

POSIMAG® – the functional principle

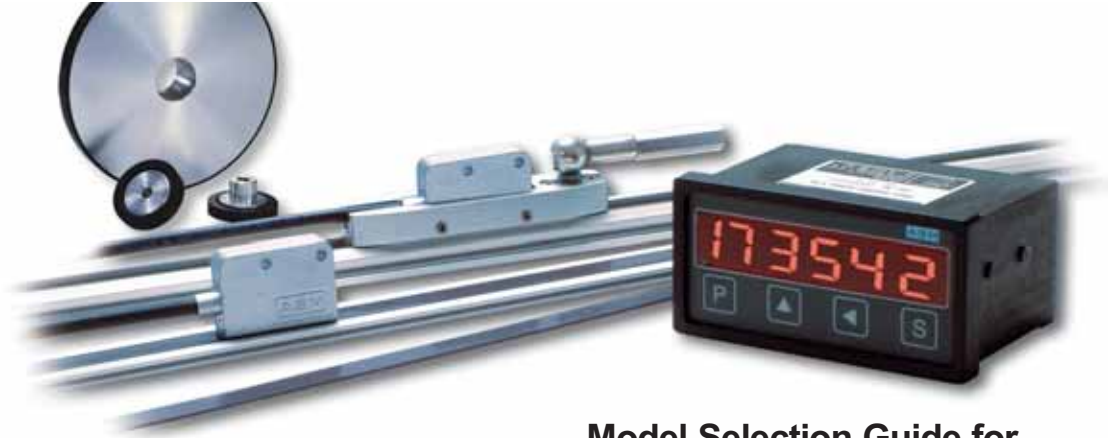
POSIMAG® is a contact-free, high-resolution magnetic position measuring system for measuring lengths of up to approx. 30 metres. Because of its sturdiness and resistance to dirt, together with the system's exceptional resistance to wear and tear, POSIMAG® is also suitable for use under challenging environmental conditions.

POSIMAG® consists of a magnetoresistive (MR) scanning head, and a magnetic measuring strip that consists of a flexible steel strip with a magnetic carrier layer laminated on top. This is magnetised at regular intervals with magnetic north and south poles. The measuring strip can be fastened in position using special adhesive fixing tape or also using pre-produced assembly rails with fastening straps. To protect against external mechanical influences, the magnetic strip has a covering laminate layer made from a thin, stainless steel strip.

To capture a position, the magnetoresistive (MR) sensor head samples sinusoidal magnetic fields above the magnetic measuring strip in such a way that the process is contact-free and avoids wear and tear. The distance of the MR sensor head to the surface of the magnetic strip can be up to 2 mm in the case of a strip with a 5 mm magnetic spacing. The sine-cosine signals generated in the sensor head, which are displaced by 90°, are output without any time delay as RS422-compatible impulse signals via the integrated interpolation electronics working in conjunction with the reference signal. Resolutions of up to 5 µm are available as standard. The signals can then be processed by all common industrial control units with suitable signal processing speeds, or displayed directly using a digital display unit from ASM's PRODIS series.

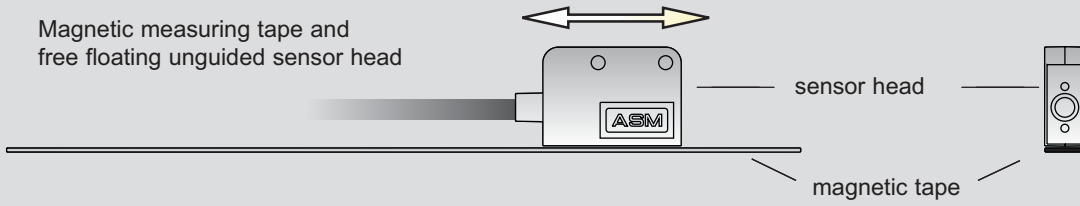
Technical advantages:

- Sturdy construction
- Contact-free and wear-free
- Shielded metal housing
- Resistant to dirt
- Protection category up to IP67
- Simple assembly and adjustment
- Signal processing as standard with encoders
- Distance between the MR sensor head and the magnetic strip up to 2 mm
- Reference and terminal position signals
- Measuring lengths of up to 30,000 mm



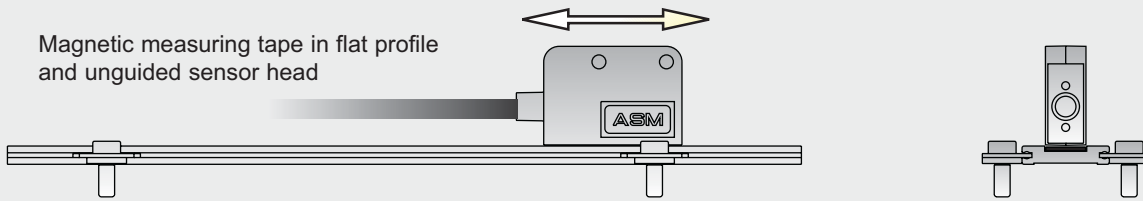
Model Selection Guide for POSIMAG® Position Sensors

Magnetic measuring tape and free floating unguided sensor head



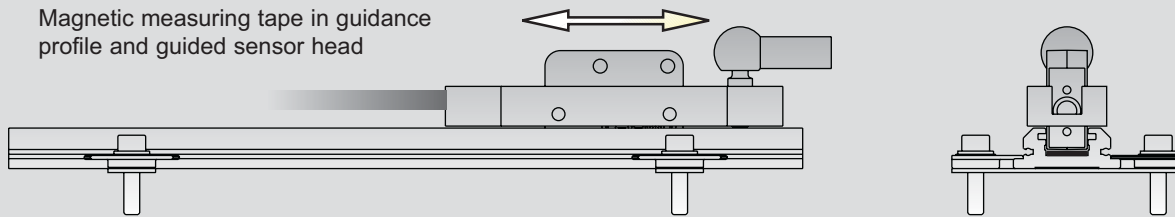
For direct adhesive backing – the cost-effective mounting method

Magnetic measuring tape in flat profile and unguided sensor head



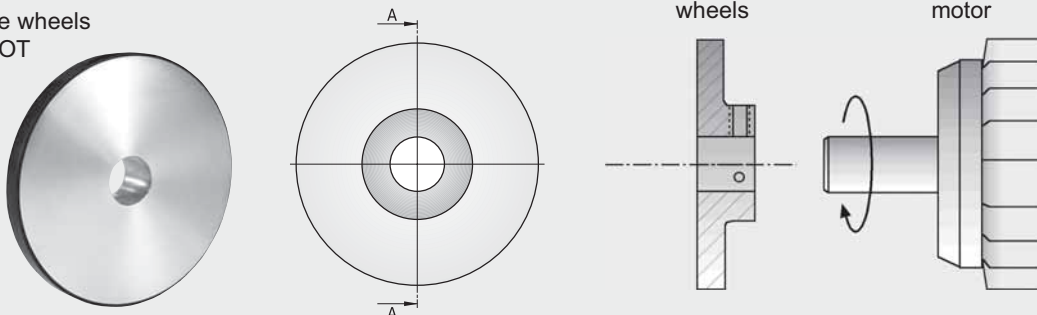
Easy to mount.
Adjustment on site possible.
Can be stacked by 3 m units up to 30 m length.

Magnetic measuring tape in guidance profile and guided sensor head



Provides integral linear guidance for applications without own linear guidance by system.

Magnetic pole wheels
POSIMAG-ROT



Pole wheels with different diameters are available for angular and/or revolution measurement.