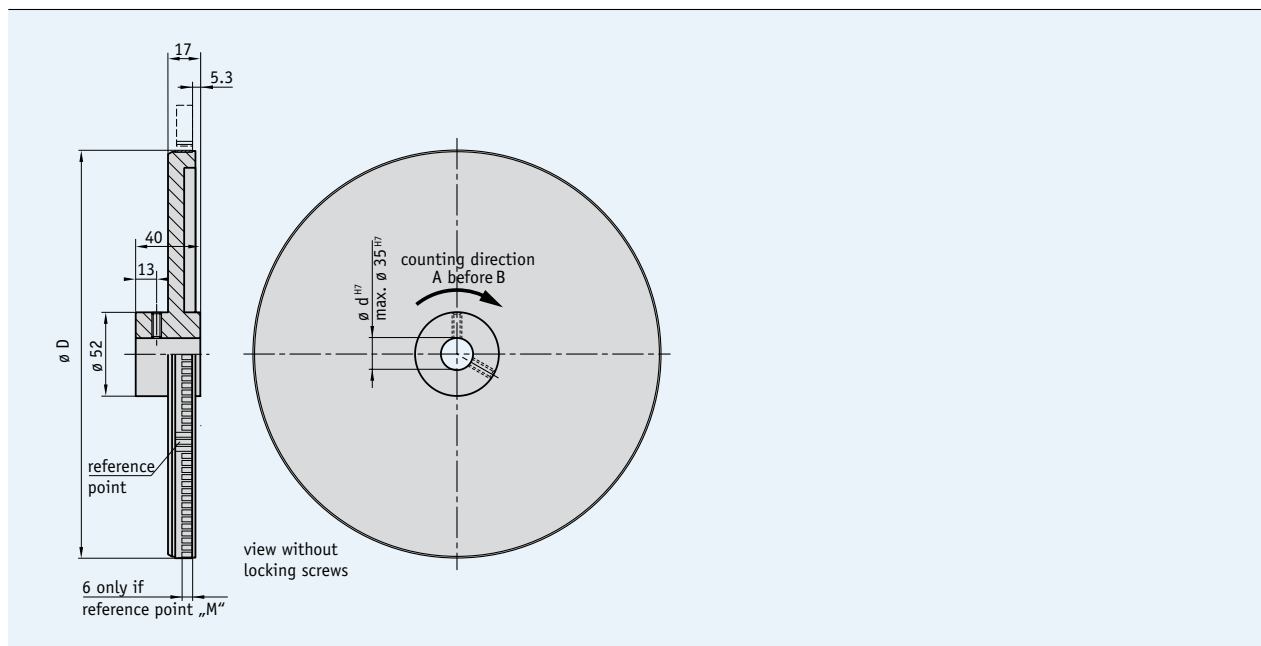


## Magnetic Ring MR500

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

### Profile

- Easy hollow-shaft mounting
- Rotary encoder system with IP67 protection category (in combination with MSK500)
- Up to 200 000 pulses/revolution ( $\approx$ 800 000 increments)
- With reference point as an option



### Mechanical data

Feature	Technical data	Additional information
Pole length	5 mm	
Measurement range	360°	
System accuracy	$\pm 0.1^\circ$	
Operating temperature	-20 ... +70 °C	
Storage temperature	-20 ... +70 °C	
Humidity	100 % rh	condensation permitted
Flange material	aluminum	

### ■ Dimensions

Pole	64	96	160
Diameter D (mm)	102	153	255
Circumference (mm)	320	480	800

## Pulses/revolution

		Number of poles 64	Number of poles 96	Number of poles 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

The table applies to the combination of MR500 with MSK5000

## Speed

The maximum speeds are calculated in reference to the circumferential speed, whereby the circumference of the fitted magnetic ring is decisive. On the MSK5000 sensor, the circumferential speed is variable; it results from the selection of the pulse interval and the scaling factor (refer to table MSK5000). The speed is calculated with the following formula:

Number of poles	U (m)	n (rpm)
64	0.32	variable
96	0.48	variable
160	0.80	variable

$$\text{Speed } n = \frac{v \times 60}{U}$$

v = circumferential speed (m/s); U = circumference (m)  
60 = extension factor (60 s/min)

### Example:

$$\text{MSK5000 } n = \frac{6 \times 60}{0.32} = 1125 \text{ (rpm)}$$

## Order

### Order table

Feature	Order data	Specifications	Additional information
Number of poles	64	A 64 poles, distributed on circumference	
	96		96 poles, distributed on circumference
	160		160 poles, distributed on circumference
			others on request
Bore diameter	20	B 20 H7	
			others on request
Reference point	O	C without	
	M		with

### Order code

MR500 -  -  - MNG -

**Scope of delivery:** MR500, User information

### Additional information:

Short Description, Technical Details  
Product Overview

Page 140 cont.  
Page 4 cont.