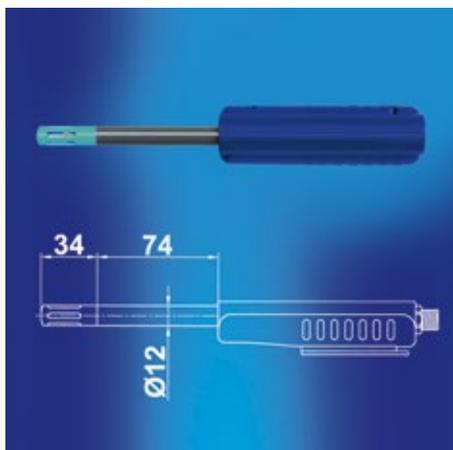


XA1000
XP200

Temperature/Humidity Sensor



Digital TFF20			Order No.
<i>Reference measurement in service and maintenance, suitable for measurements in air conditioning and heating industry segments.</i>			8120.TFF
Technical Data	Dimensions	Length 85 mm, Ø 12 mm	
	Weight	Approx. 50g	
	Protection	Polycarbonate / IP65	
	Permitted operation temp.	0...50°C	
	Permitted humidity	0...100% RH	
	Storage temperature	-20...60°C	
	Storage humidity	20...80% RH	
	Relative Humidity	Measurement range	0... 100% RH
Accuracy		± 2 % (0 ... 90 %), ± 3 % (90 ... 100 %) RH	
Resolution		0.01 % RH	
Principle		Capacitive	
Temperature	Measurement range	- 40 ... 80 °C	
	Accuracy (20°C)	± 0.1 °C	
	Accuracy (0...40°C)	± 0.2 °C otherwise ± 0.5 °C	
	Resolution	0.01 °C	
	Principle	PT1000, Class A, DIN EN 60751	
Absolute Humidity	Measurement range	0...300g/m ³	
	Unit	g/m ³	
Dew Point Temp.	Measurement range	-40...80°C	
Mixing Ratio	Measurement range	0...550g/kg	
Compatibility	XA1000, XP200, OPUS20E		
Accessories	Stainless steel sinter cap		5120.212
	Calibration salt 11,3% RH		5700.113
	Calibration salt 32,8% RH		5700.328
	Calibration salt 52,9% RH		5700.529
	Calibration salt 75,3% RH		5700.753
	Calibration salt 90,1% RH		5700.901
	Calibration adapter		8120.ADAP

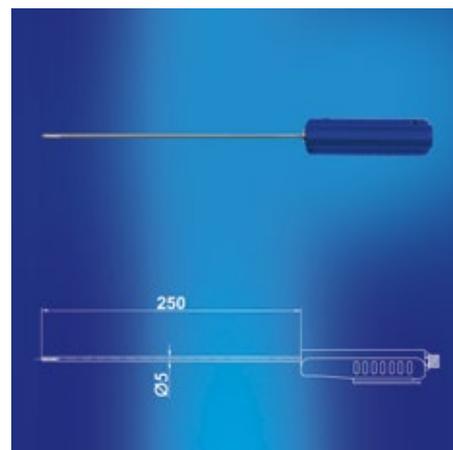


Allround SDI Temperature/Humidity Sensor			Order No.
<i>Compact temperature-/humidity sensor, in stainless steel tube. Application in HVAC field, reference measurement in accordance with ISO9000 Quality Assurance</i>			9130.540
Technical Data	Dimensions Sensor	Length 74 mm, Ø 12 mm	
	Dimensions Housing	117 x 38 mm	
	Weight	Approx. 80g	
	Protection	Housing/Sensor IP40 Sensor head plastic mesh	
	Permitted operation temp.	0...50°C	
	Permitted humidity	0...100% RH	
	Storage temperature	-20...60 °C	
	Storage humidity	20...80% RH	
Relative Humidity	Measurement range	0... 100% RH	
	Accuracy	± 2 % (0 ... 90 %), ± 3 % (90 ... 100 %) RH	
	Resolution	0.1 % RH	
	Principle	Capacitive	
Temperature	Measurement range	-20 ... 70 °C	
	Accuracy (20°C)	± 0.2 °C	
	Accuracy (-10...50°C)	± 0.4 °C otherwise ± 0.5 °C	
	Resolution	0.1 °C	
	Principle	NTC	
Compatibility	XA1000, XP200		
Accessories	Stainless steel sinter cap		5120.212
	Extension and/or connecting cable for digital sensor, 2m		8120.KAB2
	Calibration salt 11,3% RH		5700.113
	Calibration salt 32,8% RH		5700.328
	Calibration salt 52,9% RH		5700.529
	Calibration salt 75,3% RH		5700.753
	Calibration salt 90,1% RH		5700.901
	Calibration adapter		8120.ADAP

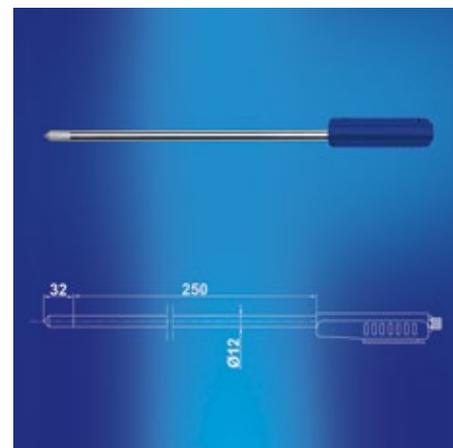
Temperature/Humidity Sensor

XA1000
XP200

SDI Temperature-/Humidity Sensor with 5mm Diameter		Order No.
Compact, slim temperature-/humidity sensor in stainless steel protective tube. With a diameter of only 5mm, the sensor is suitable for applications in measurement areas that are difficult to access.		9130.520
Technical Data	Dimensions sensor tube	Length 250mm, Ø 5mm
	Dimensions housing	117x38 mm
	Weight	Approx. 85g
	Protection	Housing/sensor IP40 sensor head: screwable, stainless steel cap, PTFE filter
	Permitted operation temp.	0...50°C
	Permitted humidity	0...100% RH
	Storage temperature	-20...60°C
	Storage humidity	20...80% RH
	Relative Humidity	Measurement range
Accuracy		±2 % (0 ... 90 %), ±3 % (90 ... 100 %) RH
Resolution		0.1% RH
Principle		Capacitive
Temperature	Measurement range	-40 ... 100 °C
	Accuracy	±0.2°C at 20 °C otherwise ±0.7°C
	Resolution	0.1°C
	Principle	PT1000 (tolerance class B, DIN EN 60751)
Compatibility	XA1000, XP200	
Accessories	Extension and/or connecting cable for digital sensor, 2m	8120.KAB2
	Calibration salt 11,3% RH	5700.113
	Calibration salt 32,8% RH	5700.328
	Calibration salt 52,9% RH	5700.529
	Calibration salt 75,3% RH	5700.753
	Calibration salt 90,1% RH	5700.901
	Calibration adapter	5700.A06



SDI High Temperature-/Humidity Sensor		Order No.
Stainless steel sensor equipped with a Teflon probe is especially suitable for high temperature/humidity measurements.		9130.530
Technical Data	Dimensions sensor tube	Length 250mm, Ø 12mm
	Dimensions housing	117x38 mm
	Weight	Approx. 200g
	Protection	Housing/sensor IP40 sensor head: stainless steel sinter filter
	Permitted operation temp.	0...50°C
	Permitted humidity	0...100% RH
	Storage temperature	-20...60°C
	Storage humidity	20...80% RH
	Relative Humidity	Measurement range
Accuracy		±2 % (0 ... 90 %), ±3 % (90 ... 100 %) RH
Resolution		0.1% RH
Principle		Capacitive
Temperature	Measurement range	-40...180°C (grip of sensing probe up to 80°C)
	Accuracy	±0.2°C at 20 °C otherwise ±0.7°C
	Resolution	0.1°C
	Principle	PT1000 (tolerance class B, DIN EN 60751)
Compatibility	XA1000, XP200	
Accessories	Extension and/or connecting cable for digital sensor, 2m	8120.KAB2
	Calibration salt 11,3% RH	5700.113
	Calibration salt 32,8% RH	5700.328
	Calibration salt 52,9% RH	5700.529
	Calibration salt 75,3% RH	5700.753
	Calibration salt 90,1% RH	5700.901
	Calibration adapter	8120.ADAP



XA1000
XP200

Temperature/Humidity Sensor



High-precision Temperature/Humidity Sensor			Order No.
High-precision Temperature/Humidity Sensor			8130.TFF
Technical data	Measurement accuracy incl. reproducibility and hysteresis	Humidity*: 15...30°C, ±0,5% RH 0...50°C, ±0,8% RH -20...80°C, ±2,5% RH	
	Temperature	Measuring range Operating temperature Storage temperature Principle Accuracy	-20...80°C -20...80°C -10...60°C (non-condensing) NTC 0,15°C between 0...+70°C, otherwise 0,25°C
Relative humidity	Principle	Resistive-electrolytic	
	Measuring range	0 ... 100 %	
Housing	Material	PVDF black	
	Mechanical sensor protection	Standard polyethylene dust filter	
Compatibility	XA1000, XP200, OPUS20E		
Accessories	Calibration salt 11,3% RH		5700.113
	Calibration salt 32,8% RH		5700.328
	Calibration salt 52,9% RH		5700.529
	Calibration salt 75,3% RH		5700.753
	Calibration salt 90,1% RH		5700.901
	Calibration adapter		5700.A13

* The humidity accuracy refers to the nominal values of Novasina humidity standards, which refer to the Greenspan Report.

CO₂ Sensor



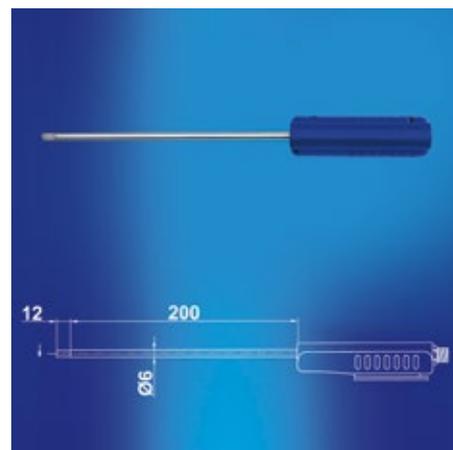
The CO₂ probe is designed for use in harsh, demanding OEM applications. A multiple point CO₂ and temperature adjustment procedure leads to excellent CO₂ measurement accuracy over the entire temperature working range, ideal for use in agriculture or outdoors for instance. The probe incorporates the dual wavelength NDIR CO₂ sensor, which compensates for ageing effects, is highly insensitive to pollution and stands for outstanding long term stability. The measured data range of up to 10000ppm is available on the Modbus or on the E2 digital interface. An optional kit facilitates easy configuration and adjustment. The measurement interval can be set according to the application requirements, by this the average current consumption can be reduced to 120µA for battery-operated devices.

CO ₂ Sensor			Order No.
CO₂ Sensor			7120.CO2
Technical data	Dimensions	Length 96 mm, Ø 18.5 mm	
	Operating temp.	-40...60°C	
	Operating humidity range	0...100% RH (non-condensing)	
	Admissible air pressure	850...1100hPa	
	Storage temp.	-40...60°C	
	Storage humidity	0...100% RH (non-condensing)	
	Storage pressure	700...1100hPa	
	Temperature dependency	typ. 1ppm CO ₂ °C (-20...45°C)	
	Outputs	Digital RS485-BUS	
	Power supply	4,75...7,5V DC, max. 350mA for 0.05s	
	Electrical connection	Connector M12	
	Electromagnetic compatibility (Industrial environment)	EN61326-1 EN61326-2-3	
	CO₂	Principle	Dual wavelength, non-dispersive infrared technology (NDIR)
Measuring range		0 ... 5000 ppm	
Accuracy		at 25°C and 1013mbar: < ±50ppm +3% of measuring value (for averaging output)	
Housing	Material	Plastic PC	
	Protection level	IP65	
Compatibility	XA1000, XP200		
Accessories	Y Connector for Temperature/Humidity and CO ₂ sensor (IAQ-Indoor Air Quality Measurement)		8120.STY

SDI Airflow-/Temperature Sensor (0...2m/s) (0...20m/s)

XP400

SDI Airflow-/Temperature Sensor (0...2m/s)		Order No.
Reference device for airflow and temperature measurements in service and maintenance. Proof of air tightness of buildings and rooms.		6120.510
Technical data	Dimensions sensor tube	Length 200mm, Ø 6mm
	Dimensions housing	117x38mm
	Weight	Approx. 200g
	Protection	Housing: plastic (ABS) IP40 sensor head: stainless steel
	Permitted operation temp.	0...50°C
	Permitted humidity	0...95% RH
	Storage temperature	-20...60°C
	Storage humidity	20...80% RH
Airflow	Measurement range	0...2m/s
	Accuracy	±(0.08m/s + 1% of measured value)
	Resolution	0.01 m/s
	Principle	Hot film anemometer
Temperature	Measurement range	-20...70°C
	Accuracy	±0.7°C in the range 0...+50°C
	Resolution	0.1°C
	Principle	NTC
Compatibility	XA1000	
Accessories	Extension and/or connecting cable for digital sensor, 2m	8120.KAB2



SDI Airflow-/Temperature Sensor (0...20m/s)		Order No.
Application: airflow and temperature measurements in climate measurement technology		6120.520
Technical data	Dimensions sensor tube	Length 200mm, Ø 6mm
	Dimensions housing	117x38mm
	Weight	Approx. 200g
	Protection	Housing: plastic (ABS) IP40 sensor head: stainless steel
	Permitted operation temp.	0...50°C
	Permitted humidity	0...95% RH
	Storage temperature	-20...60°C
	Storage humidity	20...80% RH
Airflow	Measurement range	0...20m/s
	Accuracy	±(0.2m/s + 2% of measured value)
	Resolution	0.01 m/s
	Principle	Hot film anemometer
Temperature	Measurement range	-20...70°C
	Accuracy	±0.7°C in the range 0...+50°C
	Resolution	0.1°C
	Principle	NTC
Compatibility	XA1000	
Accessories	Extension and/or connecting cable for digital sensor, 2m	8120.KAB2

