Robust technology in a sophisticated design.

Precision and reliabilty in one – made by professionals for professionals

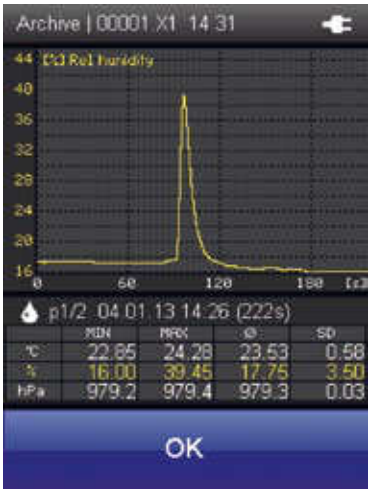
Measuring on the Go

- TFT colour display, legible in sunlight
- Capacitive touch operation
- Sampling rate 1s
- Data recording of up to 3 channels in parallel
- Graphical analysis with standard deviatzion representation
- Integrated Flash memory for 200 recording blocks with maximum length of 3 hours
- USB port for data transfer to SmartGraph3 (included in delivery)
- Various languages selectable
- Measuring temperature, humidity, airflow via external digital sensors
- Integrated air pressure measurement
- Numerous calculated measurements
- Online firmware update

Premium Segment XA1000

The most precice and flexible all-rounder instrument for professional applications-easy to handle and robust. Allows various intelligent sensors to be connected with automatic recognition, saves measuring campaignes, allows all climate data to be calculated and archieved on a computer for further evaluation by SmartGraph3 software.

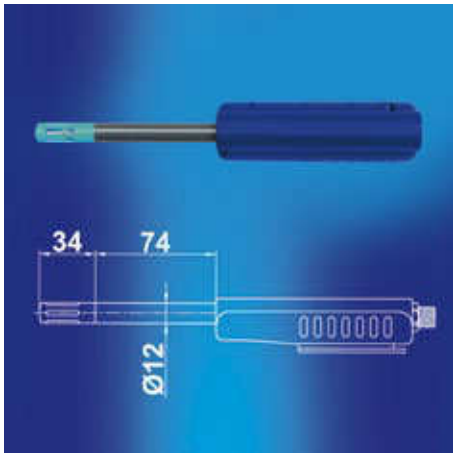
Hand-held Measuring Device XA1000 "All-in-ONE"			Order No.
"All-rounder" in the measurement technology segment. A universal measuring device for professionals with the inclusion of exchangeable SDI Sensors. Highly precise measurements of temperature and relative humidity. Integrated air pressure sensor, online/offline data recording. Equipment test certificate, can be calibrated.			**5900.00**
Technical data	Dimensions	170 x 62 x 34 mm	
	Weight	ca. 205g	
Storage conditions	Permitted ambient temperature	-20...60°C	
	Permitted rel. humidity	<90%RH non-condensing	
Operating conditions	Permitted rel. humidity	<90%RH (20g/m³) non-condensing	
	Permitted altitude above sea level	4000m	
Power supply	Power supply	4 Alkaline LR6 AA 1.5V / USB 5V	
	Active power consumption	Approx. 400mW	
	Battery life passive	Approx. 1 year	
	Battery life active	Min. 24 hours	
	Sensor power supply	5.5V ± 10% DC, max. 200mA	
Data storage	Integrated data storage	Up to 200 gauges taking approx. 1 mill. values	
Interface	USB	Cable and SmartGraph3 software included	
Representation	Definition of measured values	2 decimal places	
Display	Control	Touch screen, capacitive	
	Technology	TFT, resolution 240x320, 65k colours, very good contrast due to Piezoresistive technology	
	Surface, toughened glass	Degree of hardness: 7, scratch-resistant	
Integrated air pressure sensor	Measuring range (full accuracy)	800...1,100mbar	
	Accuracy at 25°C,1013.25mbar	0.5mbar	
	Long-term stability	typ. - 1mbar/year	
	Measurement resolution	0.024mbar	
	Measuring principle	Piezoresistive	
Calculated measurement categories for external temperature/humidity sensors	Mathematical: MIN/MAX/AVG/HOLD		
	Temperature (°C/°F)		
	Rel. humidity (%RH)		
	Rel. humidity of ice (%RH)		
	Water vapour density (absolute humidity) g/m³		
	Dew point temperature °C/°F		
	Frost point temperature °C/°F		
	Mixing ratio at saturation (100%) g/kg		
	Volume fraction of water vapour /mass fraction of water vapour (%)		
	Wet-bulb temperature °C/°F		
	Ice-bulb temperature °C/°F		
	Specific Enthalpy (mass of air) kJ/kg		
	Saturation vapour pressure above ice/water (hPa)		
	Vapour particle pressure (hPa)		
	Air density kg/m³		
Calculated measurement categories for external airflow sensors	Operating airflow volume - various units: (m³/s) (m³/h) (l/min)		
	Standard airflow volume: DIN 1343 (°C, 1013.25hPa), ISO 2533 (15°C, 1013.25hPa), DIN 1945 (20°C, 1013.25hPa)		
	Various units: (m³/s), (m³/h), (l/min)		
Compatibility	Sensor/probe: all SDI/digital sensors (temperature, humidity, SDI airflow, air pressure integrated)		
Accessories	Connecting cable for external sensors, 2m		**8120.KAB2**
	Connecting cable for external sensors, 10m		**8120.KAB10**



Compatible sensors for XA1000		Page
Temperature/ humidity	digital TFF20	20
	Allround SDI	20
	4 mm diameter SDI	21
	High temperature SDI	21
	Sintered stainless steel filter	22
Airflow/ temperature	SDI (0…2m/s)	23
	SDI (0…20m/s)	23

Temperature/Humidity Sensor

Digital TFF20			Order No.
Reference measurement in service and maintenance, suitable for measurements in air conditioning and heating industry segmetnts.			**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% r.h.	
	Storage temperature	-20...60°C	
	Storage humidity	20...80% r.h.	
Relative Humidity	Measurement range	0… 100% r. h.	
	Accuracy	±2 % (0 … 90 %), ±3 % (90 … 100 %) r. h.	
	Resolution	0.01% r.h.	
	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/m³	
	Unit	g/m³	
Dew Point Temperature	Measurement range	-40...80°C	
Mixing Ratio	Measurement range	0...550g/kg	
Compatibility	XA1000		
Accessories	Stainless steel sinter cap		**5120.212**

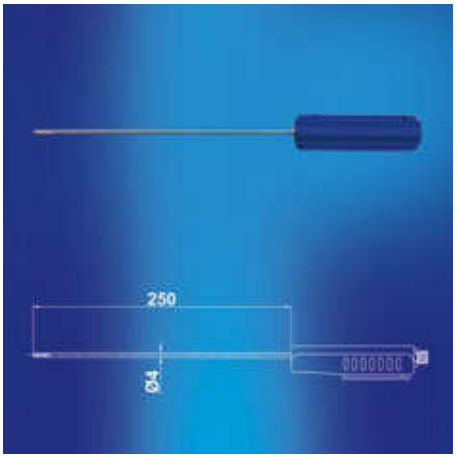


Allround SDI Temperature/Humidity Sensor			Order No.
Compact temperature-/humidity sensor, in stainless steel tube. Application in HVAC field, reference measurement in accordance with ISO9000 Quality Assurance			**9130.540**
Technical Data	Dimensions Sensor	Length 74 mm, Ø 12 mm	
	Dimensions Housing	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% r.h.	
	Storage temperature	-20...60 °C	
	Storage humidity	20...80% r.h.	
Relative Humidity	Measurement range	0… 100% r. h.	
	Accuracy	±2 % (0 … 90 %), ±3 % (90 … 100 %) r. h.	
	Resolution	0.1% r.h.	
	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		
Accessories	Stainless steel sinter cap		**5120.212**
	Extension cable for sensor, 2m		**8120.KAB2**

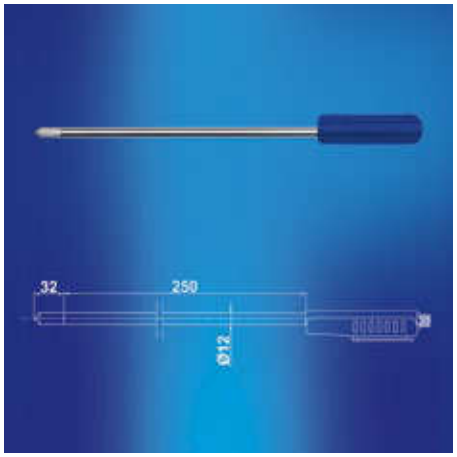
More Information Lufft X-Series
www.lufft-xseries.com

Temperature/Humidity Sensor

SDI Temperature-/Humidity Sensor with 4mm Diameter			Order No.
Compact, slim temperature-/humidity sensor in stainless steel protective tube. With a diameter of only 4mm, the sensor is suitable for applications in measurement areas that are difficult to access.			**9130.520**
Technical Data	Dimensions sensor tube	Length 250mm, Ø 4mm	
	Dimensions housing	117 x 38 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% r.h.	
	Storage temperature	-20...60°C	
	Storage humidity	20...80% r.h.	
Relative Humidity	Measurement range	0…100% r. h.	
	Accuracy	±2 % (0…90 %), ±3 % (90…100 %) r. h.	
	Resolution	0.1% r.h.	
	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		
Accessories	Extension cable for sensor, 2m		**8120.KAB2**



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	117 x 38 mm	
	Weight	Approx. 200g	
	Protection	Housing/sensor IP40 sensor head: stainless steel sinter filter	
	Permitted operation temp.	0...50°C	
	Permitted humidity	0...100% r.h.	
	Storage temperature	-20...60°C	
	Storage humidity	20...80% r.h.	
Relative Humidity	Measurement range	0…100% r. h.	
	Accuracy	±2 % (0…90 %), ±3 % (90…100 %) r. h.	
	Resolution	0.1% r.h.	
	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		
Accessories	Extension cable for sensor, 2m		**8120.KAB2**



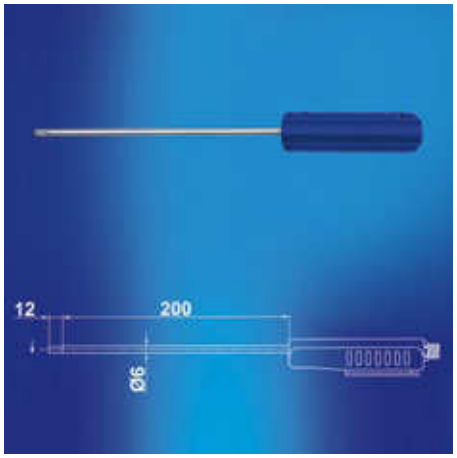
More Information Lufft X-Series
www.lufft-xseries.com

Temperature/Humidity Sensor

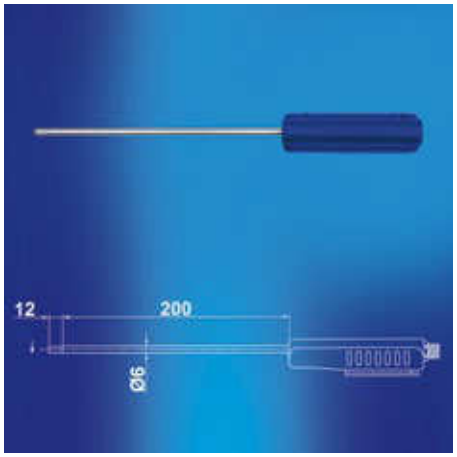
Stainless Steel Sinter Filter			Order No.
Stainless steel sinter filter for high dirt protection			**5120.212**
Technical data	Material	Sintered stainless steel	
	Response time	30s	
	Size of pores	10µm	

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

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	117 x 38 mm	
	Weight	Approx. 200g	
	Protection	Housing: plastic (ABS) IP40 sensor head: stainless steel	
	Permitted operation temp.	0...50°C	
	Permitted humidity	0...95% r.h.	
	Storage tempe-rature	-20...60°C	
	Storage humidity	20...80% r.h.	
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 cable for 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	117 x 38 mm	
	Weight	Approx. 200g	
	Protection	Housing: plastic (ABS) IP40 sensor head: stainless steel	
	Permitted operation temp.	0...50°C	
	Permitted humidity	0...95% r.h.	
	Storage tempe-rature	-20...60°C	
	Storage humidity	20...80% r.h.	
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 cable for sensor, 2m		**8120.KAB2**



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