### **Extensive measured variables**

- Temperature/Dew point
- Globe temperature
- Relative humidity
- Air velocity
- Noise level (Class 2)
- Flicker frequency
- Illuminance (Class C)
- Luminance/-contrast
- TVOC indicator
- CO<sub>2</sub> (Carbon dioxide)
- CO (Carbon monoxide)
- Particulate Matter
- Climate indices (Calculation of medium PMV/PPD indices and thermal radiation)
- Now: Measuring range extension noise level, Cpeak up to 137 dB

## **Clear advantages**

- Easy to operate with immediate results
- Colour display with touch screen
- USB port
- Classification of noise and illuminance measurements
- Software for preparation, evaluation, documentation
- Integrated data logger for long-term recording
- Sturdy case for all components and accessories
- Optional BAPPäck, the shoulder bag for on the move

### **Technical specifications**

	•		
	Mearsurement Range	Tolerance	Resolution
Air temperature	-2050 °C	+/- 0.5 °C	0.1 °C
Globe temperature*	070 °C -2070 °C	+/- 0.7 °C +/- 2 °C	0.1 °C
Rel. humidity	1090 %	+/- 4 % r.H.	0.1 %
Air velocity*	0,05 m/s	+/- 10 % v.M.** +/- 3 Digit	0.01 m/s
Noise level (Class 2) in accordance with DIN EN 61672-1	30135 dB(A) A-evaluation Slow/Fast Cpeak= 137 dB	+/- 1.0 dB(A) (at 1 kHz) inherent noise < 25 dB(A)	0.1 dB(A)
Illuminance (Class C) in accordance with DIN 5032-7	5030,000 Lux	V-Lambda adjustment 7.5 % Cos-accurate evaluation 4 % Linearity 3 %	1 Lux
	150 Lux	plus +/- 1 Lux	
Flicker frequency	01000 Hz	+/- 0.2 Hz	0.1 Hz
Luminance	102000 cd/m <sup>2</sup>	+/- 10 % v.M.** +/- 10 % cd/m²	0.1 cd/m <sup>2</sup>
CO <sub>2</sub> * (carbon dioxide)	010,000 ppm	+/- 75 ppm +/- 5 % v.M. (at 02000 ppm)	1 ppm
TVOC* (Total Volatile Organic Compounds)	1002000 ppb (Isobutylenequivalent)	+/- 100 ppb +/- 15 % v.M.**	1 ppb
CO* (carbon monoxide)	0500 ppm	+/- 5 ppm +/- 10 % v.M.**	1 ppm
	PM <sub>1</sub> 01000 μg/m³	PM <sub>1</sub> PM <sub>2.5</sub> 0100 µg/m³ +/- 15 µg/m³ 1011000 µg/m³ +/- 15 % v.M.**	
PM* (Particulate Matter)	$PM_{2.5}$ 01000 $\mu g/m^3$ $PM_{10}$ 01000 $\mu g/m^3$	PM <sub>10</sub> 0100 µg/m³ +/- 30 µg/m³ 1011000 µg/m³ +/- 30 % v.M.**	0.1 μg/m <sup>3</sup>
	Cubicat to traducinal alternation	at 040°C; 1070 % r.H.	
Subject to technical changes *optional sensor **from measured value			

**BAPPU** – with its optional system components it can be extended in line with requirements. All components are supplied in the sturdy case with cables and accessories.





# A measurably healthier work place



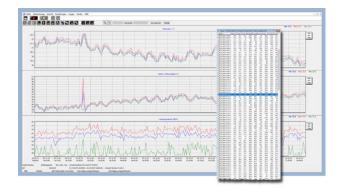
Das Multimessgerät für die Arbeitsplatzanalyse

## Spotlight on the "work climate"

The BAPPU-evo multi-measuring device is helping to turn the workplace into a healthier and safer environment. It provides a comprehensive and efficient analysis of workplaces in both administration and industry. BAPPUevo records health-related environmental parameters and assesses them "on site" against defined targets.

For over 20 years now, BAPPU has been constantly adapted to ensure conformity to the ever changing requirements of occupational health and safety. Therefore, useful features such as the USB interface, colour display, the possibility for carrying out continuous recordings, as well as the IAO sensor for assessing indoor air quality have been integrated into the system. In the development of BAPPU-evo, current legal requirements were taken into account, such as those stipulated in the German Technical Rules for Workplaces (ASR).

BAPPU-evo utilises a practical-oriented software solution for analysing and processing data. With BAPPU-time, our software solution for simultaneous long-term recording of all measuring ranges, correlations between the individual parameters can be evaluated. The measurement results are clearly displayed on the PC in the form of graphs or tables. Moreover, a calculation of mean values or even clearly arranged documentation can be made with ease.



The evaluation software BAPPU-time is available as an option

# Intuitive operation,

# evaluation made simple

Great care went into the design of the BAPPU to ensure practical, intuitive operation. For example, a measurement function can be activated by simply pressing a single button. Following this, the data that has been collected is then clearly displayed on the large, 3.5-inch colour touch screen.

All data can be stored and transferred to a PC where it can be further processed (e.g. in Excel) and printed out, if necessary. A clearly arranged table presents the measurement series with all analyses and name assignments.

### All OK!

All measuring functions can bring into action with the "OK"-button.



Alternatively the handling is possible via the touchscreen.



For assessing the measurements, the requirements for health protection (target value) are compared directly with the measurements results (actual value) from the respective workplace. The current guidelines for VDU work places are already factory preset. Each memory location can be assigned a name and workplace profile. Targets values for defining additional workplace profiles (e.g. warehouse, laboratory) can be entered using the software provided.

### **Summary:**

BAPPU-evo is very easy to use; the measurement values and their evaluation provide a clear picture of the "quality" of the workplace environment.

### Additional functions and sensors

**BAPPU-Anemometer** is a supplementary sensor for measuring air velocity and intensity of turbulence. It uses the "thermal measuring procedure" (measurement of the cooling phase of a heated sphere) and can therefore also precisely determine small air movements (0-5 m/sec). This makes it possible to quickly and easily check the "comfort" within the framework of comfort measurements in workplaces.

BAPPU-Globe is a spherical thermometer that helps to determine "thermal comfort" at the workplace. The climatic data measured by the BAPPU is used to generate the "climate indices", which are required by the rules laid out in ASR A3.5 for unfavourable conditions. Utilising the BAPPU-Globe, the difficult to find "PMV" and "PPD" comfort indices can be calculated.



**BAPPU-Vocoo-sx** measures the indoor climate – an aspect that is becoming increasingly important for the objective assessment of well-being. In order to evaluate the "Indoor Air Quality" (IAQ), the optional sensor detects not only fine dust and CO<sub>2</sub>, but also volatile organic compounds (VOCs). With the VOC indicator possible volatile compounds, as they can occur, for example, after renovations, in the indoor air can be detected. Optionally, BAPPU-Vocoo-sx is available with additional carbon monoxide (CO) measurement.

