MAS Series Installation & Operation Instructions

! This preliminary information is not guarantee of device characteristics or performance.
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1. Electromagnetic Compatibility

Ensuring electromagnetic compatibility (EMC) is crucial for the electrical connection.
▪ The ground potential of the system and control cabinet must be the same.
Make use of insulated wires. Attach protective earth (PE) to the cable shield's cabinet side.
▪ Steer clear of installing near electricity lines.
▪ Even in the event of a voltage decrease along the supply line, the nominal operating voltage (according to the datasheet) needs to be maintained!
▪ Choose an installation location where the sensor won't be impacted by capacitive or inductive interferences. It is possible to minimize interferences by properly routing the cable.

2. Intended Use

The MAS series magnetic sensing heads are a component of a highly precise measurement system that also includes sensor heads and magnetic scales that can detect positions contactlessly in rotary applications.

Applied fields include mechanical, electrical, and medical engineering as well as automation.
The system can be integrated into a variety of electrical systems and comprises of a rotating magnetic scale and a sensor head. It can be set up to meet the needs of the client. Absolute and relative positions as well as changes in positions can be measured when used in conjunction with an appropriate analysis program. For example, this allows one to identify longitudinal expansions, detect torsional forces, and operate machine tools.

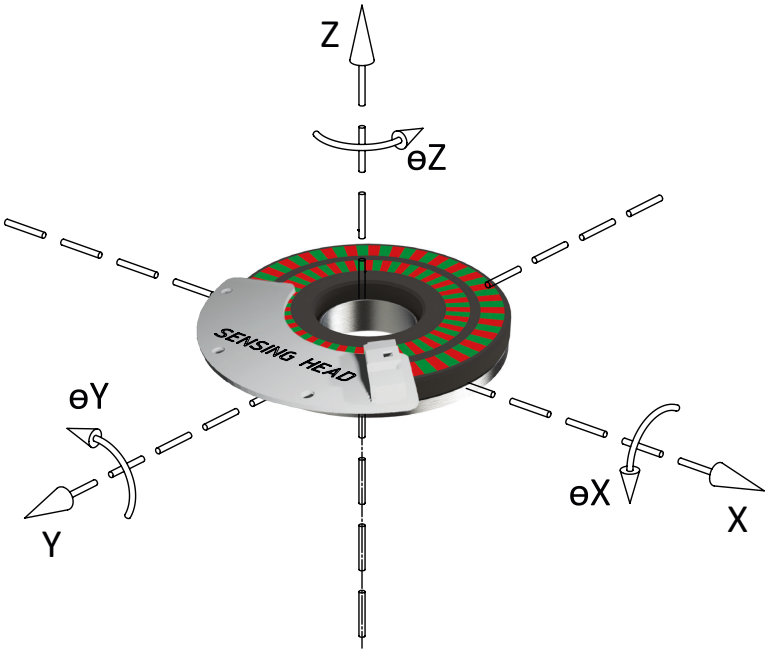
3. Assembly and Installation

It is necessary to be extremely clean before assembling. Parts of the device must be completely degreased before adhering. As specified in the datasheet, the mounting tolerances and the measuring point's location must be followed during installation.

4. Calibration

When all MAS series are finally assembled, a calibration procedure is necessary. It is advised that the calibration be carried out throughout the sensing solution's entire operating range. The calibration process consists of an analog calibration where the different sensors in the sensing head will be optimized for best performance and a nonius calibration where the sensing head is optimized over the scale.

5. Mounting Tolerances



Assembly Values and Tolerances	
Z (mm)	MAS30 : for 1.28 mm pole pitc: 0.4 mm ±0.15mm MAS45 : for 2.00 mm pole pitc: 0.6 mm ±0.15mm MAS55 : for 1.28 mm pole pitc: 0.4 mm ±0.15mm MAS86 : for 2.00 mm pole pitc: 0.6 mm ±0.15mm
Y (mm)	0.25 mm
X (mm)	0.25 mm
θZ (°)	1°
θY (°)	1°
θX (°)	1°