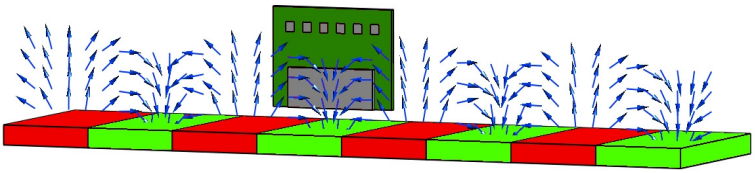
Magnetic Scale



application example

- **Magnetic scale**
- **Steel back**
- **Adhesive back for easy mounting**
- **High Precision**
- **Various Pole Pitches Available**

DESCRIPTION

Magnetic scales are commonly used for incremental and absolute measurements. A magnetic scale is made of a magnetic tape bonded into matrix, which is then bonded on a steel support.

The matrix can be made with two different materials, either plastic bonded material or a new highly temperature and media resistive rubber bonded material, which possess different qualities.

The magnetic carrier guarantees a mechanical stability. The steel carrier expansion determines the thermal expansion, which makes it optimal for use in machines made from a steel construction.

The standard tape **EE** is equipped of an optimum stainless steel alloy, with no loss of field compared to CK85 standard steel support. The same signal strength is available as with the CK85 material, and corroding material is no longer used.

Depending on the measurement need, it is possible to obtain magnetic scales with equally spaced pole pitches for incremental tapes, and irregularly spaced pole pitches for absolute tapes. Generating the pole pattern does not need any special tooling, but a file with a code data. All tape qualities are interchangeable and compatible with MEAS magnetoresistive MLS and ED sensors.

FEATURES

- Sequence of north and south poles
- Standard pole pitches from 1 to 5 mm
- Steel back for temperature stability
- optional adhesive back for easy mounting
- plastic or rubber material

APPLICATIONS

- Measuring positions, movements, velocities
- Angular measurement with scales on wheels

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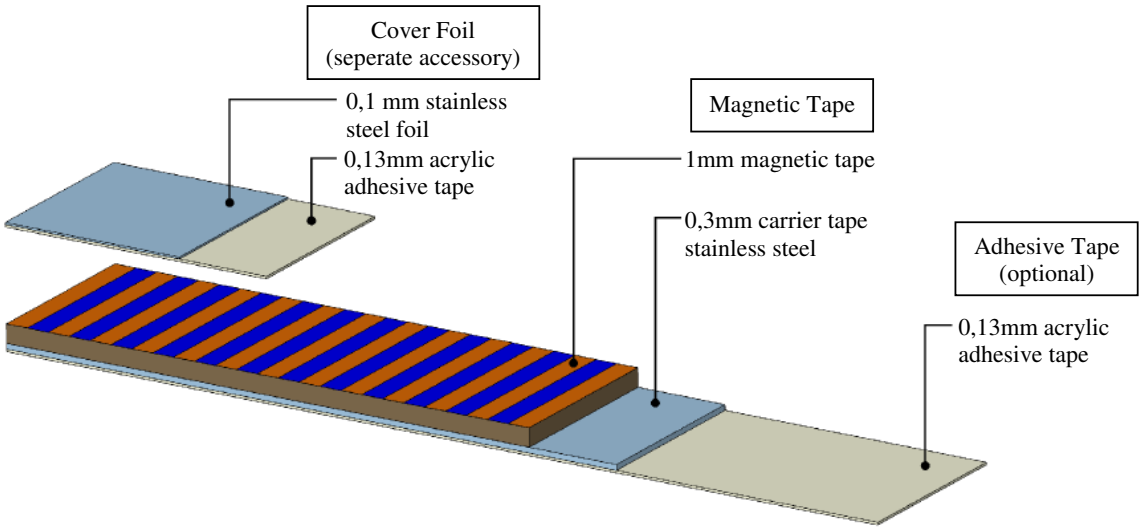
Magnetic Scale

STAINLESS STEEL CARIER WITH MAGNETIC TAPE, STANDARD TAPE

Properties	Values
Operating temperature	-40℃ to +100℃
Storage temperature	-40℃ to +100℃
Water protection	CrNi 17 7 stainless steel carrier nitrile rubber high temperature magnetic tape
Accuracy Class (20℃)	Standard: ± 40µm High Precision Line: ±10µm / ±20µm
Width	5; 8; **10; 20; 25** mm ±0,2mm
Thickness	**1,3mm** ± 0,15mm incl. stailess steel carrier
Length	Rolls of **25mm**, **50m** and **100m**
Number of tracks ≤ 10 mm	1
Pole pitch	arbitrary, standard: **1; 2; 5;mm**
Absolute pole pattern possible	yes, any pole pattern/code
Accuracy	±0,04mm/m up to 50m length
Linear expansion coefficient	~17 ± x 10^{-6} / K
Bending radius	65 mm min.

bold face indicates **standard** values

TAPE SETUP



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Magnetic Scale

ORDERING CODES

G-MRSC-001 = Polepitch 1mm, Width 10mm, Length: 1m
G-MRSC-002 = Polepitch 2mm, Width 10mm, Length: 1m
G-MRSC-003 = Polepitch 5mm, Width 10mm, Length: 1m

For example 10m Scale with 5mm polepitch: 10x G-MRSC-003

ORDERING INFORMATION

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