



PRODUCT OVERVIEW

LEVEL MEASUREMENT

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LC20 Series Smart Capacitance Level Sensors (Cut Off Type and Max 50% can be cut off)



Characters:

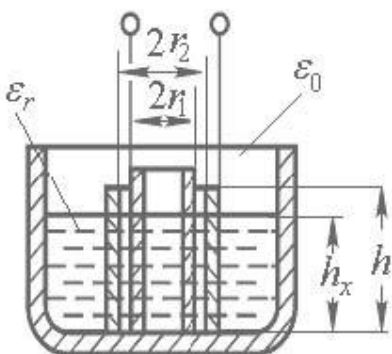
- ☆ Accuracy: $\leq \pm 1.0\% \text{F.S.}$
- ☆ good stability and reliability
- ☆ Precise linear and temperature compensation
- ☆ Support local ZERO and SPAN calibration
- ☆ Adjustable damp output time
- ☆ Probe cut off available
- ☆ Strong shock resistance

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:

LC20 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

ϵ_r : Liquid dielectric constant

ϵ_0 : Air dielectric constant

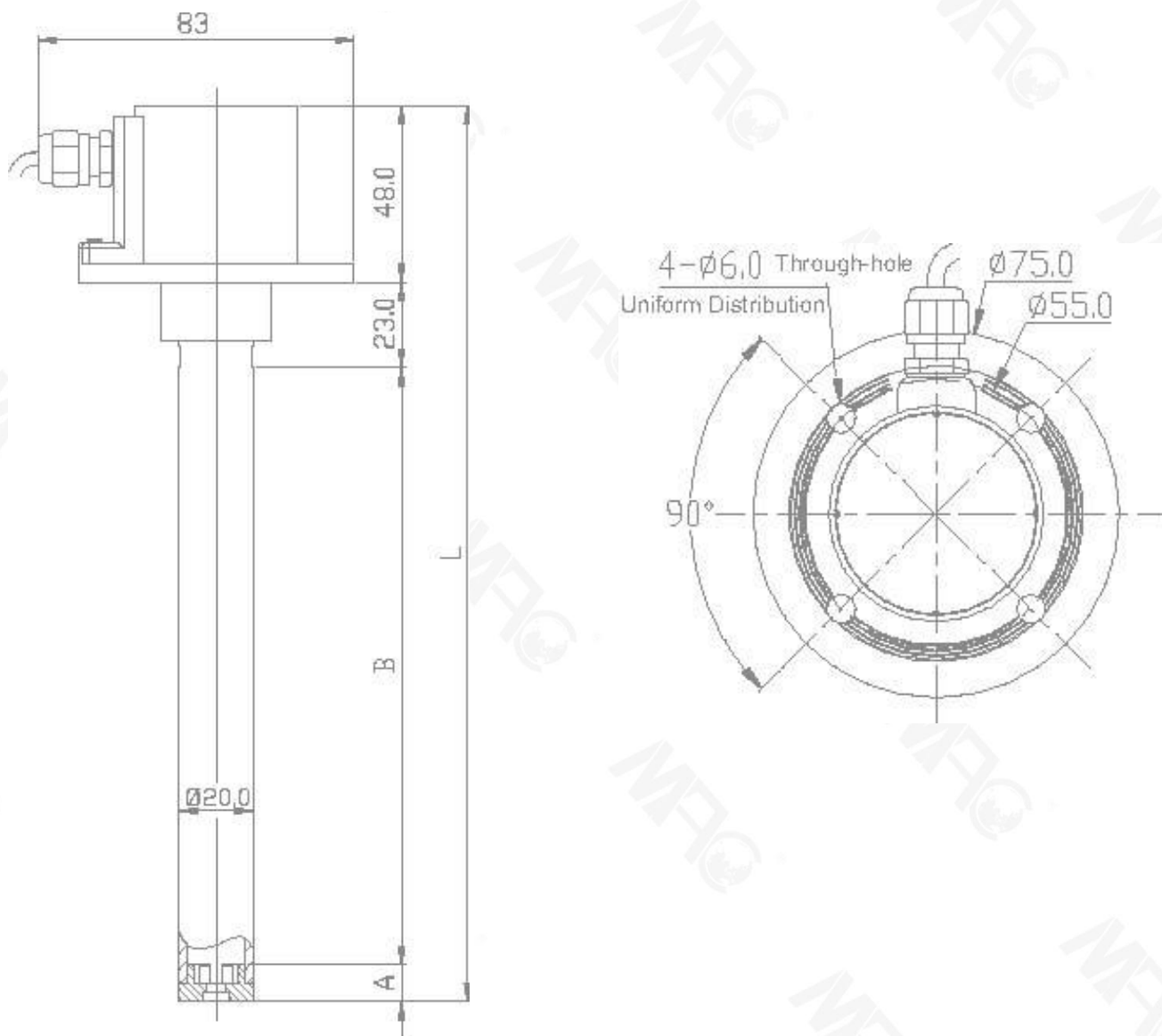
h_x : Liquid Level

$$CC = C_0 + \Delta C = C_0 + K(\epsilon_r - \epsilon_0) * h_x / \ln(r_2/r_1)$$

II . Specifications:

Model:	LC20 Series		
Parameter:			
Pressure Range:	0-200 mm...1500mm optional		
Probe Diameter:	Φ20 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:	M30*2.0 ,DN75 flange... (by customized)		
Response time:	First time starting time $\approx 2s$; working status ≤ 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	009	0-900mm
002	0-200mm	010	0-1000mm
003	0-300mm	011	0-1100mm
004	0-400mm	012	0-1200mm
005	0-500mm	013	0-1300mm
006	0-600mm	014	0-1400mm
007	0-700mm	015	0-1500mm
008	0-800mm	016	Customized

VI. Order Information

P/N Selection	LC20 (Model)	3	1	007	3	0	D	G
Output	3= 4-20mA 4= 0.5-4.5V Ratiometric 5= 0-5V 7= 0-10V 9=RS485 10=RS232							
Process connection	1=M30*2.0 2=DN75 flange							
Pressure Measurement	See last pages Pressure Range Code Table and select your requested range code adhere here.							
Measuring Medium	1= water 2=Gasonlie 3=Diesel 4=Others liquid by customers							
Accuracy	0=1.0%F.S. 1=0.5%F.S.							
Probe Diameter	D=20mm							
Pressure type	G=Gage S=Sealed A=Absolute							