



More Precision

induSENSOR // Linear inductive displacement sensors



Ideal for customer-specific adaptations

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Examples for customer-specific modifications

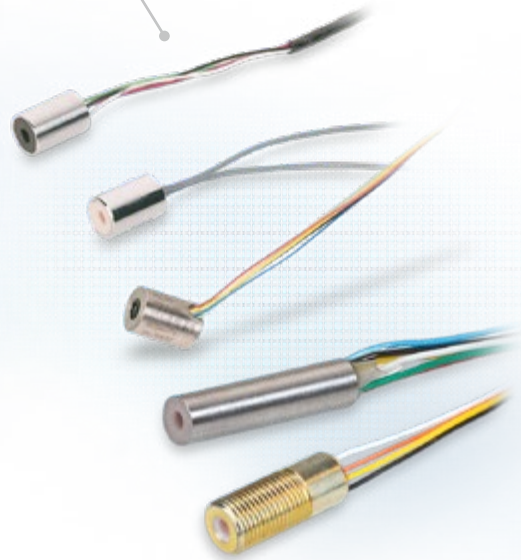
Special Systems

- Mechanical adaptations
- ATEX/FM approval
- Additional physical principles



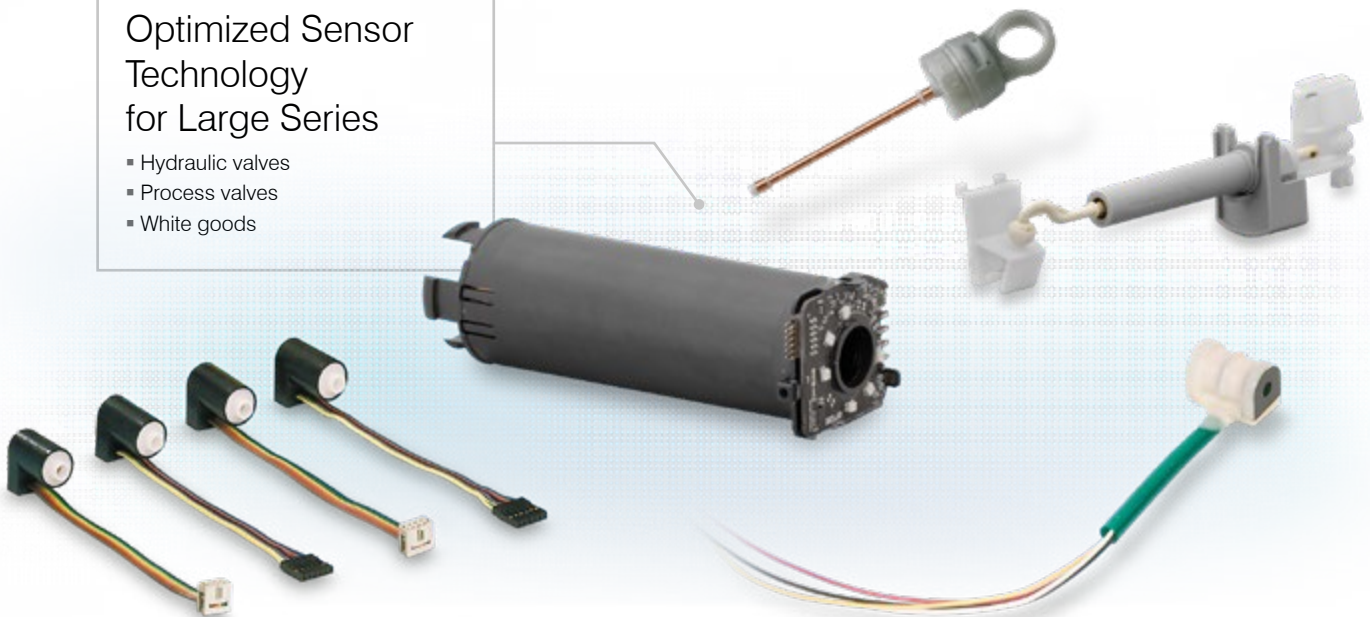
Miniature LVDTs

- Small measuring ranges and designs for installation into confined spaces



Optimized Sensor Technology for Large Series

- Hydraulic valves
- Process valves
- White goods



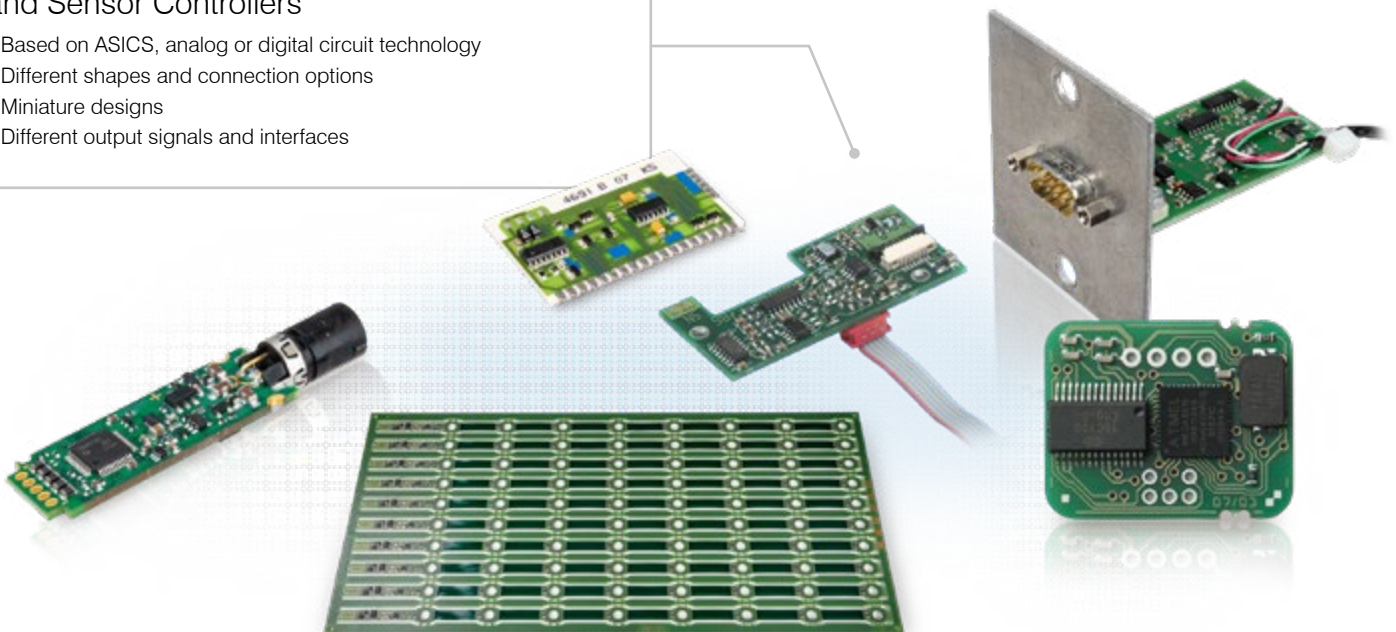
Eddy Current Long-Stroke Sensors

- High resistance to shocks, vibrations and pressure
- Adapted flanges and connectors for optimal integration
- External controllers for high temperature applications
- Miniature designs for confined installation spaces
- Designs with aluminum tube or plunger



Adapted Controller Components and Sensor Controllers

- Based on ASICS, analog or digital circuit technology
- Different shapes and connection options
- Miniature designs
- Different output signals and interfaces





Sensor-level services:

Connector assembly, cable reduction



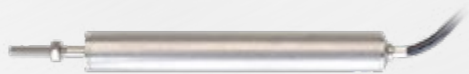
Mounting accessories / Probe tips

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Sensors



Gauge: DTA-xG8 series
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Sensor: DTA-xDX series
Page 18 - 21



Sensor: LDR series
Page 22 - 25



Sensor: LVP/LDR series
Page 26 - 27

Controllers



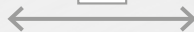
Single-channel system
Controller MSC7401
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2-channel system
Controller MSC7802
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Multi-channel system
Controller MSC7602
Page 32 - 33



Measuring system

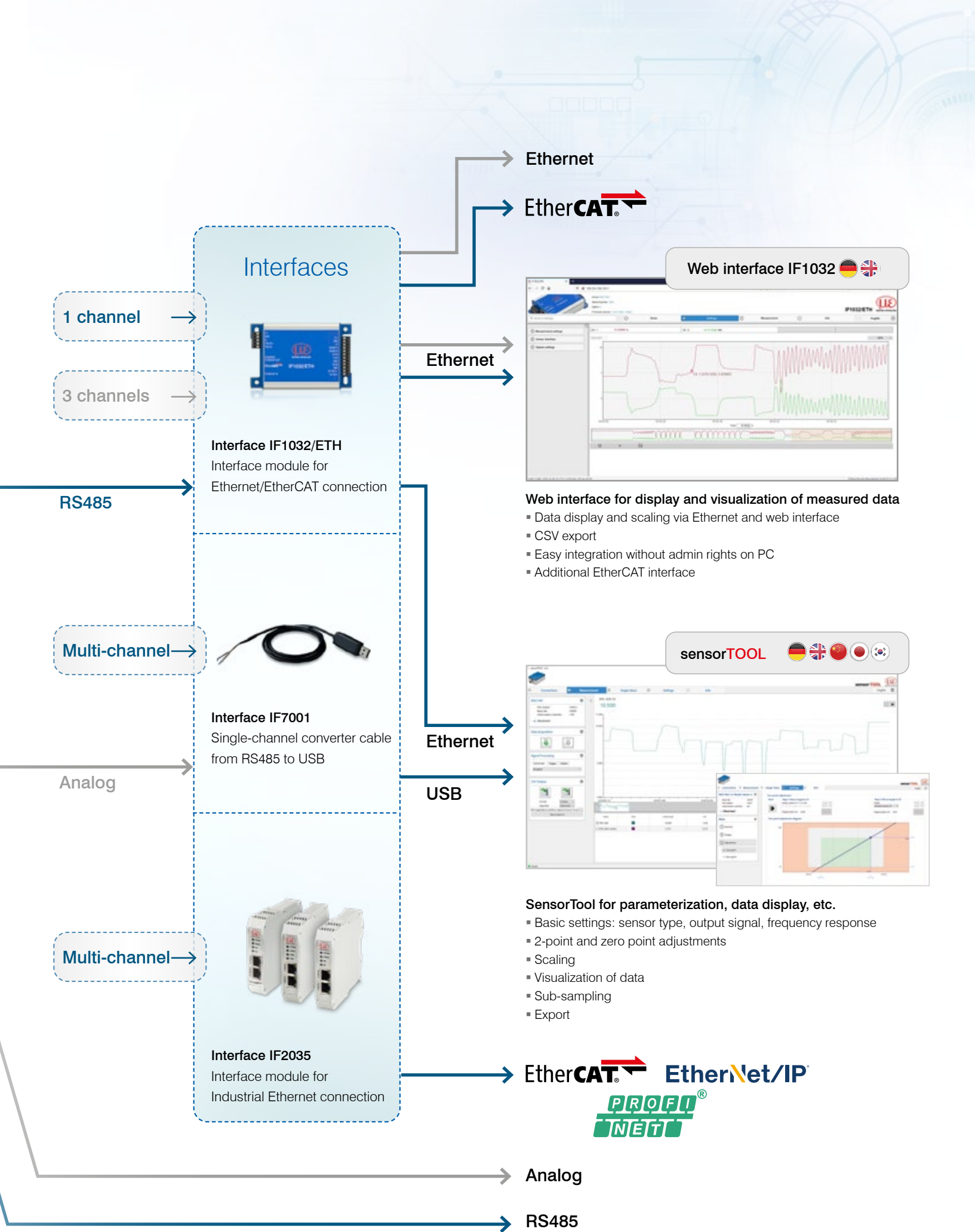


Sensor: DTD-xG8 series Page 12 - 13



System-level services:

Adjustment, linearization, basic settings, test certificates



Technology and measuring principle

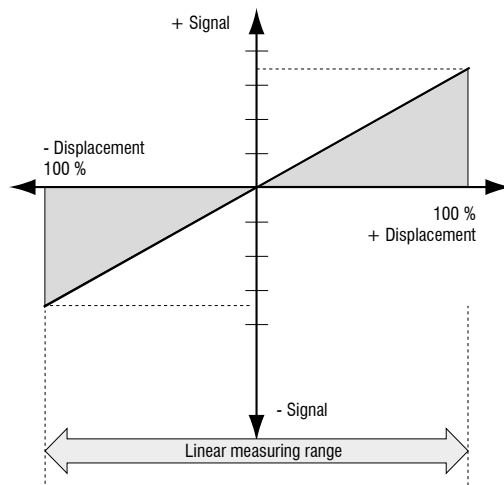
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LVDT Gauges and LVDT displacement sensors (DTA series)

LVDT displacement sensors and gauges (Linear Variable Differential Transformer) are constructed with a primary and two secondary coils, which are arranged symmetrically to the primary winding. As a measuring object, a rod shaped soft-magnetic core can be moved within the differential transformer. An electronic oscillator supplies the primary coil with an alternating current of constant frequency. The excitation is an alternating voltage with an amplitude of a few volts and a frequency between 1 and 10 kHz.

Depending on the core position, alternating voltages are induced in the two secondary windings. If the core is located in its "zero position", the coupling of the primary to both secondary coils is equally large. Movement of the core within the magnetic field of the coil causes a higher voltage in one secondary coil and a lower voltage in the second coil. The difference between the two secondary voltages is proportional to the core displacement. Due to the differential design of the sensor, the LVDT series has an output signal which is very stable.

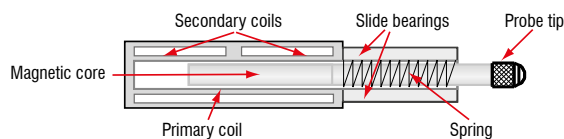
Signal LVDT sensor



Measuring principle gauging sensor



Probe tip



Measuring principle displacement sensor



Plunger

