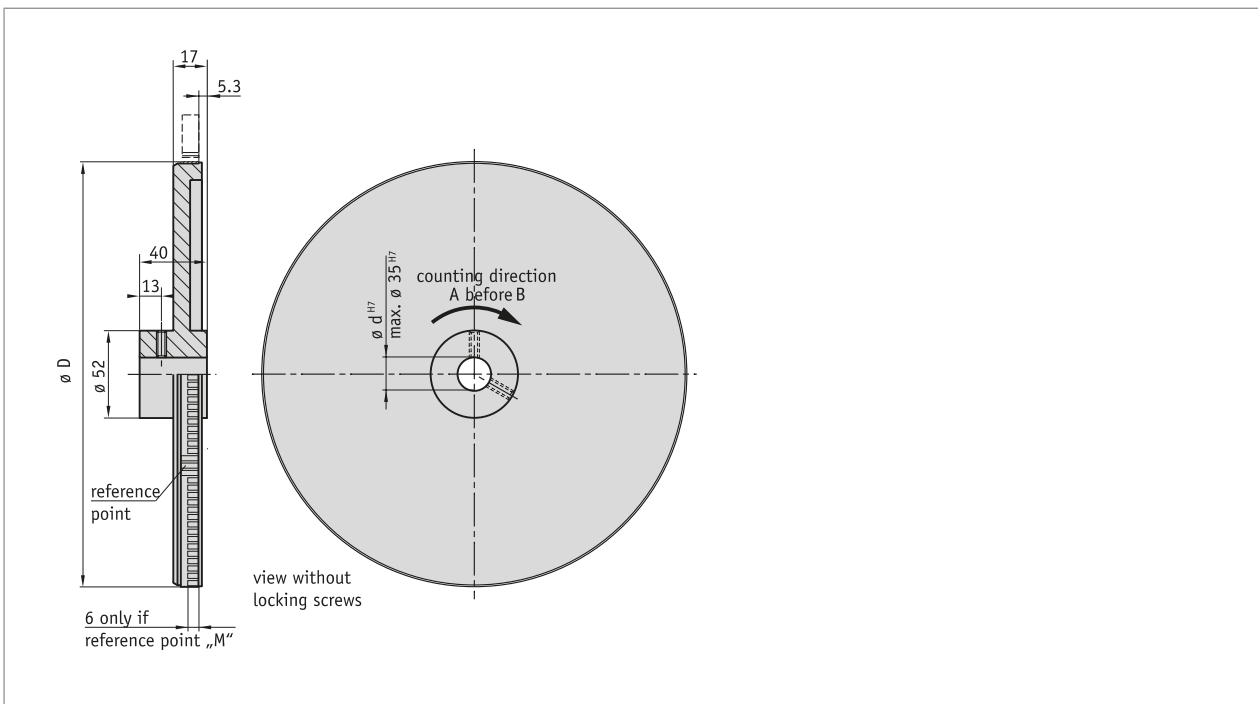


# Magnetic ring MR500

Incrementally coded ring with permanently connected flange, pole length 5 mm

## Profile

- Easy hollow-shaft mounting
- Rotary encoder system with IP67 protection class (in combination with MSK5000)
- Up to 200 000 pulses/revolution (800 000 increments)
- With reference point as an option



## Mechanical data

| Feature | Technical data | Additional information |
|---------|----------------|------------------------|
| Flange  | aluminum       |                        |

### ■ Dimensions

| Pole             | 64         | 96         | 160        |
|------------------|------------|------------|------------|
| Diameter D [mm]  | 102        | 153        | 255        |
| Scope [mm]       | 320        | 480        | 800        |
| Rotational speed | "variable" | "variable" | "variable" |

### ■ Speed

Maximum speeds are calculated in relation to circumferential speed, with the circumference of the magnetic ring being decisive. The circumferential speed of the MSK5000 sensor is variable; it results from the selection of pulse interval and scaling factor (see table MSK5000). Speed is calculated according to the formula:

#### Formula:

$$n = \frac{v \times 60000}{U}$$

#### Example:

$$n = \frac{6 \times 60000}{320} = 1125$$

#### Legend:

n [min<sup>-1</sup>] speed  
 v [m/s] circumferential speed  
 60000 extension factor  
 (60 s/min x 1000 mm/m)  
 U [mm] circumference

### System data

| Feature         | Technical data                    | Additional information |
|-----------------|-----------------------------------|------------------------|
| Pole length     | 5 mm                              |                        |
| System accuracy | ±0.1 ° at T <sub>0</sub> = 20 ° C |                        |
| Measuring range | 360 °                             |                        |

### ■ pulses/revolution

| "Pole number"            | 64   | 96    | 160    |        |
|--------------------------|------|-------|--------|--------|
| Scaling factor of sensor | 1250 | 80000 | 120000 | 200000 |
|                          | 250  | 16000 | 24000  | 40000  |
|                          | 125  | 8000  | 12000  | 20000  |
|                          | 50   | 3200  | 4800   | 8000   |
|                          | 25   | 1600  | 2400   | 4000   |
|                          | 12.5 | 800   | 1200   | 2000   |

Table applies to the combination MR500 with MSK5000

### Ambient conditions

| Feature             | Technical data | Additional information  |
|---------------------|----------------|-------------------------|
| Ambient temperature | -20 ... 70 °C  |                         |
| Storage temperature | -20 ... 70 °C  |                         |
| Relative humidity   | 100 %          | condensation admissible |

### Order

#### ■ Ordering table

| Feature         | Ordering data            | Spezifikation  | Additional information |
|-----------------|--------------------------|--|------------------------|
| "Pole number "  | <b>A</b> 64<br>96<br>160 | 64 poles<br>96 poles<br>160 poles<br>others on request |                        |
| bore/diameter   | <b>B</b> 20              | ø20 mm<br>others on request                            |                        |
| reference point | <b>C</b> 0<br>M          | without<br>with  |                        |

#### ■ Order key



|  |
|--|
|  <b>Scope of delivery:</b><br>MR500 |
|--|