

MTGB SERIES

MAGNETOSTRICTIVE LINEAR POSITION SENSOR

FEATURES

- ⊙ Non-contact measurement, no wear
- ⊙ Full stainless-steel construction
- ⊙ Analog and SSI output options
- ⊙ Absolute output, no zeroing required
- ⊙ Low-profile flange, only 34 mm installation height
- ⊙ Fully sealed electronics with strong anti-interference



INTRODUCTION

The DWEL MTGB series magnetostriuctive position sensor is designed for hydraulic cylinders requiring precise and reliable stroke measurement. Its ultra-low-profile flange structure fits compact designs, while the non-contact magnetostriuctive principle ensures long life, high accuracy, and stable performance even in harsh industrial environments.

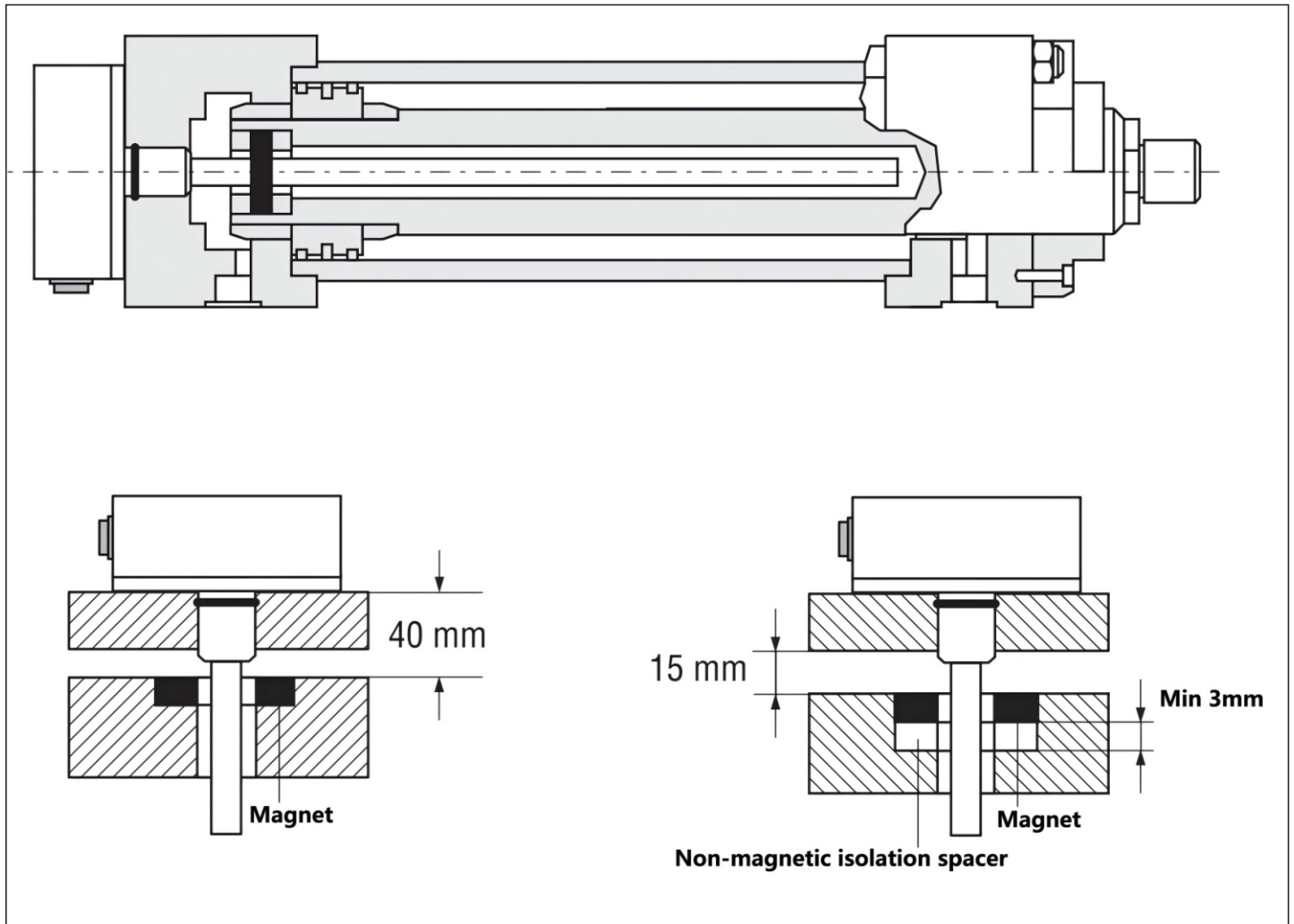
SPECIFICATIONS

Measuring Range	50–4000 mm
Output signal	4 ~ 20mA, 20-4mA, 0-20mA, 20-0mA, 0-10V, 10-0V, 0-5V, 5-0V, SSI
Non-linearity	< $\pm 0.03\%$ F.S. (min. $\pm 100 \mu\text{m}$)
Repeatability	< $\pm 0.002\%$ F.S. (min. $\pm 1 \mu\text{m}$)
Connection Type	M16 connector or cable output
Resolution	16-bit D/A
Update Time	0.5ms(<1m), 1.0ms(1m<Range<2m), 2.0 ms(2<Range<4m)
Power supply	24 VDC (–15% / +20%)
Overvoltage protection	Max. 36 VDC
Insulation Resistance	500 V (between signal ground and housing)
Material	304SS
Position magnet	Magnet rings
Operating Current	< 80 mA (varies with measuring range)
Temperature	–40~85°C
Pipe pressure	35MPA(Continuous), 70MPA (Max)
Installation Method	6 × M6×16 face-mounted flange screws for compression sealing
Protection	IP67

INSTALLATION

Hydraulic Installation Diagram

Use a rod-type bushing (such as PTFE) to prevent friction between the magnet and the sensor rod. The hole inside the piston rod depends on hydraulic pressure, speed, and other factors. The hole diameter must not be less than 13 mm. The peak pressure must not exceed 70 MPa.



ELECTRICAL CONNECTION

Analog Output

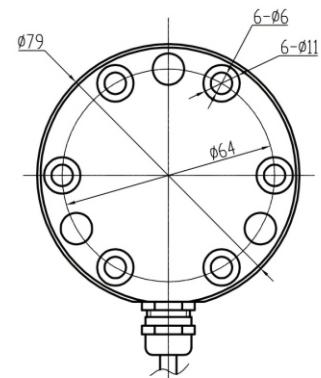
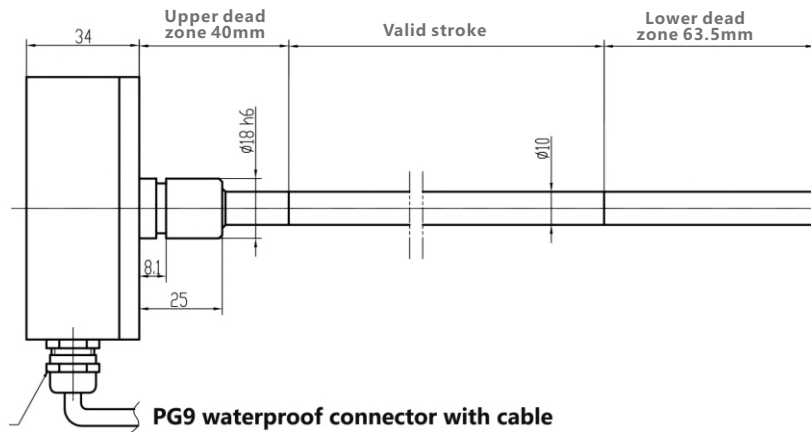
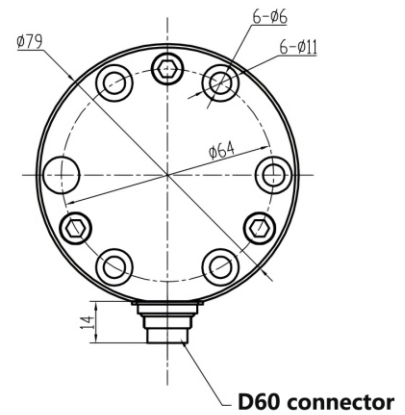
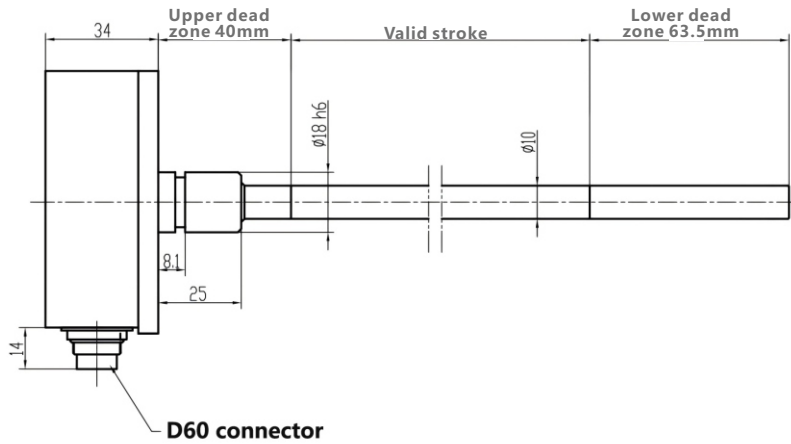
Pin	Color	Definition
1	Gray	Signal output
2	Pink	Signal GND
3	Yellow	Null
4	Green	Null
5	Brown	+24VDC
6	White	Power GND

SSI Output

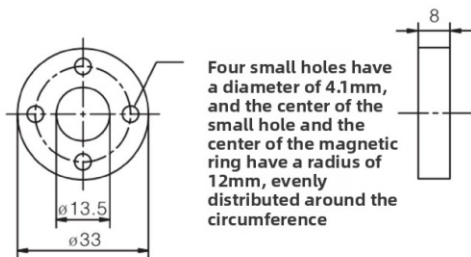
Pin	Color	Definition
1	Gray	Data -
2	Pink	Data +
3	Yellow	Clock-
4	Green	Clock+
5	Brown	+24VDC
6	White	Power GND



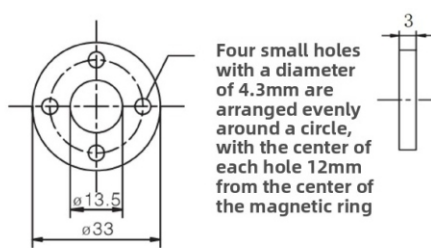
DRAWING



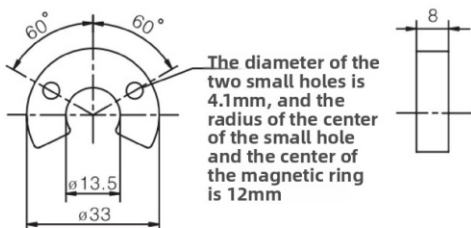
Magnets & Accessories



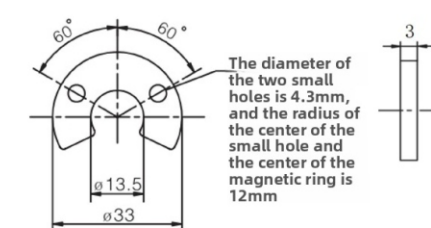
Standard magnetic ring



Magnetic isolation gasket

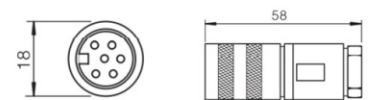


Open magnetic ring

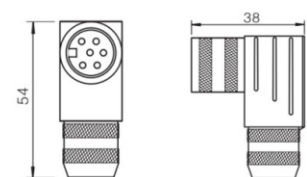


Open magnetic ring gasket

Connector



M16 6pin straight connector CON6S



M16 6pin connector 90° CON6R

ORDER FORMAT

MTGB - T0500C42CF02R

Types	Code
Dead zone 40+63.5	T
Dead zone 30+60	B

Range	Code
50mm	0050
100mm	0100
....	
4000mm	4000

Output signal	Code
4-20mA	C42
20-4mA	C24
0-20mA	C02
20-0mA	C20
0-10V	V01
10-0V	V10
0-5V	V05
5-0V	V50

Output signal(SSI)			
Data length	Code	Data format	Code
24-bit	1	Binary	B
25-bit	2	Gray code	G
26-bit	3		
Resolution	Code	Output direction	Code
10um	1	Forward	F
5um	2	Reverse	R
2um	3		
1um	4		
20um	5		
50um	6		
100um	7		

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

Cable length	Code
1 meter	01
2 meters	02
3 meters	03
...	...

Electrical connection Code	
Cable	F
M16 connector 6pin	C6
M16 connector 8pin	C8

Magnetic type	Code
Close magnetic ring	C
Open magnetic ring	O

Example

MTGB-T0500C42CF02R, Dead zone 60+63.5mm, Range 500mm, analog output 4-20mA, Close magnet ring, Cable leads 2m, PUR cable

MTGB-T05001B3FCF02R, Dead zone 60+63.5mm, Range 500mm, **SSI output** 24 bit, Binary, 2um, forward measuring, Close magnet ring, Cable leads 2m, PUR cable