

# ABSOLUTE

## Absolute angle sensor

Resolution up to 19 bits and accuracy less than 0.1°

**ABSOLUTE** is an angle sensor for through-shaft applications, providing absolute measurement as soon as power is applied. Thanks to its **high-performance** magnetic measurement technology, it guarantees exceptional accuracy and resolution, comparable to that of optical sensors, while being significantly more **robust** in harsh environments.

**Easy** to install and use, **ABSOLUTE** consists of a magnetic ring with a Vernier/Nonius pattern and a fixed sensor mounted opposite the ring.

It adapts to various shaft diameters and offers two protocols: BiSS and SSI.

### The benefits of magnetic technology

Magnetic technology is more robust than optical technology, which is more fragile due to its sensitivity to external elements such as water vapour, stray light, oil, mist or ageing, which can disrupt reading.



### BENEFITS

**This sensor combines:**

**Robust** operation whatever sensor environment

- Magnetic technology that is reliable outdoors, in the presence of moisture, dust or pollution, and resistant to vibration and ageing
- Can be used over a temperature range from -40°C to 105°C

**Performance** in terms of resolution (up to 19 bits), accuracy ( $\pm 0.1^\circ$ ) and repeatability

- Latest-generation patented measurement principle: specific arrangement of magnetic elements for a tubular sensor facing a radial magnetic ring
- Specific magnetic pattern design: 4 mm pole width

**Easy** to install and operate


- Can be positioned anywhere on a shaft, with tolerances adapted to industrial applications
- Provides the absolute angle immediately after power on

### APPLICATIONS

**Suitable for harsh industrial environments (vibration, dust and moisture)**

- Industrial robotics in harsh environments
- Textile machinery
- AGV-AMR autonomous vehicles, transport, agricultural machinery, etc.
- Synchronous electric motors
- Handling and Logistics 4.0
- Construction machinery

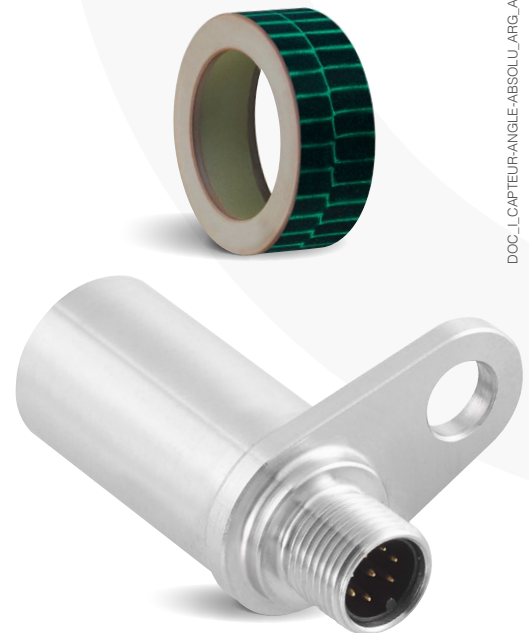
## RANGE

	Magnetic ring	Sensor
	Diameter 31.9 mm (16/15 pp)	For 16/15 pp magnetic ring (18-bit resolution), SSI interface
		For 16/15 pp magnetic ring (18-bit resolution), BiSS interface
	Diameter 72.3 mm (32/31 pp)	For 32/31 pp magnetic ring (19-bit resolution), SSI interface
For 32/31 pp magnetic ring (19-bit resolution), BiSS interface		

## TECHNICAL SPECIFICATIONS

Mechanical characteristics	Value
Maximum speed	20000 rpm
Sealing	ISO20653: IP65 / IP67
Vibrations and shocks	IEC60068-2-6: 10 - 2000 Hz: 30 g IEC60068-2-27: 50 g / 11 ms
Temperature	-40°C to 105°C
EMC standards	EN61000-6-2 EN61000-6-3

Electrical characteristics	Value
Supply voltage	4.5 to 5.5 V
Interface	SSI or BiSS
Error output	Open collector, active at low level
0° angle preset input	Active at high level
Consumption	Typ: 65 mA (unloaded outputs)



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