

DEW POINT SENSOR (-100 ... 0 °C Td) S220



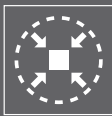
COMPACT DESIGN
Makes it easy to fit into the application



Very fast response time — ensures safe and reliable measurements



S220 FEATURES



COMPACT DESIGN
Makes it easy to fit into the application



PRECISE MEASUREMENT
Unique QCM sensor technology



LOW DEW POINT
Measures down to $-100\text{ }^{\circ}\text{C Td}$



PRESSURE SENSOR
Integrated as option

S220 FEATURES AT A GLANCE

- Small size makes it ideal for dryer installations
- Measures dew points down to $-100\text{ }^{\circ}\text{C Td}$
- SUTO QCM sensor technology
- Version with integrated pressure measurement
- Various output versions available: 1 x 4 ... 20 mA, 2 x 4 ... 20 mA, RS-485 (Modbus), 4 ... 20 mA loop powered
- IP65 casing provides robust protection in rough industrial environment
- Can be installed directly into dryers through G 1/2" thread
- High accuracy of $\pm 2\text{ }^{\circ}\text{C}$ dew point
- M12 connector

S220 SENSOR TECHNOLOGY

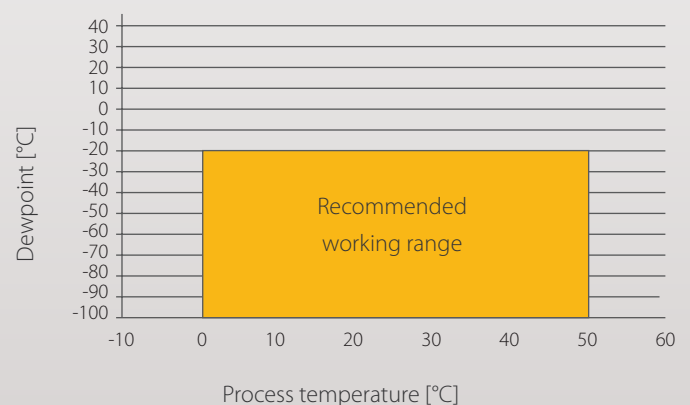


The innovative QCM Sensor Technology used by SUTO measures moisture changes in parts per billion range.

Stated accuracy under following conditions:

- Ambient temperature $23\text{ }^{\circ}\text{C} \pm 3\text{ }^{\circ}\text{C}$
- Process temperature $23\text{ }^{\circ}\text{C} \pm 3\text{ }^{\circ}\text{C}$
- Ambient humidity $< 95\%$, no condensation
- Airflow $> 2\text{ l/min}$ at sensor tip

Recommended working range S220

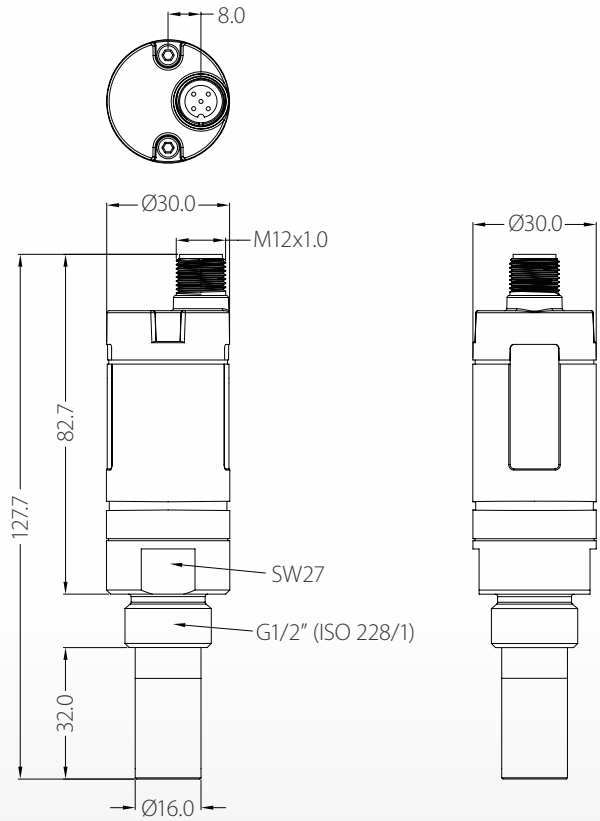


S220 TECHNICAL DATA

General Specifications	
Measurement range	Dew point -100 ... 0 °C Td Temperature -30 ... +70 °C Pressure -0.1 ... 1.6 MPa
Dew point sensor	QCM
Temperature sensor	Pt100
Pressure sensor	Piezo resistive type
Accuracy	Dew point ±2 °C Td Temperature 0.3 °C Pressure 0.05 bar
Operating Pressure	-0.1 ... 1.6 MPa
Operating Temperature (Medium)	-30 ... +70 °C
Measured gases (Medium)	Air, Argon, O ₂ , N ₂ , CO ₂ *
Response Time t90 (@ 4 l/min)	-80 °C Td -> -20 °C Td = 20 sec -20 °C Td -> -80 °C Td = 180 sec
Ambient Temperature	0 ... +50 °C
Ambient Humidity	0 ... 100 % rH
Supply Voltage	12 ... 30 VDC
Current consumption (model depending)	30 mA @ 24 VDC 3-Wire 20 mA @ 24 VDC 2-Wire
Output signals (model depending)	4 ... 20 mA 3-Wire 4 ... 20 mA 2-Wire Modbus/RTU
Electrical connection	M12, 5 poles
Process connection	G 1/2" thread (ISO 228/1) Stainless steel 1.4301 (SUS 304)
Casing material	Zinc alloy
Classification	IP65
EMC	IEC 61326-1
Approval	-
Sensor protection	Sinter filter/perforated cap
Transport Temperature	-30 ... +70 °C
Storage Temperature	-20 ... +50 °C
Weight	204 g

* To support CO₂, the S220 must be configured ex-works or the SFA software must be used. SFA software can be downloaded from the SUTO website.

Dimensions



S220 BENEFITS

The SUTO dew point sensor S220 provides long term stable and reliable dew point measurements at very low dew points in industrial applications.

The sensor technology used in the sensor is developed by SUTO and offers superior measurement signals at very low moisture applications, allowing reliable measurements down to -100 °C.

The included sinter cap protects the sensor from dust and other particles, this ensures a stable measurement and low maintenance at the same time.

The measured sensor data is transmitted via different signals. Depending on the selected model multiple measurement values, like dew point and pressure can be output at the same time. The various analog output options or digital Modbus outputs make the S220 the perfect dew point sensor to fit into any low moisture application.

S220 ORDERING



Visit our website or e-mail us:
www.suto-itec.com
sales@suto-itec.com

Please use the following table to assist in placing your order with our sales staff.

S220 DEW POINT SENSOR (-100 ... 0 °C Td)	
Order No.	Description
S699 0220-X	S220, dew point sensor, -100 ... 0 °C Td, G 1/2" thread, 16 bar, 1 x 4 ... 20 mA
S699 0221-X	S220, dew point sensor, -100 ... 0 °C Td, G 1/2" thread, 16 bar, 2 x 4 ... 20 mA, dew point and temperature
S699 0222-X	S220, dew point sensor, -100 ... 0 °C Td, G 1/2" thread, 16 bar, RS-485 (Modbus)
S699 0223-X	S220, dew point sensor, -100 ... 0 °C Td, G 1/2" thread, 16 bar, incl. pressure, 2 x 4 ... 20 mA, dew point and pressure
S699 0224-X	S220, dew point sensor, -100 ... 0 °C Td, G 1/2" thread, 16 bar, incl. pressure, RS-485 (Modbus)
S699 0225-X	S220, dew point sensor, -100 ... 0 °C Td, G 1/2" thread, 16 bar, loop powered 4 ... 20 mA
Accessories	
A554 2005	Service kit for sensor configuration including software
A699 3491	Measuring chamber for easy installation in compressed air system up to 1.5 MPa
A699 3493	Measuring chamber bypass type (in and out 6 mm hose connection)
R699 3696	Sensor calibration
C190 0193	Perforated filter cap, aluminum
C198 0008	Sinter cap, diameter 16 mm, stainless steel, 30 µm pore size

X: Select the desired sensor protection cap by adding A or B at the end of the order number.

A: stainless steel sinter filter, pore size < 30 µm (standard)

B: Perforated sensor cap (standard, requires a prefilter 0.1 µm)

Example: S699 0220-B