



temperature



humidity



CO<sub>2</sub>



level



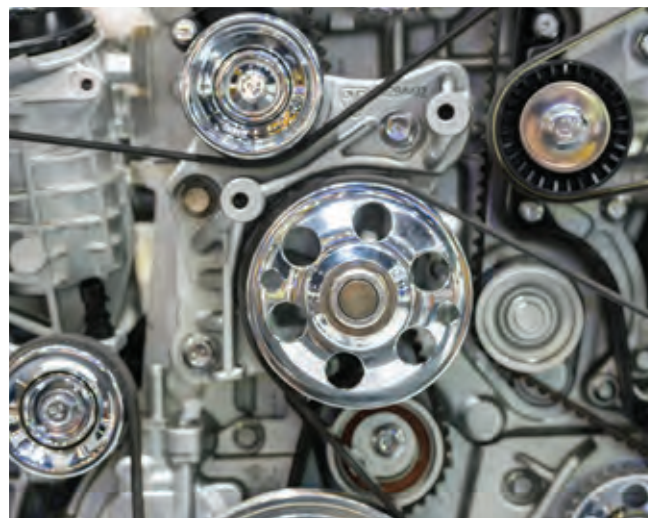
flow



position



Product overview



05/23



extend your senses

## HEAD TEMPERATURE SENSORS

**IoT**  
application ready

### ■ Type of sensing element:

Resistance – Pt 100/3850, Pt 500/3850, Pt 1000/3850, Ni 1000/5000, Ni 1000/6180, Ni 10000/5000, Ni 10000/6180, Ni 2226 = T1, Ni 891, NTC, PTC  
 Thermocouple – TCK, TCJ, TCT; Others – KTY, SMT 160, DALLAS, TSic etc.

### ■ Maximum measuring range: -200 °C to 600 °C

(custom manufactured sensors above the stated parameters)

### ■ Ingress protection: up to IP 68 (according the sensor type)

### ■ Output signal: resistance, current, voltage and digital

### ■ Stem length: standardly 70 to 240 mm, custom manufactured from 40 mm to ..."according to customer's requirement"

### ■ Stem material: stainless steel DIN 1.4301, DIN 1.4571, DIN 1.4404 and others "according to customer's requirement"

### ■ Accessories: thermowells, welded-on pieces, reductions, brackets, flanges, clamps, connectors

### ↓ CONTACT (series S 140, S 150, S 190)



### ↓ INTERIOR USE (series S 100)

DIGI output



### ↓ OUTDOOR USE (series S 110, K 110)



### ↓ IMMERSION (Ex) (series S 120, K 120, S 160, K 160, S 180, S MINI)



### ↓ HIGH TEMPERATURES (IP 68) (up to 600 °C)



### ↓ WITH CONNECTOR (TR 021, TR 021A, TR 021F, TR 02)



### ↓ WITH DISPLAY (series NSD)



## CABLE TEMPERATURE SENSORS

### ■ Type of sensing element:

Resistance - Pt 100/3850, Pt 500/3850, Pt 1000/3850, Ni 1000/5000, Ni 1000/6180, Ni 10000/5000, Ni 10000/6180, Ni 2226 = T1, Ni 891, NTC, PTC

Thermocouple - TCK, TCJ, TCT; Others - KTY, SMT 160, DALLAS, TSic etc.

■ Maximum measuring range: -200 °C to 450 °C (custom manufactured sensors above the stated parameters) ■ Connection: 2wire, 3wire, 4wire

■ Ingress protection: up to IP 68 (according the sensor type) ■ Case diameter: from 1,5 mm ..."according to customer's requirement"

■ Threads: standardly G 1/2", G 1/4", M 10 x 1, M 10 x 1,5 and others based on application ■ Cables: PVC, silicone, Teflon, fibreglass insulation and others

■ Case material: stainless steel DIN 1.4301, DIN 1.4571, DIN 1.4404, brass, dural and etc. ..."according to customer's requirement"

### ↓ SMOOTH CASE



### ↓ THREAD



### ↓ CONTACT



### ↓ BAYONETS



### ↓ PLASTIC CASE



### ↓ CRYOGENIC TEMPERATURE



### ↓ RIGHT-ANGLE



### ↓ ELECTROMOTOR WINDING



## MINERAL INSULATED RESISTANCE TEMPERATURE SENSORS – MGO

■ Temperature range up to 600 °C ■ Case diameter from 1 mm ■ Type of sensing element: Pt 100, Pt 500 or Pt 1000 ■ Shapeable

### ↓ MINERAL INSULATED



### ↓ WITH CONNECTOR



### ↓ WITH CONNECTION HEAD



## THERMOCOUPLE TEMPERATURE SENSORS

- Temperature range up to 1 200 °C
- Case diameter from 1 mm
- Types: TCK, TCJ, TCT, TCS etc.
- Shapeable

↓ MINERAL INSULATED    ↓ WITH BAYONET    ↓ WITH CONNECTOR    ↓ WITH CONNECTION HEAD



## PAIRED TEMPERATURE SENSORS

- Type of sensing element: Pt 100/3850, Pt 500/3850, Pt 1000/3850
- Compliance with standards: EN 60751, EN 1434; MID Certification
- Maximum temperature range: 0 °C to 180 °C
- Compatibility with measuring instruments of the following companies: SIEMENS, LADIS+GYR, KAMPSTRUP, ITRON, COMAC CAL, CODEA, SENSUS METERING and others
- Design variability: mounting into thermowell, direct immersion into the piping



## BIMETALLIC TEMPERATURE SENSORS AND SWITCHES

Sensors

- Max. measuring range: -30 °C to 200 °C
- Measuring system: bimetallic
- Design: into thermowell, contact

Switches

- Switch off / Switch on temperature from 70 to 180 °C
- Design: with a smooth stem, with a thread
- Contact design: normally open / normally closed



## TEMPERATURE SWITCHES

- Design: on a DIN bar, on a console, for interiors and exteriors, for ducts, with an external probe, with or without a display, with an adjustable temperature/with a fixed temperature
- Input: Pt 100/3850, Pt 1000/3850, Ni 1000/6180, TCK
- Output: relay, RS 485
- Maximum measuring range: -50 °C to 400 °C
- Hysteresis: adjustable
- Power supply: 12/24 V or 230 V/50 Hz (according to the sensor type)



## CUSTOM MADE

Complete service includes

- Thorough analysis of the application
- Production and delivery of samples
- Technical support and consulting design of sensor which you need, personal approach
- Price quotation is calculated on the base of required quantity
- Production of sensors including control of every sensor, for every piece
- Delivery date between 7 to 21 days
- Express production and delivery within possibilities of technological process



## CONVERTERS

Temperature – Current / Temp. – Voltage / Temp. – RS 485 / Temp. – CAN protocol

- Output: 4 to 20 mA, 0 to 10 V, RS 485, CAN protocol ■ Power supply: 11 to 30 V<sub>DC</sub> (according type)
- Standard measuring range: -30 °C to 60 °C, 0 °C to 35 °C, 0 °C to 100 °C, 0 °C to 150 °C, 0 °C to 200 °C, 0 °C to 400 °C; possibility of custom setting of the measuring range
- Design: on a DIN bar, wall-mounted version



## TEMPERATURE AND RELATIVE HUMIDITY SENSORS

- Design: for interiors and exteriors, air-conditioning ducts, with an external probe
- Output: two galvanic separated signals 4 to 20 mA, 0 to 10 V, RS 485, CAN protocol, I2C
- Measuring range of relative humidity: 0 to 100 % RH ■ Maximum measuring temperature range: -30 °C to 125 °C according to the sensor type ■ "S" head design is in compliance with the temperature sensor, designed without mobile parts, high sensitivity ■ Option with display



## COMBINED TEMPERATURE, RELATIVE HUMIDITY AND CO<sub>2</sub> SENSORS



- Measured variables: temperature, relative humidity, CO<sub>2</sub>, atmospheric pressure and VOC
- Possible to choose a sensor version with various combinations of measured quantities (combination of two to five measured quantities) by selecting specific sensors
- Outputs: 4 to 20 mA, 0 to 10 V, RS 485, CAN protocol, LED identification
- Design: for interiors and exteriors, air-conditioning ducts, with an external probe



## WIRELESS RADIO SENSORS



- Temperature, relative humidity and CO<sub>2</sub> sensors
- Sensor protection up to IP 65 depending on the sensor type
- Communication is transmitted using the unlicensed 868 MHz band
- Integration into various SCADA systems using the Modbus RTU protocol (RS485)



## FLOW SENSORS AND FLOW SWITCHES OF LIQUIDS

- Liquid output: 4 to 20 mA, normally open contact
- Recommended measuring range: 2 to 5 m/s, 2 to 10 m/s, 2 to 20 m/s
- Design: for explosive environments



## FLOOD DETECTORS

- Design: wall-mounted version or for horizontal surface, with external probe
- Output: the relay output or the output terminal of an open collector type ■ „S” head design



## INDUCTIVE SWITCHES AND OPTICAL SENSORS

### ↓ INDUCTIVE PROXIMITY SWITCHES

Application:

- Rotation control ■ Press work presence
- Revolutions ■ Chain sag ■ Linear motion
- Products on a conveyor ■ Aperture
- Switch position ■ Material thickness
- Pressure ■ Door position ■ Rotary motion
- Object presence ■ Turbine revolutions
- Liquid level etc.



### ↓ OPTICAL LEVEL SENSORS

Suitable for:

- Food Processing Industry (dairies, production of alcoholic and non-alcoholic beverages, breweries)
- Chemical and Petrochemical industry
- Medical and Pharmaceutical industry



## ACCESSORIES

- Thermowells, welded-on pieces, reducers, movable fittings, holders, connectors, bayonet adapters, thermal conductive paste...



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SENSIT s.r.o., Skolni 2610, 756 61 Roznov pod Radhostem, Czech Republic  
T +420 571 625 571 F +420 571 625 572 E [obchod@sensit.cz](mailto:obchod@sensit.cz)

[www.sensit.cz](http://www.sensit.cz)