

- Low profile ring encoder
- Contactless magnetic sensing
- Resolution up to 18 bit
- SSI output
- Robust design with IP68 protection
- Hollow shaft diameter Ø80mm (Ø95 on request)



SMAB • MRAB

ENVIRONMENTAL SPECIFICATIONS

Operating temperature range:	-25°C +85°C (-13°F +185°F)
Storage temperature range:	-25°C +85°C (-13°F +185°F)
Protection:	IP68
Option:	• Protection IP69K

MECHANICAL SPECIFICATIONS

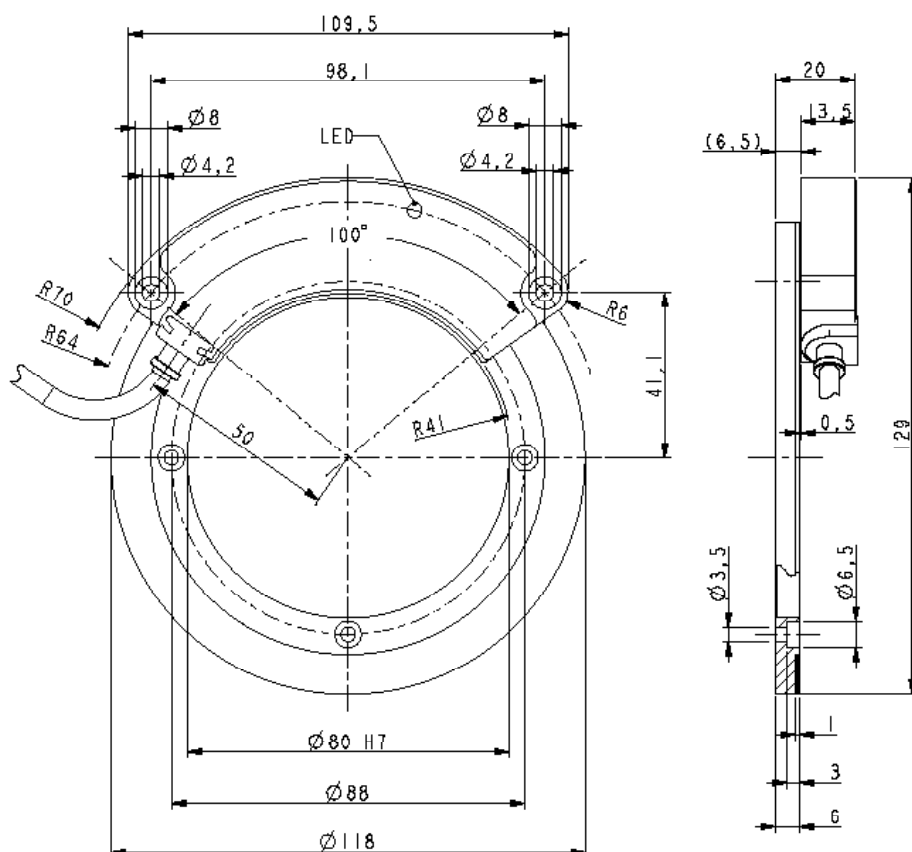
Dimensions:	see drawing
Hollow shaft diameter:	80 mm
Shaft rotational speed:	6000 rpm max. (mechanical)
Moment of inertia:	5,98 x 10 ⁻⁴ kg m ²
Gap sensor-ring:	0,1 - 0,6 mm
Electrical connections:	M12 8 pin inline plug or Lika Hi-flex cable 1,0 m
Weight:	~ 320 g (11,2 oz)
Option:	• additional cable

ELECTRICAL SPECIFICATIONS

Resolution:	65536, 262144 cpr
Accuracy:	± 0,15° typ. (± 0,2° max.)
Repeatability:	± 1 count
Output circuits:	SSI, MSB aligned, clock rate max 2MHz Position refresh up to 10000 rpm
Output code:	Gray, Binary
Power supply:	+5Vdc ± 5%, +10Vdc ÷ +30Vdc
Protection:	against inversion of polarity (except 5V version) and short-circuit
EMC:	electro-magnetic immunity, EN 61000-4-2 EN 61000-4-4
Functions:	• Counting direction • Zero setting /Preset

MATERIALS

Sensor housing:	anticorodal, UNI EN AW-6082
Ring:	stainless steel AISI 420 + plastroferrite



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Order code - Sensor

SMAB	-	XXX (a)	-	XX (b)	-	XXXX (c)	-	/Sxxx (d)
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(a) OUTPUT CIRCUITS / POWER SUPPLY

GG1 = SSI, Gray MSB aligned, +5Vdc $\pm 5\%$

GG2 = SSI, Gray MSB aligned, +10Vdc +30Vdc

BG1 = SSI, Binary MSB aligned, +5Vdc $\pm 5\%$

BG2 = SSI, Binary MSB aligned, +10Vdc +30Vdc

(b) RESOLUTION

16 = 65536 cpr

18 = 262144 cpr

(c) CONNECTIONS

L010 = cable output 1 m

Lxx0 = cable out. x m (max. length 10m)

M005 = 0,5 m cable + M12 8 pin inline plug

M020 = 2 m cable + M12 8 pin inline plug

(d) CUSTOM VERSION

Order code - Magnetic ring

MRAB/118	-	XXX (a)	-	XXX (b)	/Sxxx (c)
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(a) MAGNETIC CODING

64N = 64 poles

(b) INSIDE DIAMETER

80 = 80 mm

(c) CUSTOM VERSION

Document release	Date	Description
1.0	7.08.2025	New order code