

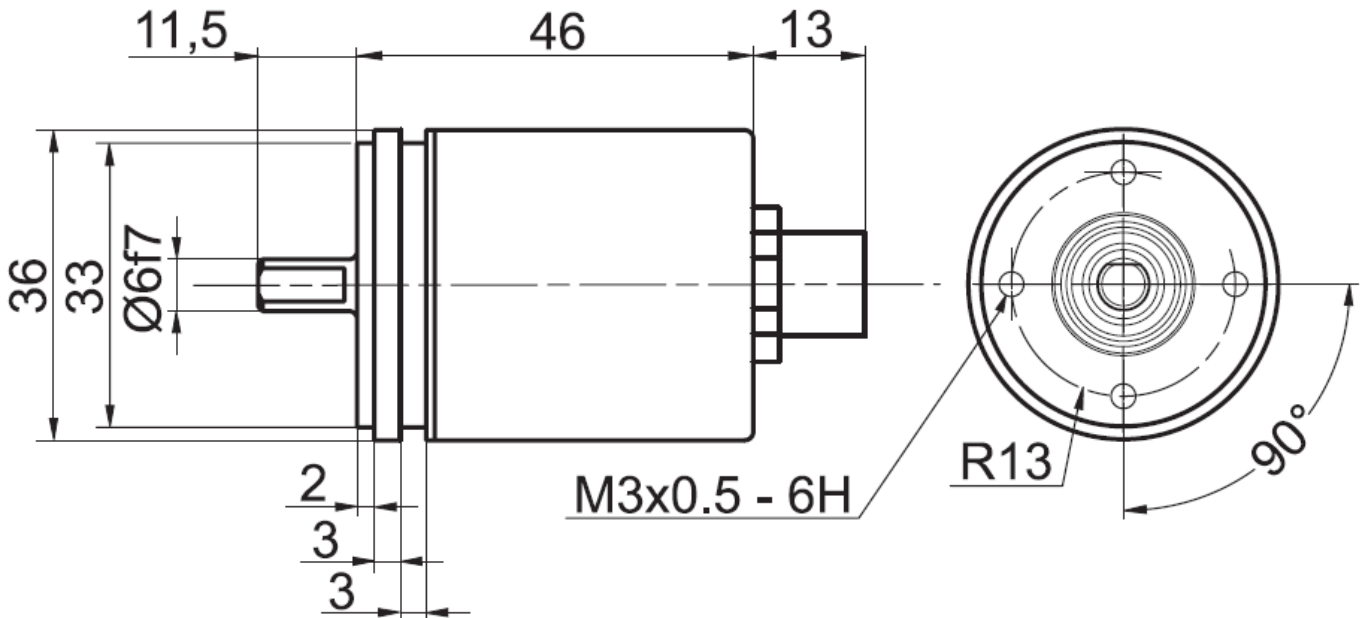
MAGNETIC ANALOG ABSOLUTE MULTI-TURN ENCODERS - SERIE THM4

THM4, Ø36mm multi-turn encoder with analog output :

- Robust and compact conception.
- Ø 6 mm solid shaft version.
- Precision ball bearings with seal.
- High temperature performances -40°C to 85°C .
- Magnetic technology encoder.
- Patented battery backup free counter.
- Analog output 4-20mA, 0-20mA, 0.5-5Vdc, 0-5Vdc or 0-10Vdc.
- Analog output calibration possibility (minimum angle 22.5°).
- Resolution : 12 bits over entire measuring range.
- Polarity inversion and over-voltage-peak protection.
- Highly integrated circuit in SMD-technology.



DIMENSIONS: THM4_06 AXIAL M12



MECHANICAL CHARACTERISTICS

Material	Cover : nickel, plated steel	Vibrations (EN 60068-2-6)	$\leq 10 \text{ g}$ (10Hz... 1 000Hz)		
	Body : aluminium	Weight (approx.)	150 g		
	Shaft: stainless steel	Operating temperature	$-40 \dots +85^{\circ}\text{C}$		
Maximal loads	Axial : 20 N	Storage temperature	$-40 \dots +85^{\circ}\text{C}$		
	Radial : 80 N	Humidity	98 % without condensation		
Shaft inertia	$\leq 20 \text{ g.cm}^2$	Protection class	Cover: IP64		
Torque	$\leq 2 \text{ N.cm}$		Body: IP64		
Continuous max. speed	$12\,000 \text{ min}^{-1}$	Lifetime in 10^8 revolutions with F_a / F_r (axial/radial)			
Shocks (EN 60068-2-27)	$\leq 100 \text{ g}$ (half-sine, 6 ms)	20 N / 20 N	20 N / 40 N	20 N / 80 N	
Shocks (EN 60028-2-29)	$\leq 10 \text{ g}$ (half-sine, 16ms)	224	28	3	

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ELECTRICAL CHARACTERISTICS

Single turn technology	Magnetic 2 axis Hall sensor	Cycle period	< 600 μ s
Resolution of output	Max 12 bits over entire measuring range	Turn on time	< 1 s
Multiturn technology	Self supplied magnetic pulse counter	Current consumption	Typical: 50mA
Max. number of turns	Programmable	Electrical life-time	> 10 ⁵ h
Single turn accuracy	+/- 0,35°	EMC	EN 61000-6-4 EN 61000-6-2
Linearity	0.15 %	Load resistance	Current: <500Ohms
Supply voltage	12 – 30Vdc		Voltage: >10kOhms

ANALOG CONNECTION

Reference	Type	1	2	3	4	5	Ground
00	M12 5 pinouts	Analog output	+Vcc	GND	SET 2	SET 1	Connector body

INPUTS

Set 2	Set 1	Function
0 (N.C. or GND)	0 (N.C. or GND)	Normal operation
0 (N.C. or GND)	1 (> 12Vdc)	Preset zero point (non turning shaft)
1 (> 12Vdc)	0 (N.C. or GND)	Preset max point (non turning shaft)
1 (> 12Vdc)	1 (> 12Vdc)	Pdefault scale (non turning shaft)

ORDERING REFERENCE (Contact the factory for special versions, ex:special flanges, connections...)

THM4_	06	//	5	L3	0	//	00B00	//	00A
Absolute multi-turn encoder	6mm Solid shaft encoder		Power supply: 12 to 30Vdc	L3 : 4-20mA L4 : 0-20mA L1 : 0-10Vdc	Programmable encoder		Absolute multi-turn encoder Standard configuration: 16 turns		Axial M12 5 pinouts

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