Hand held measuring device XA1000 - „all in one“

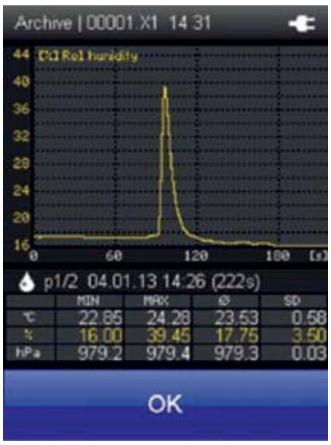
Universal measuring device for professionals with the inclusion of exchangeable SDI sensors (automatically recognised).

High accurate measurement of
- Barometric air pressure
- Temperature
- Relative Humidity and Air Flow

Online-/Offline data recording

Can be calibrated

Including PC-Software SmartGraph3 to archive and evaluate of the stored data



- Touchscreen operation
- USB interface incl. cable

Technical Data	
Display:	TFT 240 x 320, 65k colours, with capacitive Touch screen
Display surface:	Toughened glass, scratch-resistant, 7 degree of hardness
Display resolution:	2 decimal places
Interface:	USB (cable and PC software SmartGraph3 included)
Data storage:	up to 200 gauges taking approx. 1 million values
Power supply:	4 Alkaline LR6 AA (included), or via USB 5V Optional: mains adapter 115…230 VAC
Power consumption:	approx. 400 mW (active)
Battery life:	approx. 1 year passive; min. 24 hours active
Integr. sensor supply:	5.5 V ±10% DC, max. 200 mA
Integrated **Air Pressure sensor:** (barometric pressure)	Range 800…1100 mbar Accuracy 0.5 mbar (at 25°C/1013.25 mbar) Resolution 0.024 mbar Measuring principle: piezoresistive
Opteration conditions:	<90% r.h. (20 g/m³) non-condensing max. 4000 m altitude above sea level
Storage conditions:	-20…+60°C ambient temperature <90% r.h. non-condensing
Dimension:	170 x 62 x 34 mm
Weight:	approx. 205 g

Calculated measurement categories for external temperature/humidity sensors
Mathematical: MIN, MAX, AVG, HOLD
Temperature (°C/°F)
Relative humidity (% r.h)
Relative humidity of ice (% r.h)
Water vabour 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
Operational airflow volume: Various units: m³/s, m³/h, l/min
Standard airflow volumes: DIN 1343: °C; 1013.25 hPa ISO 2533: 15°C; 1013.25 hPa DIN 1945: 20°C; 1013.25 hPa

Temperature-Humidity Sensors	Digital temperature/humidity sensor TFF20 Reference device in service and maintenance, suitable for air conditioning and heading segments.	Allround SDI temperature/humidity sensor compact, stainless steel tube HVAC field, reference for ISO 9000.	SDI temperature/humidity sensor 4 mm diameter compact slim with stainless steel protective tube also measurements in difficult to access areas.	SDI high temperature/humidity sensor Stainless steel sensor with Teflon probe, suitable for high temperature.
Order-Code:	**8120.TFF**	**9130.540**	**9130.520**	**9130.530**
Dimensions	Length 85 mm x diameter 12 mm	Sensor length 74 mm x diameter 12 mm Housing 117 x 38 mm	Sensor tube length 250 mm x diameter 4 mm Housing 117 x 38 mm	Sensor tube length 250 mm x diameter 12 mm Housing 117 x 38 mm
Weight	approx. 50 g	approx. 80 g	approx. 85 g	approx. 200 g
Protection	Polycarbonate / IP 65	Housing/Sensor IP 40 Sensor head plastic mesh	Housing IP 40 / sensor IP 40 sensor head: screwable, stainless steel cap, PTFE filter	Housing IP 40 / sensor IP 40 sensor head stainless steel sinter filter
Perm. operation temp.	0...50°C	0...50°C	0...50°C	0...50°C
Permitted humidity	0...95% r.h.	0...95% r.h.	0...95% r.h.	0...95% r.h.
Storage temperature	-20...+60°C+60°C	-20...+60°C	-20...+60°C	-20...+60°C
Storage humidity	20...80% r.h.	20...80% r.h.	20...80% r.h.	20...80% r.h.
Relative Humidity:				
Measurement range	0.00...100.00% r.h.	0...100% r.h.	0.00...100.00% r.h.	0.00...100.00% r.h.
Accuracy	±2% (0...90%); ±3% (90...100%) r.h.	±2% (0...90%); ±3% (90...100%) r.h.	±2% (0...90%); ±3% (90...100%) r.h.	±2% (0...90%); ±3% (90...100%) r.h.
Resolution	0.01% r.h.	0.1% r.h.	0.1% r.h.	0.1% r.h.
Principle	capacitive	capacitive	capacitive	capacitive
Temperature:				
Measurement range	-40...+80°C	-20...+70°C	-40...+100°C	-40...+180°C
Accuracy (20°C)	±0.1°C	±0.2°C	±0.2°C	±0.2°C
Accuracy	±0.2°C (0...40°C), otherwise ±0.5°C	±0.4°C (-10...+50°C), otherwise ±0.5°C	±0.7°C	±0.7°C
Resolution	better 0.01°C	0.1°C	0.1°C	0.1°C
Principle	Pt1000, Class A, DIN EN 60751	NTC	Pt1000, Class B, DIN EN 60751	Pt1000, Class B, DIN EN 60751)
Absolute Humidity:				
Measurement range	0...300 g/m³			
Unit	g/m³			
Dew Point Temperature:				
Measurement range	-40...+80°C			
Mixing Ratio Compatibility:				
Measurement range	0...550 g/kg			

Airflow-Temperature Sensors	SDI Airflow-/Temperature Sensor 0...2 m/s Reference device in service and maintenance, Proof air tightness of buildings and rooms.	SDI Airflow-/Temperature Sensor 0...20 m/s Airflow and temperature measurement in climate measurement technology.
Order-Code:	**6120.510**	**6120.520**
Dimensions	Sensor tube length 200 mm x diameter 6 mm Housing 117 x 38 mm	Sensor tube length 200 mm x diameter 6 mm Housing 117 x 38 mm
Weight	approx. 200 g	approx. 200 g
Protection	Housing: plastic (ABS) IP40 sensor head: stainless steel	Housing: plastic (ABS) IP40 sensor head: stainless steel
Perm. operation temp.	0...50°C	0...50°C
Permitted humidity	0...95% r.h.	0...95% r.h.
Storage temperature	-20...+60°C	-20...+60°C
Storage humidity	20...80% r.h.	20...80% r.h.
Airflow:		
Measurement range	0...2 m/s	0...20 m/s
Accuracy	20°C, 45% r.h.; 1013 hPa: ±(0.04 m/s +1% of measured value)	
Resolution	0.01 m/s	
Principle	Hot film aneometer	
Temperature:		
Measurement range	-20...+70°C	
Accuracy	±0.7°C in the range 0...50°C and v > 0.5 m/s	
Resolution	0.1°C	
Principle	NTC	

8120.TFF

9130.540

9130.520

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6120.510 & 6120.520

DRUCK & TEMPERATUR Leitenberger GmbH • Bahnhofstr. 33 • D-72138 Kirchentellinsfurt • GERMANY
Tel. +49 (0) 7121-90920-0 • Fax +49 (0) 7121-90920-99 • DT-Info@Leitenberger.de • www.druck-temperatur.de • www.LR-Cal.net