



ANGULAR POSITION OPTICAL SENSOR

Optical sensor without absolute angular position contact using the polarimetry technique

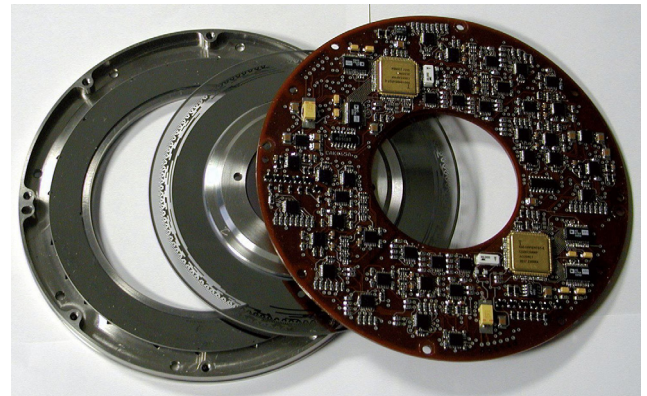
Technological benefits

A simple and innovative concept

Contactless sensor
 Longer lifetime
 Electrical redundancy
 Simple design, average accuracy

High performance levels

Accuracy: $\pm 0.5\%$ ($\pm 1.8^\circ$)
 10 to 12 bit resolution (0.09° to 0.35°)
 Analog output:
 - Analog ramps
 - Sine-cosine outputs
 Digital output option
 Consumption < 30mA



Optical sensors

Invention overview

Optical sensor measuring the absolute angular position over 360° of a rotating mobile object.

Analog processing based on switching between signals, level changes and half-turn ambiguity resolution can be used to reconstruct an analog signal proportional to the angular position on a turn (analog ramp).

Commercial benefits

A reliable technology

Sensor tolerating a large geometric assembly fault
 Cost reduction

Potential applications

All mechanisms requiring angular positioning knowledge:

- Solar array mechanisms
- Antenna pointing mechanisms

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*Patented invention, available under license
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