

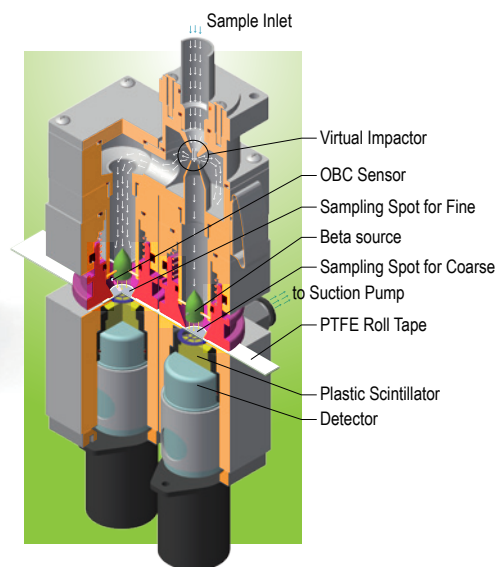
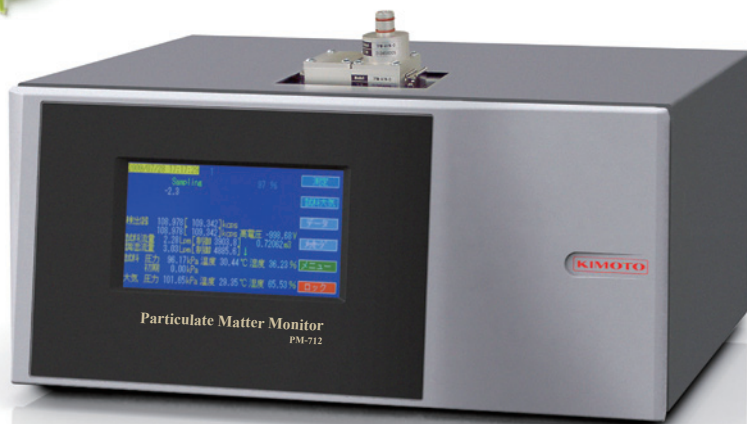
# PM<sub>2.5</sub>/PM<sub>10-2.5</sub>/PM<sub>10</sub>/OBC Dichotomous Monitor

## PM-712

JAPANESE PATENT APPLICATION No.3574045



**P**M-712 is a continuous PM monitor for measuring both PM<sub>2.5</sub> and PM<sub>10</sub>. Black carbon mainly attributed from diesel emissions is also measured, simultaneously. It's notable that **SmartCalc** function. SmartCalc evaluates PM<sub>2.5</sub> concentrations to 'reference' concentrations with high equivalence of FRM from 'real' concentrations under ambient condition.



PM-712 is designed to measure both fine (PM<sub>2.5</sub>) and coarse (PM<sub>10-2.5</sub>) fractions in PM<sub>10</sub> using a virtual impactor, simultaneously. PM-712 also measures the black carbon mainly attributed from diesel emissions using OBC (optical black carbon) sensor. (Simple PM<sub>2.5</sub> type is selectable by product code PM-712-00.)

KIMOTO realized the precise measurement of PM<sub>2.5</sub> with high-equivalence of FRM by the unique function "SmartCalc" born from our rich experiences. Using this function, 'real' PM<sub>2.5</sub> concentrations under ambient condition are evaluated 'reference' concentrations of FRM after aging for 24 hour with 35%RH.

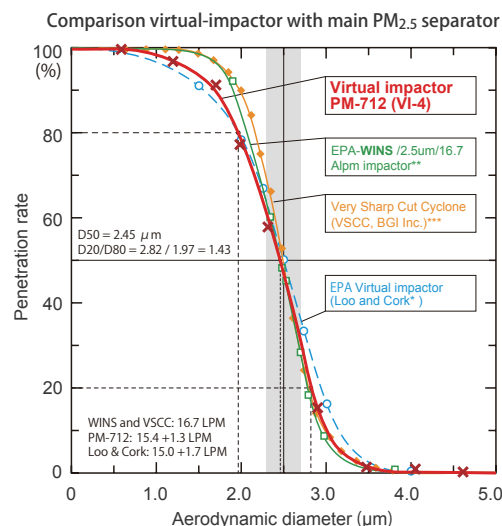
PTFE tape filter that has few effects by moisture and gas adsorption.

Easy operation by large color LCD touch panel.

USB memory is available for data retrieve.

Large capacity memory stores measuring data for 1 year.

Optional cover tape roll protects sample spots for speciation analysis.



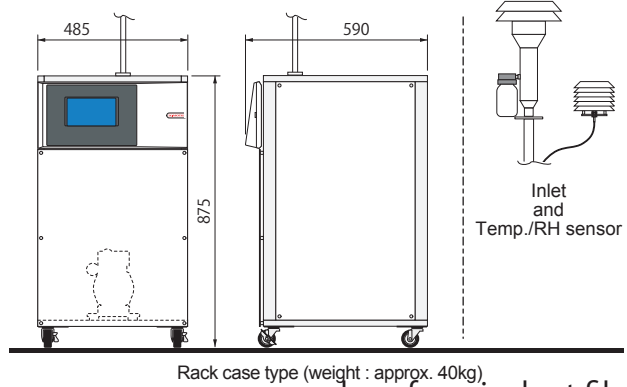
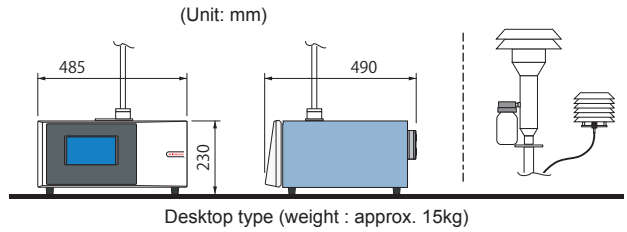
\*Loo, B. W. and Cork, C. P., Aerosol Sci. and Tech., 9(3),167, (1988).

## Standard Specifications

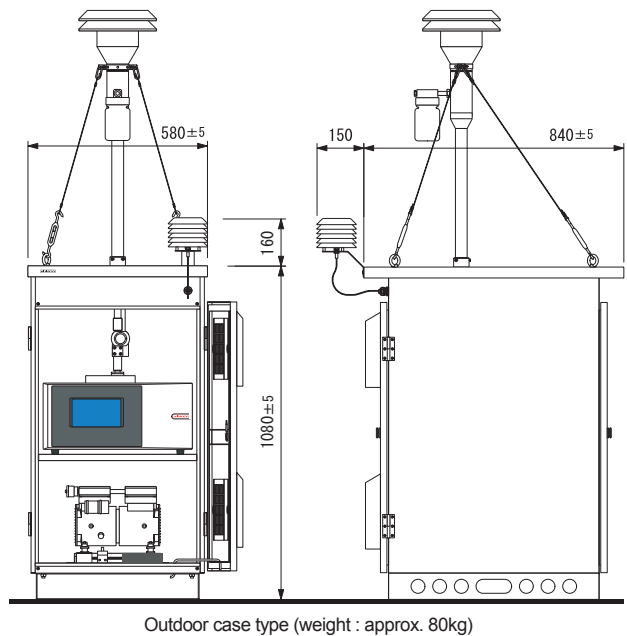
Measuring object	Particulate Matter in the ambient air
Measuring method	PM <sub>2.5</sub> , PM <sub>10-2.5</sub> : Beta ray attenuation method OBC (Optical Black Carbon): Light scattering method
Measuring range	PM <sub>2.5</sub> : 0~1000 µg/m <sup>3</sup> PM <sub>10</sub> : 0~5000 µg/m <sup>3</sup> OBC: 0~20 µg/m <sup>3</sup>
Repeatability	± 2 % of equivalence film number
Zero drift	± 5.0 µg/m <sup>3</sup> /day
Span drift	± 3%/ day of equivalent film number
Linearity	± 5 % of equivalence film number
Instrument reading for standard air sample	± 10% of mass concentration
Sample flow rate	16.7 LPM (15.4LPM + 1.3 LPM)
Flow control	Volumetric flow control
Stability for fluctuation in voltage for conc.	±3%/100±10V of equivalence film number
Stability for fluctuation in voltage for flow	± 5%/100±10V for sampling flow rate
Filter media	PTFE tape roll
Beta ray source	14C, less than 10 MBq
Detector	Plastic scintillation detector
Sampling inlet	Inlet: USEPA PM <sub>10</sub> Inlet Separator: PM <sub>2.5</sub> Virtual Impactor
LCD display	Measuring data, Output range, Alarm, Performance and Control information
Internal data memory	Measuring data (1min. data, 1h data), Messages
Digital IN/OUT	Ethernet, USB1.1, RS232C
Analog output for telemeter (Optional)	DC 0~1V: 1h value (as provisional): 0 - 500/1000/2000/ 5000 µg/m <sup>3</sup> 4 ranges auto/manual switching *Starting range is selectable. *Fixed range is also available. Contact signals: Output range, Adjustment, Power off, Failure alarm etc.
Power requirement	AC 100 V, 50/60 Hz, approx. 450 VA
Withstand voltage test	AC1000V 50/ 60Hz for 1min.
Insulation resistance	More than 5 M OHM

\*For further information, please contact us.

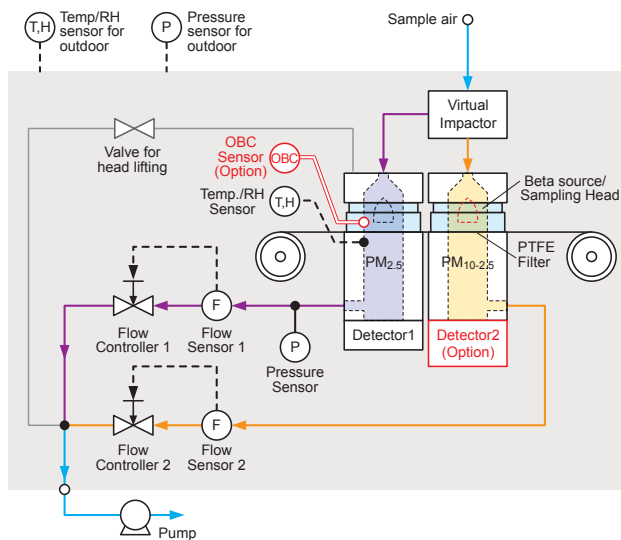
## Size (Desktop type and rack case type)



day of equivalent film number



## Flow Diagram



## Product Code (please select to order)

PM-712-□□□□

C	PM <sub>10</sub> Simultaneous measurement
0	No use
B	OBC measurement
0	No use
T1	Desktop type
A1	Rack case type
S1	Outdoor case type

T	Analog telemeter communication unit
0	No use
R	Serial recorder
0	No use

**KIMOTO**

**KIMOTO ELECTRIC Co., Ltd.**

3-1 FUNAHASHI-CHO, TENNOJI-KU, OSAKA 543-0024, JAPAN  
PHONE: +81-6-6768-3401 FAX: +81-6-6764-7040  
Home page: <http://www.kimoto-electric.co.jp>  
E-mail: [sales@kimoto-electric.co.jp](mailto:sales@kimoto-electric.co.jp)