

# Special-Sensors for Automation



## INNOVATIONS

- Flow sensor for waterbased media with digital display and  IO-Link
- Consumption measurement in compressed air networks
- Very compact Inline flow sensor with  IO-Link
- Inductive sensors for ATEX Zone 0/20 for extreme environment



**ISO 9001  
certified**

## Compressed air meters

### Measuring device for compressed air

Consumption measurement in compressed air networks:

- Leakage detection
- Additional measurement of temperature and pressure
- User levels configurable
- Manipulation detection
- Easy configuration via IO-Link interface

The Sensors support a broad variety of options for energy-efficient monitoring and control of compressed air networks. the LDN 1009 measures compressed air consumption and flow, detects even minor leakages and features many extra operating modes such as dosage function, temperature measurement, hysteresis function or off-delay.

The Sensors of the series LDN, LDV and LDS show air usage of a connected plant section, machine or tool in a clear 6-digit display. In addition to that the sensors can be configured very comfortably from a PC or laptop using the IO-Link interface. Via IO-Link it can also be connected directly to a common bus-system. Process values can thus be read out by a PLC. In addition to two programmable outputs, functions include a manipulation detection by means of a non-resettable modification counter as well as an option to customize the scope of available functions for different user groups.

### Series LDN

The LDN 1009 measures compressed air consumption, flow, and temperature. Due to its high sensitivity the calorimetric sensor detects even very small leakages. The sensor is designed for simple inline insertion into the pipe.

Detection range: 0.04 – 15 m<sup>3</sup>/h 0.5...250.0 l/min

Connection: G $\frac{1}{4}$  thread

### Series LDV

The air flow sensor LDV is suitable for pipelines of 1" and 1,5" diameter and compressed air flow up to 750 m<sup>3</sup>/h. In addition to that, the sensor measures temperature and pressure. Due to the rugged working principle (differential pressure) the sensor is resistant against contaminants within the compressed air. The sensor is designed for simple inline insertion into the pipe.

#### LDV 1025:

Detection range: 3 - 450 m<sup>3</sup>/h 50...7500 l/min

Connection: G1, DIN ISO 228-1

#### LDV 1040:

Detection range: 5 - 750 m<sup>3</sup>/h 80...12500 l/min

Connection: G1 $\frac{1}{2}$ , DIN ISO 228-1

### Series LDS

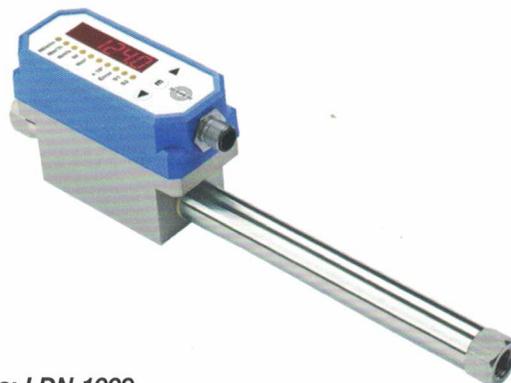
The insertion probe LDS is suitable for flow measuring in pipelines with diameters up to 200 mm. It works according to a specific version of the differential pressure principle and is thus resistant against contaminants within the compressed air. The sensor delivers in addition to the consumption values the values of measured temperature and pressure.

Detection range: Depends on pipe diameter

Connection: Cutting ring stud. The probe is fixed in the optimal insertion depth.



Series: LDS 1000



Series: LDN 1009



Series: LDV 1000

## Flow sensors

### Flow sensor for water based media with digital display

#### Series SNS 552

For the flow measurement in bigger pipe diameters

- Displays in liter or m<sup>3</sup>
- With integrated temperature measurement 0...80 °C
- Two outputs optionally as switching or analog outputs
- Insensitive against temperature changes – fast reaction time
- Rotatable display
- Easy parameterization by laptop or PC and integration in any common bus system with help of IO-Link

The compact flowsensor SNS 552 measures the flow of water based media and displays the measuring values (liter or m<sup>3</sup>) in the display. Furthermore the sensor delivers the temperature values from 0...80 °C. The sensor provides two outputs: optionally two switching outputs (normally closed, normally open), analog outputs or switching output and analog output.

The SNS 552 is insensitive against temperature changes and features a fast reaction time. For processes with frequently changing liquids the sensor delivers a teach in mode for instant online setup for new components. The rotatable Display provides a good readability of the values from all directions.

The sensor is parametrized using the front buttons or the IO-Link interface. With IO-Link it is furthermore possible to integrate the sensor easily in any common bus-system.



Series: SNS 552



Series: SDNC 500

### The smart solution of flow monitoring for compact systems

#### Series SDNC

- Flow and temperature measurement
- Compact design
- Easy configurable via IO-Link interface
- Process data can also be used for remote maintenance
- Analog and switching output in SIO-mode available

SDNC 500 sensors with IO-Link function are the smart solution for process monitoring. They can measure the flow speed and temperature in fluid mediums. To do so, there is a configuration software which configures the sensors via an IO-Link/USB master. The models ...GAPL provide flow data for water-based mediums as a linear output signal.

The G $\frac{1}{4}$  threaded flow sensors are simply fitted into a pipe.

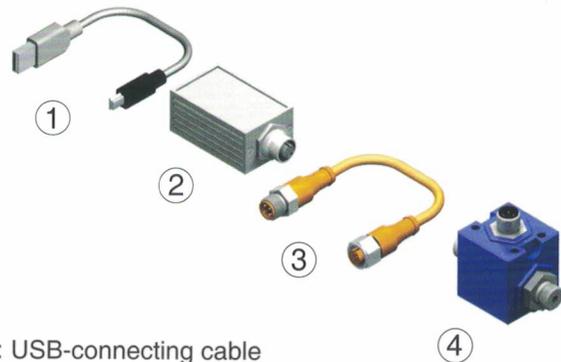
Typ	Medium	Detection range
SDNC 502 GAPL	water-based media	0.020...0.500 l/min, linearized
SDNC 503 GAPNL	liquid media	depends on Medium
SDNC 503 GAPL	water-based media	0.05...2.00 l/min, linearized
SDNC 506 GAPNL	liquid media	depends on Medium
SDNC 506 GAPL	water-based media	0.10...4.00 l/min, linearized
SDNC 508 GAPNL	liquid media	depends on Medium
SDNC 508 GAPL	water-based media	0.20...8.00 l/min, linearized

## IO-Link / Inductive sensors

### IO-Link

IO-Link is a point-to-point communication interface include enabling parametrization of sensors and actuators using a PC / Notebook and an interconnected master module. Sensors with IO-Link can with help of a suitable IO-Link master module easily be integrated into any common bus-system. The Sensor delivers via IO-Link continuously process data.

EGE delivers the IOL-Master-Set V1.1. for the connection of IO-Link Sensors to laptop or PC including all necessary cables. The corresponding software is available for free.



- 1: USB-connecting cable (to the PC/Notebook)
- 2: IO-Link-USB-Master
- 3: Sensor-connecting cable
- 4: Sensor

### EGE IO-Link-System

## Inductive proximity sensors IGEXH for Ex zones 0/20 heat resistant up to 140 °C

### Series IGEXH

- Applicable at  $-25...+140\text{ °C}$
- Switching distance up to 15 mm
- Protection IP 68
- Design M12, M18, M30 – flush / non flush

Sensors of the Series IGEXH are intrinsically safe inductive sensors for high-temperature applications in zone 0 hazardous gas atmospheres and zone 20 dust atmospheres. Designed to withstand extreme ambient temperatures from  $-25\text{ °C}$  to  $+140\text{ °C}$ , IGEXH sensors operate reliably even with frequent temperature changes. The rugged proximity switches made of 1.4571 stainless steel and PEEK provide IP 68 ingress protection. The companion signal processing unit, the IKM 122 Ex amplifier, is installed outside the hazardous area. The series features M12, M18 and M30 type sensors. The sensors are connected via a 2 meter FEP cable.

#### Technical data:

Switching distance	: 2/4/5/8/10/15 mm
Ambient temperature	: $-25...+140\text{ °C}$
Protection	: IP 68
Housing materials	: AISI 316 Ti, PEEK
Electrical connection	: 2 m FEP-cable

### Series: IGEXH



## Inductive sensors

### Inductive proximity sensors IGEXP for Ex zones 0/20 for temperatures down to -60 °C

#### Series IGEXP

- Applicable at -60...+60 °C
- Switching distance up to 15 mm
- Protection IP 68
- Design M12, M18, M30 – flush / non flush

The new IGEXP series inductive proximity sensors for use in zone 0/20 hazardous areas are suitable for ambient temperatures from -60 °C to +60 °C. The devices manufactured from 1.4571 stainless steel and PTFE provide an IP 68 protection rating. Designed for reliable operation even with frequent temperature changes, they are especially suitable for use in rugged industrial environments. The sensors connect to the IKM 122 Ex amplifier. The series features M12, M18 and M30 type sensors. They are connected via a 2 meter FEP cable.

#### Technical data:

Switching distance	: 2/4/5/8/10/15 mm
Ambient temperature	: -60...+60 °C
Protection	: IP 68
Housing materials	: AISI 316 Ti, PEEK
Electrical connection	: 2 m FEP-cable



Series: IGEXP

### Safe connection for ATEX equipment

#### Series GK

The GK series of terminal boxes allow for the safe connection of up to three circuits with "intrinsic safety" and "increased safety" type protection inside zone 1/21 hazardous areas, which provides for, for instance, the electrical connection of control units with sensors in exposed locations. Fitting has been simplified thanks to clamp-down terminals. The devices are now available as screw-type models or in push-in versions with particularly easy handling. The portfolio of terminal boxes includes GKI and GKE series for intrinsically safe electric circuits and circuits with increased safety, respectively, as well as GKEI types that combine both. The devices are suitable for environmental temperatures ranging from -20 °C to +70 °C. They provide IP 65 ingress protection.



Series: GK



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