FEATURES

◉ **Simultaneous measurement of dust, temperature, humidity and dew point**

◉ **Fine dust can measure PM1.0, PM4.0, PM2.5, PM10.0**
(PM4.0 is available when communication is connected)

◉ **long-term stability and High accuracy**(1.8% RH)

◉ **Selectable moving average filter**(temperature, humidity)

◉ **Sensor calibration function**(dust, temperature, humidity)

◉ **3 Digit FND for parameter alteration and PV output on the spot**

◉ **Real-time monitoring is possible with RS-485**(Modbus)

◉ **Data can be saved and set on an external storage device**

◉ **CO2 and VOC can be measured simultaneously in real time**(Option)

Class 1 product certified by KECO

SPECIFICATIONS

▷ **PM(Particulate Matter)**

· Measuring principle : Laser scattering

· Precisions : $1\mu g/m^3$

· Accuracy : PM2.5(Standard)

　　　$0\mu g/m^3$ to $100\mu g/m^3$: $\pm15\mu g/m^3$ at 25℃±5℃

　　　$100\mu g/m^3$ to $1000\mu g/m^3$: ±15% at 25℃±5℃

· Range : $0\mu g/m^3$ to $1000\mu g/m^3$

· Response time

　- NT-5000D : 1sec

　- Fine dust sensor : 6s less

▷ **Temperature**

· Element : Micro-machining CMOS

· Accuracy : at 25℃=0.3℃

· Temperature detection range

　- CMO Sens[K] : -40.0~120.0℃

· Response time : 1/e(63%)

Temperature accuracy
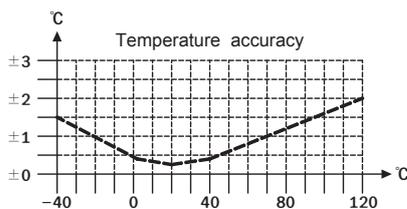
▷ **Humidity**

· Element : Micro-machining CMOS

· Accuracy : ±1.8%RH at 25℃
　　　　　　in the range of 10 to 90%RH

· Humidity detection range : 0.0~100.0%RH

· Response time : 1/e(63%) at 25℃, 1m/s air

· Long-term stability : <0.5%RH/yr

· Type of fluid : Air and neutral gases

Relative humidity absolute accuracy
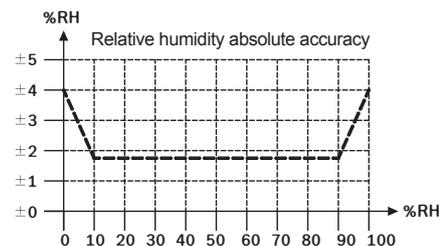
▷ **Etc**

· Moving average filte (None, 04, 08, 16, 32)
　※Temperature humidity only

· Voltage : AC 85~265V, 45~65Hz

· Calculates the current temperature and humidity difference to display the dew point temperature. (When communication connection)

· Ambient temperature & Humidity

　- Operation : -10~60℃, 10~100%

　- Storage : -20~70℃, 5~95%

· Case material : Al SUS316

· Weight : 900g±10% (Standard)

· Mounting : Wall Mount

OPTION

▷ **CO2**
  · Element : NDIR
  · Accuracy : ±(50ppm + 5% of reading) @ 25±2℃,
                50±10%RH
  · Range : 0~5000ppm
  · Response time : 30sec less (First reading)
                    1sec (Sampling)

▷ **VOC**
  · Element : Semiconductor
  · Range : 0~3 Level
  · Response time : 120sec less (First reading)
                    1sec (Sampling)

▷ The EXIT key can display temperature, humidity/VOC, and CO2 as auto/manual switching display.

  In the automatic mode, you can set the conversion time to 1~10sec in the setting mode.

  In manual mode, temperature, humidity/VOC, and CO2 can be switched by shift key in PV indication mode.
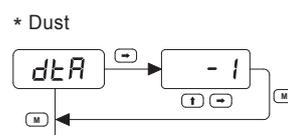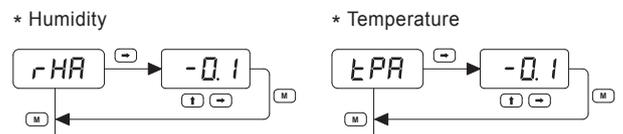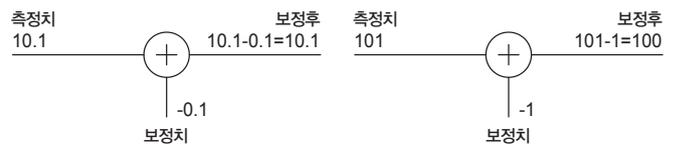
PARTS NAME
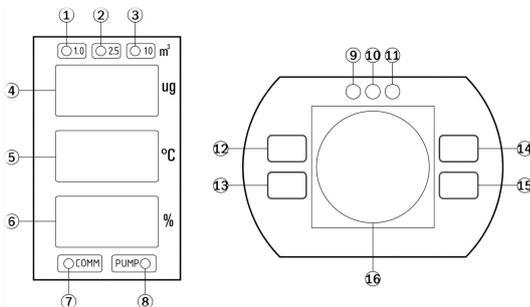
① PM 1.0 LED
② PM 2.5 LED
③ PM 10.0 LED
④ Display of measured value of PM
⑤ Temp measurement display
⑥ Humidity measurement value display
⑦ Communication LED
⑧ PUMP LED
⑨ PM concentration status LED-Yellow (bad)
⑩ PM concentration status LED-Green (normal)
⑪ PM concentration status LED-Blue (Good)
⑫ [M] Save the set data Change the menu of the changed operation, Instantaneous value/accumulated value change
⑬ [→] Enter data setting mode and Change location fix
⑭ [↑] Change data value
⑮ [E] Data storage and Exit from setting mode.
⑯ Air suction fan

MAJOR FUNCTIONS

▷ **Display scaling function 1**
  Display($d5 1$) : 1.0 (PM1.0)
                      2.5 (PM2.5)
                      10.0 (PM10.0)
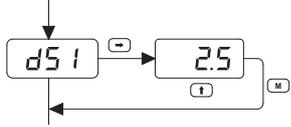
▷ **Display scaling function 2**
  You can select and display real-time data and accumulated data of PM1.0, PM2.5, PM10.0 with the MODE key.
  The integration time can be selected as 5, 10, 30, and 60Min.
  If the integration data display is selected, the corresponding PM LED blinks.
  When the power is turned ON, if it is set to display the accumulated data, the current value is displayed until It reaches the set integration time once, and when it reaches the set integration time, the accumulated data is displayed thereafter.

▷ **Sensor compensation function**
  The function is useful for compensating error by long sensor line or changed zero point by aged sensor.
  Ex) Before sensor adjust = 10.1% RH
      After sensor adjust
      = measured value – compensated value
      = 10.1 – 0.1 = 10.0%RH

측정치 10.1   보정후 10.1-0.1=10.1   -0.1 보정치

측정치 101   보정후 101-1=100   -1 보정치

* Humidity
rHR → -0.1

* Temperature
tPR → -0.1

* Dust
dtR → -1

▷ **Filter function**

Filter is moving average filter and it has 4 kinds of function. Average values of the recent 4, 8, 16, 32, 64 Samples are displayed.

Selecting the Filter function slows the response, so do not use a filter when high-speed response is required.

Stable output and display value can be obtained by using the Filter function when the input and the input and the output and display value change.

▷ **Self-diagnosis function**

When the power is turned on, the corresponding function LED automatically blinks and self-diagnosis is performed. The sequence is DSP1→DSP2→DPS3→PM1.0→PM2.5→PM10.0→COMM→PUMP→Top Blue LED→Top Green LED →Top Yellow LED for a total of about 15 seconds.

* If the corresponding function LED does not blink, contact the manufacturer.

▷ **Heater function**

Since fine dust is affected by humidity, you can set the humidity at which the heater operates.

(Initial value of set humidity is 60RH%)

The heater is automatically adjusted to prevent heating of the product.

Whether the heater is operated or not is determined based on the humidity, and when the ambient temperature is below −5℃, the heater automatically starts and adjusts to about 70~80℃.

▷ **PM concentration LED function**

Concentration LED is the Blue, Green, Yellow Blue is less than 15, Green is 35 or less, Yellow has been set to 35 or higher. (PM2.5)
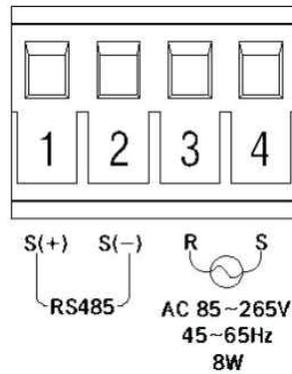
▷ If the pump function is set to off, fine dust, temperature, and humidity may not be measured properly.
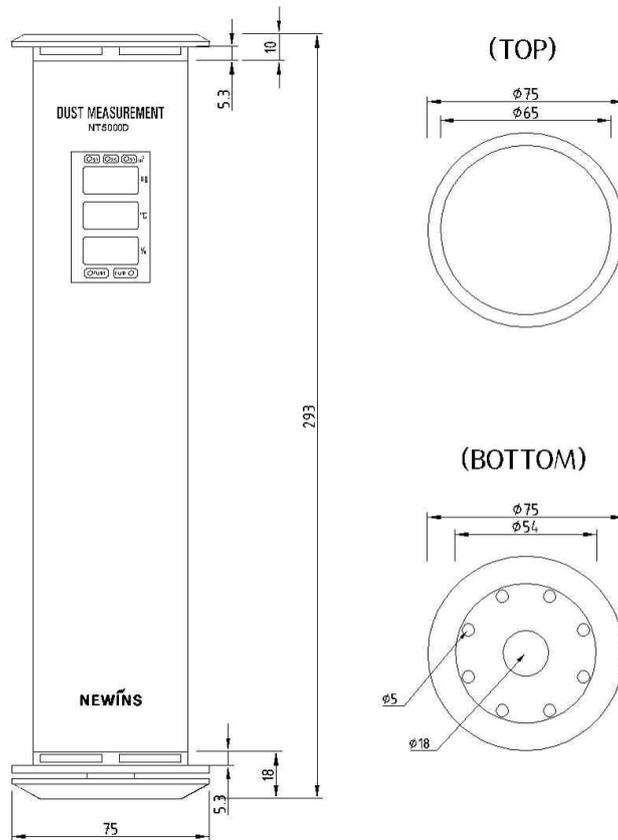
It is recommended to use on.

ORDERING CODE

Model						Description
NT 50	**0**	**0**	**D**			**Header type**
COLOR				**0**		**Black**
				1		**Blue (Option)**
CO2					**0**	**NONE**
					1	**With CO2·VOC (Option)**

TERMINAL DIAGRAM


```
1    2    3    4

S(+)  S(-)   R    S
|__RS485__|   AC 85~265V
              45~65Hz
              8W
```

DIMENSIONS

DUST MEASUREMENT
NT5000D

NEWINS

(TOP)
ø75
ø65

(BOTTOM)
ø75
ø54
ø5
ø18

293
10
5.3
18
5.3
75

* Product can be installed outdoors / indoors,
communication cable (RS485) within 30m is recommended