA, 0~5V, RS232, RS485 etc., could display liquid level height directly or be sent to the remote monitoring and control system by satellite.

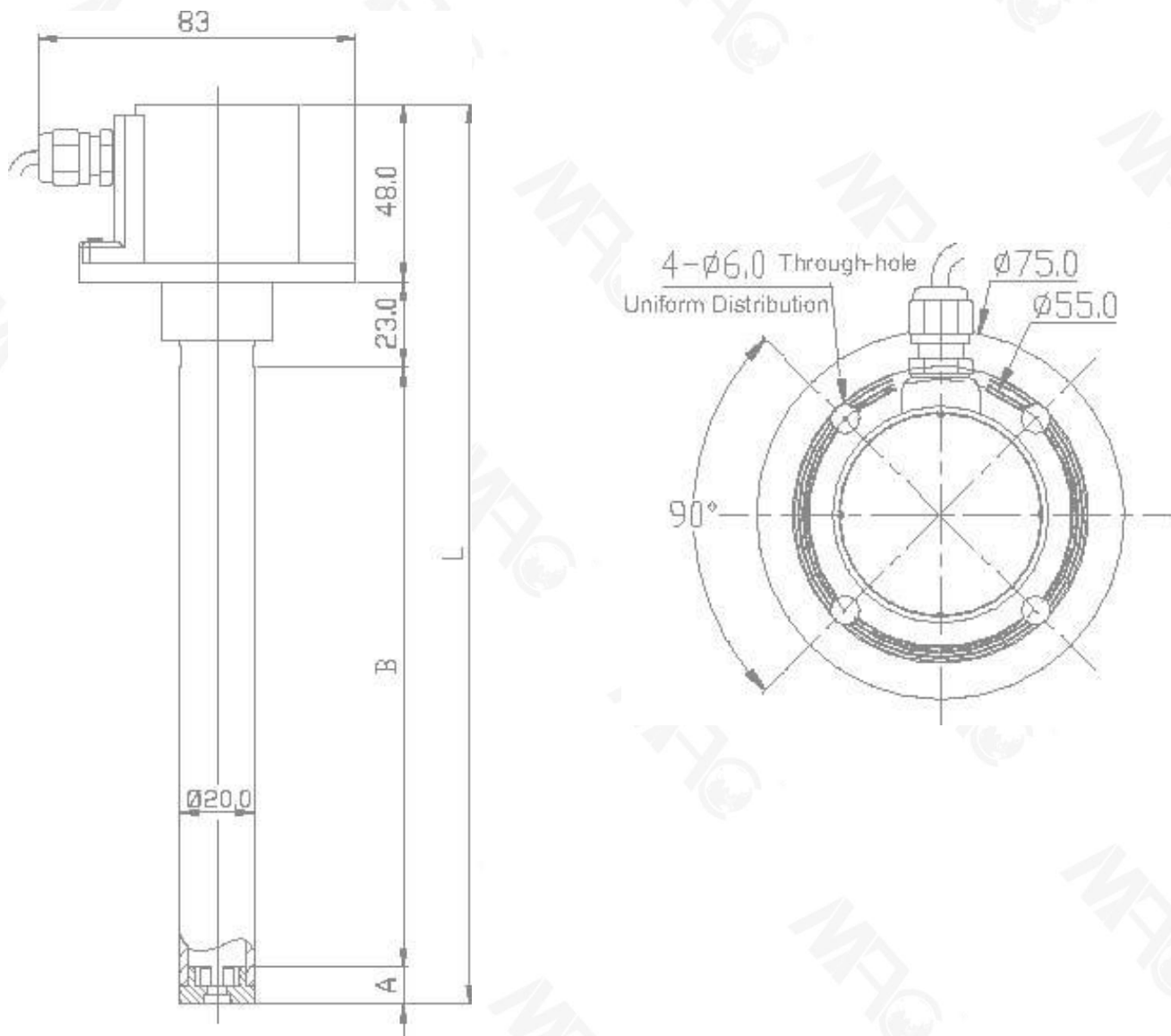


Note:  $C_0$  is constant capacitance  
 $\epsilon_r$ : Liquid dielectric constant  
 $\epsilon_0$ : Air dielectric constant  
 $h_x$ : Liquid Level  
 $CC = C_0 + \Delta C = C_0 + K(\epsilon_r - \epsilon_0) * h_x / \ln(r_2/r_1)$

## II . Specifications:

Model:	LC12 Series		
Parameter:			
Pressure Range:	0-200 mm...1000mm optional		
Probe Diameter:	Φ12 mm (standard)		
Overload:	atmosphere pressure or Max 6Bar		
Accuracy: (Linearity; Hysteresis; Repeatability)	$\leq \pm 1.0\%F.S$ (Typical); $\leq \pm 0.5\%F.S$ By Customized.		
Resolution:	1 mm (Typical) or 0.1mm by customized		
Bottom Blind Zone:	10 mm		
Stability:	Standard: 0.1%F.S/1 years,      Max: 0.15%F.S/1years		
Medium working Temp:	-30 degree C to 85 degree C		
Ambient Temp Span:	-20 degree C to +65 degree C		
Storage Temp:	-40 degree C to +85 degree C		
Materials of probe:	Aluminum Alloy		
Output:	0-10V/4-20mA	RS232/RS485/0-5V/0.5-4.5V/ CANBUS	RS232/RS485
Power Supply:	15-28VDC	9-28VDC	5 V dc
Zero Temperature Drift	0.05%/20°C		
Electronic Box:	Aluminum Alloy or Stainless steel materials		
Electronic connection:	Fixed cable by stainless steel cap and Explore Proof and water proof IP67		
Process connect port:	M18*1.5 ,DN75 flange... (by customized)		
Response time:	First time starting time $\approx$ 2s; working status $\leq$ 200 ms		
Medium compatible:	Diesel, gasoline and others fuel.		
Certificate approve:	CE Certificate and ATEX		

### III. Dimension and Drawing:



### IV. Electronic Connections:

Wire Color	Item	Definition
Red	24Vdc +	Typical Value Of Supply
Black	GND	Power Supply Grand
Blue	A	RS485A T/R+
White	B	RS485B T/R-
Blue	Vout	Analog Voltage Signal Output
Blue	Iout	Analog Voltage Signal Output

**Note:** Products output mode is only one of the above information, Wires color is based on the Output mode.

## V. Part Number Selection Table:

001	0-100mm	007	0-700mm
002	0-200mm	008	0-800mm
003	0-300mm	009	0-900mm
004	0-400mm	010	0-1000mm
005	0-500mm	011	Customized
006	0-600m		

## VI. Order Information

部件号	LC12 (型号)	3	1	007	3	0	D	G
参数								
信号输出	3= 4-20mA 4= 0.5-4.5V 比率信号输出 5= 0-5V 7= 0-10V 9=RS485 10=RS232							
过程连接	1=M18*1.5 螺纹 2=DN75 法兰							
液位量程	请从压力量程选型表中选取需要的标定量程参数代码							
测量介质	1= 水 2=汽油 3=柴油 4=其他液体可定制							
综合精度	0=1.0%F.S. 1=0.5%F.S.							
探杆直径	D=12mm							
压力类型	G=表压/相对压力 S=密封表压 A=绝压							