

# OPUS20 LAN-Datalogger Future Inside



*a passion for precision · passion pour la précision · pasión por la precisión · passione per la precisione · a*



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Measurement

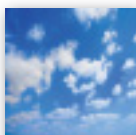
# OPUS20 THIP Temperature, Rel. Humidity, Air Pressure

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

OPUS20 THIP Temperature, Relative Humidity, Air Pressure			Order-No.
<b>OPUS20 THIP Temperature / Rel. Humidity / Air Pressure</b> (neutral without Lufft-Logo 8120.10N)			<b>8120.10</b>
<b>OPUS20 THIP Temperature / Rel. Humidity / Air Pressure POE</b> (neutral without Lufft-Logo 8120.11N)			<b>8120.11</b>
<b>Technical data</b>	Dimensions	length. 166 mm, width 78 mm, 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 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	-20...50°C	
	Max. rel. humidity	0...95%r.h.<20g/m <sup>3</sup> (non condensing)	
	Max. altitude	10,000 m above sea level	
<b>Temperature</b>	Principle	NTC	
	Measurement range	-20... 50 °C	
	Accuracy	±0,3°C (0...40°C), otherwise 0,5°C	
	Resolution	0,1°C	
<b>Rel. humidity</b>	Principle	capacitive	
	Measurement range	10...95%r.h.	
	Accuracy	±2%r.h.,	
	Resolution	0,5%r.h.,	
<b>Air pressure</b>	Measurement range	300 ... 1300 hPa abs.	
	Accuracy	700 ... 1100mbar at 25°C ±0,5 hPa	
	Resolution	0,1 hPa	
<b>Accessories</b>	4 x LRG AA Mignon		<b>8120.SV1</b>



For high-precision pressure measurements



# Opus20 TCO

## Temperature, Rel. Humidity, CO<sub>2</sub>



Opus20 TCO / Temperature / Relative Humidity / CO <sub>2</sub>			Order-No.
Opus20 TCO / Temperature / Rel. Humidity / CO <sub>2</sub> (neutral without Lufft-Logo 8120.20N)			8120.20
Opus20 TCO / Temperature / Rel. Humidity / CO <sub>2</sub> POE (neutral without Lufft-Logo 8120.21N)			8120.21
Technical data	Dimensions	length. 166 mm, width 78 mm, 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 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	-20...50°C	
	Max. rel. humidity	0...95%r.F.<20g/m <sup>3</sup> (non condensing)	
	Max. altitude	10,000m above sea level	
	Temperature	Principle	NTC
Measurement range		-20 ... 50 °C	
Accuracy		±0,3°C (0...40°C), otherwise 0,5°C	
Resolution		0,1°C	
Rel. Humidity	Principle	capacitive	
	Measurement range	10...95%r.h.	
	Accuracy	±2%r.h.,	
	Resolution	0,5%r.h.,	
CO <sub>2</sub>	Principle	NDIR	
	Measurement range	0 ... 5,000 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

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.

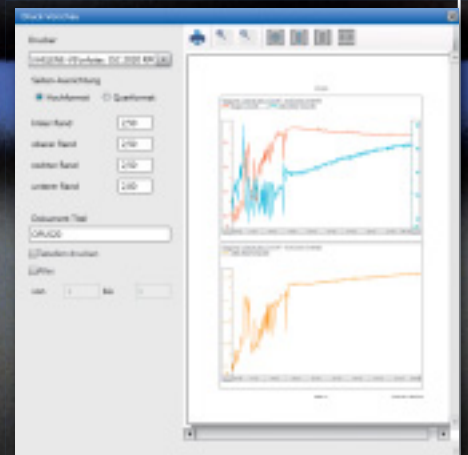
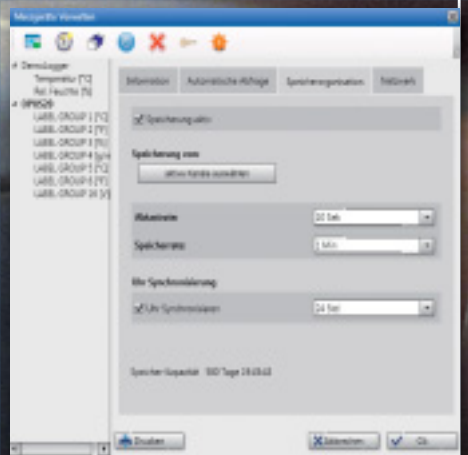
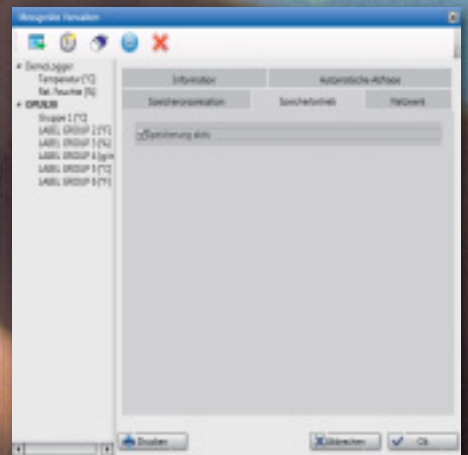
A high level of CO<sub>2</sub> in the air within a room causes headaches, tiredness and lack of concentration. The regulation on CO<sub>2</sub> concentration was established in order to evaluate IAQ (Indoor Air Quality). Normal atmospheric air in so-called ‘clean air areas’ has a level of 360 ppm and 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.



For high-precision CO<sub>2</sub> measurements

# software



# SmartGraph 3 Software



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.

- Automatic data readout of all measured data is supported.

