



# Displacement Transducers and Readouts



- ✓ Measuring Length to 5000mm
- ✓ Resolution 0,001mm
- ✓ IP67 Protection
- ✓ Supply 5V-200mA
- ✓ Accuracy  $\pm 0,01\text{mm}$
- ✓ Positioning Speed to 7m/sec
- ✓ Quadrature Output RS422
- ✓ Digital Displays

Digital Displacement Transducers are mainly designed for measurements of position in machine tools and other industrial applications. The design and the used materials permit applications in heavy industrial environments.

The Transducers are inductive sensors which operate on the principal of resolver. The moving part contains precision coil inside the ferromagnetic rod. The stationary parts include an excitation coil and two sensing coils. The excitation coil is powered by an alternating current. During the positioning of the moving rod, voltage is induced into the sensing coils. The amplitude changes in accordance to the sinusoidal and cosinusoidal dependencies. The generated voltage is amplified, digitized and connected to the output terminals as Quadrature Signals A, B.



Display with two control points for one axis applications. Two Set Point Relays, Analogue Outputs and Serial Data Ports are optionally available.

The sensors are characterized by high precision of 0,001mm and fast positioning speed of up to 7m/sec. They are absolutely dust and waterproof.

Metal rests, abrasives, dust and cooling liquid have no influence on the measurement accuracy. They do not include permanent magnets and can also work under strong magnetic fields.

The sturdy construction and the use of corrosion-free materials determine the sensors for use in the toughest industrial environments.

The quadrature output signal can be directly connected to Orbit Controls digital displays and controllers.

The Displacement Transducers are inexpensive, robust and durable sensors intended for applications where optical sensors cannot be used.



**Sensor Type S** with digital Quadrature Output RS422. Supply 5VDC-200mA. The resolution can be ordered from 0.001mm to 0.5mm with a standard positioning speed of 1m/sec. Optional 7m/sec is available.



**Sensor Type L** for long measuring applications is placed in a protection frame 40x40mm. The spring retainer avoids bending of the measuring rod. Measuring rods up to 5 meters of length are available.



**Type P** – telescopic type of rod ends are available from 100mm to 800mm with resolution of 0.001mm and IP54 protection.

### Two Axis Digital Display



### Three Axis Digital Display



### Four Axis Digital Display



The Digital Displays contain functions which are useful for operation at machine tools.

- Display Range -99999,000 to 99999,000mm
- Selection mm or inch, resolution and counting direction
- Arithmetic Functions
- Preset- and Zero settings of up to 199 points
- Drilling in Circle, Radius, Diameter, straight line
- Tools compensation
- Memory for Parameters and Data
- Correction of Linearity