

MTEL SERIES

MAGNETOSTRICTIVE LINEAR POSITION SENSOR

FEATURES

- ⊙ Non-contact measurement
- ⊙ Output options: Analog and SSI
- ⊙ Absolute output – no need for re-zeroing
- ⊙ External mounting design for easy installation
- ⊙ Joint-bearing sliding magnet resists lateral stress
- ⊙ Low power consumption, reduced temperature drift



INTRODUCTION

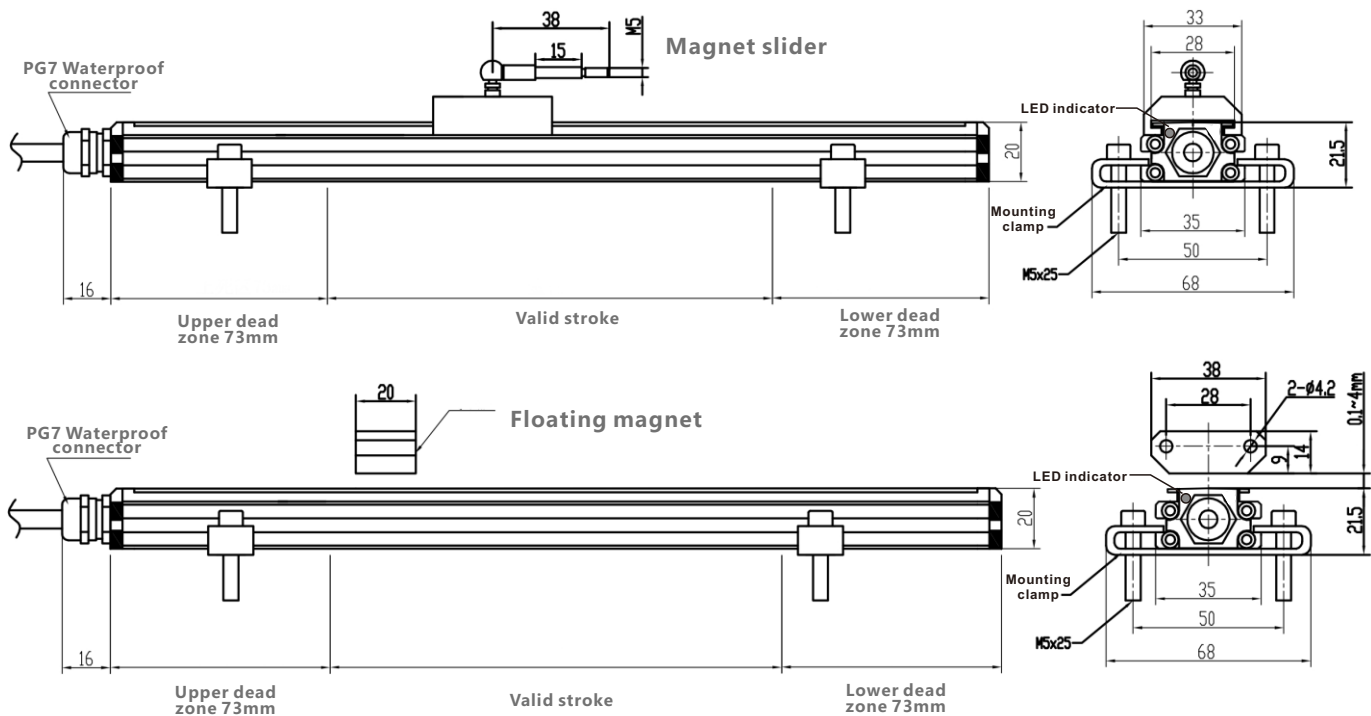
The MTEL Series Magnetostriuctive Position Sensors provide precise, non-contact linear position measurement with a convenient external installation design. Equipped with a joint-bearing sliding magnet capable of withstanding high lateral forces, the MTEL Series ensures durability, stability, and maintenance-free operation. Typical applications include injection molding machines, hydraulic presses, linear actuators, mobile machinery and industrial automation systems. The MTEL Series is a direct replacement for Temposonics, Balluff sensors.

SPECIFICATIONS

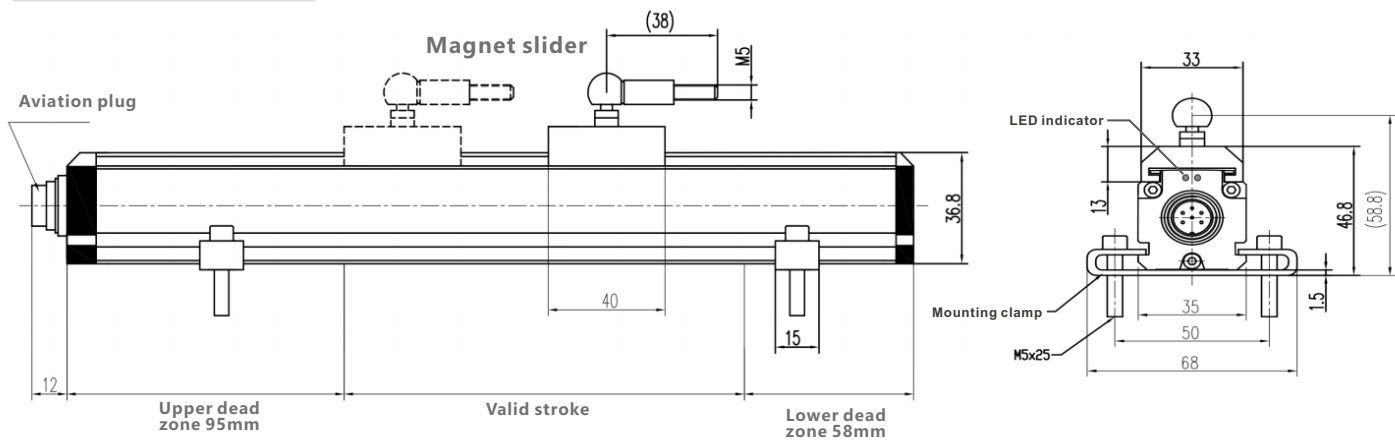
Measuring Range	50–4000 mm
Output signal	4 ~ 20mA, 20–4mA, 0–5V, 0 ~ 10V, 0~5V, SSI
Non-linearity	< ±0.03% F.S. (min. ±50 µm)
Repeatability	< ±0.002% F.S. (min. ±1 µm)
Connection Type	Waterproof connector or aviation plug
Resolution	Analog output: 16-bit D/A SSI output: 1 / 2 / 5 / 10 / 20 / 50 / 100 µm
Update Time	0.5 ms (≤1 m range) 1.0 ms (1–2 m range) 2.0 ms (2–4 m range)
Power supply	24 VDC (–15% / +20%)
Overvoltage protection	Max. 36 VDC
Insulation Resistance	500 V (between signal ground and housing)
Material	Housing: Aluminium
Position magnet	Magnet slider, floating magnet
Operating Current	< 80 mA (varies with measuring range)
Temperature	–40~85°C
Protection	IP65

DRAWING

MTEL-S SERIES



MTEL-F SERIES



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



ORDER FORMAT

MTEL-S0500C42SF01P

Types	Code
Sensor model	MTEL-S
Sensor model	MTEL-F

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

Output signal(Analog) 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
*For cable outlet	

Cable length	Code
1 meter	01
2 meters	02
3 meters	03
...	...
*For cable outlet	

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

Magnetic type	Code
Magnet slider	S
Floating magnet	F

Example

MTEL-S0500C42SF01P, Range 500mm, **analog output** 4-20mA, Magnet slider, wire leads on the top cable 1m, PVC cable

MTEL-F05001B2FSC8, Range 500mm, **SSI output** 24 bit, Binary, 5um, forward measuring, Magnet slider, M16 8PIN connector, with LED indicator