Position and proximity sensors

Magnetostrictive Linear Position Sensor, 50 to 2000 mm, Analog, RS485 or SSI

Model DW-MLT

Magnetostrictive linear position sensor with a pressure-resistant 316 stainless steel rod for hydraulic cylinders, 50 to 2000 mm stroke, absolute 4–20 mA, voltage, RS485 or SSI output, a 24 V DC supply and IP67.



Range
50–2000 mm

Output
4–20 mA, 0–10 V, RS485 or SSI

Protection
IP67

Features

- Non-contact magnetostrictive measurement, no wear
- Absolute output: no re-homing after a power loss
- Pressure-resistant stainless steel rod for mounting in hydraulic cylinders
- 4–20 mA, 0–5 V, 0–10 V, RS485 (Modbus) or SSI output
- LED fault indication
- Low power consumption and low temperature drift

Applications

Hydraulic cylinder piston position, Wind turbine pitch adjustment, Brake control systems, Rail distance detection, Metallurgical and port machinery, Construction, rubber and injection moulding machines

Specifications

Performance

Measuring range	50 to 2000 mm
Non-linearity	1%–0.5% FS (50–100 mm); 0.5%–0.1% FS (100–300 mm); 0.1%–0.05% FS (300–2000 mm)
Repeatability	±0.008% FS
Resolution	16-bit D/A
Data update	0.5 ms (stroke < 1000 mm); 1.0 ms (stroke < 2000 mm), analog

Temperature coefficient	< 0.007% FS/°C

Output	
Output signal (current)	4–20 mA or 20–4 mA (load 0–500 Ω)
Output signal (voltage)	0–5 V, 5–0 V, 0–10 V or 10–0 V DC (load > 5 kΩ)
Digital output	RS485 (Modbus) or SSI (Gray code or binary)
SSI data length	24, 25 or 26 bit (24 data bits, 25th parity bit, 26th alarm bit)
SSI baud rate	100–1000 kBd

Electrical	
Supply voltage	24 V DC (−15% to +20%)
Operating current	< 70 mA
Reverse voltage	Max. −30 V DC
Overvoltage	Max. 33 V DC
Electrical connection	Straight cable outlet, or 6-pin or 7-pin aviation plug

Mechanical	
Thread specification	M18×1.5 (M20×1.5 or 3/4"-16UNF-3A optional)
Rod material	316 stainless steel, Ø10 mm
Housing material	304 stainless steel
Rod pressure rating	≤34 MPa
Position magnet	Ring magnet Ø33 mm with 4 × Ø4 mm holes; floats for level measurement
Dimensions	Hexagonal housing 49 × 44 mm, 75 mm long; null zone 50.8 mm; end dead zone 63.5 mm

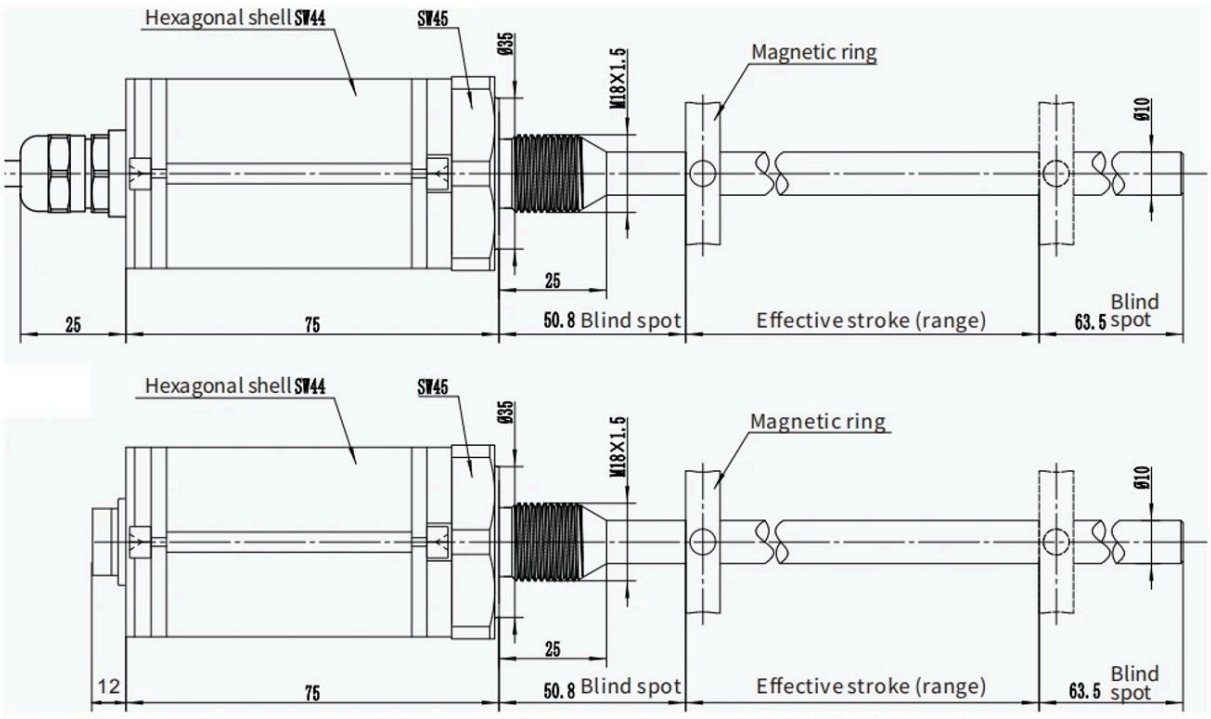
Environmental	
Operating temperature	−40 to +85 °C
Storage temperature	−40 to +100 °C
Ingress protection	IP67 (straight cable or 6-pin plug; 7-pin plug not waterproof)

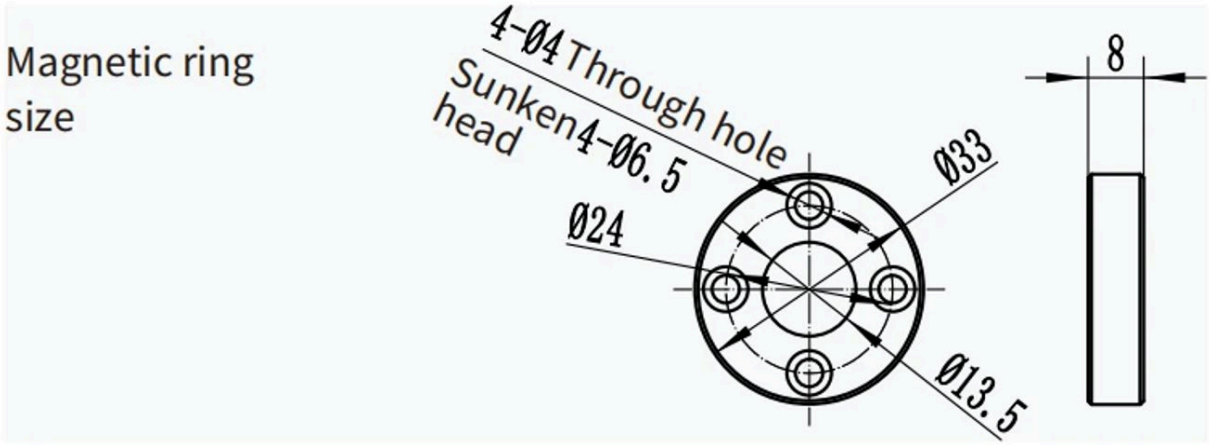
Ordering and support

Pricing, samples, lead time and custom versions: xyx@gzdwin.com, +86 181 0280 8901.

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Dimensions and wiring





Drawings are for reference. Dimensions in millimetres unless stated.