

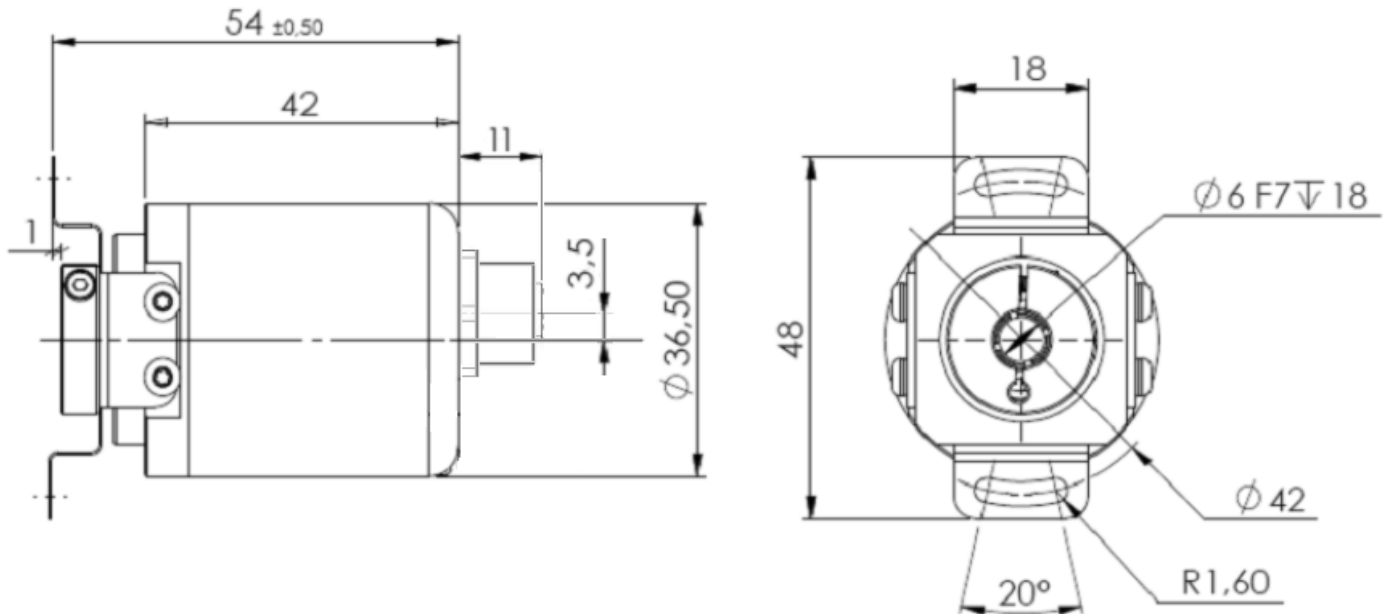
MAGNETIC ANALOG ABSOLUTE MULTI-TURN ENCODERS - SERIE THK4

THK4, Ø36mm multiturn encoder with analog output:

- Robust and compact conception.
- Ø 6 mm blind 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 (angle minimum 22.5°).
- Resolution : 12 bits over entire measuring range.
- Polarity inversion and over-voltage-peak protection.
- Highly integrated circuit in SMD-technology.



DIMENSIONS: THK4_06 AXIAL M12



Minimal hollow shaft depth : 8mm.
Maximal hollow shaft depth : 18mm.

MECHANICAL CHARACTERISTICS

| | | | |
|-----------------------|------------------------------|---------------------------|---------------------------|
| Material | Cover : nickel, plated steel | Shocks (EN 60068-2-27) | ≤ 100 g (half-sine, 6 ms) |
| | Body : aluminium | Shocks (EN 60028-2-29) | ≤ 10 g (half-sine, 16ms) |
| | Shaft : stainless steel | Vibrations (EN 60068-2-6) | ≤ 10 g (10Hz... 1 000Hz) |
| Maximal loads | Axial : 20 N | Weight (approx.) | 200 g |
| | Radial : 80 N | Operating temperature | - 40 ... + 85°C |
| Shaft inertia | ≤ 20 g.cm ² | Storage temperature | - 40 ... + 85°C |
| Torque | ≤ 2 N.cm | Humidity | 98 % without condensation |
| Continuous max. speed | 12 000 min ⁻¹ | Protection class | Cover: IP64 |

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ELECTRICAL CHARACTERISTICS

| | | | |
|------------------------|---|----------------------|---------------------------|
| Single turn technology | Magnetic 2 axis Hall sensor | Cycle period | < 600 µs |
| 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...)

| THK4_ | 06 | // | 5 | L3 | 0 | // | 00B00 | // | 00A |
|-----------------------------|--------------------|----|------------------------------|---|-------------------------|----|--|----|------------------------|
| Absolute multi-turn encoder | Blind shaft 6mm | | 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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Mailing Address: Sensata Technologies, Inc., 529 Pleasant Street, Attleboro, MA 02703, USA

CONTACT US

Regional head offices:

United States of America

Sensata Technologies

Attleboro, MA

Phone: 508-236-3800

E-mail: support@sensata.com

Netherlands

Sensata Technologies Holland B.V.

Hengelo

Phone: +31 74 357 8000

E-mail: support@sensata.com

China

Sensata Technologies China Co., Ltd.

Shanghai

Phone: +8621 2306 1500

E-mail: support@sensata.com

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