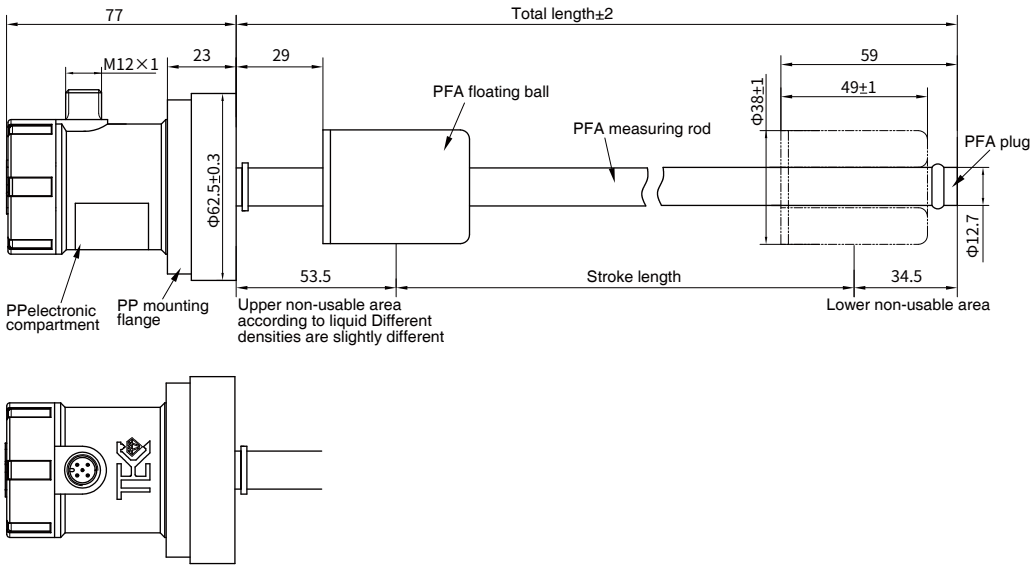
ESC Displacement Sensor

Technical characteristics

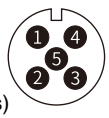
- Non-contact measuring, never wear
- PFA material shell, strong acid and alkali corrosion resistance
- Resolution 0.01, high precision liquid level detection
- The communication interface is rich and can be customized according to needs

ESC-Analog Output

Structural shape



Wiring and pin definition



Analog (four wires)

- PA50 pin arrangement (Sensor Oriented)

Pin	Wire 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

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	Maximum36Vdc
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-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		21	22

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

21 - 22	Country
	Refer to the country list

Selection example

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

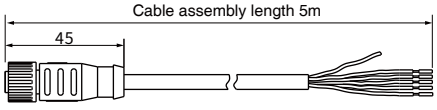
Indicates: ESC structure, non-threaded flange installation, 520mm Stroke length, M12, 5-pin socket, single floating ball, 20~4mA output, head and end non-usable area 29mm + 59mm.

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°C~80°C.

Note: For other accessories, please refer to general options