

OPUS20 Multiple Functions with Internal Sensors

Functions	THI 8120.00	THIP 8120.10	TCO 8120.20
Power supply battery			
Power supply USB			
Power supply LAN (POE)	optional	optional	optional
Measured data storage	3,200,000	3,200,000	3,200,000
Typical battery life	>1 year	> 1 year	> 1 year
LC-display			
One-button operation			
1-point calibration by user/operator			
°C/°F switchable			
Optical/acoustical alarm			
Date/time			
Records Min/Max/Avg.			
SmartGraph 3 evaluation software			
Measurement Categories	THI 8120.00	THIP 8120.10	TCO 8120.20
Temperature			
Air temperature			
Humidity			
Relative Humidity			
Absolute humidity			
Dew point temperature			
Air pressure			
Barometric air pressure			
Relative air pressure			
CO ₂ Concentration			
CO ₂ Concentration			
Function Table Software	THI 8120.00	THIP 8120.10	TCO 8120.20
Graphical representation			
Numerical data (measured value display)			
Print function			
Export function for measured values (e.g. Excel)			
Gathered printouts of all measurement sites			
User administration			
Administration of up to 255 measuring devices			









CO ₂ Concentration			
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dministration of up to 255 measuring devices			

THI



THIP



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OPUS20 THI Temperature and rel. Humidity

Opus20 Temperature and Relative Humidity						
Opus20 Temperature / rel. Humidity (neutral without Lufft-Logo 8120.00N)						
Opus20 Temperature / rel. Humidity POE (neutral without Lufft-Logo 8120.01N)						
Technical data	Dimensions	length. 166mm, width 78mm, depth 32mm				
	Measurement rate	10/30s, 1/10/12/15/30min, 1/3/6/12/24h				
	Construction	plastic housing				
	Operation life (battery)	> 1 Year				
	Data Storage	16 MB, 3,200,000 measured values				
	LC-Display	size 90x64mm				
	Weight	approx. 250g				
	Included in delivery	PC-Windows Software SmartGraph 3 for graphical and numerical representation of measured values / instruction manual/ data cable / battery				
	Interface	USB, LAN				
	Storage rate	1/10/12/15/30min, 1/3/6/12/24h				
	Power supply	4 x LRG AA Mignon, USB, (POE opt.)				
	Max. operation temperature	-2050°C				
	Max. rel. humidity	095%r.h.<20g/m³ (non condensing)				
Temperature	Principle	NTC				
	Measurement range	–2050°C				
	Accuracy	±0,3°C (040°C), otherwise 0,5°C				
	Resolution	0,1°C				
Rel. humidity	Principle	capacitive				
	Measurement range	1095%r.h.				
	Accuracy	±2%r.h.,				
	Resolution	0,5%r.h.				
Accessories	4 x LRG AA Mignon		8120.SV1			



For climate monitoring in buildings and the control of all climate-sensitive production processes: in electronic data-processing centres, control cabinets, wind turbines, storage rooms and museums.

The Opus20 runs on batteries or powered via USB. Alternatively, you have the possibility to power the device via POE (Power over Ethernet).

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For high-precision temperature and humidity measurements



The only LAN datalogger with built-in sensors and the highest precision



Finally available: Lufft's precise weather station for interior applications – an essential data collector for all calibration laboratories.

OPUS20 THIP Temperature, Rel. Humidity, Air Pressure

OPUS20 THIP Tem	perature, Relative Humidity	y, Air Pressure	Order-No.				
OPUS20 THIP Temperature / Rel. Humidity / Air Pressure (neutral without Lufft-Logo 8120.10N) 81							
OPUS20 THIP Temperature / Rel. Humidity / Air Pressure POE (neutral without Lufft-Logo 8120.11N)							
Technical data	Dimensions	length. 166 mm, width 78 mm, depth 32 mm					
	Measurement rate	10/30s, 1/10/12/15/30min, 1/3/6/12/24h					
	Construction	plastic housing					
	Operation life (battery)	> 1 Year					
	Data Storage	16 MB, 3,200,000 measured values					
	LC-Display	size 90x64 mm					
	Weight	approx. 250g					
	Included in delivery	PC-Windows Software SmartGraph 3 for graphical and numerical representation of measured values / instruction manual/ data cable / battery					
	Interface	USB, LAN					
	Storage rate	1/10/12/15/30min, 1/3/6/12/24h					
	Power supply	4 x LRG AA Mignon, USB, (POE opt.)					
	Max. operation temperature	-2050°C					
	Max. rel. humidity	095%r.h.<20g/m ³ (non condensing)					
	Max. altitude	10,000 m above sea level					
Temperature	Principle	NTC					
	Measurement range	–2050°C					
	Accuracy	±0,3°C (040°C), otherwise 0,5°C					
	Resolution	0,1°C					
Rel. humidity	Principle	capacitive					
	Measurement range	1095%r.h.					
	Accuracy	±2%r.h.,					
	Resolution	0,5%r.h.,					
Air pressure	Measurement range	3001300 hPa abs.					
	Accuracy	7001100mbar at 25°C ±0,5 hPa					
	Resolution	0,1 hPa					
Accessories	4 x LRG AA Mignon		8120.SV1				



For high-precision pressure measurements



Opus20 TCO Temperature, Rel. Humidity, CO₂

Opus20 TCO / Tem	perature / Relative Humidi	ty / CO,	Order-No.					
Opus20 TCO / Temperature / Rel. Humidity / CO, (neutral without Lufft-Logo 8120.20N)								
Opus20 TCO / Temp	Opus20 TCO / Temperature / Rel. Humidity / CO2POE (neutral without Lufft-Logo 8120.21N)							
Technical data	Dimensions	length. 166 mm, width 78 mm, depth 32 mm						
	Measurement rate	10/30s, 1/10/12/15/30min, 1/3/6/12/24h						
	Construction	plastic housing						
	Operation life (battery)	> 1 Year						
	Data Storage	16 MB, 3,200,000 measured values						
	LC-Display	size 90x64 mm						
	Weight	approx. 250g						
	Included in delivery	PC-Windows Software SmartGraph 3 for graphical and numerical representation of measured values / instruction manual/ data cable / battery						
	Interface	USB, LAN						
	Storage rate	1/10/30min, 1/3/6/12/24h						
	Power supply	4 x LRG AA Mignon, USB, (POE opt.)						
	Max. operation temperature	-2050°C						
	Max. rel. humidity	095%r.F.<20g/m ³ (non condensing)						
	Max. altitude	10,000 m above sea level						
Temperature	Principle	NTC						
	Measurement range	–2050°C						
	Accuracy	±0,3°C (040°C), otherwise 0,5°C						
	Resolution	0,1°C						
Rel. Humidity	Principle	capacitive						
	Measurement range	1095%r.h.						
	Accuracy	±2%r.h.,						
	Resolution	0,5%r.h.,						
CO ₂	Principle	NDIR						
	Measurement range	05,000 ppm						
	Accuracy	± 50 ppm +3 measured values at 20°C and 1,013 mbar						
	Resolution	1 ppm						
	Long-term stability	20 ppm/a						
Accessories	4 x LRG AA Mignon		8120.SV1					

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4 x End AA Mightin
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Image: Constraint of the second secon



The amount of carbon dioxide had been virtually constant at 280 ppm (particles per million) – i.e 280 gas molecules per million air molecules – the last ten thousand years. However in recent years, this measured value has been increasing rapidly at approx. 2 % per year.

A high level of CO_2 in the air within a room causes headaches, tiredness and lack of concentration. The regulation on CO_2 concentration was established in order to evaluate IAQ (Indoor Air Quality). Normal atmospheric air in so-called 'clean air areas' has a level of 360 ppm and approx. 500 ppm in urban areas. The limit of 1,000 ppm ("Pettenkofer Figure") is still seen as being adequate indoor-air quality, which is especially important when regarding all meetings and conference rooms, as well as schools and open-plan offices.

As a guideline for school rooms in the USA the limit of 1,000 ppm applies; for workplaces the occupational exposure limit is 5,000 ppm.



Representation and Evaluation



SmartGraph 3 Software



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With SmartGraph 3 the gathering of measured data is simple and as intuitive as possible:

An Opus20 datalogger is automatically recognised and added as a "network device".

In addition to its data-readout function, the software possesses a recording mode that enables parallel recording to be displayed on the computer.

The data from any desired number of OPUS20 devices can be read out simultaneously.

The zoom function allows for quick analysis of critical time periods.

The exporting of measured data in csv format enables it to be imported into Excel.

The device configuration can be printed out in order to check installation parameters.

Alarm limits – like the measured data – are chronologically managed at various times so that when changes in alarm limits occur, they can be retraced.

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Automatic data readout of all measured data is supported.

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We represent this supplier. For more information contact Observator Instruments:

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