

## SFCG Series of Explosion-proof type capacitance level sensor



### Installation

Capacitive level measurement principle: probe line and conductive liquid constituted the capacitor, among them the metal inner core of probe line is one pole of capacitor the other pole is conductive liquid, the material between them is high stability PPR or gather fluorine ethylene. The probe line insulators outer as media of capacitor poles, the space which surrounden by liquid is changed along with the liquid level changing, so that make relative space of capacitor polar changed which leading to the changed of capacitance. According to the capacitance formula we can find out the relationship between liquid height and capacitance.

### Features

- Probe  $\Phi$  12 mm, stainless steel 304 thread interface and aluminum shell
- Dc single power supply, built-in high-performance special chip
- No dynamic elastic parts, high dependability ,Zero and stroke can be adjusted according to customer requirements
- This liquid level does not apply to high viscous medium testing, such as the melting asphalt, petrochemical crude oil
- Customized according to different detection, can adapt to a variety of demanding conditions of the liquid level detection, more detail information please see our products catalogs

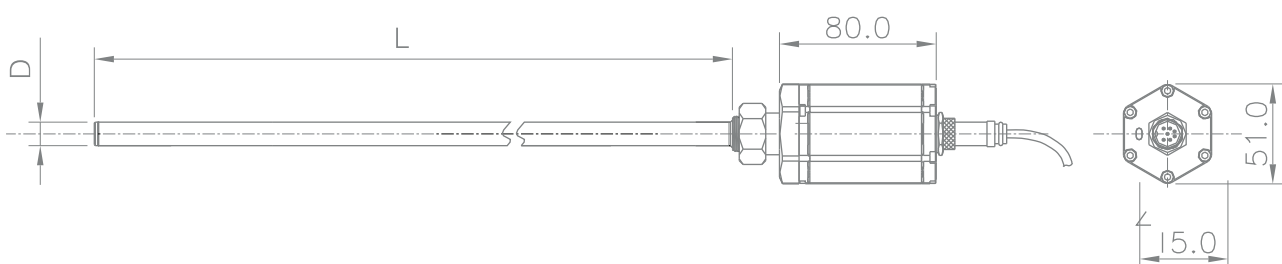
### Applications

- Chemical plant: dacron, spandex, acid, alkali, and other chemical raw material level detection
- Environmental protection: sewage level detection
- Hydraulic machinery: lubricating oil detection
- Light industry: cooking oil level detection

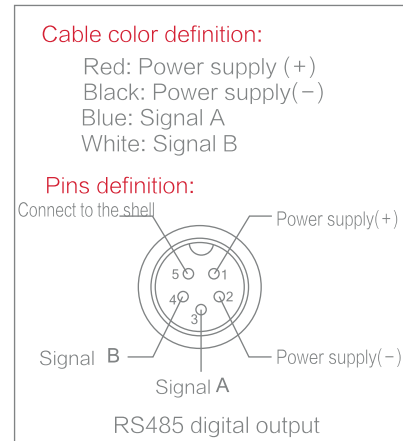
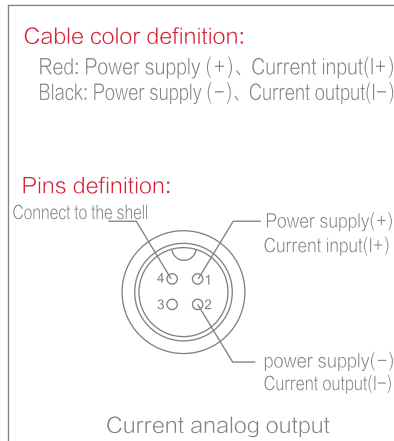
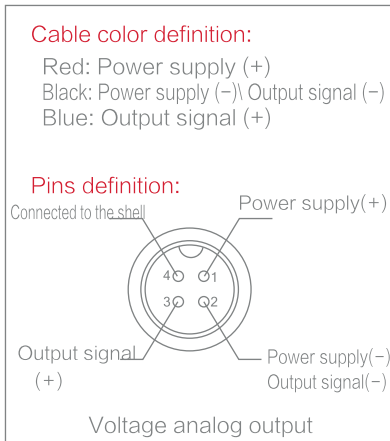
### Specifications


- ◆ Power supply : 9 ~ 28V DC
- ◆ Stroke range : 200 ~ 3000mm
- ◆ Output signal : 1. 0 ~ 5V DC    2. 4 ~ 20mA three wires    3. Digital type RS485(ModBus RTU)
- ◆ Linearity: Analog output-  $\pm 0.25\%$ ,  $\pm 0.5\%$
- ◆ Medium temperature:  $-60^{\circ}\text{C} \sim +180^{\circ}\text{C}$
- ◆ Operating temperature:  $-25^{\circ}\text{C} \sim 85^{\circ}\text{C}$

### Mechanical specifications



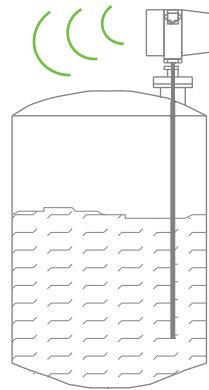
## Wiring



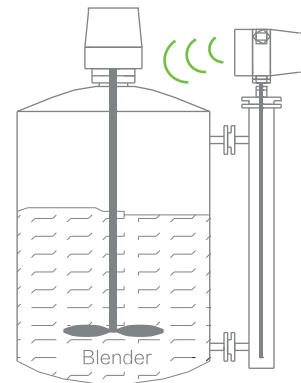
 The input voltage must be within the scope of specifications. (Refer to the performance parameter table), two output types, one is socket output the other is cable directly output.

## Installation

Capacitance level sensor can be fixed at upper part of the container, installation requirements stem body and Containers bottom vertical. (see chart)



Top mounted



Positive probe  
Bypass installation

## Product selection table

SFC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Selection description
Type	G																Standard
	Z																Customized
Probe outer diameter	X	X															Unit : mm
Outer tube material	S																Stainless steel
	F																Fluorine plastic
Stroke					X	X	X	X									Unit : mm
Precision										A							0.25%
										B							0.5%
Output signal											X	X					Appendix 1
Installation													X	X			Appendix 2
Output type																D	Connector output
																P	Directly exit cable(length:1m)
																M	With digital display table output

## Appendix 1: Output signal

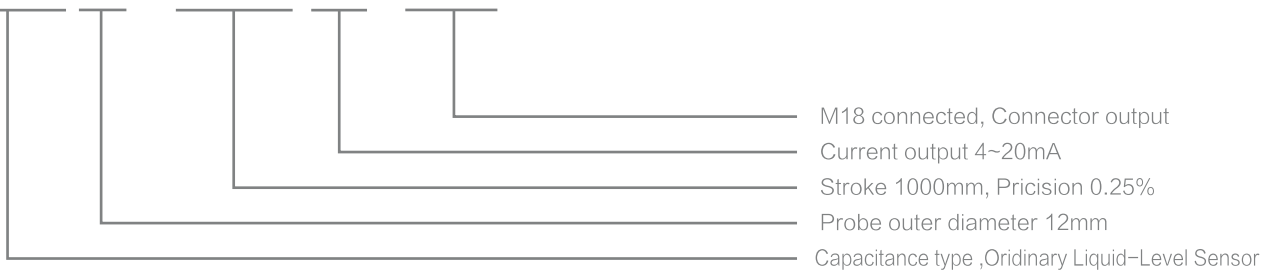
	□	□															
Analog output	Output model	Output range															
	A:Current	1、 4~20mA															
	V:Voltage	1、 0~10V DC 2、 0~5V DC															
Digital output	Output model	Date format and Baud rate															
	M:Modbus Output	<table border="1"> <thead> <tr> <th>RTU</th> <th>ASCII</th> </tr> </thead> <tbody> <tr> <td>0: 2400</td> <td>A: 2400</td> </tr> <tr> <td>1: 4800</td> <td>B: 4800</td> </tr> <tr> <td>2: 9600</td> <td>C: 9600</td> </tr> <tr> <td>3: 19200</td> <td>D: 19200</td> </tr> <tr> <td>4: 38400</td> <td>E: 38400</td> </tr> <tr> <td>5: 76800</td> <td>F: 76800</td> </tr> <tr> <td>6: 115200</td> <td>G: 115200</td> </tr> </tbody> </table>	RTU	ASCII	0: 2400	A: 2400	1: 4800	B: 4800	2: 9600	C: 9600	3: 19200	D: 19200	4: 38400	E: 38400	5: 76800	F: 76800	6: 115200
RTU	ASCII																
0: 2400	A: 2400																
1: 4800	B: 4800																
2: 9600	C: 9600																
3: 19200	D: 19200																
4: 38400	E: 38400																
5: 76800	F: 76800																
6: 115200	G: 115200																

## Appendix 2: Installation specifications

□	□					
C:Cylindrical	Code	Thread (outer diameter)	DN	Code	Thread (outer diameter)	DN
M: Standard thread	1			B	12	50
T: Fine thread	2			C	14	65
F: Flange DN	3		10	D	16	80
	4		15	E	18	100
	5		20	F	20	125
	6		25	G	22	150
	7		30	H	24	200
	8		32	I	27	250
	9			J	30	300
	A	10	40			

Selection example:

### SFCP 12 – 1000A– A1– MED



Information and technical support:

More detail information please read our products catalogs or contact us directly:

E-mail: [info@itargetsensors.com](mailto:info@itargetsensors.com)

Visit our web site [www.itargetsensors.com](http://www.itargetsensors.com), we look forward to solve the problem for you.