JENIX®
Digital Readout System

# ABSOLUTE
# Linear Magnetic Scale

**(Model: MSOA)**

- **Resolution: 0.001 mm**
- **Fast reading speed**
- **Through non-contact sensing techniques High reliability**




The JENIX Absolute Magnetic Scale is designed for use in harsh environments and features an advanced linear scale that displays the absolute value of your current position.

It can be used up to 32 meters and uses a compact shielded magnetic encoder that moves with 1 mm gap from the self-adhesive magnetic tape.



## Technical specifications

| Environmental Conditions | |
|---|---|
| Operation temp. | -25℃ to +85℃ |
| Storage temp. | -40℃ to +100℃ |
| Waterproofing treatment | CrNi 17/7 stainless steel carrier<br>Nitrile rubber high-temperature magnetic tape |

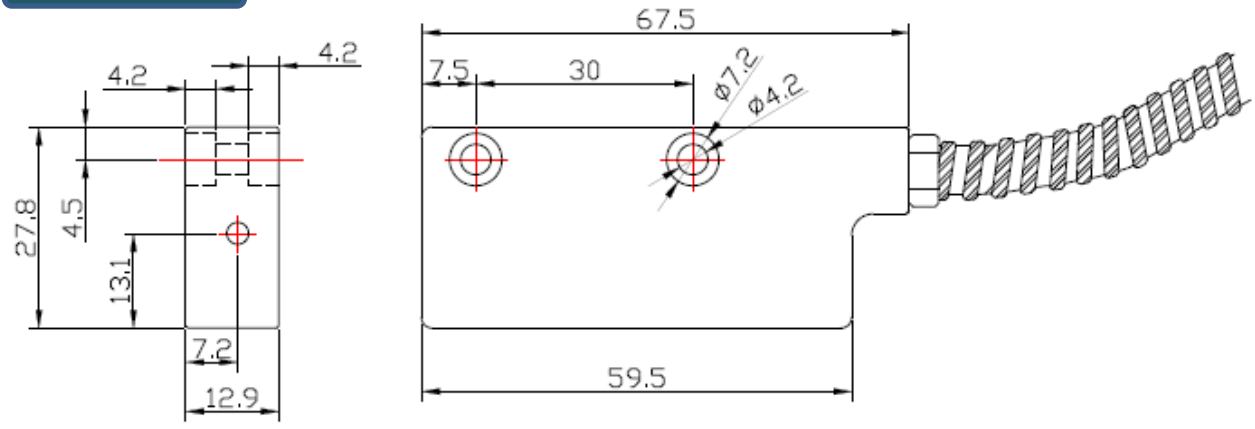


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| Magnetic Tape - Physical Properties | |
|---|---|
| Width / Thickness | 10mm / 1.43mm |
| Maximum length | 32m (roll) |
| Track / Pole pitch / other | 2 트렉 / ABS + INCR (2mm) / 3M 접착테이프 |
| Linear expansion coefficient | ~ 17 ± $10^{-6}$ /K |

| Encoder (Sensor) Technical Specifications | |
|---|---|
| Measurement Principle | Absolute type |
| Resolution (Digital Counter) | 0.001mm |
| Accuracy | 20㎛/m ( 3㎛, 5㎛, 10㎛ selectable ) |
| Output Format | SSI / RS485 |
| Maximum movement speed | 250m /min |
| Data Update Rate | 100 Hz |
| Sensor-to-tape spacing | 1 mm (maximum) |
| Protection class | IP67 |
| Operation temp. | -5℃ to +50℃ |
| Storage temp. | -20℃ to +70℃ |
| DC power | 5V ± 5%, 150mA |
| Max. measurement length | 32m |
| Max. cable length / standard | 30m / standard 4m (12pins D-SUB connector) |

## Dimensions



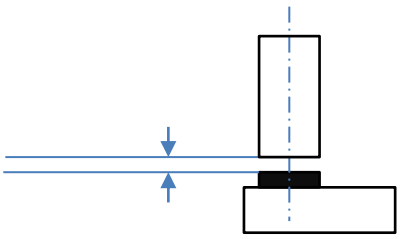

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## Connector

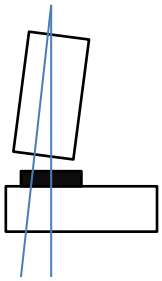



| | | |
|---|---|---|
| 1 | Black | GND |
| 3 | Red | Vcc (5V) |
| 5 | Shield | Shield |
| 6 | Yellow | DATA- |
| 7 | White | DATA+ |
| 8 | Green | CLK- |
| 9 | Blue | CLK+ |

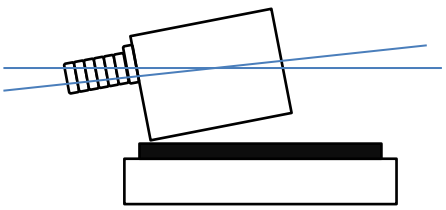
## Available angle



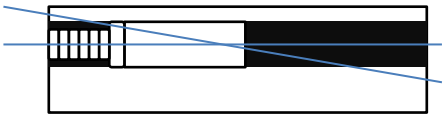
(1) Space: 1mm (max.)



(2) <+/- 5˚

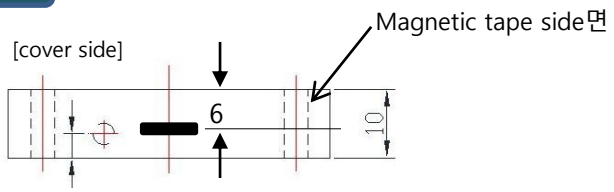


(3) <+/- 5˚



(4) <+/- 1.5˚

## Position of the sensor IC






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