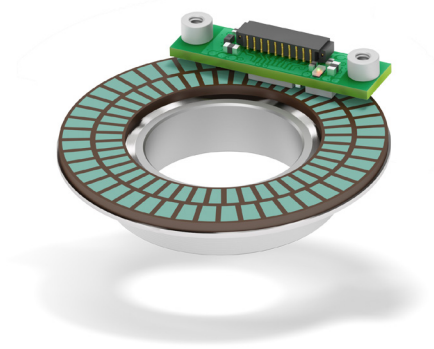




- Ultra flat Kit-encoder
- Absolute magnetic sensing
- BiSS-C, SSI interfaces
- Resolution up to 19 bit (524288 cpr)

Applications:

- Cobots
- Drones/UAV
- Camera/surveillance systems
- Servo motors



SMAR4

ENVIRONMENTAL SPECIFICATIONS

Shock:	250 g, 6 ms acc. to CEI EN 60068-2-27
Vibrations:	10 g, 5-2000 Hz acc. to CEI EN 60068-2-6
Protection:	sensor IP00, ring IP67
Operating temperature range:	sensor: -25°C +100°C (-13°F +212°F) ring: -40°C +200°C (-40°F +392°F)
Storage temperature range:	-25°C +85°C (-13°F +185°F)

MECHANICAL SPECIFICATIONS

Dimensions:	see drawing
Hollow shaft diameter:	Ø19 mm (others on request)
Shaft rotational speed:	32000 rpm max. (mechanical), 12000 rpm (electrical)
Gap sensor/ring:	0,4 ÷ 0,6 mm typ. (optimal 0,5 mm)
Radial/tangential misalignment:	0,5 mm max.
Electrical connections:	PCB connector (connection cable to be ordered separately)
Weight:	<15 g (0,53 oz)

ELECTRICAL SPECIFICATIONS

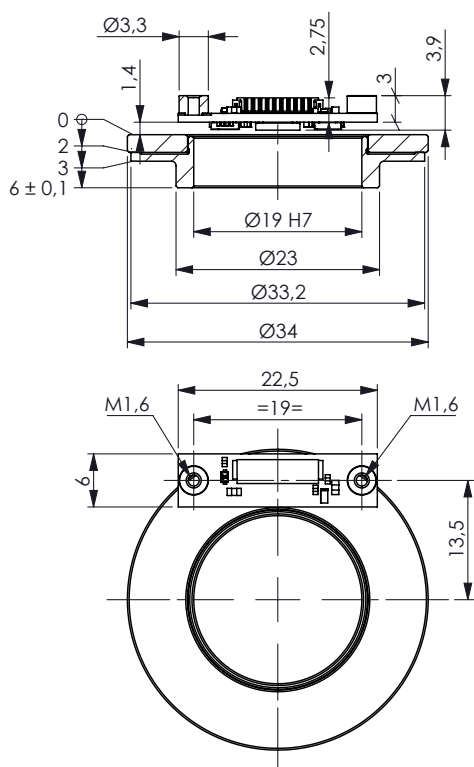
Resolution:	absolute: 19 bit (524288 cpr) max.
Accuracy:	typ. ±0,05°
Output circuits:	BiSS-C (clock max. 5MHz) SSI (MSB aligned, clock 100 kHz ÷ 2MHz, T _p = 20µs)
Power supply:	+5Vdc ± 5%
Power consumption:	typ. 60 mA

MATERIALS

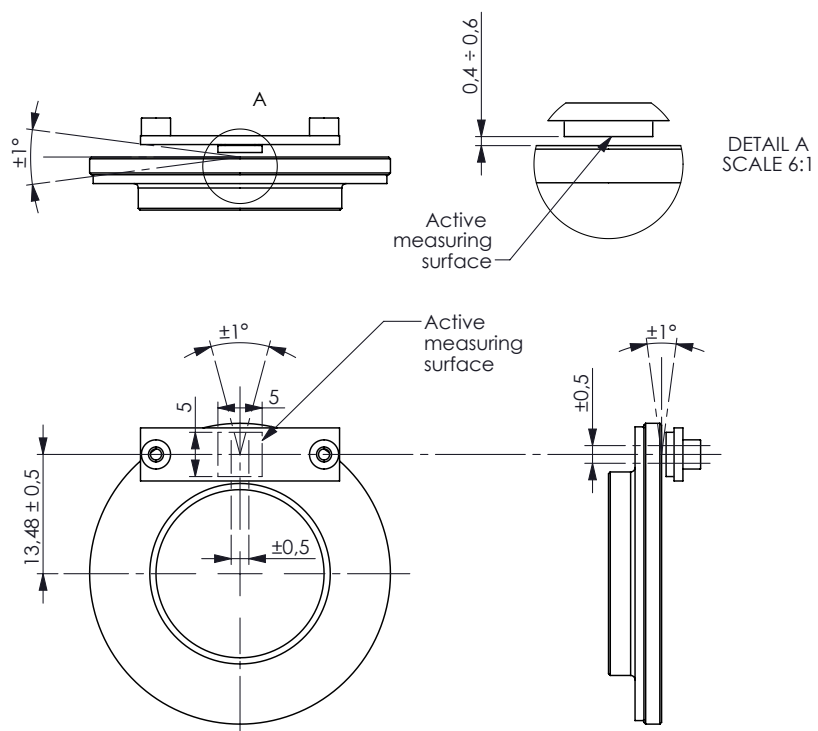
Sensor:	open PCB
Ring:	aluminium + sintered hard ferrite

ACCESSORIES / SPARES

MRA/34D-019-A-P-32N-A:	Spare ring type D9
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SMAR4



SMAR4 - Mounting requirements

Order code

SMAR4	-	XXX Ⓐ	-	XXX Ⓑ	/	XXXXX Ⓒ	-	XX Ⓓ	-	XX Ⓔ	-	XX Ⓕ	/XXXX Ⓖ
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Ⓐ INTERFACE / POWER SUPPLY SC1 = BiSS-C mode BG1 = SSI Binary	Ⓑ RESOLUTION (ABS) 017 = 17 bit 018 = 18 bit 019 = 19 bit	Ⓒ RESOLUTION (INC) 00000 = no incr. output Ⓓ N° POLES 00 = 0 poles	Ⓔ CONNECTION X1 = Amphenol FCI 10144041-10 Minitek (mating type: FCI 10145492-10) Ⓕ RING TYPE D9 = ring type D9	Ⓖ CUSTOM VERSION /Sxxx = special version /Pxxx = special firmware setting
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RING TYPE CODE	MRA/34x	-	CODING XXX	-	INSIDE Ø XX	CUSTOM VERSIONS /Sxxx
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D9	MRA/34D ring with flange	32N = standard coding	19 = Ø 19 mm	xxx = running nr.
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Document release	Date	Description
1.0	July 2023	First issue