

MH SERIES

MAGNETOSTRICTIVE LINEAR POSITION SENSOR

FEATURES

- ⊙ Non-contact measurement
- ⊙ Low-power design for improved stability
- ⊙ Absolute output – no need for re-zeroing
- ⊙ Compact structure for tight installation spaces
- ⊙ Ideal for in-cylinder use in hydraulic machinery
- ⊙ Rugged, oil-resistant, contamination-resistant design



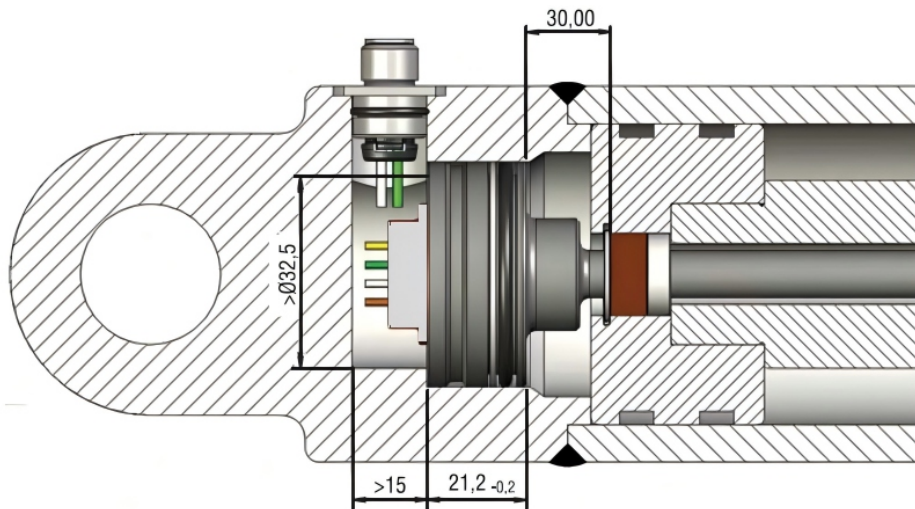
INTRODUCTION

The DWEL MH Series Magnetostriuctive Position Sensors are designed for integrated installation inside hydraulic cylinders used in mobile machinery and off-highway equipment. With a compact housing and rugged construction, the MH series delivers accurate, absolute position feedback even under harsh operating conditions. The non-contact magnetostriuctive principle ensures long service life with zero wear, making it ideal for continuous position monitoring in demanding hydraulic systems.

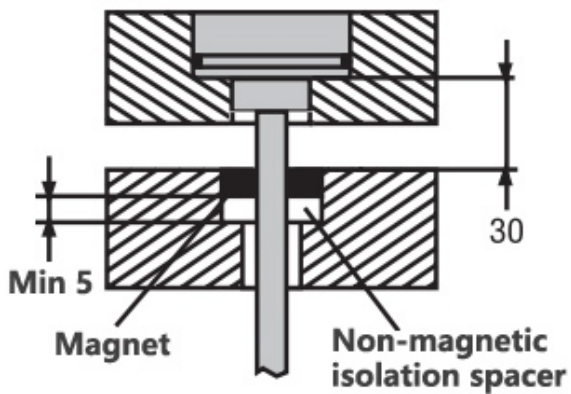
SPECIFICATIONS

Measuring Range	50–3000 mm
Output signal	4 ~ 20mA, 20-4mA, 0.25-4.75V, 0.5 ~ 4.5V
Non-linearity	< $\pm 0.03\%$ F.S. (min. $\pm 100 \mu\text{m}$)
Repeatability	< $\pm 0.002\%$ F.S.
Connection Type	M12 connector or single wires or cable output
Resolution	16-bit D/A
Update Time	2.0 ms
Power supply	24 VDC (–15% / +20%)
Overvoltage protection	Max. 36 VDC
Insulation Resistance	500 V (between signal ground and housing)
Material	304SS/316SS
Position magnet	Magnet rings
Operating Current	< 80 mA (varies with measuring range)
Temperature	–40~85°C
Pipe pressure	35MPA(Continuous), 70MPA (Max)
Protection	IP67

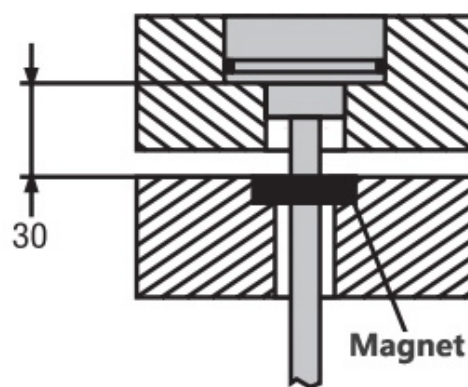
INSTALLATION



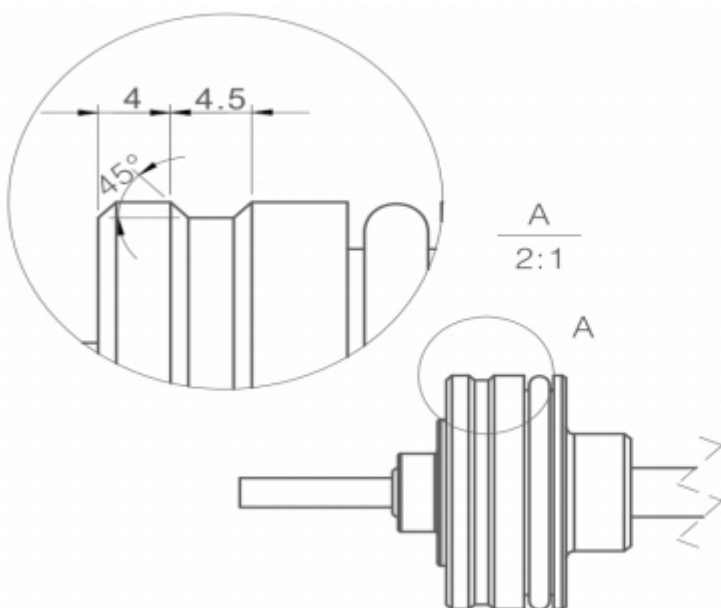
1. For installation on magnetic materials, use a non-magnetic isolation spacer



2. For installation on non-magnetic materials, no non-magnetic isolation spacer is required

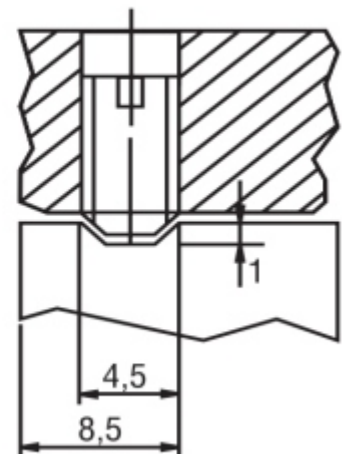


3. Housing Installation Details

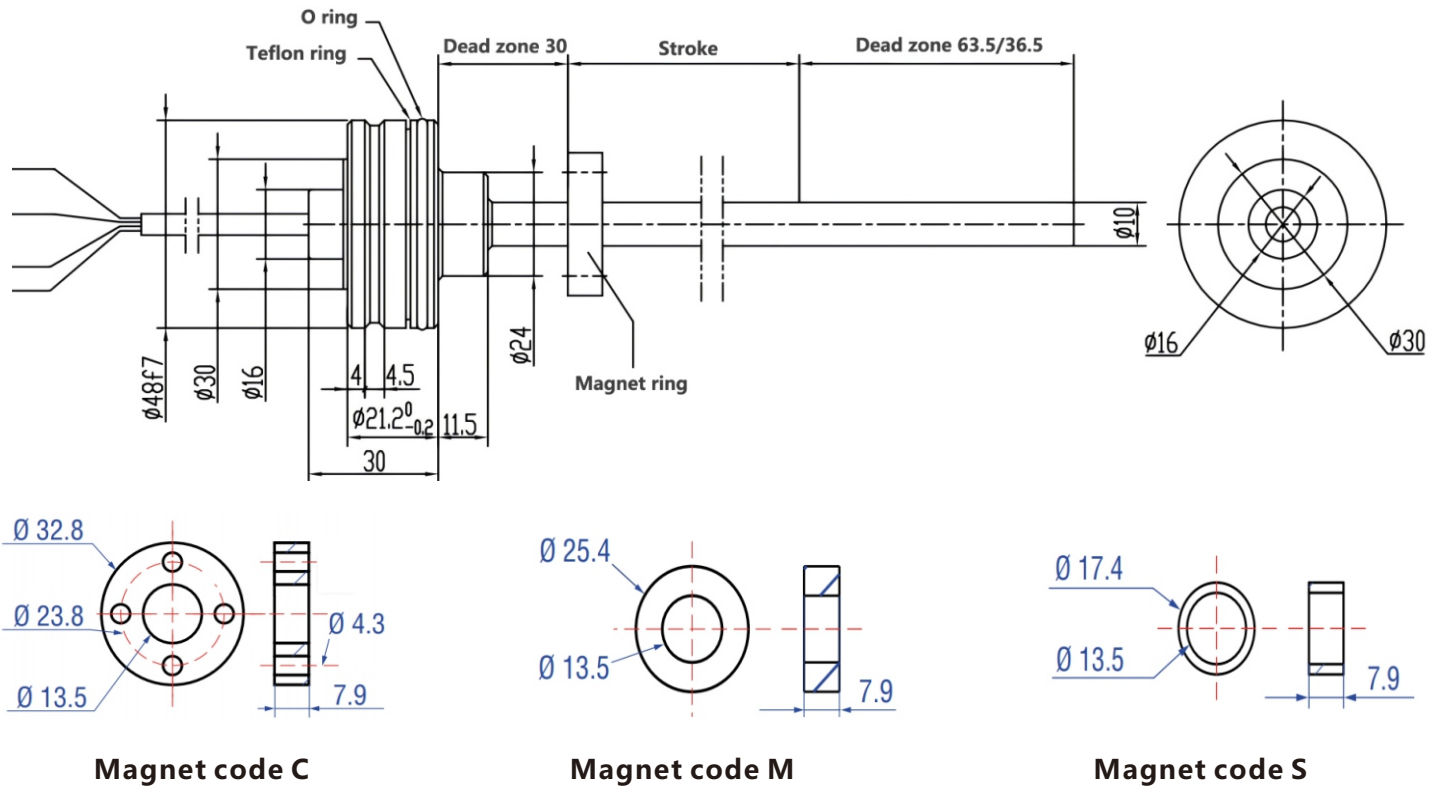


For example, use DIN913 M5×10 (flat-tip) set screws for mounting.

Maximum tightening torque: 0.5 Nm

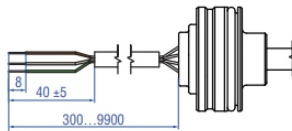


DRAWING

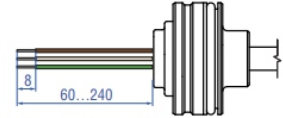


ELECTRICAL CONNECTION

Cable output (Code F)



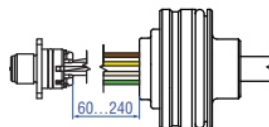
Single wires (Code S)



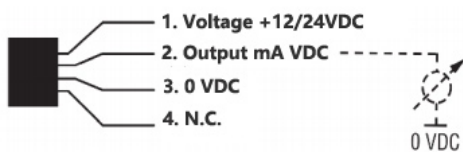
Pin	Color	Definition
1	Brown	12-24VDC
2	White	0VDC
3	Green	Output mA VDC

Pin	Color	Definition
1	Brown	12-24VDC
2	White	0VDC
3	Gray	Output mA VDC
4	Black	GND

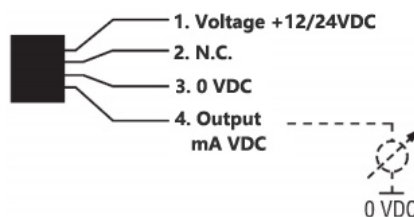
M12 connector definition



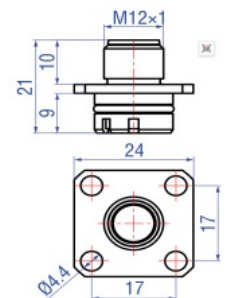
PIN definition (Code D)



PIN definition (Code B)



M12 connector size



ORDER FORMAT

MH - T0500C42CD06R

Types	Code
Dead zone 30+63.5	T
Dead zone 30+36.5	B

Range	Code
50mm	0050
100mm	0100
....	
3000mm	3000

Output signal	Code
4-20mA	C42
20-4mA	C24
0.25-4.75V	V24
0.5-4.5V	V54

Magnetic type	Code
Magnet ring OD32.8	C
Magnet ring OD25.4	M
Magnet ring OD17.4	S

Cable material	Code
PVC cable	P
PUR cable	R
High temperature cable	H

Cable/wire length	Code
Cable output (Code F)	
1 meter	01
2 meters	02
3 meters	03
...	...
Single wires/M12 (CodeS/D/B)	
60mm	06
...	...
250mm	25

Electrical connection Code	
Cable output	F
Single wires	S
M12 connector PIN1/2/3	D
M12 connector PIN1/3/4	B

Example

MH-T0500C42CD06R, Dead zone 30+63.5mm, Range 500mm, analog output 4-20mA, Standard magnet ring OD32.8,M12 connector pin 1/2/3 wring with extension cable 60mm, PUR cable

MH-T0500C42CF03R, Dead zone 30+63.5mm, Range 500mm, analog output 4-20mA, Standard magnet ring OD32.8,cable leads output,3 meters, PUR cable