

# OPUS 10<sup>®</sup> Thermo - Hygrograph

The Lufft Opus 10 is a versatile new product designed to serve as a temperature and humidity data gathering device with computer interface. This compact, completely portable instrument can be wall-mounted or left in any area to record readings over programmable intervals and periods of time. The large LCD always gives the current readings and the time. Up to 120,000 readings can be stored. Opus 10's are shipped with Windows™ compatible "SmartGraph™" software to allow installation on any PC. Readings are downloaded via RS232 cable to the program's graphs and tables for data analysis and storage. Two Opus 10 Models are available: one with internal sensors and one with external sensors and optional extension cables.

### APPLICATIONS

Laboratories • HVAC/R Installations • Hospitals  
 Materials Curing • Wood Products Storage  
 Food Storage Areas • Computer Installation  
 Printing Presses • Museums • Art Galleries  
 Greenhouses • Clean Rooms

### SPECIFICATIONS

<b>Interface</b>	RS232
<b>Power</b>	3.6V mono-cell (approx. 2yr service)
<b>Memory</b>	120,000 readings
<b>Memory Interval</b>	1/10/30min 1/3/6/12/24h
<b>Measurement Interval</b>	1/10/30/60s 1/10/30min 1/3/6/12/24h
<b>Dimensions</b>	
Housing	115 x 110 x 25mm (4.5 x 4.3 x 0.98in)
LCD	65 x 40mm (2.6 x 1.6in)
Weight	approx. 250g (0.5lb)

Environmental Limits	Model No. 8152.00	Model No. 8152.10
Temperature	-20°C to 50°C (-4°F to 122°F)	0°C to 50°C (32°F to 122°F)
Humidity	0% to 95% (non condensing)	0% to 95% (non condensing)
Altitude	5000m (16,400 ft) above sea level	5000m (16,400 ft) above sea level

Accessories and Replacements	Model No. 8152.00	Model No. 8152.10
	8152.SV1 replacement battery	8152.SV1 replacement battery
	8152.MOD1 temp/RH rpl. sensor module	8152.MOD2 temp/RH rpl. sensor module
		8152.TF temp sensor w/2 meter cable
		8152.TFF temp/RH sensor w/2 mtr. cable
		8152.KAB 2 meter ext. cable for 8152.TFF

Sensors	Model No. 8152.00	Model No. 8152.10
Sensor Location	internal to housing	external to housing (cables optional)
R.H. Sensor	capacitive sensor	capacitive sensor
R.H. Range	10 to 95%RH	0 to 100% RH
R.H. Accuracy	±3%RH	±2%RH
R.H. Resolution	0.5%RH	0.5%RH
Temp. Sensor	NTC	NTC
Temp. Range	-20°C to 50°C (-4°F to 122°F)	-30°C to 70°C (-22°F to 158°F)
Temp. Accuracy	±0.3°C/0 to 40°C (±0.54°F/32 to 104°F)	±0.2°C/-20 to 50°C (±0.36°F/-4 to 122°F)
Temp. Resolution	0.1°C (0.1°F)	0.1°C/-20 to 50°C (0.1°F/-4 to 122°F)



OPUS 10 Internal Sensors (Model 8152.00) shown with RS232 cable for Windows™ Compatible SmartGraph™ Computer Interface. (Model No. 8152.10 features external sensors).

- Storage of up to 120,000 records per channel
- Programmable storage parameters
- Space-saving compact design, 4.5" x 4.3"
- Temperature, R.H., and Time Display
- Long-term, Maintenance Free Operation
- Accurate and Secure Readings
- RS232 Interface Port for Windows™ Compatible SmartGraph™ Software
- Option for External or Internal Sensors



# NEW Opus 10 Expanded Capabilities



The Lufft Opus 10 is now available with additional functions. All versions are shipped with Windows™ compatible SmartGraph™ 2 Software.

- **Use with Thermocouples:**  
Accepts Type J, K, E, R, S, and T Thermocouples  
*Model No. 8254.00*
- **Measure Temperature and Air Pressure:**  
*Model No. 8253.00*
- **Measure Temperature and CO<sub>2</sub>:**  
*Model No. 8255.00 (Discontinued)*
- **Without Display:**  
Measure Temperature and Relative Humidity or Temperature Only  
*Model No. 8257.00 and Model No. 8256.00*

## Opus 10 for Use with Thermocouples

Specifications						
Thermocouple	Type K	Type J	Type E	Type R	Type S	Type T
<b>Range</b>	-328 to 2192°F -200 to 1200°C	-328 to 2192°F -200 to 1200°C	-454 to 1832°F -270 to 1000°C	-58 to 3218°F -50 to 1770°C	-58 to 3218°F -50 to 1770°C	-454 to 752°F -270 to 400°C
<b>Accuracy</b>	±1°C at 20°C	±1°C at 20°C	±1°C at 20°C	±2°C at 20°C	±2°C at 20°C	±2°C at 20°C
<b>Resolution</b>	0.2°C	0.2°C	0.2°C	0.2°C	0.2°C	0.2°C

### Measure Two Temperatures Points with Thermocouples: *Model No. 8254.00*

The Opus 10 is now available for gathering two Temperatures using Thermocouples. It accepts Type K, J, E, R, S, and T Thermocouples, thus providing for a wide variety of measuring ranges. Includes RS232 Interface Port for Windows™ compatible SmartGraph™ 2 Software provided. For use in environmental applications.



Opus 10 Shown with Two Standard Thermocouple Inputs and RS232 Port

**Lufft** a member of  
**INSTRUMENTATION GROUP**

Calibration Services Available

## Opus 10 Temperature and Air Pressure

### Measure Temperature and Air Pressure: Model No. 8253.00

The Opus 10 can now gather Temperature and Air Pressure data. Air Pressure measured in hPa is equivalent to mBar. New versions feature the same versatile product features and specifications as the original Opus 10 in the same compact, completely portable design. Comes with RS232 Interface Port for Windows™ compatible SmartGraph™ 2 Software.

Specifications		
	Temperature	Air Pressure
<b>Range</b>	4° to 122°F (-20° to 50°C)	750 to 1100 hPa
<b>Accuracy</b>	±0.3°C: 0 to 40°C otherwise 0.5°C	±0.5 hPa at 25°C ±1.0 hPa for -10°C<T≤60°C
<b>Resolution</b>	0.1°C	0.1 hPa
<b>Principle</b>	NTC	
<b>Stability</b>		0.1 hPa standard

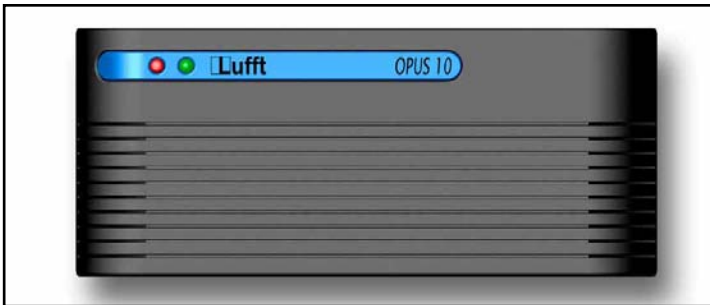
## Opus 10 Temperature and CO<sub>2</sub>

### Measure Temperature and CO<sub>2</sub>: Model No. 8255.00 (Discontinued)

Measure Temperature and Carbon Dioxide with this new version of the Lufft Opus 10. Same space-saving compact design and specifications as the original Opus 10. RS232 Interface Port for Windows™ compatible SmartGraph™ 2 Software provided. For use in environmental applications.

Specifications		
	Temperature	CO <sub>2</sub>
<b>Range</b>	4° to 122°F (-20° to 50°C)	0 to 10000 ppm
<b>Accuracy</b>	±0.3°C: 0 to 40°C otherwise 0.5°C	±100 ppm
<b>Resolution</b>	0.1°C	10 ppm
<b>Principle</b>	NTC	NDIR Infrared

## Opus 10 Without Display



- Same Versatile Features as the Opus 10 but with no display
- More Affordable Pricing
- Measure Temperature and Relative Humidity:  
*Model No. 8257.00*
- Measure Temperature Only:  
*Model No. 8256.00*

Lufft has re-designed their Opus 10 Thermo-Hygrograph. Now without display, this new version of the Opus 10 offers the same great versatility at an affordable price. For use in the same applications as the Opus 10 and includes RS232 Computer Interface for Windows™ compatible SmartGraph™ 2 Software.

Specifications		
	Temperature	Relative Humidity
<b>Range</b>	4° to 122°F (-20° to 50°C)	10 to 95%
<b>Accuracy</b>	±0.3°C: 0 to 40°C otherwise 0.5°C	±.3%
<b>Resolution</b>	0.1°C	0.5%
<b>Principle</b>	NTC	Capacitive

## Opus 10 NEW Accessories

**8152.SGP** Smart Graph2 software, professional version  
**8152.WDS** Anti-Theft Device System, for wall mounting



Instrumentation Group  
234 Old Weaverville Road, Asheville, NC 28804

Calibration Services Available