

7/14MPa Position Sensing Hydraulic Cylinder Model:PTN/PTH-1B

Full Product Description

The PTN/PTH-1B series is a 7 / 14MPa hydraulic cylinder with position sensor with a bore size of $\phi 50$ to $\phi 250$. A position sensor that applies the magnetostriction phenomenon enables highly accurate absolute position detection. No switch is required to set the origin, and no correction is required. By adopting a high-performance cushion, the impact at the time of stopping is reduced. The switch set has been standardized up to a bore size of $\phi 150$. The switch set supports inner diameters from $\phi 50$ to $\phi 140$ as semi-standard.

Markets:

- General Industry
- Factory Automation
- Machine Tools
- Molding

Applications:

- General industry
- Factory Automation
- Machine Tools
- Injection molding
- Presses

Features/Benefits:

- 7 standard mounting styles.
- Standard stroke is up to 2,000mm.
- As a safety measure, the cushion valve uses a retaining mechanism and a locknut to prevent loosening.
- Sealing material can be selected from 4 types.
- Magnetic proximity switch specifications are also semi-standard.

Technical Specifications

Bore Diameter:	φ50,φ63,φ80,φ100,φ125,φ140,φ160,φ180,φ200,φ224,φ250 B mm	Rod End Type:	250 B
Seal Material:	1:Nitrile rubber 2:Urethane rubber(φ50 to φ160) 3:Fluorocarbon 6:HNBR(φ50 to φ160)	Operating Pressure:	7MPa
Maximum Operating Pressure:	9 MPa	Proof Pressure:	10.5MPa
Minimum Operating Pressure:	Cap side:0.3MPa or less Rod side:0.45MPa or less MPa	Operating Speed:	φ50,φ63:8 to 400mm/s φ80 to φ125:8 to 300mm/s φ140 to φ250:8 to 200mm/s
Operating Temperature:	Cylinder:-10 to +80°C(No freezing)(ambient temperature)Detector:-20 to +80°C(No freezing) °C	Cushioning Type:	Metal fitting system
For Fluid Type:	Petroleum-based fluid(When using another fluid,give us such instructions.)	Thread Tolerance:	JIS 6g/6H
Stroke Tolerance:	0 to 100mm:0 to +0.8 101 to 250mm:0 to +1.0 251 to 630mm:0 to +1.25 631 to 1000mm:0 to +1.4 1001 to 1600mm:0 to +1.6 1601 to 2000mm:0 to +1.8	Tube Material:	Carbon steel for machine structural use
Mounting Type:	SD,LA,LB,FA,FY,TA,TC	Rod End Thread Type:	Rod eye(T-end),Rod clevis(Y-end)with pin,lock nut,Floating joint(F-end:Do not use together with Mounting style TA and TC accessories.)
Bellows Material:	Standard:Nylon tarpaulin, Semi-standard:Chloroprene,Conex	Power Supply Voltage:	24V DC±2V 0.05A

Linearity:	±0.025%FS or ±75μm TYP	Resolution:	±0.01%FS or ±30μm or less mm
Repeatability:	±0.01%FS or ±30μm or less	Temperature Characteristics:	±0.01%FS or ±30μm or less
Output Current Rating:	Current output:4 to 20mA Load resistance:500Ω or less For the voltage output(0 to 10V,etc.),contact us.	Update Rate:	1 kHz
Maximum Impact Rate:	50G 2m/s	Vibration Resistance:	6G or 40Hz2mmPP
Ingress Protection Rating:	IP67(10kPa,30min)	Connection Size:	Pin No.:1 Signal:24V DC Pin No.:2 Signal:0V Pin No.:3 Signal:Output Pin No.:4 Signal:COM Shield to be connected to 0V by user 0V and COM are connected internally.
Accessories Included:	Connector:OMRON XS2C-D4S1	Cable Type:	Outer diameter:φ5 to φ6mm Wire size:0.18 to 0.75mm ² (not supplied)