

OPUS20 LAN-Datalogger Future Inside

- Measurement
- Storage and Transfer
- Representation and Evaluation
- Qualification and Calibration
- Alarm

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

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Technische Änderungen vorbehalten OPUS20 02-2011



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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 | | ■ | |
| CO2 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 | ■ | ■ | ■ |

THI



THIP



TCO



OPUS20 THI Temperature and rel. Humidity



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).

| Opus20 Temperature and Relative Humidity | | Order-No. |
|--|----------------------------|---|
| Opus20 Temperature / rel. Humidity (neutral without Luft-Logo 8120.00N) | | 8120.00 |
| Opus20 Temperature / rel. Humidity POE (neutral without Luft-Logo 8120.01N) | | 8120.01 |
| Technical data | Dimensions | length. 166mm, 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 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 | -20...50°C |
| | Max. rel. humidity | 0...95%r.h.<20g/m ³ (non condensing) |
| 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. |
| Accessories | 4 x LRG AA Mignon | 8120.SV1 |

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. |
|---|----------------------------|---|-----------------|
| OPUS20 THIP Temperature / Rel. Humidity / Air Pressure (neutral without Lufft-Logo 8120.10N) | | | 8120.10 |
| OPUS20 THIP Temperature / Rel. Humidity / Air Pressure POE (neutral without Lufft-Logo 8120.11N) | | | 8120.11 |
| 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 | -20...50°C | |
| | Max. rel. humidity | 0...95%r.h.<20g/m ³ (non condensing) | |
| | Max. altitude | 10,000 m 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., | |
| Air pressure | Measurement range | 300 ... 1300 hPa abs. | |
| | Accuracy | 700 ... 1100mbar at 25°C ±0,5 hPa | |
| | Resolution | 0,1 hPa | |
| Accessories | 4 x LRG AA Mignon | | 8120.SV1 |

Opus20 TCO Temperature, Rel. Humidity, CO₂

A high level of CO₂ in the air within a room causes headaches, tiredness and lack of concentration. The regulation on CO₂ concentration was established in order to evaluate IAQ (Indoor Air Quality).

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.



| Opus20 TCO / Temperature / Relative Humidity / CO ₂ | | | Order-No. |
|--|----------------------------|---|-----------------|
| Opus20 TCO / Temperature / Rel. Humidity / CO₂ (neutral without Lufft-Logo 8120.20N) | | | 8120.20 |
| Opus20 TCO / Temperature / Rel. Humidity / CO₂ POE (neutral without Lufft-Logo 8120.21N) | | | 8120.21 |
| 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 | -20...50°C | |
| | Max. rel. humidity | 0...95%r.h.<20g/m ³ (non condensing) | |
| | Max. altitude | 10,000 m 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., | |
| CO₂ | 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 |

OPUS20 for External Sensors

With up to 10 external channels/sensors per Opus20.

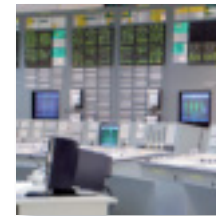
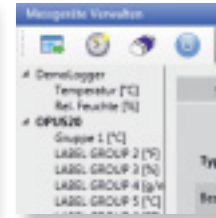
The Opus20 offers the highest flexibility and excellent value for money, allowing the connection of up to 4 external temperature and relative humidity sensors, as well as 2 further analogue sensors. Intelligent sensors can be integrated via the Opus20's RS485 interface (e.g. particle counter).

Air flow and differential pressure sensors are typically connected to the Opus20 via the analogue input. In contrast, a maximum of 4 external temperature/humidity sensors are integrated via a digital protocol (UMB).



In connection with its LAN capabilities, the Opus20 is able to realize universal measurement networks in real time. For standard applications the SmartGraph 3 comes into play, and in order to fulfil the 21 CFR 11 guidelines the well-established and proven SmartControl is available.

| OPUS20 for External Sensors | | | Order-No. |
|--|----------------------------|---|-----------------|
| Opus20 for External Sensors (neutral without Lufft-Logo 8120.30N) | | | 8120.30 |
| Opus20 for External Sensors POE (neutral without Lufft-Logo 8120.31N) | | | 8120.31 |
| Technical data | Dimensions | length. 180mm, 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 | |
| | UMB bus interface | RS 485 | |
| | 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 | |
| Connections | Temperature | PT 100, 3-wire, 4-wire thermocouple K, J, S | |
| | Power input | 0...20 mA, 4...20 mA, | |
| | Voltage input | 0...1 V, -1...+1 V, | |
| Accessories | 4 x LRG AA Mignon | | 8120.SV1 |



Measuring is not just measuring. Each application and application area requires the ideal sensor. Apart from this, it is imperative in the pharmaceutical production and food industry that the hundreds of guidelines in place are adhered to and a multitude of inspections conducted. Only then can long-lasting international standards be guaranteed. Lufft can help you fulfil all such criteria and find the right product.

