



EP Displacement Sensor



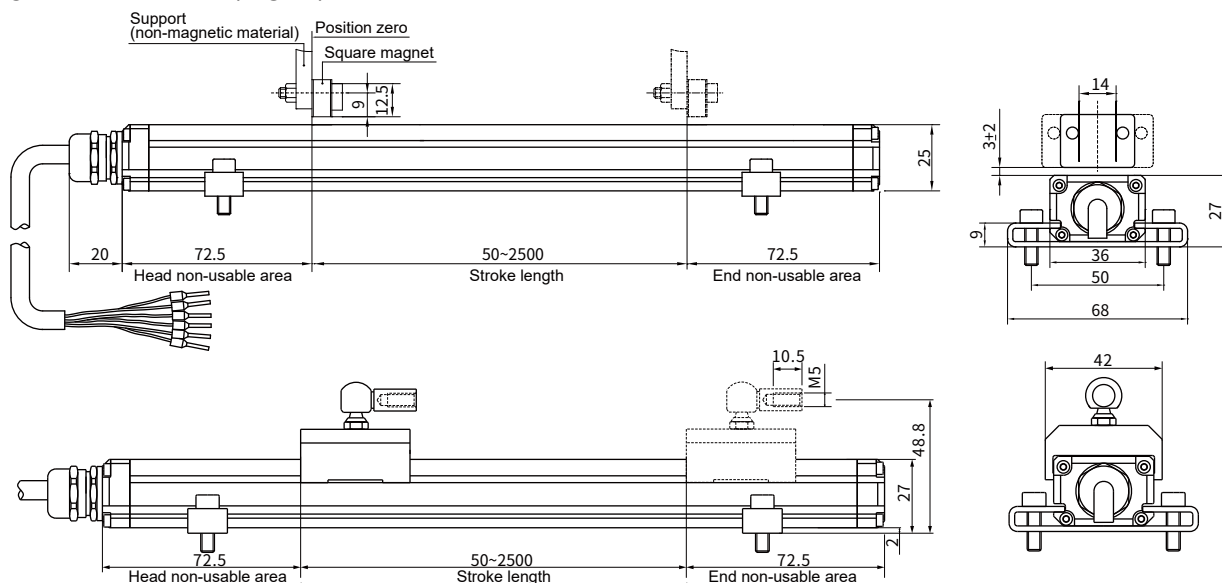
Technical characteristics

- Compact structure, convenient disassembly and assembly
- Linear measuring, absolute position output
- Never wear and tear, not affected by power failure
- Replaceable: LVDT, electronic ruler, encoder, etc.

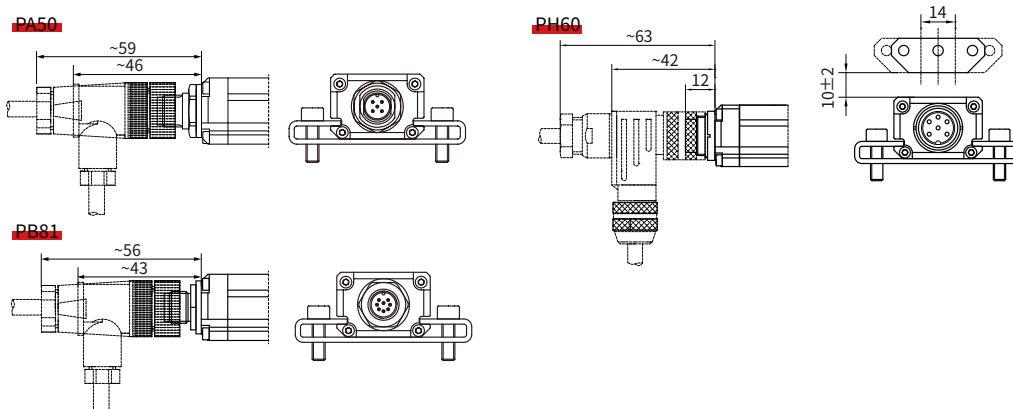
EP-Analog Output

► Structural shape

- Cable outlet DHXX/DUXX/DWXX



- Connector PA50/PB81/PH60



► Wiring and pin definition



- PA50 pin arrangement (Sensor Oriented)

Pin	Wire color3*	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	Sensor programming line

Note:* Wire color1: Cable PUR sheath, black, -20~90°C

* Wire color 2: Cable PVC sheath, orange, -20~105°C

* Wire color 3: Cable PUR Sheath, Black, -40~85°C

Note:The shield wire of the shielded cable is grounded



- PH60 pin arrangement (Sensor Oriented)

Pin	Wire color1*	Wire color2*	Function definition
1	Blue	Grey	Magnet ring position signal+
2	Green	Pink	Magnet ring position signal-
3	Yellow	Yellow	Sensor programming line
4	White	Green	Sensor programming line
5	Red	Brown	+24Vdc±20% power supply
6	Black	White	GND (power supply circuit)



- PB81 pin arrangement (Sensor Oriented)

Pin	Wire color4*	Function definition
1	Yellow	Do not connect
2	Grey	Magnet ring position signal -
3	Pink	Do not connect
4	Red	Sensor programming line
5	Green	Magnet ring position signal+
6	Blue	0 Vdc (power supply loop)
7	Brown	+24Vdc power supply (-20%~+20%)
8	White	Sensor programming line

🔍 EP Analog Output-Product Parameters

• Input

Measuring data	Position magnet
Stroke length	50~2500 mm, others can be customized according to needs

• Output

Current	0 ~ 20mA or 4 ~ 20mA (min/max load 0/500Ω)
Voltage	0 ~ 10Vdc or 0~5Vdc (minimum load resistance ≥10KΩ)
Resolution	14-bit D/A or 0.0065% of full scale (minimum 10μm)
Nonlinearity	<±0.03% of full scale
Repeatability	<±0.005% of full scale
Update time	1ms(range≤1m) 2ms(1m<range≤2m) 3ms(2m<range≤ 3m)
Hysteresis	<10μm

• Operating conditions

Magnet velocity	Arbitrary
Protection class	IP65
Operating temperature	-40℃ ~ +85℃
Temperature coefficient	<30ppm/℃
Humidity/dew point	Humidity 90%, no condensation
Shock index	GB/T2423.5 50g(11ms)
Vibration index	GB/T2423.10 10g/10~2000Hz
EMC test	GB/T17626.2 Anti-interference Degree of Electrostatic Discharge, Grade 4, 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 4, Class A
	GB/T17626.6 RF Field Induced Conducted Disturbance Immunity, Grade 2, Class A
	GB/T17626.8 Power Frequency Magnetic Field Immunity, Grade 3, Class A
	CE certification

• Electrical Connections

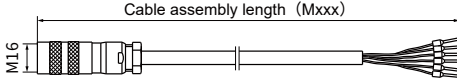
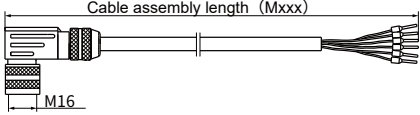
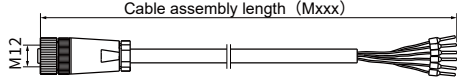
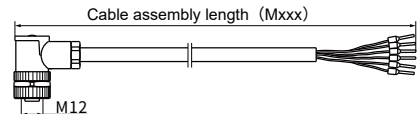
Input voltage	+24Vdc±20%
Power consumption	<80mA
Polarity protection	Maximum-30Vdc
Overvoltage protection	Maximum36Vdc
Insulation resistance	>10MΩ
Insulation strength	500V

• Construction and Materials

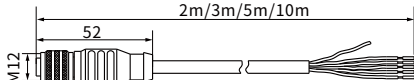
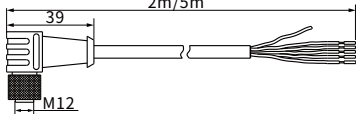
Measuring rod	Aluminum profile
Installation	Any direction, clamp installation
Position magnet	Square magnet, trapezoidal magnet
Outgoing mode	Cable outlet (scattered connection), connector (M16 or M12 connector)

▶ EP Analog Output - Common Options

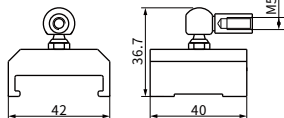
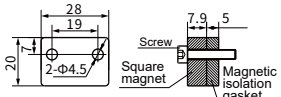
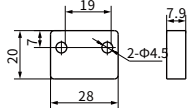
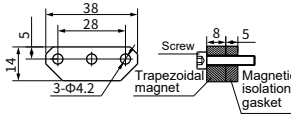
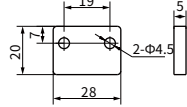
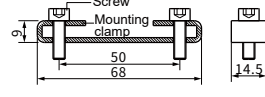
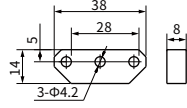
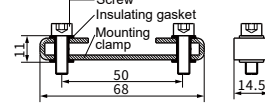
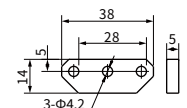
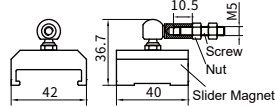
• Plug assembly cable

Accessory name/model	Dimensions	Description
Analog wiring cable assembly Order No.:AST-Mxxx-H01 (U01)		Mxxx denotes cable length in meters; H01-6-pin PUR orange sheath, temperature-resistant-20~90°C cable assembly; U01-6-pin PVC orange sheath, temperature resistance -20~105°C cable assembly.
Analog wiring right angled cable assembly Order No.:AST-Mxxx-H03 (U03)		Mxxx denotes cable length in meters; H03-6-pin PUR orange sheath, temperature-resistant -20~90°C cable assembly; U03-6-pin PVC orange sheath, temperature resistance -20~105°C cable assembly.
Analog output cable assembly Order No.:AST-Mxxx-W06		Mxxx denotes cable length in meters; W06-6-pin PUR black sheath, temperature -40~80°C cable assembly.
Analog output right angled cable assembly Order No.:AST-Mxxx-W05		Mxxx denotes cable length in meters; W05-5-pin PUR black sheath, temperature -40~80°C cable assembly.

• Finished plug cable

Accessory name/model	Dimensions	Description
M12 5-pin female connector Order No.:521801-2 (3/5/10) M12 8-pin female connector Order No.:521803-5(10)		PUR black sheath, Wire colour1* for 521801-2 (3/5/10) Wire colour4* for 521803-5(10)
M12 Right angle female connector Order No.:521804-2 (5) M12 8-pin angle female connector Order No.:521802-5(10)		PUR black sheath, Wire colour1* for 521804-2 (3/5/10) Wire colour4* for 521802-5(10)

• Magnet ring/floating ball

Accessory name/ model	Dimensions	Accessory name/ model	Dimensions	Description
Slider Magnet Order No.:211517		Square Magnet Order No.:288508		One square magnet 211508, one square magnet gasket 211529 (thickness 5mm), two M4X20 socket screws
Square magnet Order No.:211508		Trapezoidal magnet kit Order No.:288514		One trapezoidal magnet 211514, one trapezoidal magnet gasket 211530 (thickness 5mm), three M4X20 socket screws
Square magnet gasket Order No.:211529		Mounting clamp kit Order No.:211561		One mounting clamp, two M5X16 socket screws
Trapezoidal magnet Order No.:211514		Mounting clamp kit (With insulation) Order No.:211801		One mounting clamp, two M5X16 socket head cap screws, four insulating washers
Trapezoidal magnet gasket Order No.:211530		Slider Magnet Kit Order No.:288517		One slider Magnet 211517, one M5x25Screw, Two M5 Nuts

Note:For other accessories, please refer to general options