KappaSense
Sensing your needs

Innovative Capacitive Linear Encoders

Overcoming design barriers in motion applications.

- Cable-free Readhead Linear Encoders
- Ultra Flexible operation
- Micro sized solutions

Industry's most Flexible Encoders

KappaSense
Sensing your needs

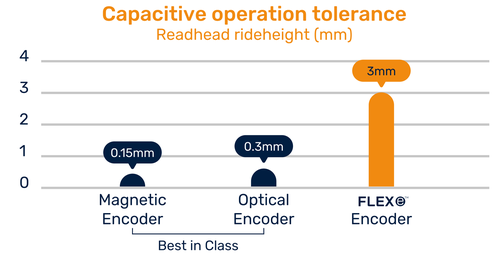
Principle and operation

The fundamental operating principle of the capacitive encoder is capacitive modulation between two dielectric plates based on their relative position. Variations in capacitance are detected by transmitting a high-frequency reference signal from a stationary dielectric and detecting the modulated signal at the receiver using sinusoidal patterns.

Absolute and Incremental options are available.

Cable-free & Electronics free Readhead

Capacitive operation tolerance
Readhead rideheight (mm)



Advantages

- Industry's best installation tolerances
- Superior installation and operation range
- Cable-free Technology
- Resilient to vibration
- Immunity to magnetic Interference and contamination

Disadvantages

- Resolution = today 0.5 µm
- Limited stroke length.
  In Q3 2024, stitching technology will be introduced

Production constraints & limits

- Easy customized to different form factors
- Wide range of Readhead materials
- Cable-free technology easy to install & maintain (better MTBF)
- Sentech is an expert in designing and manufacturing integrated sensor solutions tailored to your application
- Strong local support by sentech

Cost considerations

- Quick and easy installation due to the relaxed assembly tolerances
- Cost effective design and assembly due to Cable-free readhead
- Less unplanned downtime due to elimination of cables to moving parts
- No Need for EMC protection Hardware due to immunity to magnetic interference
- Light weight allows for design freedom
- Better MTBF due to absence of sensitive Electro optics components

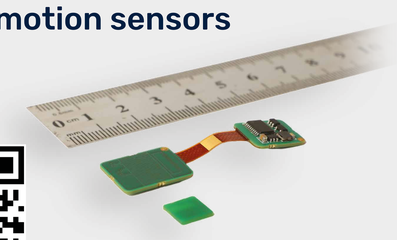
Application areas

- Semiconductor Handling
- Metrology and inspection
- Medical equipment (A miniature version is available)
- Printing & Packaging
- Electronics Manufacturing
- Industrial Automation
- Aerospace
- Electro Optical

Environmental immunity

Limited Dust Sensitivity
No Magnetic Sensitivity
Vibration Immunity
Installation Flexibility

Micro motion sensors



Cable-free technology

www.KSCconference.nl