

IMPRESS

SENSORS & SYSTEMS

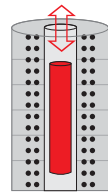
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Pressure - Temperature - Level - Flow - Analytical - Control - Indication - Data logging

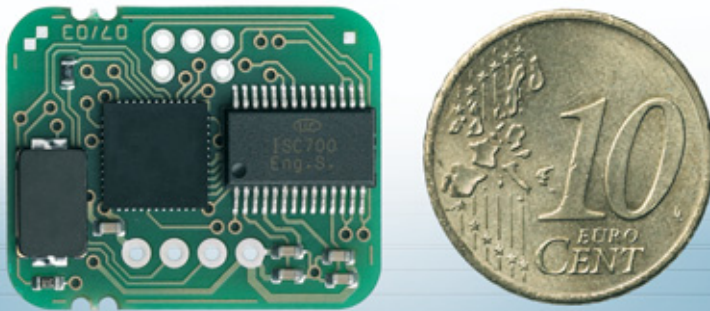
More Precision.

induSENSOR

Linear inductive displacement sensors



ISC7001 subminiature sensor controller



Subminiature ASIC design

Flexible OEM-system

Freely definable digital interface

Programmable sensor parameters

Integrated temperature measurement

Integrable subminiature sensor controller for OEM applications

The sensor ASIC, ISC700 has been designed for the control and evaluation of inductive sensors. The implemented two-chip technology with ASIC and micro-controller facilitates versatile adaptation to the measurement task in hand. An oscillator drives the sensor and the output signal is digitally conditioned by the ASIC. The signals are processed further by the micro-controller and output as a standardized signal. In line with the performance capability of the micro-controller, trouble-free migration of calibration and linearization of the sensor characteristics, together with filtering and averaging of the signals is possible. For control systems and monitoring tasks, the output of limits and switching points is programmed in the sensor electronics. The sensor becomes "intelligent".

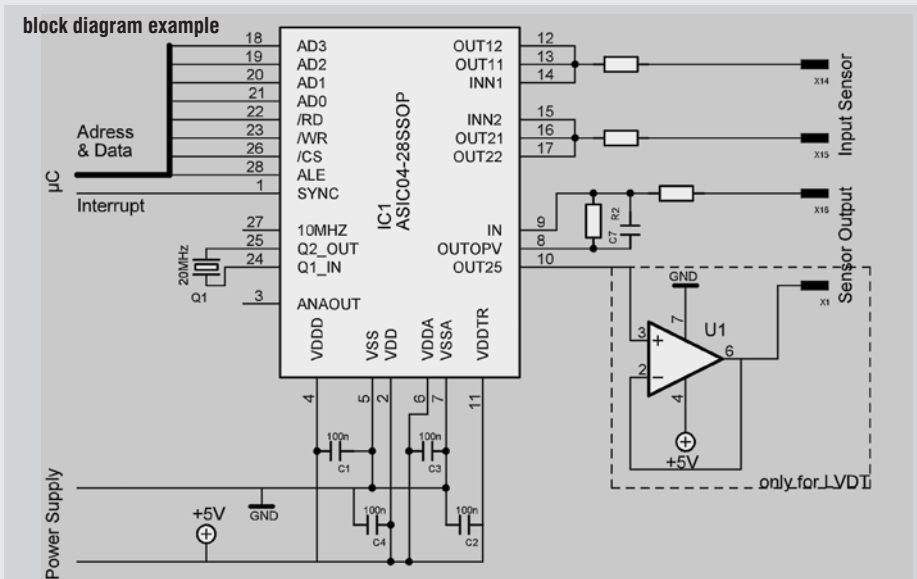
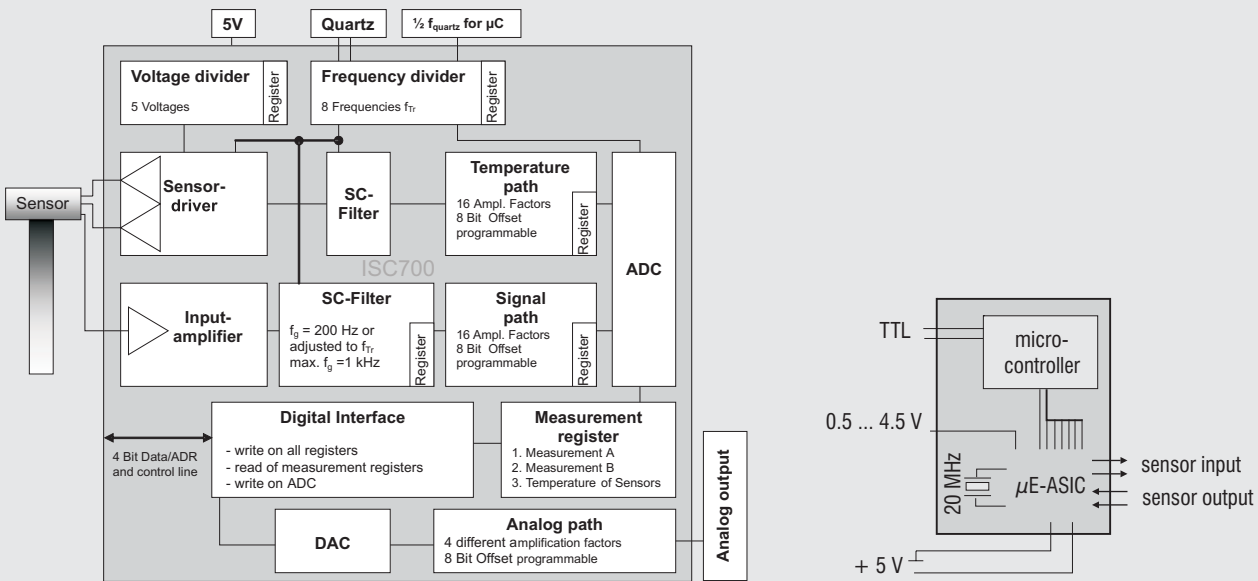
Increasing demands are being made on modern sensor systems in terms of miniaturization, flexibility, economy and digital interfaces. This is particularly true in the case of displacement and position sensors for applications involving medium to large quantities in automation, automotive production and household appliances.

CAN-Bus, Profibus DP and industrial Ethernet, I²C and Lin-Bus are examples of present bus systems for data transfer between sensors and their controllers. In a continually increasing number of applications decentralized data acquisition, conditioning and processing of sensor signals is demanded.

Sensor-specific parameters such as frequency selection, cut-off frequency, signal gain and offset are defined and programmed in the actual sensor ASIC. Temperature compensation of the measurement is possible through an additional integrated temperature measurement. The remaining signal conditioning occurs in a normal commercially available micro-controller. This concept ensures optimum adaptation and suitability of the computing power. Furthermore, all digital interfaces, available now and in the future, for controllers can be integrated into the system. Another advantage is the possible relief of main boards and data channels by moving the supervisory and control functions into the sensor system.

Model		ISC 7001
Dimensions		length: 25 mm, width: 20 mm, height: 5 mm
Operating temperature		-40° C ... 85° C option: up to 125° C
Supply voltage		5 V regulated, stabilized
Supply current		appr. 45 mA
Output (standard)	digital	serial output with TTL level (UART Rx/D und Tx/D)
	digital	free definable bus-interface
Output (optional)	analog	from 0.5 V to 4.5 V (voltage output $R_L > 100 \text{ k}\Omega$) at 10 bit DA-converter or 10 bit PWM
Frequency response		up to 1 kHz
Resolution (bit)		up to 11 Bit

Note: all data have to be verified after the definition of the individual specifications



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Sensors and systems

for displacement, position and dimension

Sensors and measurement devices

for non-contact temperature measurement

Measurement systems

for online/offline quality control