

## ESC Analog Output Displacement Sensor

50–3000 mm Stroke, Update Time: 1 ms (four-wire), 100 ms (two-wire), IP67, Non-Contact

### Features

Non-contact measuring, never wear

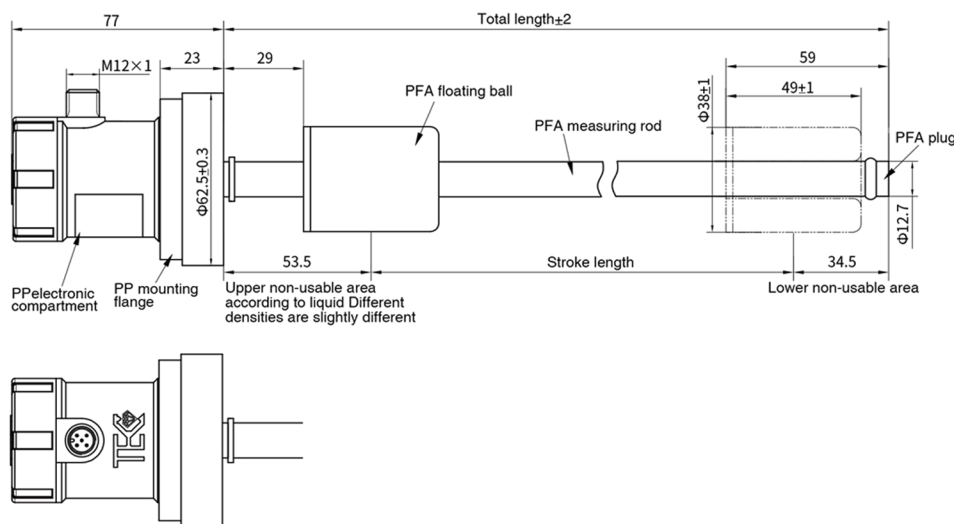
PFA material shell, strong acid and alkali corrosion resistance

Resolution 0.01, high precision liquid level detection

The communication interface is rich and can be customized according to needs

### Technical Characteristics

#### ► Structural shape



#### ► Wiring and pin definition

PA50 pin arrangement	Cable color	Function definition
1	Brown	+24Vdc±20% Power Supply
2	White	GND (power supply circuit)
3	Blue	Magnet ring position signal+
4	Black	Magnet ring position signal-
5	Grey	Shielded wire

PA50 pin arrangement diagram (facing the sensor head):

Analogue (four wires) (facing the sensor head)

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## ESC Analog Output-Product Parameters

### • Input

Measuring data	Position magnet ring
Stroke length	25~2500 mm, others can be customized according to needs

### • Output

Current	4 ~ 20mA or 20 ~ 4mA(min/max load 0/500Ω)
Voltage	0 ~ 10Vdc or 0~5Vdc (minimum load resistance ≥ 10KΩ)
Resolution	±0.01mm, 16bitDA, current ±0.1mm, 12bitDA, Voltage
Nonlinearity	0.05%F.S
Repetition accuracy	Same resolution
Update time	1ms ( range ≤ 1m) 、2ms ( 1m<range ≤ 2m)、3ms ( range > 2m)

### • Operating conditions

Magnet velocity	Arbitrary
Protection class	IP67
Operating temperature	-40°C ~ +75°C
Humidity/Dew Point	Humidity 90%, no condensation
Impact Indicator	GB/T2423.5 50g(6ms)
Vibration index	GB/T2423.10 15g/10~2000Hz
EMC test	GB/T17626.2 Anti-interference Degree of Electrostatic Discharge, Grade 3, Class A GB/T17626.3 Radiation Anti-interference Degree of Radio Frequency Electromagnetic Field, Grade 3, Class A GB/T17626.4 Anti-interference Degree of Electrical Fast Transient Train, Grade 3, Class B GB/T17626.6 RF Field Induced Conducted Disturbance, Grade 2, Class A GB/T17626.8 Power Frequency Magnetic Field Anti-interference Degree, Grade 3, Class A CE certification

### • Electrical Connections

Input voltage	+24Vdc±20% / +12Vdc±20%
Power consumption	<80mA
Polarity protection	Maximum -30Vdc
Overvoltage protection	Maximum 36Vdc
Insulation resistance	> 10MΩ
Insulation strength	500V

### • Construction and Materials

Electronic compartment	PP
Measuring rod	PFA
Outgoing connection	Connector (M12 connector)
Installation	Any direction, threaded mounting (M50) or movable flange mounting
Position magnet	Built-in magnet in floating ball

## ESC Analog Output Displacement Sensor

## ESC Analog Output-Selection Guide

E	S	C	-	M					-	S	0	-	P	A	5	0	-	A	1	2	C	-	F	5
01	02	03		04	05	06	07	08		09	10		11	12	13	14		15	16	17	18		19	20

01 - 03	Sensor shell form
E S C	Integral profile structure series
04 - 08	Measuring range (0025~2500mm, others can be customized according to needs)
	0025~0750mm step length 5mm
	0750~1000mm step length 25mm
	1000~2500mm step length 50mm
09 - 10	Installation mode
S 0	Unthreaded flange installation
11 - 14	Outgoing mode, cable length
P A 5 0	M12 5-pin male socket, plug cable needs to be selected separately
15 - 18	Communication interface
A 1 2 C	Single floating ball, 20~4mA output
19 - 20	Non-usable area at head and end
F 5	29mm+59mm

### Selection example

For example: ESC-M0520-S0-PA50-A12C-F5

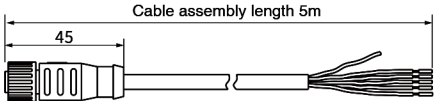
Indicates: ESC structure, non-threaded flange installation, 520mm Stroke length, M12, 5-pin socket, single floating ball, 20~4mA output, head and end non-usable area 29mm + 59mm.

### Supply list

Sensor, certificate, instruction manual, optional parts (optional separately)

## ESC Analog Output-Common Options

### Finished plug cable

Accessory name/model	Dimensions	Description
M12 Right angle female connector Order No.:521816-5		Mxxx denotes cable length in meters; PP black sheath, -pin 1 brown, 2 white, 3 blue, 4 black, 5 gray, Temperature resistance-40℃~80℃.

**Note:**For other accessories, please refer to general options