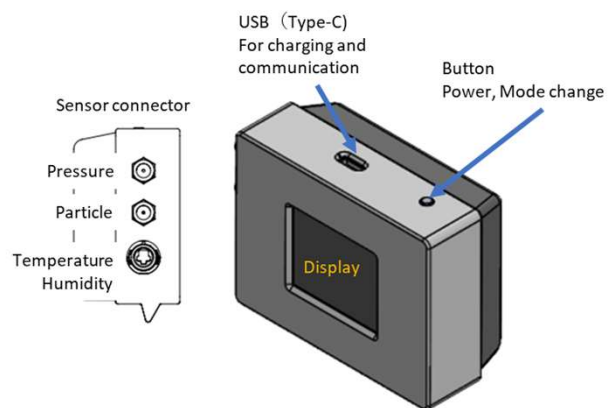


# REAM

## (Respiratory Environment Air Monitor)

REAM is a simple monitor that is useful for preliminary performance evaluation of the indoor environment in ICU, NICU, and operating rooms, as well as for heating and humidifying devices, artificial noses with filters, etc.

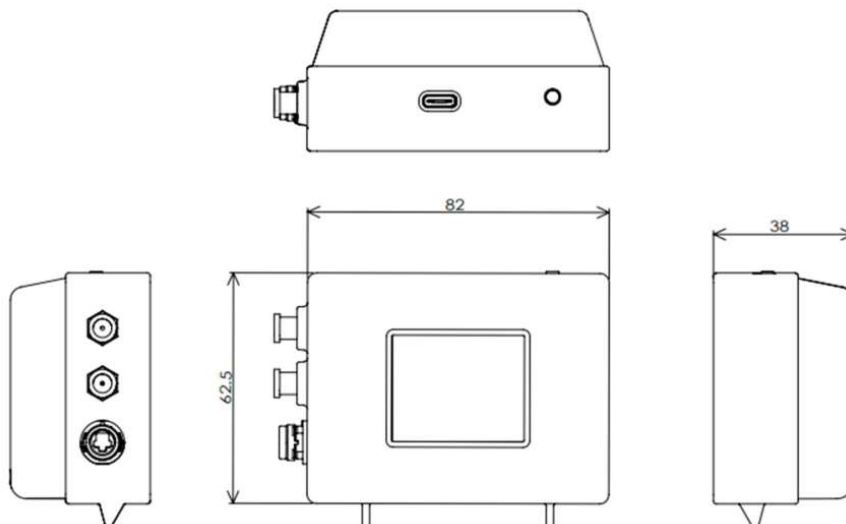
This small box measures and displays six parameters: temperature, humidity, pressure (difference from atmospheric pressure), number of dust particles, equivalent CO<sub>2</sub>, and TVOC. In addition, the measured data can be recorded for long periods of time via USB connection to a PC. This is useful for recording and evaluating daily equipment inspections.



- The main unit is palm-sized and can be placed anywhere.
- The drive battery is a rechargeable lithium-ion battery.
- The unit is started by pressing and holding down the single control button.
- The temperature and humidity sensor is connected to the main unit using a one-touch connector.

### Main unit dimensions

Height: 62.5, Width: 82, Depth: 38 [mm]



# Performance (built-in sensor)

pressure

item	conditions	Min	Typ	Max	unit
Pressure resolution	-	-	0.00001	-	cmH2O
Pressure effective resolution	MODE4	-	0.002	0.008	cmH2O
Pressure linearity	-40 ~ +40cmH2O Ta = 0° C to 50° C	-0.11	-	0.11	%FS
Pressure linearity Long-term drift	-40 ~ +40cmH2O Ta = 0° C to 50° C	-0.89	-	-0.89	%FS
Pressure measurement error	-40 ~ +40cmH2O Ta = 0° C to 50° C	-0.5	-	0.5	%FS
Pressure measurement error Long-term drift	-40 ~ +40cmH2O Ta = 0° C to 50° C	-4.5	-	4.5	%FS

## Particle Counter Specifications

item	conditions	specification	unit
Mass concentration accuracy	0 to 100 µg/m3	± 10	µg/m3
	100 to 1'000 µg/m3	± 10	%
Counting concentration size range	PM0.5	0.3 to 0.5	µm
	PM1.0	0.5 to 1.0	µm
	PM2.5	1.0 to 2.5	µm
	PM4	2.5 to 4.0	µm
	PM10	4.0 to 10.0	µm
sample cycle	-	1	second (60th min)
startup (interval of) time	-	< 8	second (60th min)

# Performance (external sensor)

## Temperature

item	conditions	Min	Typ	Max	unit
resolution	standard	-	0.01	-	°C
allowable limit of error	standard	-	±0.3	-	°C
reproducibility	-	-	±0.1	-	°C
hysteresis (behaviour)	-	-	±0.1	-	°C
Responsiveness	$\tau$ 63%.	5	-	30	second
Long-term stability	standard	-	<0.1	-	°C/year

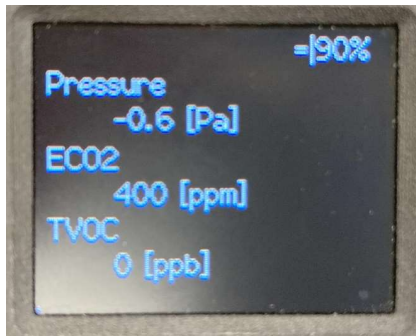
## Relative humidity

item	conditions	Min	Typ	Max	unit
resolution	standard	-	0.024	-	%RH
accuracy	standard	-	±2	-	%RH
reproducibility	-	-	±0.1	-	%RH
hysteresis (behaviour)	-	-	±1	-	%RH
non-linearity	-	-	<0.1	-	%RH
Responsiveness	$\tau$ 63%.	-	<8	-	second (60th min)
Long-term stability	standard	-	<1	-	%RH/year



Temperature and humidity sensor cable

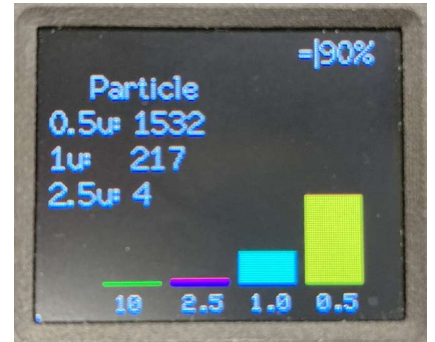
# Monitor screen



Pressure, ECO2, TVOC

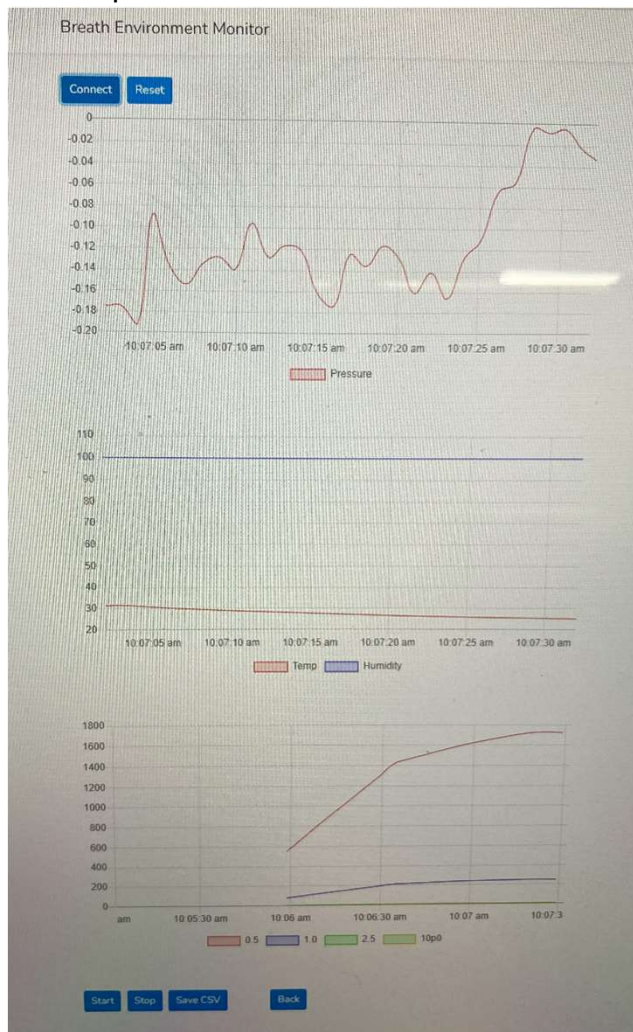


Temperature, Humidity



Particle Counter

Example of measurement using a smartphone screen



The measurement data is stored in the cloud.