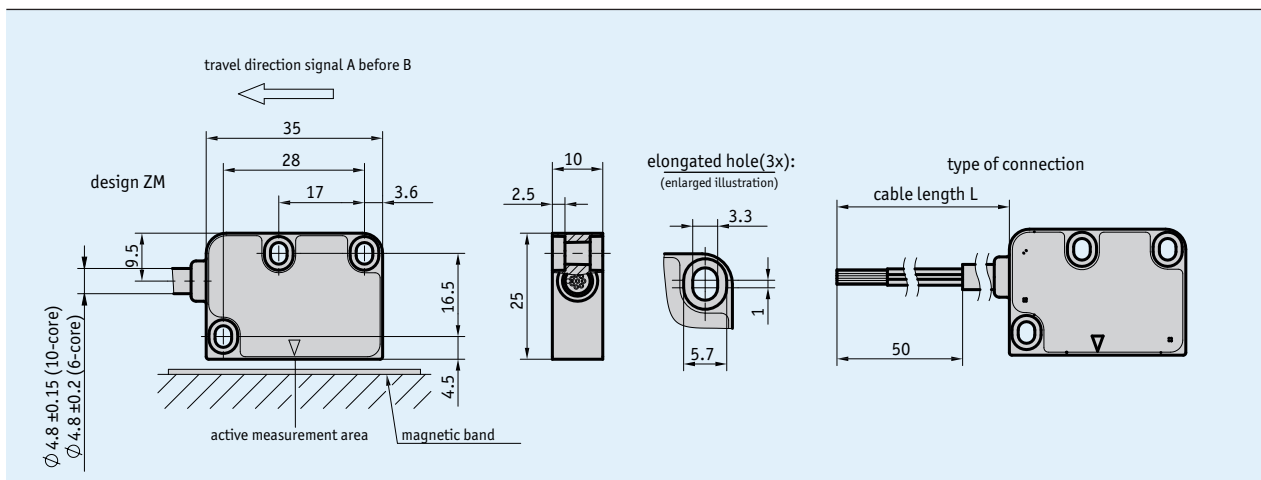
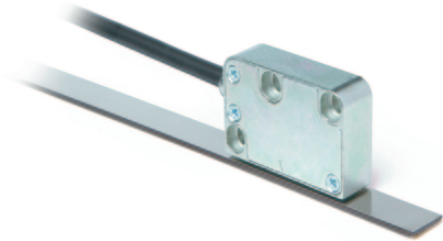


Profile

- Enhanced safety owing to independent output channels
- 2 magnetic sensors and 2 signal conditioners in one sensor head
- Works with MB320/1 magnetic tape, MRI01 or MR320 magnetic ring, MBR320 magnetic tape ring
- Reading distance ≤ 2 mm
- Repeat accuracy of ± 1 increment
- Great application temperature range of $-40 \dots 85^\circ \text{C}$
- Cost advantage by installation of one MSK320R sensor instead of two MSK320 sensors



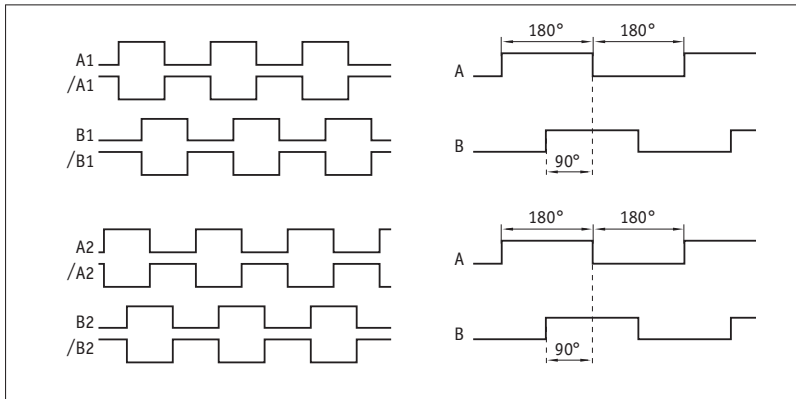
Mechanical data

Feature	Technical data	Additional information
Housing	zinc die cast	ZM design
Sensor/band reading distance	0.1 ... 2 mm	reference signal 0
Sensor/ring reading distance	0.1 ... 2 mm	reference signal 0
Cable sheath	PUR drag chain-compatible	10-core, $\varnothing 4.8 \pm 0.15$ mm

Electrical data

Feature	Technical data	Additional information
Operating voltage	4.5 ... 30 V DC	reverse polarity protected
Current consumption	<20 mA <75 mA	at 24 V DC, off-load loaded
Output circuit	PP, LD (RS422)	PP only with 4.5 ... 30 V DC and LD only with 4.5 ... 6 V DC
Output signals	A1, /A1, B1, B/1, A2, A/2, B2, B/2	quadrature signal
Output signal level high	>UB -2.5 V >2.5 V	PP LD
Output signal level low	<0.8 V <0.5 V	PP LD
Pulse width of reference signal	1 increment(s)	
Real-time requirement	velocity-proportional signal output	
Type of connection	open cable end	

Signal pattern



! The logic state of signals A1/B1 relating to signals A2/B2 is not defined. The phasing A1/B1 and A2/B2 may deviate from the signal pattern.

System data

Feature	Technical data	Additional information
Resolution	0.8, 0.4, 0.2, 0.1, 0.05, 0.025, 0.0125 mm	each channel configurable
Scaling factor	1, 2, 4, 8, 16, 32, 64	each channel configurable
Linearity deviation	±30 µm	at TU = 20° C, reading distance 1 mm
Repeat accuracy	±1 increment(s)	
Measuring range	∞	
Circumferential speed	≤25 m/s	
Travel speed	≤25 m/s	

Ambient conditions

Feature	Technical data	Additional information
Ambient temperature	-40 ... 85 °C	
Storage temperature	-40 ... 85 °C	
Relative humidity	100 %	condensation admissible
EMC	EN 61326-1	immunity requirement of industrial applications, emission limit class B
Protection category	IP67	EN 60529
Shock resistance	500 m/s ² , 11 ms	EN 60068-2-27
Vibration resistance	100 m/s ² , 5 ... 150 Hz	EN 60068-2-6

Pin assignment

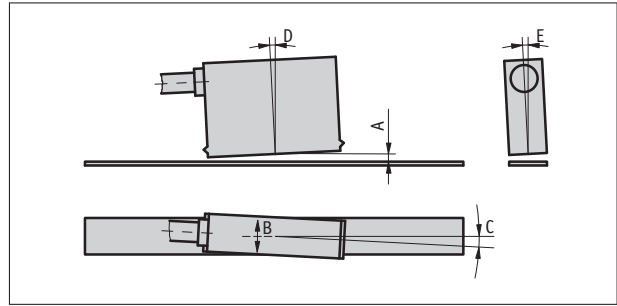
inverted

Signal	E1 (cable color)
+UB	brown
GND	black
A1	red
B1	orange
/A1	yellow
/B1	green
A2	blue
B2	violet
/A2	white
/B2	gray

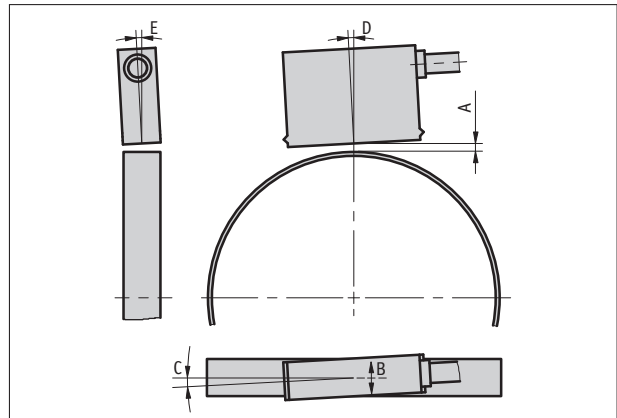
Hint for mounting

For systems with reference points on the magnetic ring please take care that sensor and ring are aligned correctly (see picture)

A , Sensor/ring reading distance	≤2 mm
B , Lateral offset	±2 mm
C , Alignment error	±3°
D , Longitudinal inclination	±1°
E , Lateral inclination	±3°



symbolic sensor representation



symbolic sensor representation

Order

■ **Ordering information**

One or more system components are required:

- Magnetic band MB320/1
- Magnetic ring MRI01
- Magnetic ring MR320
- Magnetic band ring MBR320

- www.siko-global.com
- www.siko-global.com
- www.siko-global.com
- www.siko-global.com

■ **Ordering table**

Feature	Ordering data	Specification	Additional information
Cable length	00.1	0.1 m	A voltage drop is to be expected with increasing cable length. This must be taken into account in the electrical design.
	...	01.0 ... 20.0 m, in intervals of 1 m	
Resolution linear/ scaling factor radial A1/B1	...	0.0125/64, 0.025/32, 0.05/16, 0.1/8, 0.2/4, 0.4/2, 0.8/1	
		others on request	
Resolution linear/ scaling factor radial A2/B2	...	0.0125/64, 0.025/32, 0.05/16, 0.1/8, 0.2/4, 0.4/2, 0.8/1	
		others on request	

■ **Order key**



Scope of delivery: MSK320R, Mounting instructions