

LC2000-Capacitive Level Meter

- ▶ Optional intrinsically safe model
- ▶ Sanitary clamp connection
- ▶ High pressure resistant
- ▶ High/low temperature resistant
- ▶ Applicable to various media
- ▶ Field calibration available, No moving parts

LC2000 consists of electronic module and measuring electrode which is determined by type of medium and applications. It can be used to measure the limit level of the fluids, powder or bulk solid materials in tanks, vessels, etc.



Specifications

Measuring Range (Rod length L)	5...300cm
Applicable Medium	Conductive liquid, non-conductive liquid, bulk solid, powder
Current Consumption	
Current Output	Signal current
Voltage Output	About 8mA
Power Supply	
Current Output	9...36Vdc
Voltage Output	16...36Vdc
Current Analog Output	
Output	2-wire 4...20mA
Load RA (Ω)	R _{max} =750Ω
Voltage Analog Output	
Output	3-wire 0...10V
Load RA (Ω)	R>1KΩ
Sensitivity Ranges(PF)	20;30;50;100;150;300;500;1000
Initial Capacity Regulation Ratio	Min 1:2
Linearity	Max 1%
Temperature Error	Max 0.05%/K
Voltage Error	
Current Output	Max 0.3uA/V
Voltage Output	Max 0.1mV/V
Material	
Housing	304 stainless steel
Guide rod	304 stainless steel
Guide rod coated	FEP
Insulating Bushing	FEP
Protection Class	IP65 (M12 plug) /IP67(housing)
Electrical Connection	M12 plug
Explosion Proof Parameters	
Grade	Ex Ia IIB T5
MAX Internal value	Ui=30V DC;Ii=132mA;Pi=0.99W;Ci=370nF;Li=0.9mH
Power Supply	9...30Vdc
Temperature Range	-20...60°C
Pressure Range	0.08...0.11MPa
Process Connection	G3/4 external thread, 50.5 sanitary chuck

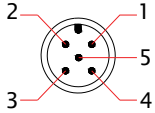
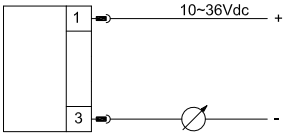
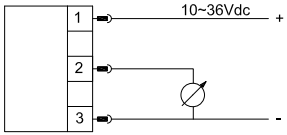
Applications

- ▶ Level measuring
- ▶ Material level measuring
- ▶ Petrochemicals, energy
- ▶ Water treatment
- ▶ Hydraulic/lubrication system

Temperature and Pressure Durability

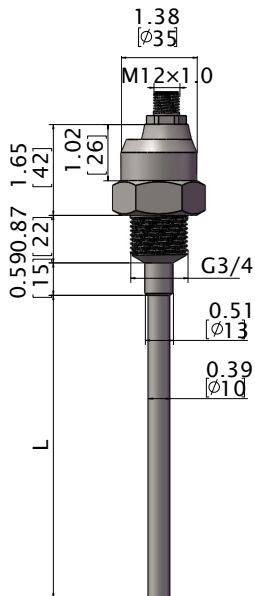
Medium Temperature °C	Ambient Temperature °C	Temperature at Process Connection Spot	Max. Operating Pressure for Process Connection Spot	
			30°C	85°C
-40...300	-40...85(Xi:70°C)	-40...85(Xi:75°C)	7MPa	5MPa
-40...200			4MPa	2MPa
-40...130			1MPa	0.5MPa

Wiring

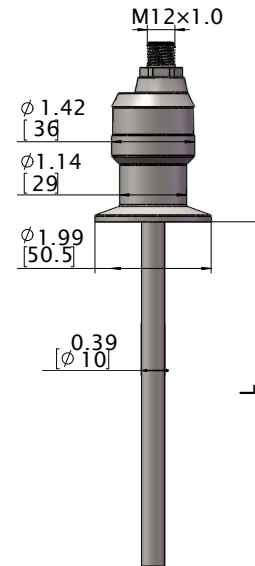
Wiring	2-wire Output type	3-wire Output type												
 <p>M12 plug</p> <table border="1"> <thead> <tr> <th>Signal</th> <th>Plug</th> <th>Cable</th> </tr> </thead> <tbody> <tr> <td>U+</td> <td>1</td> <td>Brown</td> </tr> <tr> <td>U-</td> <td>2</td> <td>White</td> </tr> <tr> <td>Signal port</td> <td>3</td> <td>Blue</td> </tr> </tbody> </table>	Signal	Plug	Cable	U+	1	Brown	U-	2	White	Signal port	3	Blue		
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Dimensions in inches (mm)

Standard type



50.5 Sanitary chuck type



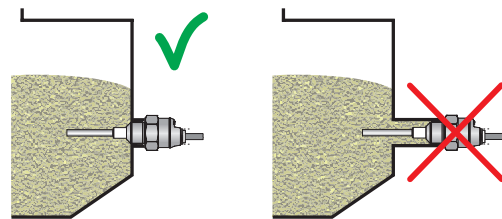
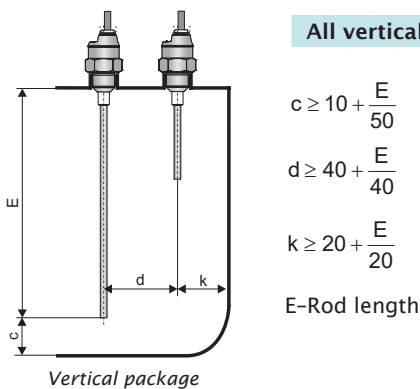
Model Number

OrderNO.	Type	Rod Length cm	Process Connection	Output type mA /V
LC00XXX	LC2000/2GISM(XXX)304N	XXX (5...300)	G3/4	2-wire 4...20mA/Current Output
LC10XXX	LC2000/2GUSM(XXX)304N			3-wire 0...10V、Voltage Output
LC20XXX	LC2000/2GISM(XXX)304Xi			2-wire 4...20mA/Current Output(Explosion Proof)
LC01XXX	LC2000/2GISM(XXX)304N	XXX (5...300)	50.5 Sanitary chuck	2-wire 4...20mA/Current Output
LC11XXX	LC2000/2GUSM(XXX)304N			3-wire 0...10V、Voltage Output
LC21XXX	LC2000/2GISM(XXX)304Xi			2-wire 4...20mA/Current Output(Explosion Proof)
LC00XXXT	LC2000/2GISM(XXX)304NT	XXX (5...300)	G3/4	2-wire 4...20mA/Current Output
LC10XXXT	LC2000/2GUSM(XXX)304NT			3-wire 0...10V、Voltage Output
LC20XXXT	LC2000/2GISM(XXX)304XiT			2-wire 4...20mA/Current Output(Explosion Proof)
LC01XXXT	LC2000/2GISM(XXX)304NT	XXX (5...300)	50.5 Sanitary chuck	2-wire 4...20mA/Current Output
LC11XXXT	LC2000/2GUSM(XXX)304NT			3-wire 0...10V、Voltage Output
LC21XXXT	LC2000/2GISM(XXX)304XiT			2-wire 4...20mA/Current Output(Explosion Proof)

Note: When selecting, XXX is replaced by rod length (unit: cm); T is for high temperature type

Dimensions in inches (mm)

- The level sensor may be attached to the wall of a container, tank or fixture in a vertical, horizontal or inclined position. Install the console inside the oil pan by screwing in a welded flange and attaching using a retaining nut or TriClamp® process.
- In the case of vertical mounting, the sensor can be installed in open, closed and pressurized tanks. The distance is related to the electrode length (longer electrode).
- In the case of sidewall installation, it is necessary to avoid long fittings where induction media may accumulate (Figure right). We recommend installing the sensor with the entire sensor electrode and insulation inside the tank (figure left).



Correct and incorrect long tube installation