Indoor Air quality monitoring system

prio A100

Real-time measurement of fine dust(PM2.5), CO₂, TVOC, CO

WISECONN

prio A100

Prio-A100 is IoT based air condition monitoring system used 7 sensors such as Temp, Humidity, CO, CO_2, VOC, PM2.5.

Prio-A100 is available to use real time anywhere for measuring the air conditions as a compact size. The measured data is saved on database server and sers are able to check anywhere & anytime the environment's condition that installed the device using Web browser or PC Program.

Product characteristics

System Integration
- 1 to 1 monitoring system
- monitoring system using Cloud server
- 1 : N type monitoring

Customizing
- It is possible to provide the customizing product that use the sensor which customer need. (Depending on the order quantity)

Provide Data backup service
- Data backup and stores data for 1 year

Products integration system
- For monitoring a number of products data on the PC, It is possible to integration the system and program. (Need consultation)

Specification

Communication		WIFI Network IEEE 802.11, b/g/n	
Sensor list	Temperature	-10℃ ~ +80℃	±0.2℃
	Humidity	10 ~ 99%	±2%RH
	CO₂	0 ~ 5000ppm	±15%
	TVOC	0 ~ 9999ppb	±20%
	PM2.5, PM10	0 ~ 500μg/㎥	±10% @ 100 ~ 500μg/㎥
			±10μg/㎥ @ 0 ~ 100μg/㎥
	CO	0 ~ 200ppm	±10%
PC Software	Prio-Point	0 ~ 500	
	Server data	Graph display	
	Event data	Alarm display	
	Data display	4 Steps display	
Power		5volt, Max 500mAh USB power, No battery	
Place		Indoor only	
Dimensions		110*110*43 (mm)	
Weight		180g, Main device only	
Installation		Tripod, Wall mount	

Integrated control system

Prio integrated control system enables simultaneous and remote monitoring of data of the A100 installed in different locations. The system operates on a Windows-based operating system and can be customized to meet customer needs.

○ System configuration

Cloud and local servers

Integrated control program

Main program
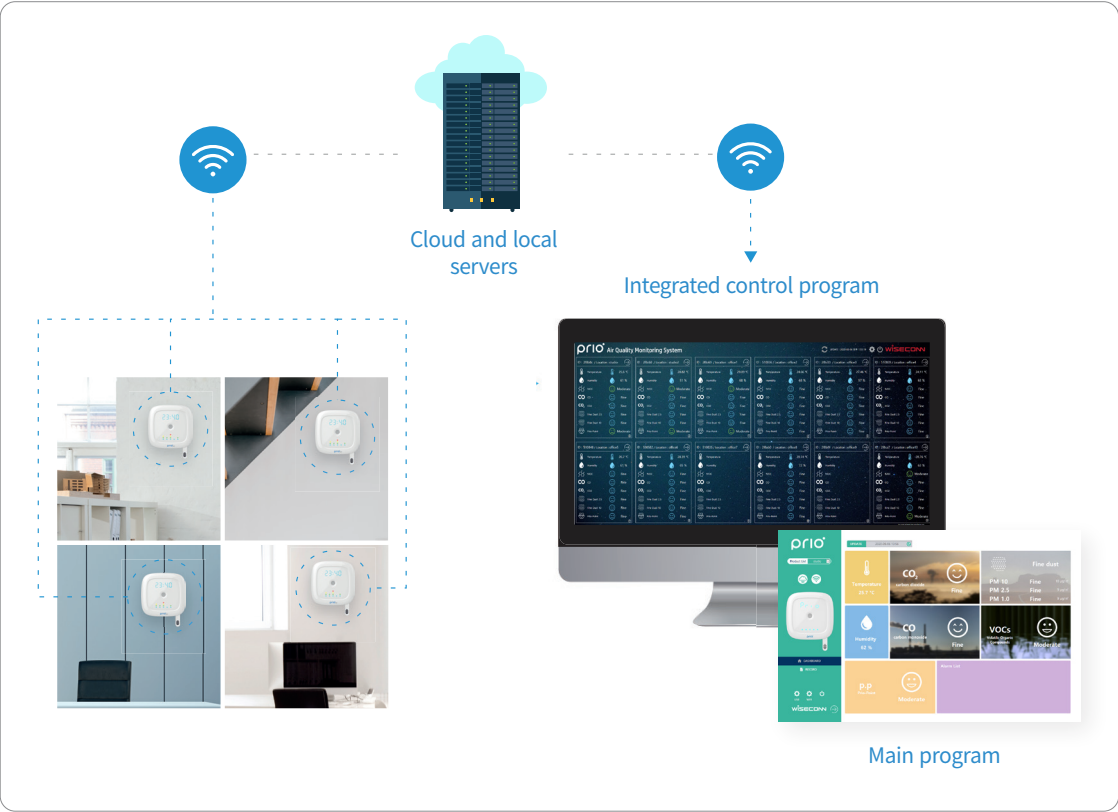
○ Multi-use facility installation photo

Indoor air quality integrated control system for multi-use facilities

The indoor air quality meter(A100) is installed at the users' desired location, and data is stored on the server via communication. Stored data can be monitored using integrated control programs at the users' desired location.

Indoor air quality maintenance standards(Article 3 related)

Pollutant category / Multi-use facility	Fine Dust (μg /㎥)	CO₂ (ppm)	Formaldehyde (μg /㎥)	Total floating bacteria (CFU / ㎥)	CO (ppm)
Underground station, underground shopping mall, and passenger car terminal Room, waiting room at railway station, passenger terminal among airport facilities, Waiting rooms, libraries, museums and art galleries, funeral parlor, baths, large-scale stores, movie theaters, academies, Exhibition facility, Internet computer game facility	150 or less	100 or less	100 or less	-	10 or less
Medical institutions, day care centers, elderly care facilities, postpartum care centers	100 or less			800 or less	
Indoor parking lot	200 or less				25 or less

The purpose is to protect the health of the people who use the facilities and prevent environmental harm by properly maintaining and managing the indoor air quality of multi-use facilities, new apartment houses and public transportation vehicles.

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cloud and local servers

Integrated control program

Fine dust	How to behave
●	Free indoor/outdoor activities.
●	Activities are not necessarily restricted, however sensitive groups of people need to be careful with any prevalent physical conditions. (old man, child, infant, Chronic disease patients)
●	Refrain from prolonged or excessive outdoor activities.
●	If possible, refrain from outdoor activities, and in particular, those with heart or bronchial diseases should refrain from outdoor activities.

TVOC	How to behave
●	Proper concentration.
●	Ventilation required to match outside weather conditions
●	Ventilation required to match outside weather conditions
●	May cause eye, nose and throat irritation, ventilation required

CO_2	How to behave
●	Proper concentration.
●	Ventilation required to match outside weather conditions
●	May cause drowsiness. Ventilation required.
●	May cause drowsiness and headaches. Ventilation required.

CO	How to behave
●	Proper concentration.
●	May cause mild headache within 2-3 hours, ventilation required
●	May cause vomiting, tinnitus, or shortness of breath. In such case, ventilate the area immediately, evacuate, and call 119.
●	May cause vomiting, tinnitus, or shortness of breath. In such case, ventilate the area immediately, evacuate, and call 119.

A100 product composition

A100

A100 single product

A100×6 / Monitoring SW / DATABASE PC

A100 × 6   Monitoring S/W   DATABASE PC

## A100×12 / Monitoring SW / DATABASE PC

A100 × 12   Monitoring S/W   DATABASE PC

* Monthly charges may apply when using an LTE modem.

Item of organizing	Ower	Size	Weight	Measurement item
12 A100s (LTE modem included) DATABASE PC Monitoring SW	Constant power (usb micro 5pin)	A100 : 110x110x43(mm) PC : Varies by product specification	A100 : 180g PC : Varies by product specification	Temperature, Humidity, CO2, TVOC, Fine Dust(PM2.5, 10), CO
6 A100s (LTE modem included) DATABASE PC Monitoring SW	Constant power (usb micro 5pin)	A100 : 110x110x43(mm) PC : Varies by product specification	A100 : 180g PC : Varies by product specification	
One A100	Constant power (usb micro 5pin)	110x110x43(mm)	A100 : 180g	

Sensor
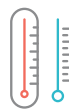
Temperature	Humidity	Fine dust (PM 2.5)	TVOC	CO_2	CO

Display

23:40
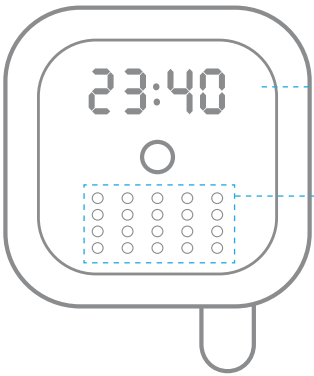
· **When it is linked with cloud and local servers** : Time
· **When used on a standalone basis** : Temperature, Humidity

	PM2.5	CO_2	TVOC	CO	P.P
Extreme	●	●	●	●	●
High	●	●	●	●	●
Moderate	●	●	●	●	●
Fine	●	●	●	●	●

The LEDs on four levels indicate the condition of airborne substances.
It evaluates indoor air using a score up to 500.

* Prio Point indicates indoor air pollution based on the integrated air environment index(CAI). It also indicates air pollution caused by human impact and sensory pollution levels according to air pollution levels in order to provide guidelines to the public to easily understand air pollution level measurements and prevent damage from air pollution.

Alarm

When the sensor reading reaches the user-set level, the LED on the front flashes to show the current reading.
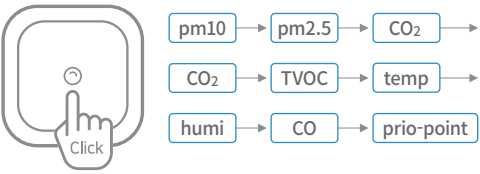
C 02   →   20 00
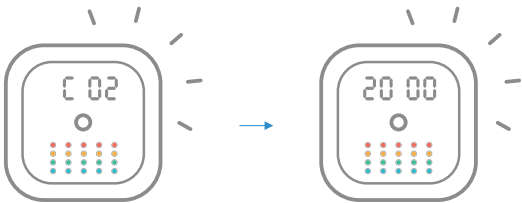
* When carbon dioxide reaches the user-set level, the name and reading of the sensor are displayed on the front LED.

Button

23:40
prio

Mode change
The measurement can be converted by pressing the button on the front.

pm10 → pm2.5 → CO_2
CO_2 → TVOC → temp
humi → CO → prio-point

Click

Reset
The instrument can be initialized by pressing and holding the front button for more than 10 seconds.

10Sec
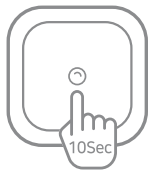
Ideas connect technology with people.

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