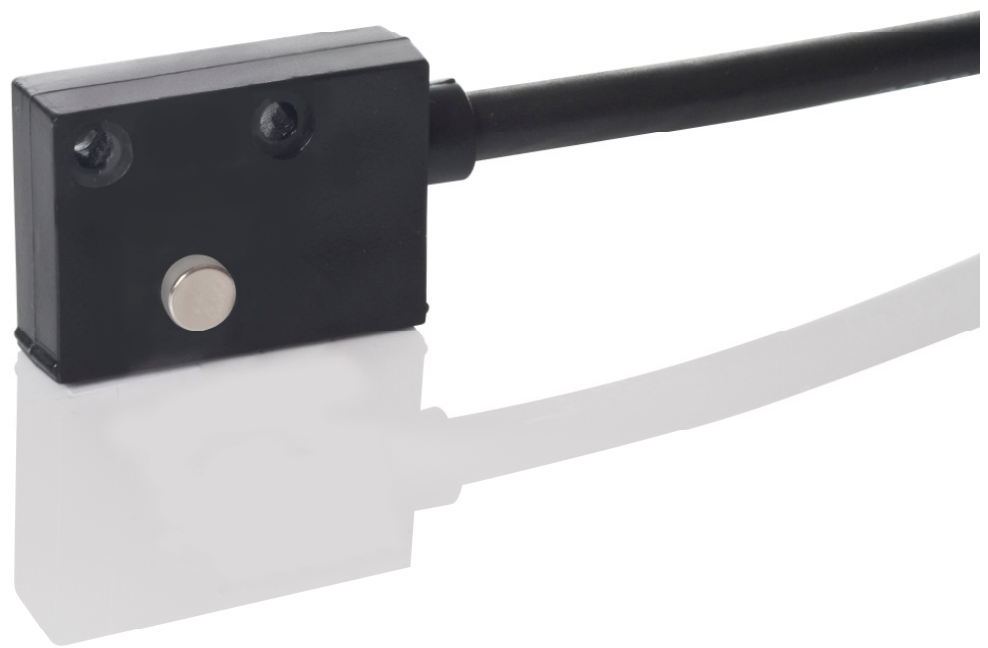


# **MIRE**



Magnetic incremental, Rotary Encoder

# MIRE Magnetic, Incremental, Rotary Encoder

**General:** MIRE = Magnetic Incremental Rotary Encoder. The angle measuring system MIRE is a combination of a sensor and a round magnet. The magnet is mounted directly on the engine shaft or on an axis. Therefore an easy and quick installation is guaranteed. (MIRE suites particularly rotative angle measuring.)

The sensor head has a high protection class and is resistant against any kind of dust and dirt and absolutely wearless. The distance between the sensor head and the magnet may be between 0.20 and 1.00 mm.

The resolution of the magnetic sensor is  $1,40625^\circ$  with 4 flank evaluation. The maximum revolution speed of the magnet is 10,000 revolutions per minute.

## Product features:

- Rotative angle measuring system
- Resolution of  $1,40625^\circ$
- Up to 10000 revolutions per minute
- Direct measuring at the engine shaft or the axis possible
- No abrasion through contactless measuring principle

## The Magnet:

The included round magnet has a diameter of 6 mm and a height of 2.5 mm. One of the two sides must be centered in the middle of the sensor. Since there is no upper side defined, it does not matter which side of the magnet is adjusted to the sensor.

NOTE: The measuring system may only be operated with the magnet sold separately.

## Magnet distance:

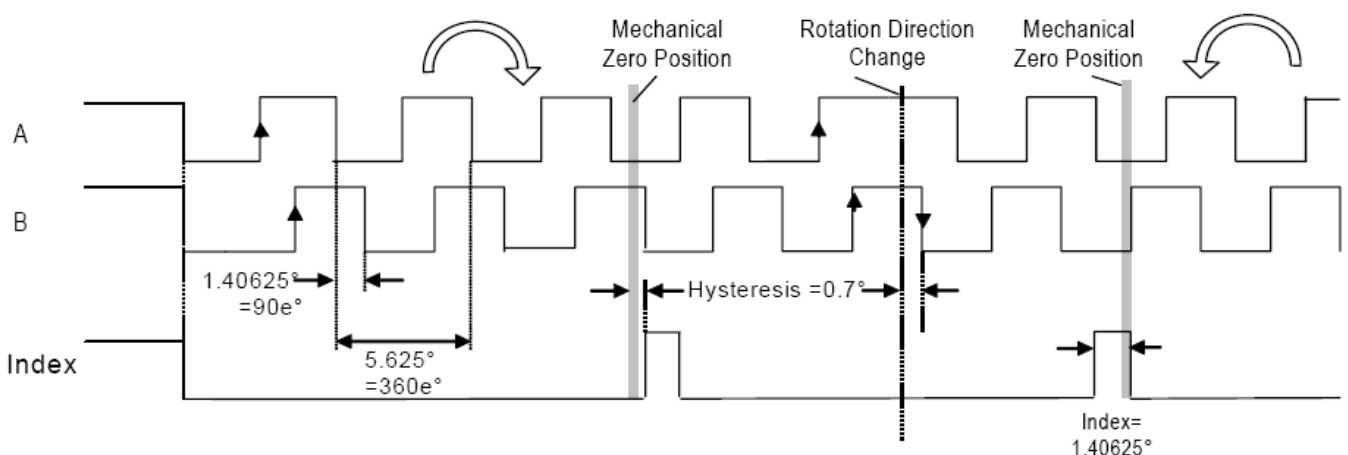
The perfect distance between magnet and active sensor area of the measuring system is 0.20 to 1.00 mm. Out of this range the accuracy cannot be guaranteed.

## Fixation of the magnet:

The magnet can either be glued or for example be bedded directly in a shaft or a guiding system, as long as they are made out of non-magnetic steel such as high-grade steel, V2A, V4A. The magnet and the bonding surface have to be clean and greaseless before gluing the parts together. When gluing on plastic it is advisable to rub the plastic with fine sandpaper. Suitable adhesives are: LOCTITE 405 (viscosity liquid, curing in about one minute) LOCTITE 409 (viscosity gel-like, curing in about two minutes)

**Function:** With a full rotation of the magnet ( $360^\circ$ ) the sensor provides 64 impulses. This corresponds to a 4 flank evaluation 256 increments. The angular resolution is at a 4 flank evaluation  $1,40625^\circ$ . The maximum revolution speed of the magnet without loss of increments is 10.000 RPM.

## Signal sequence:

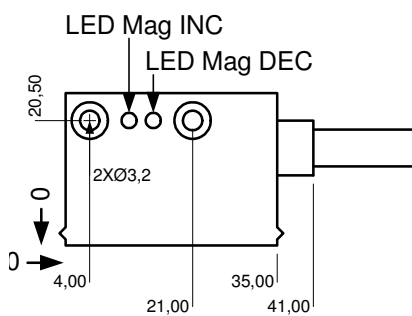


### Technical Data:

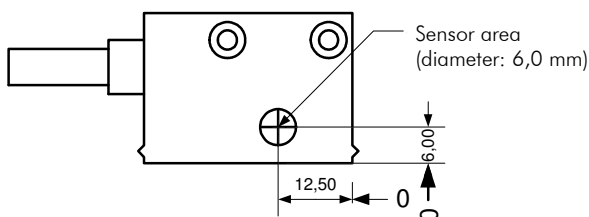
Input supply voltage	See order reference
Output supply voltage	See order reference
Output current	Max. 50 mA per Channel
Resolution	1,40625° (4-edge triggering)
Flanks /Revolution	256 (4-edge triggering ) 64 Pulses
Repeatability	+/- 1 Increment
Magnet Distance	0,30 - 1,00 mm
Revolutions/Minutes	Max. 10.000 U/min.
Operation temperature	0... +50°C
Storage temperature	-20... +80°C
Humidity	Max. 80%, nicht kondensierend
Cable length	1,0/1,5/3,0/5,0/8,0 Meter
Bending radius	Min. 60 mm

### Dimensions:

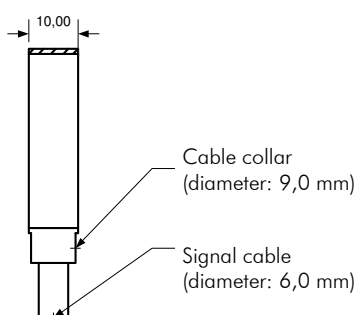
Front view:



Back view:



Top view:



### Order reference:

For orders, please use the following order code:

MIRE -          -             -             -      

#### A SN-Number

**000** ELGO standard

**001** First special version

#### B Cable length

Example: 03.0 = 3,0 m

**01.5** 1,5m (ELGO standard)

#### C Pulses

**064** 64 Pulse / rotations

#### D Input-/ Output current

**00** 10... 30V DC / VCC IN -0,40 V

**01** 10... 30 V DC / 5 V DC (+/- 5 %)

**11** 5 V DC (+/- 5 %) / VCC IN -0,40 V)

#### Accessories

Circular Magnet (DRM)

For Example:

MIRE - **000** - **01.5** - **0064** - **00**  
         -             -             -      

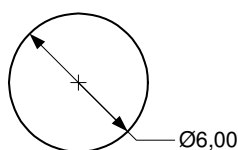
MIRE ELGO standard, with 1,5 m cable length, 64 rotations and a power supply about 10... 30V DC / VCC IN -0,40 V.

Your order:

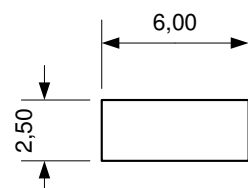
MIRE -          -             -             -      

Circular magnet (DRM):

Top view:



Side view:



## Accessories:

DRM      Circular magnet

## Bestellbezeichnung:

For orders, please use the following order code:

DRM -          -          -         

### A Version

- 000 ELGO standard
- 001 First special version

### B Overall diameter

- 060 6 mm

### C High

- 025 2,5 mm

For Example:

DRM - 000 - 060 - 025  
A A A - B B B - C C C

DRM ELGO standard, with 6 mm overall diameter and a high about 2,5 mm.

Your Order:

DRM -          -          -         

