Genuine glass surface with high resolution colour

X(pert) P(rofessional) Series

- TFT LCD, anti-glare colour display Capacitive touch screen
- Sampling rate 1s
- Data recording simultaneously on up to 3 channels
 Graphical analysis including standard deviation
- Integrated flash memory with space for up to 200 data blocks, or up to three hours continuous recording
- USB port for data transfer to Smartgraph 3 (included in delivery)
- Multilingual interface
- Numerous dimensions calculated
- Online firmware update

Hand-held measuring device XP200/ XP201 for measuring temperature and humidity



X-pert range for humidity and temperature measurements in climate and environmental technology.

torage conditions Dimensions 170 x 62 x 34 mm	Hand-held measuring	g device XP200		Order N
Weight	Temperature and hur	nidity measuring device o	compatible with various intelligent sensors.	5820.00
torage conditions Permitted ambient temperature Permitted rel. humidity perating Onditions Permitted rel. humidity Permitted altitude above sea level Active power consumption Battery life passive Battery life active Min. 24 hours Sensor power supply ata storage Integrated data storage In	Technical data	Dimensions	170x62x34mm	
temperature Permitted rel. humidity Permitted altitude above sea level 4000m ower supply Power supply 4 Alkaline LR6 AA 1.5V / USB 5V Active power consumption Battery life passive Approx. 400mW Sensor power supply 5.5V ± 10% DC, max. 200mA Up to 200 data/approx. 1 Mio measured values Up to 200 data/approx. 1 Mio measured values Control Touch screen, capacitive Technology TFT, resolution 240x320, 65k colours, very good contrast due to Piezoresistive technology Surface, toughened glass Measuring range (full accuracy) Accuracy at 25°C,1013.25mbar Long-term stability Measurement resolution Measured resolution Measured temperature ("C"F") Rel. humidity of ice (% RH) Water vapour density (absolute humidity) g/m³ Dew point temperature "C"F" Rel. humidity of ice (% RH) Water vapour density (absolute humidity) g/m³ Dew point temperature "C"F" Rel. humidity of ice (% RH) Water vapour density (absolute humidity) g/m³ Dew point temperature "C"F" Rel. humidity of ice (% RH) Water vapour density (absolute humidity) g/m³ Dew point temperature "C"F" Rel. humidity of ice (% RH) Water vapour density (absolute humidity) g/m³ Dew point temperature "C"F" Rel. humidity of ice (% RH) Water vapour density (absolute humidity) g/m³ Dew point temperature "C"F" Rel. humidity of ice (% RH) Water vapour density (absolute humidity) g/m³ Dew point temperature "C"F" Rel. humidity of ice (% RH) Water vapour density (absolute humidity) g/m³ Dew point temperature "C"F" Rel. humidity of ice (% RH) Water vapour pressure above ice/water (hPa) Water vapour particle pressure (hPa) Water vapour particle pressure (hPa) Water vapour particle pressure (hPa) Air density kg/m³ Extension and/or connecting cable for digital sensor, 2m 8120.KA		Weight	Approx. 205g	
Permitted altitude above sea level Ower supply	Storage conditions		-2060°C	
permitted altitude above sea level above sea l		Permitted rel. humidity	<90% RH non-condensing	
above sea level above sea level Active power supply Active power consumption Battery life passive Battery life active Min. 24 hours Sensor power supply Integrated data storage Integrated all SmartGraph3 software included Included Integrated active Control Integrated active Integrated act	Operating conditions	Permitted rel. humidity	<90% RH (20g/m³) non-condensing	
Active power consumption Battery life passive Approx. 1 year Battery life passive Approx. 1 year Battery life active Min. 24 hours Sensor power supply 5.5V ± 10% DC, max. 200mA Integrated data storage Up to 200 data/approx. 1 Mio measured values cable and SmartGraph3 software included besolution Definition of measured 2 decimal places values Control Touch screen, capacitive Technology TFT, resolution 240x320, 65k colours, very good contrast due to Piezoresistive technology Surface, toughened glass tegrated air ressure sensor Accuracy at 25°C,1013.25mbar Long-term stability typ 1mbar/year Accuracy at 25°C,1013.25mbar Long-term stability typ 1mbar/year Measuring principle Piezoresistive Mathematical: MIN/MAX/AVG/HOLD Temperature (°C/°F) Rel. humidity (% RH) Rel. humidity (% RH) Rel. humidity (% RH) Water vapour density (absolute humidity) g/m³ Dew 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 Specific Enthalpy (mass of air) kJ/kg Saturation vapour pressure above ice/water (hPa) Water vapour density kg/m³ Sceessories Extension and/or connecting cable for digital sensor, 2m Approx. 1 year Min. 24 hours Min. 24 hours Min. 24 hours Min. 24 hours Approx. 1 year Min. 24 hours Approx. 1 year Min. 24 hours Approx. 1 year Approx. 2 year Approx. 1 year Approx. 1 year Approx. 2 year Approx. 2 year Approx. 1 year Approx. 2 year Approx. 1 year Approx. 2 year Approx. 3 year Approx. 2 year Approx. 4 year Approx. 4 year Approx. 2 year Approx. 2 year Approx. 2 year Approx. 1 year Approx. 2 year Approx. 2 year Approx. 2 year Approx. 4 year Approx. 4 year Approx. 2 year Approx. 2 year Approx. 4 year Approx. 4 year A			4000m	
consumption Battery life passive Approx. 1 year Battery life active Min. 24 hours Sensor power supply 5.5V ± 10% DC, max. 200mA Integrated data storage Values Cable and SmartGraph3 software included esolution Definition of measured values Control Touch screen, capacitive Technology TFT, resolution 240x320, 65k colours, very good contrast due to Piezoresistive technology Surface, toughened glass Measuring range (full accuracy) Accuracy at 25°C,1013.25mbar Long-term stability typ 1mbar/year Measurement resolution 0.024mbar Measurement resolution 0.024mbar Measuring principle Piezoresistive Mathematical: MIN/MAX/AVG/HOLD 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 Specific Enthalpy (mass of air) kJ/kg Saturation vapour perssure above ice/water (hPa) Water vapour particle pressure (hPa) Air density kg/m³ Eccessories Extension and/or connecting cable for digital sensor, 2m 8120.KA	Power supply	Power supply	4 Alkaline LR6 AA 1.5V / USB 5V	
Battery life active Sensor power supply Integrated data storage Integrated data storage Integrated data storage USB Cable and SmartGraph3 software included Pesolution Definition of measured values Control Touch screen, capacitive Technology TFT, resolution 240x320, 65k colours, very good contrast due to Piezoresistive technology Surface, toughened glass Gouracy at 25°C,1013.25mbar Long-term stability Measurement resolution Measuring principle Mathematical: MIN/MAX/AVG/HOLD Temperature "C"F" Rel. humidity of ice (% RH) Water vapour density (absolute humidity) g/m³ Dew point temperature "C"F Firost point temperature "C"F Specific Enthalpy (mass of air) kJ/kg Saturation vapour pressure above ice/water (hPa) Wate vapour particle pressure (hPa) Air density kg/m³ Eccessories Min. 24 hours 5.5V ± 10% DC, max. 200mA Up to 200 data/approx. 1 Mio measured values Cable and SmartGraph3 software included Up to 200 data/approx. 1 Mio measured values Cable and SmartGraph3 software included Us 20 detmal places Values Cable and SmartGraph3 software included Up to 200 data/approx. 1 Mio measured values Included Values Seculous (Procoman, 200 data and SmartGraph3 software Included Us 20 decimal places Values Seculous (Procoman, 200 data/approx. 1 Mio measured values Values Values Seculous (Procoman, 200 data/software Included Values Values Seculous (Procoman, 200 data/software Included Values V		•	Approx. 400mW	
Sensor power supply Integrated data storage Integrated data storage Integrated data storage Integrated data storage Integrated Up to 200 data/approx. 1 Mio measured values Cable and SmartGraph3 software included Include		Battery life passive	Approx. 1 year	
Integrated data storage Integrated data storage Integrated USB Cable and SmartGraph3 software included		Battery life active	Min. 24 hours	
values Cable and SmartGraph3 software included esolution Definition of measured 2 decimal places values isplay Control Technology TFT, resolution 240x320, 65k colours, very good contrast due to Piezoresistive technology Surface, toughened plass Surface, toughened plass Measuring range (full 8001,100mbar accuracy) Accuracy at 25°C,1013.25mbar Long-term stability typ 1mbar/year Measurement resolution 0.024mbar Measuring principle Piezoresistive Measuring principle Piezoresistive Mathematical: MIN/MAX/AVG/HOLD Temperature "C/"F Rel. humidity Gice (% RH) Water vapour density (absolute humidity) g/m³ Dew 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 Specific Enthalpy (mass of air) kJ/kg Saturation vapour pressure above ice/water (hPa) Water vapour particle pressure (hPa) Air density kg/m³ ccessories Extension and/or connecting cable for digital sensor, 2m 8120.KA		Sensor power supply	5.5V ± 10% DC, max. 200mA	
included Definition of measured values Control Touch screen, capacitive Technology TFT, resolution 240x320, 65k colours, very good contrast due to Piezoresistive technology Surface, toughened glass Measuring range (full accuracy) Accuracy at 25°C, 1013.25mbar Long-term stability typ 1mbar/year Measurement resolution 0.024mbar Measuring principle Piezoresistive 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 Specific Enthalpy (mass of air) kJ/kg Saturation vapour perssure above ice/water (hPa) Water vapour particle pressure (hPa) Air density kg/m³ 8120.KA	Data storage	Integrated data storage	•	
values Control Technology TFT, resolution 240x320, 65k colours, very good contrast due to Piezoresistive technology Surface, toughened glass Measuring range (full accuracy) Accuracy at 25°C,1013.25mbar Long-term stability typ 1mbar/year Measurement resolution Measuring principle Piezoresistive Mathematical: MIN/MAX/AV/G/HOLD Temperature (°C/°F) Rel. humidity (6 RH) Rel. humidity of ice (% RH) Water vapour density (absolute humidity) g/m³ Dew 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 Specific Enthalpy (mass of air) kJ/kg Saturation vapour pressure above ice/water (hPa) Water vapour particle pressure (hPa) Air density kg/m³ Ccessories Extension and/or connecting cable for digital sensor, 2m 8120.KA	Interface		·	
Technology TFT, resolution 240x320, 65k colours, very good contrast due to Piezoresistive technology Surface, toughened glass Measuring range (full accuracy) Accuracy at 25°C,1013.25mbar Long-term stability typ 1mbar/year Measurement resolution 0.024mbar Measuring principle Piezoresistive 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 Mixing ratio at saturation (100%) g/kg Volume fraction of water vapour /mass fraction of water vapour (%) Wet-bulb temperature °C/°F Specific Enthalpy (mass of air) kJ/kg Saturation vapour particle pressure (hPa) Air density kg/m³ Extension and/or connecting cable for digital sensor, 2m 8120.KA	Resolution		2 decimal places	
very good contrast due to Piezoresistive technology Surface, toughened glass Measuring range (full accuracy) Accuracy at 25°C,1013.25mbar Long-term stability typ 1mbar/year Measurement resolution Measurement resolution Measuring principle Piezoresistive 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 Specific Enthalpy (mass of air) kJ/kg Saturation vapour particle pressure (hPa) Air density kg/m³ Extension and/or connecting cable for digital sensor, 2m 8120.KA	Display	Control		
glass Measuring range (full accuracy) Accuracy at 25°C,1013.25mbar Long-term stability typ 1mbar/year Measurement resolution 0.024mbar Measuring principle Piezoresistive Mathematical: MIN/MAX/AVG/HOLD Temperature (°C/°F) Rel. humidity (% RH) Rel. humidity (% RH) Water vapour density (absolute humidity) g/m³ Dew 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 Specific Enthalpy (mass of air) kJ/kg Saturation vapour particle pressure (hPa) Air density kg/m³ 8001,100mbar 900100mbar 900100mb		Technology	very good contrast due to Piezoresistive	
Accuracy at 25°C,1013.25mbar Long-term stability typ 1mbar/year Measurement resolution 0.024mbar Measuring principle Piezoresistive 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) Water vapour particle pressure (hPa) Air density kg/m³ Ccessories Extension and/or connecting cable for digital sensor, 2m 8120.KA			Degree of hardness: 7, scratch-resistant	
25°C,10 ¹ 3.25mbar Long-term stability typ 1mbar/year Measurement resolution 0.024mbar Measuring principle Piezoresistive 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 Specific Enthalpy (mass of air) kJ/kg Saturation vapour perssure above ice/water (hPa) Water vapour particle pressure (hPa) Air density kg/m³ Extension and/or connecting cable for digital sensor, 2m 8120.KA	Integrated air pressure sensor		8001,100mbar	
Measurement resolution 0.024mbar Measuring principle Piezoresistive 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) Water vapour particle pressure (hPa) Air density kg/m³ Extension and/or connecting cable for digital sensor, 2m 8120.KA			0.5mbar	
Measuring principle Piezoresistive 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) Water vapour particle pressure (hPa) Air density kg/m³ Extension and/or connecting cable for digital sensor, 2m 8120.KA		Long-term stability	typ 1mbar/year	
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) Water vapour particle pressure (hPa) Air density kg/m³ Extension and/or connecting cable for digital sensor, 2m 8120.KA		Measurement resolution		
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) Water vapour particle pressure (hPa) Air density kg/m³ Extension and/or connecting cable for digital sensor, 2m 8120.KA		· · ·		
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) Water vapour particle pressure (hPa) Air density kg/m³ CCESSORIES Rel. humidity (% RH) Rel.	Calculated measure-		AVG/HOLD	
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) Water vapour particle pressure (hPa) Air density kg/m³ CCESSORIES Rel. humidity (% RH) Rel.	ment categories for external temperature/humidity sensors	. ,		
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) Water vapour particle pressure (hPa) Air density kg/m³ Ccessories Extension and/or connecting cable for digital sensor, 2m 8120.KA		, ,		
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) Water vapour particle pressure (hPa) Air density kg/m³ Ccessories Extension and/or connecting cable for digital sensor, 2m 8120.KA		,		
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) Water vapour particle pressure (hPa) Air density kg/m³ Ccessories Extension and/or connecting cable for digital sensor, 2m 8120.KA				
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) Water vapour particle pressure (hPa) Air density kg/m³ Ccessories Extension and/or connecting cable for digital sensor, 2m 8120.KA				
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) Water vapour particle pressure (hPa) Air density kg/m³ ccessories Extension and/or connecting cable for digital sensor, 2m 8120.KA				
Wet-bulb temperature °C/°F Ice-bulb temperature °C/°F Specific Enthalpy (mass of air) kJ/kg Saturation vapour pressure above ice/water (hPa) Water vapour particle pressure (hPa) Air density kg/m³ Ccessories Extension and/or connecting cable for digital sensor, 2m 8120.KA				
Ice-bulb temperature °C/°F Specific Enthalpy (mass of air) kJ/kg Saturation vapour pressure above ice/water (hPa) Water vapour particle pressure (hPa) Air density kg/m³ Ccessories Extension and/or connecting cable for digital sensor, 2m 8120.KA				
Specific Enthalpy (mass of air) kJ/kg Saturation vapour pressure above ice/water (hPa) Water vapour particle pressure (hPa) Air density kg/m³ Ccessories Extension and/or connecting cable for digital sensor, 2m 8120.KA		•		
Saturation vapour pressure above ice/water (hPa) Water vapour particle pressure (hPa) Air density kg/m³ ccessories Extension and/or connecting cable for digital sensor, 2m 8120.KA				
Water vapour particle pressure (hPa) Air density kg/m³ ccessories Extension and/or connecting cable for digital sensor, 2m 8120.KA				
Air density kg/m³ ccessories Extension and/or connecting cable for digital sensor, 2m 8120.KA				
ccessories Extension and/or connecting cable for digital sensor, 2m 8120.KA				
		, ,		
J. 2011 201	Accessories			8120.KA 8120.KA



XP201 Order No. 5810.20
High quality wooden case and
High-precision Temperature/Humidity Sensor
Order No.8130.TFF from page 26
are included in delivery.

Compatible sensors for XP200		
Tempera-	Digital TFF20	24
ture/ humidity	High-precision Tempera- ture/Humidity Sensor	26
	Allround SDI	24
	5 mm diameter SDI	25
	High temperature SDI	25
CO ₂	CO ₂ Sensor	26