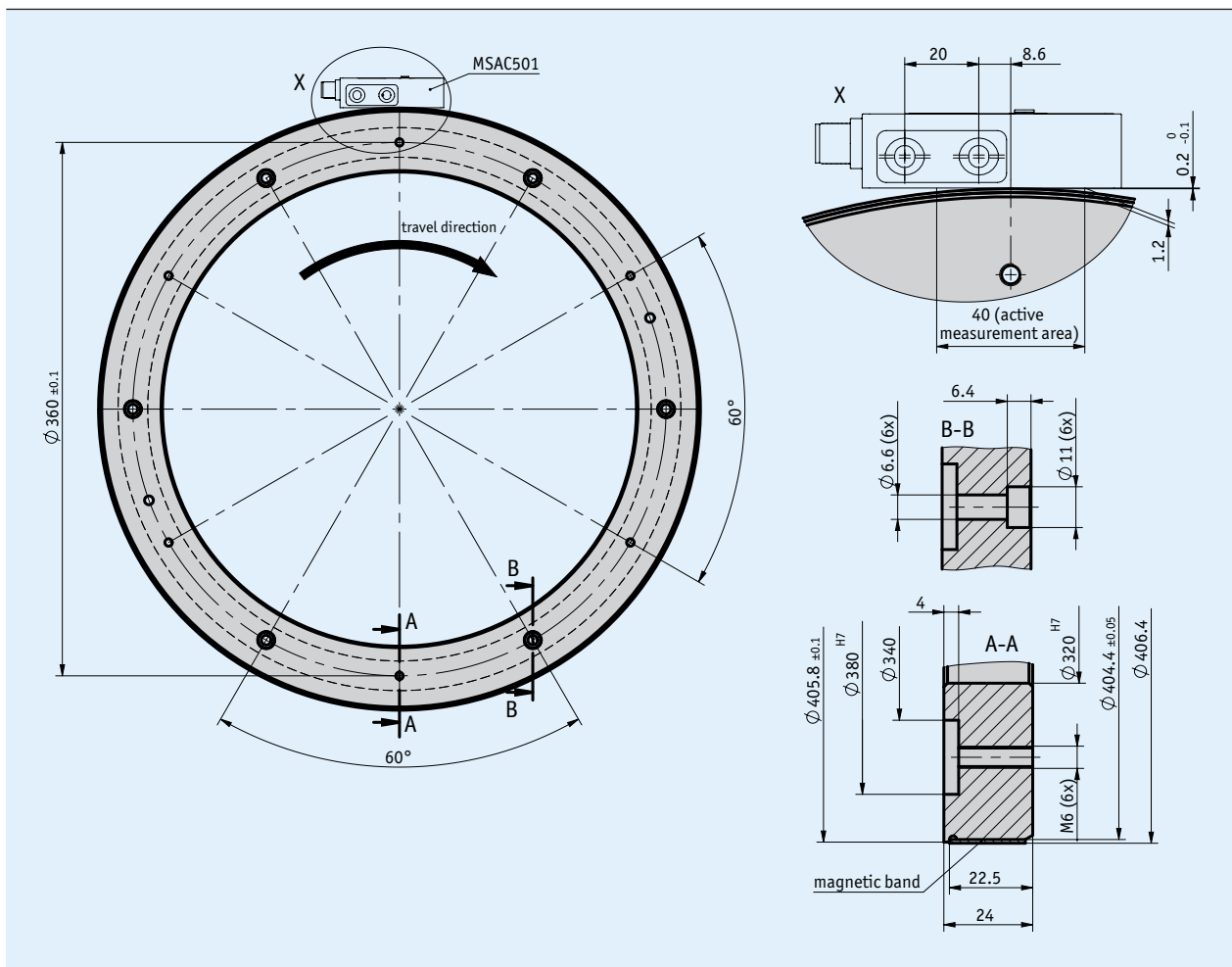


Profile

- External diameter 406.4 mm, 256 poles (code size 8 bits)
- Hollow shaft diameter ≤ 320 mm
- Speed absolute $\leq 234 \text{ min}^{-1}$
- Speed incremental $\leq 1172 \text{ min}^{-1}$



Mechanical data

Feature	Technical data	Additional information
Flange	aluminum	
Speed	$\leq 234 \text{ rpm}$	absolute
	$\leq 1172 \text{ rpm}$	incremental, mechanical

System data

Feature	Technical data	Additional information
Pole length	5 mm	
System accuracy	±0.06°	at T _J = 20 °C
Measuring range	360°	

Ambient conditions

Feature	Technical data	Additional information
Ambient temperature	-40 ... 80 °C	
Storage temperature	-40 ... 80 °C	
Relative humidity	100 %	condensation admissible

System resolution MRAC501 with MSAC501

System resolution* absolute and incremental [bit]

		Total bits/revolution
Scaling MSAC501 magnetic sensor	7 bit	15
	8 bit	16
	9 bit	17
	10 bit	18
Number of poles of MRAC501 magnetic ring		256 (8 bit)

System resolution* absolute [steps/revolution]

Bits/revolution	Steps/revolution	Resolution
15	32768	0.011° (39.6")
16	65536	0.0055° (19.8")
17	131072	0.0027° (9.9")
18	262144	0.0014° (4.9")

System resolution* incremental [steps/revolution]

Bits/revolution	Steps/revolution**	Resolution**
15	131072	0.0027° (9.9")
16	262144	0.0014° (4.9")
17	524288	0.0007° (2.5")
18	1048576	0.0003° (1.2")

* System resolution = Scaling of the sensor + code size of the ring

**After 4-fold evaluation of the incremental signals

Rotational speed of MRAC501 with MSAC501

Incremental, code size 8 bits, 256 poles

Incremental scaling MSAC501 magnetic sensor	7 Bit	Rotational speed [min ⁻¹]								
		1172	732	366	146	92	46	23	11.4	5.6
MSAC501 magnetic sensor	8 Bit	916	366	183	73	46	23	11.4	5.7	2.8
	9 Bit	458	183	92	37	23	11.4	5.7	2.9	1.39
	10 Bit	229	92	46	18.3	11.4	5.7	2.9	1.43	0.69
Pulse interval [µs]	0.2	0.5	1	2.5	4	8	16	32	66	
Counting frequency [kHz]	1250	500	250	100	62.5	31.25	15.63	7.81	3.79	

Absolute

Number of poles	Speed [min ⁻¹]
256	234

Order

■ Ordering information

One or more system components are required:

Magnetic sensor MSAC501

www.siko-global.com



*When ordering sensor MSAC501,
please be sure to select code size 8.*

■ Order key

MRAC501 - 8 - 320

Scope of delivery: MRAC501