

ABSOLUTE MAGNESCALE

The latest encoder generation
with Siemens DRIVE-CLiQ interface



Magnescape

SPEED X PRECISION

Absolute Magnescale

The first magnetic, high-precision, linear and rotary encoders with integrated Siemens DRIVE-CLiQ interface for machine tools equipped with the Siemens 840D SL control.

Improve the safety and performance of your machine tool with Magnescale high-performance magnetic encoder technology.



Extremely precise and reliable

The new absolute Magnescale encoders provide the highest accuracy, resolution, and reliability under the harshest machine tool environments thanks to the unique magnetic based encoder technology.

Durable against shock and vibration

The main encoder structure consists exclusively of metal components which makes the encoder highly resistant against shock and vibration. That means consistently reliable performance under severe operating conditions which generate high vibrations.

Thermal behavior identical to machine tools

The full metal structure of the encoder provides the same expansion coefficient as steel or cast iron. This improves the accuracy of the machine under varying temperature fluctuations.



High response speed

Magnescale encoders provide the highest response speed due to the latest electronics and signal processing technology. Perfectly suited for high speed linear and torque motor applications.

Functional Safety

Magnescale encoders with Siemens DRIVE-CLiQ interface protocol are certified by TÜV Rheinland to provide Functional Safety.

The Functional Safety feature helps maintain safe operating machines for your customers.



Siemens DRIVE-CLiQ Interface

Magnescale produced the first encoder to be certified by Siemens. We also offer encoders with Fanuc, Mitsubishi, Yaskawa and Panasonic protocols.



Product line-up

SR27A Series

Magnetic absolute linear encoder with slim design for constricted installation applications. Functional Safety compliance with Siemens DRIVE-CLiQ interface protocol.

- Measuring lengths: 70 mm – 2040 mm
- Expansion coefficient: $12 \pm 1 \times 10^{-6} / ^\circ\text{C}$
- Max. Resolution: 10 nm
- Max. Response speed: 200 m/min
- Accuracy: 3+3L/1000 μm (p-p); 5+5L/1000 μm (p-p)
- Interface: Fanuc, Mitsubishi, Siemens DRIVE-CLiQ



SR67A Series

Magnetic absolute linear encoder with robust design for large machine tool applications. Functional Safety compliance with Siemens DRIVE-CLiQ interface protocol.

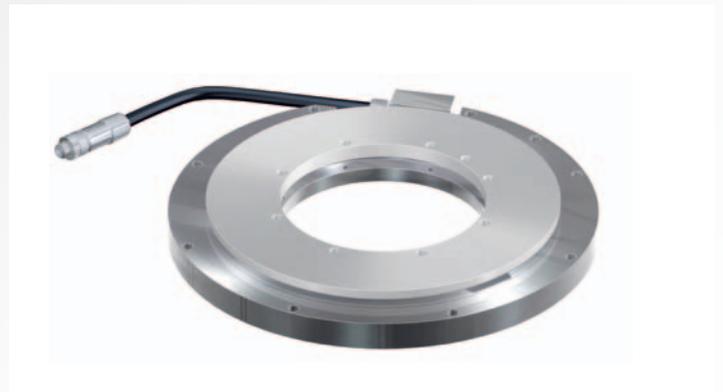
- Measuring lengths: 140 mm – 3640 mm
- Expansion coefficient: $12 \pm 1 \times 10^{-6} / ^\circ\text{C}$
- Max. Resolution: 10 nm
- Max. Response speed: 200 m/min
- Accuracy: 3+3L/1000 μm (p-p); 5+5L/1000 μm (p-p)
- Interface: Fanuc, Mitsubishi, Siemens DRIVE-CLiQ



RS97 Series

Magnetic absolute rotary encoder with open type design for limited installation space. Perfect for integration in rotary tables and tilting axes with torque motors. Functional Safety compliance with Siemens DRIVE-CLiQ interface protocol.

- Inside diameter: 96 mm and 180 mm
- Max. Resolution: 23 bit
- Max. Response revolution: 5000 min^{-1}
- Accuracy: $\pm 2,5 \text{ s}$
- Interface: Fanuc, Mitsubishi, Siemens DRIVE-CLiQ



RU97 Series

Magnetic absolute rotary encoder with integrated bearing. Perfect for integration in high precision rotary tables. Functional Safety compliance with Siemens DRIVE-CLiQ interface protocol.

- Inside diameter: 20 mm and 22 mm
- Max. Resolution: 25 bit
- Max. Response revolution: 2000 min^{-1}
- Accuracy: $\pm 2,5 \text{ s}$
- Interface: Fanuc, Mitsubishi, Siemens DRIVE-CLiQ



About Magnescale

More than 45 years' experience in development and production of high precision linear and rotary encoders for machine tool and semiconductor applications.

- 1965 Introduction of magnetic encoder technology
- 1969 Established Sony Magnescale Co., Ltd. to develop, design and manufacture Magnescale magnetic encoder products
- 1971 Release of Magnescale GP series, first magnetic high precision linear encoder
- 1971 Release of Magnescale MSE and MSB series, the first magnetic high precision rotary encoders
- 1978 Release of Counter LM series
- 1981 Established Isehara plant
- 1988 Release of Laserscale BS10, first linear encoder for picometer applications
- 1996 Change company name to Sony Precision Technology Inc.
- 2003 Release of high precision linear encoder SR33 series with MR sensor technology
- 2004 Change company name to Sony Manufacturing Systems Corporation
- 2007 Release of high precision absolute Magnescale SR70 series with serial interfaces for Fanuc, Mitsubishi, Panasonic, and Yaskawa controllers
- 2008 Release of absolute Magnescale SR80 robust type and absolute angle encoder RU70
- 2010 Establish Magnescale Co., Ltd.
- 2013 Release of absolute Magnescale SR27/SR67 series and absolute angle encoder RS97 and RU97 series with Fanuc, Mitsubishi and Siemens DRIVE-CLiQ interface



Magnescale

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