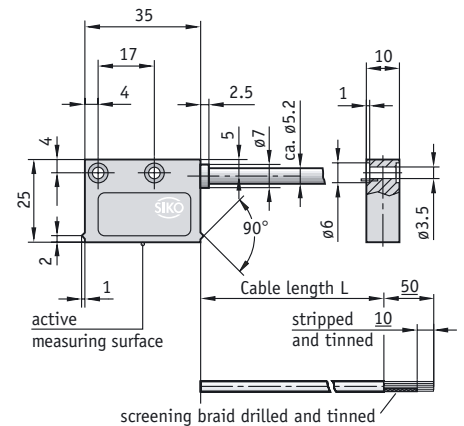


Magnetic Sensor MSK500/1

Contactlessly measuring scanning unit with integrated translation module and digital signal output. In combination with the MB500 magnetic strip the magnetic sensor forms an open, robust linear measuring system.



Sensor / Strip assignment for R reference signal

Features:

- insensitive to dust, shavings, humidity
- max. resolution 0.005 mm
- real-time data processing
- IP67 type of protection
- fixed reference point

Resolution[mm]	Travel speed v_{max} [m/s]							
0.005	0.1	0.2	0.4	0.8	1.7	3.4	6.9	13.8
0.01	0.2	0.4	0.8	1.7	3.4	6.9	14.5	25
0.0125	0.3	0.5	1.1	2.2	4.5	9	18	25
0.02	0.4	0.8	1.7	3.4	6.9	14.5	25	25
0.025	0.5	1.1	2.2	4.5	9	18	25	25
0.05	1.1	2.2	4.5	9	18	25	25	25
Pulse interval [μs]	32	16	8	4	2	1	0.5	0.25

The travel speed results from the selected pulse interval and the corresponding resolution.

Feature	Ordering data	Technical data	Additional information
Operating voltage	4	24 V DC \pm 20 %	standard, with polarity protection
	5	5 V DC \pm 5 %	
Connection / cable length	E1/2.0	fly lead, 2 m cable	standard (max. 20 m cable length) E8, D-SUB 9-pin
	E6, E8	E6, circular plug	
Output circuit	PP	push-pull	standard RS422
	LD	line driver	
Reference signal	0	without	standard
	I	periodic index	
	R	fixed index	
Resolution	0.005	0.005 mm	standard, options 0.01/0.0125/0.02/0.025/0.05
Pulse interval	1	1 μs	standard, options 32/16/8/4/2/0.5/0.25/64
Power consumption		max. 70 mA	@ 24 V DC unloaded
Output signals		A, /A, B, /B, options: I, /I or R, /R	quadrature signal
Sensor / magnetic strip gap		0.1-2.0 mm, reference signal R 0.1-1.5 mm	lateral offset \pm 2 mm, @ reference signal R \pm 0.5 mm
System accuracy		\pm (0.025 + 0.01 x L) mm, [L in m]	repeat accuracy \pm 1 increment, at $T_U = 20^\circ\text{C}$
Travel speed		see table	max. referencing speed 5 m/s
Interference protection class		3, according to IEC 801	humidity: 100 % rH, condensation permitted
Temperature ranges		working temperature: -10 ... +70 °C	storage temperature: -30 ... +80 °C
Type of protection		IP67 acc. to DIN 40050 (housing)	CE test mark
Housing		plastic, black	
Cable		PUR	

Note: The internal translation module can generate fast counting pulses, the lengths of which are limited by the pulse interval. The follower electronics must be adjusted accordingly. Select the pulse interval in advance, if necessary. For operating voltage 4 and output circuit LD use terminating resistors of \geq 470 Ohm to avoid thermal overload.

Your order: MSK500/1 - A - B - C - D - E - F