

Data Sheet for sensor accessories

Encoder magnet

Series MAG18



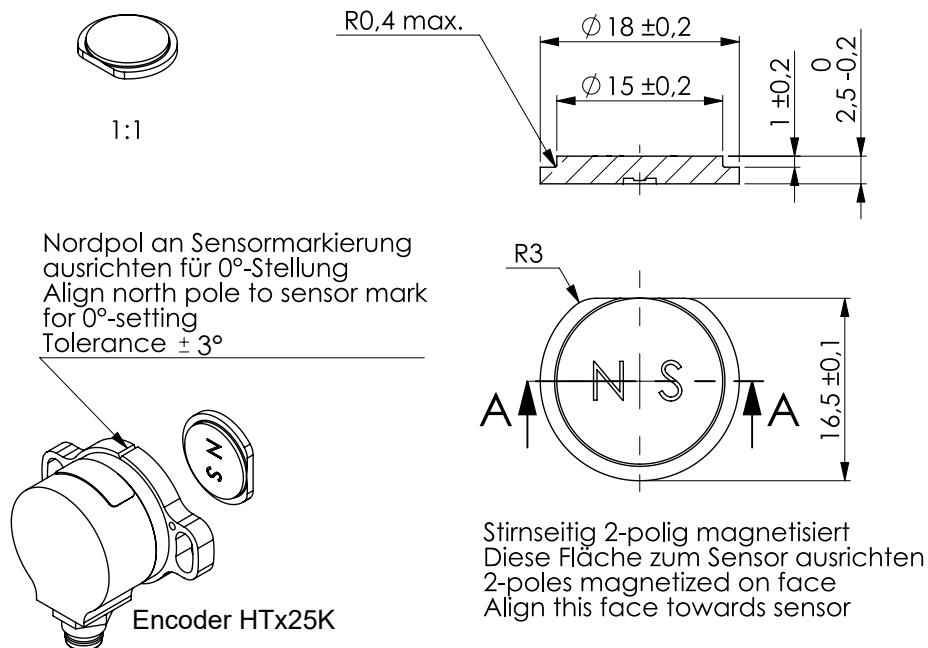
- Polymer-bonded magnet
- Perfect for Hall effect kit encoders
- For example for MEGATRON series HTx25K
- Flattening for alignment of the magnetic field in the application
- Diameter 18 mm

MAG18 polymer-bonded magnets allow the magnetic field to be aligned relative to the kit encoder. This means that the zero position for absolute encoders and the position of the Z pulse for incremental encoders can be defined in the application during assembly. There is no need to adjust the encoder or magnet during installation.

Data

Material	Hard ferrite + PA6 according to DIN IEC 60404-8-1
Operating temperature	max. 160°C
Angular magnetization error	< 3° relative to flattening between N and S pole

Drawing



Handling Instructions

1. The magnets must not be exposed to any electromagnetic fields. These can be caused by other magnets, nearby transformers, welding rectifiers, live cables, etc.
2. Magnets must not be brought together against their repelling forces, i.e. with the same poles, as this would also result in a weakening. Always peel off parts that are attracted to each other perpendicularly to the surface, do not shear them off
3. Do not place the magnets on iron surfaces or allow them to come into contact with iron during removal or installation.
4. The magnets should not touch each other when they are removed from the packaging.

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Position-dependent angular error when used for rotary encoders / angle sensors

Accuracy remark

The magnet is manufactured with an absolute magnetization accuracy of $\pm 2^\circ$ relative to the flattening. When it is placed off-axis (lateral displacement) relative to a sensor, an additional inaccuracy adds to mechanical inaccuracy. It will cause additional linearity error in the angle measurement. The expected additional error is shown in the figure below:

