



- **Direct measurement of linear displacement, angle of rotation, rotational speed**
- **Non-contact measurement, no wearing parts**
- **Resolution max 5 μ m**
- **Wide range of supply voltage 4-30 V DC**
- **Measurement length up to 20 m.**
- **The distance between the sensor and the tape is 2 mm**
- **Insensitive to dirt, dust, water IP67**
- **High resistance to shocks, vibrations, pressure**
- **Anodized aluminum housing**
- **Polyurethane belt chip scrapers**
- **Optional cable in a metal conduit**
- **LED diode indicating incorrect signal level**
- **Mounting with 2 M3 screws**

The MSI-51 magnetic sensor together with the MT50 tape or magnetic wheel creates an incremental measuring system designed for direct measurement of linear displacement, rotation and rotational speed. The measurement is non-contact and does not have any wearing parts (bearings, seals, etc.). The sensor can be mounted up to 2 mm from the tape or wheel. It is completely insensitive to dirt, dust, water and oil. The output is a quadrature signal, 2 channels shifted in phase by 90 degrees.

Magnetic encoders are an excellent solution in harsh environments, including woodworking, stone processing, metalworking, textiles, printing, packaging, plastics processing, automation and assembly systems, laser / water cutting, electronic assembly equipment, etc.

Technical data:

Power	4-30 V DC	
Current consumption	< 20mA	
Output load	70mA	
Resolution (um)	5 , 10 standard , 25 , 125	
Interpolation factor	1000, 500 standard , 200, 40	
Sensor interpolation error	Typ. 15 um , max. 20 um	
Max speed	1um-0,7m/s , 2um-1,4m/s , 4um-2,8m/s	
Max speed	5um-3m/s , 10um-7m/s , 25um-4,38m/s , 50um-4,38m/s	
Cable	PUR , 2m standard (other on request)	
Output type	Push-Pull , Line Driver	
Signals	A, A/, B, B/, I, I/	
Index	2 mm	
Distance sensor-tape	0,1 – 2 mm	
Accuracy measurement system (sensor+tape) in um w 20°C	Depends on the accuracy class of the tape used	
	A20	A40
	+/- 20	+/- 40

Ordering:**MSI-51 - A - B - C**

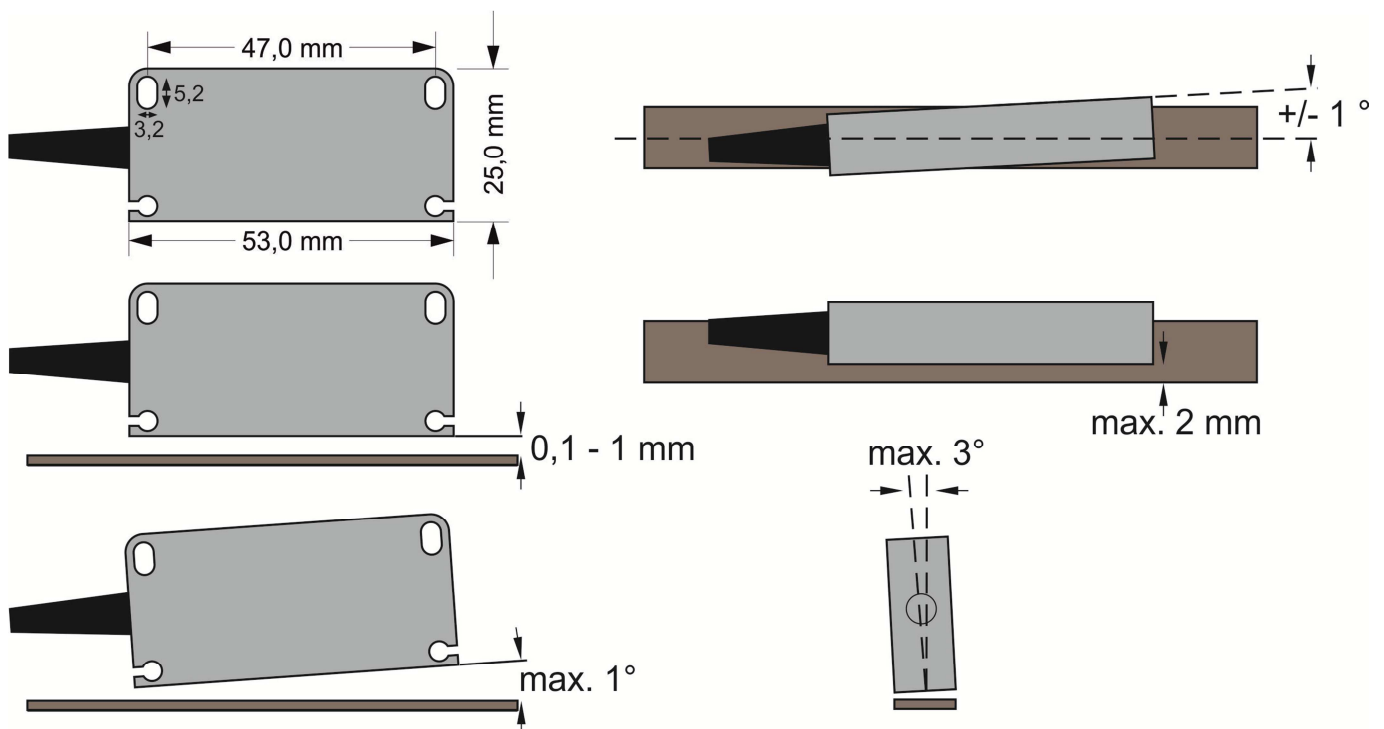
A – resolution in um (5 , 10 standard , 25 , 125)

B - scrapers (1 – with scrapers; 0 – without scrapers)

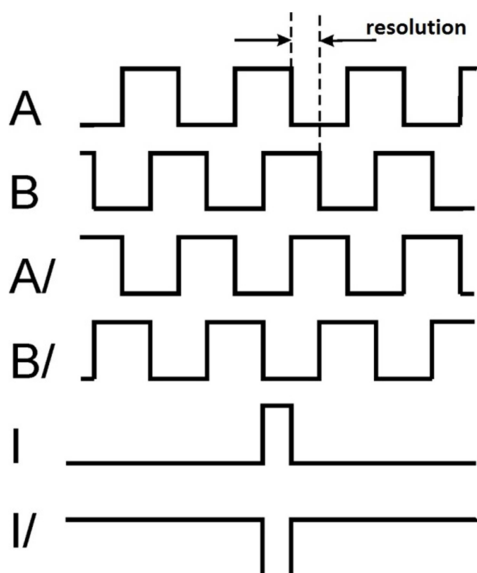
C - metal conduit (1 – with metal conduit; 0 – without metal conduit)

MSI-51 - 10 - 0 - 0 means sensor with resolution 10 um (0,01mm) without scrapers and without metal conduit

Dimensions and assembly deviations:



Output signals:



Function	Color
+ V DC	Red
- V DC	Blue
A	Yellow
A/	Brown
B	Green
B/	Pink
I	White
I/	Grey