

Cat.No.7630-00

## Digital Barometer

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Model

### **SK-500B**



The SK-500B is a desk-top type precision digital barometer having the wide measuring range (600 to 1100 hPa). Possible to display and store the measured data on a PC in real time

### Features

- Wide measuring range of 600 to 1100hPa
- High resolution of 0.01hPa
- Red LED for easy visibility
- Various arithmetic results: calculates and displays the values of MAX, MIN, AVG and REL
- RS-232C/Printer output  
Equipped with an RS-232C output. Measured values can be displayed on a computer in real time. The data also can be printed out in real time with the [optional printer](#)
- Upper and lower limit alarms  
Equipped with a contact output that can be connected to an external alarm device such as a buzzer and revolving light.  
Upper and lower limit alarm values can be separately set
- Pressure port that is the inlet for the atmospheric pressure is equipped

### Front view



### Rear view



- Pressure port : Rc1/4
- RS-232C/Printer output port
- Alarm output port (upper and lower)

### Specifications

Measuring range	600.00 to 1100.00hPa
Resolution	0.01hPa
Accuracy (at 10 to 40C)	±0.50hpa (700.00 to 1100.00hPa) ±1.00hpa (other than above)
Sampling time	approx. 1 sec.
Sensing element	Piezoresistance pressure sensor
Display	7 segment red LED (6 digits) Status indication: red LED
Operation ambient	-10°C to 50°C, less than 85 %rh (no condensing)
Power requirement	9VDC (exclusive AC adapter in 100 to 240VAC use) 660mA 50/60Hz
Materials	Main Body: SPCC Display: acryl resin Pressure port: SUS304
Dimensions	(W)200×(H)90×(D)280 mm
Weight	appricx. 3.0 kg
Accessories	Instruction manual, exclusive AC adapter x 1 RS-232C cable x 1 USB serial cable (with CD-ROM for USB driver) x 1

### Installation

The SK-500B is an indoor use desk-top type digital barometer. Install the unit vertically avoiding the places as below.

- In flammable gases, corrosive gases and explosive gases
- In a place subject to direct sunshine and near the thermal appliance
- Near the exhaust port of airconditioner
- In a place subject to vibration
- Beyond the operation ambient (-10 to 50°C, less than 85%rh, no condensing)
- In an environment where electrical noise is generated
- In a place subject to rain and splash water

## Cautions in use



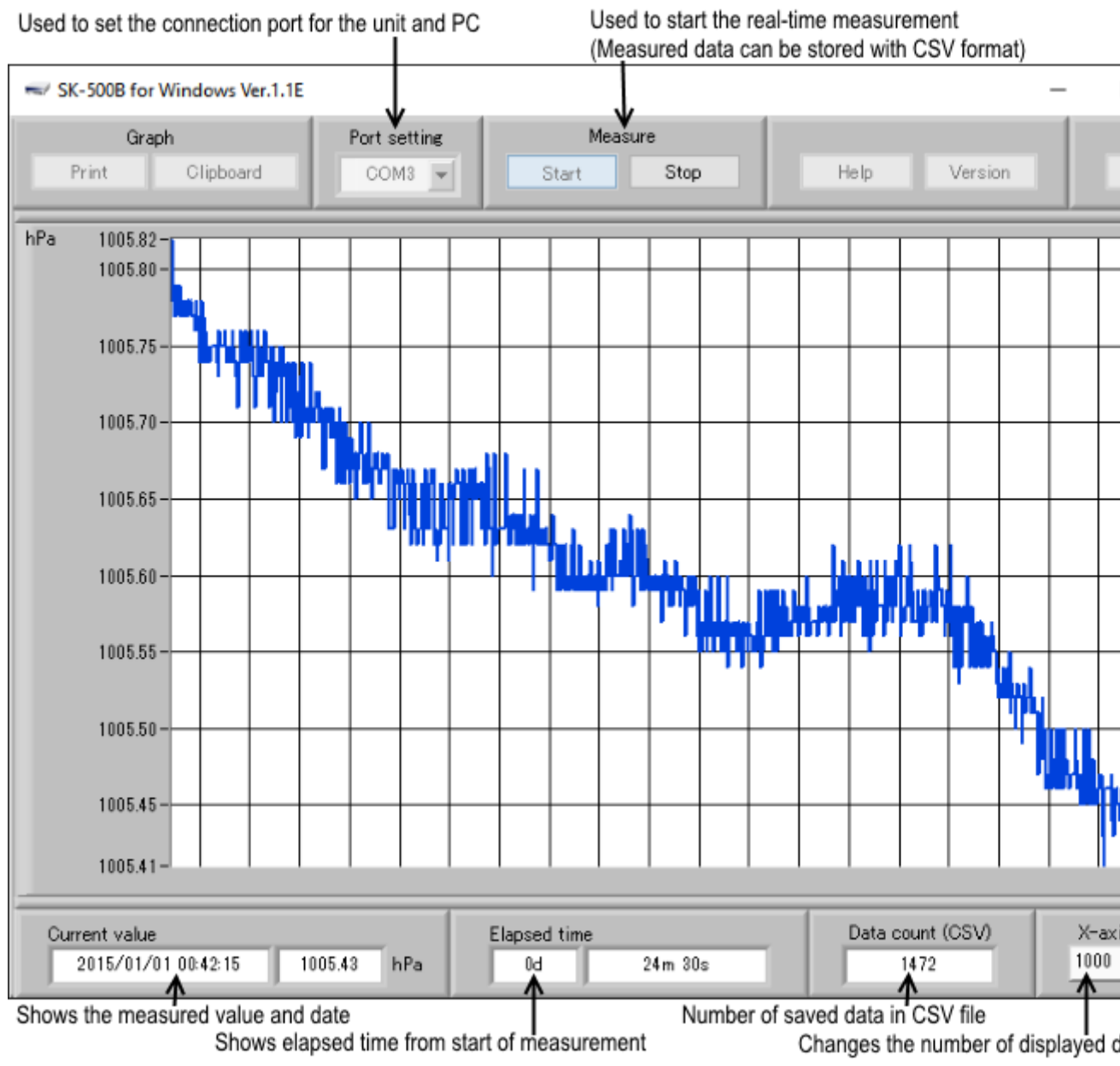
## Software

By using the exclusive software, measured data can be displayed on PC in real time.

- SK-500B and PC can be connected with the dedicated cable
- Measured data can be evaluated with graphs on PC
- Acquired data can be stored with "CSV" format in real time
- Exclusive software can be downloaded from our software downloading page
- OS: Windows XP(SP3), Windows 7(64-bit/32-bit), Windows 8(64-bit/32-bit), Windows 8.1(64-bit/32-bit), Windows 10(64-bit/32-bit)

\* Please click [here](#) to skip to the software downloading page (free software)

## Graph Display on the PC Screen



## Trivial

Atmospheric pressure is defined as "power" on the horizontal surface by weight of the air and hectopascal (hPa) is used as a unit of atmospheric pressure.

The air becomes atmospheric layer and wraps up the earth. The weight (pressure) of approx. 1kg per 1cm<sup>2</sup> applies to sea level and it is equivalent to approx. 1,013 hPa.

As altitude rises, the air decreases and its weight decrease. This means that the atmospheric pressure falls down as altitude rises.

Upon reaching a height of 100m above sea level, the atmospheric pressure will drop approx. 12 hPa.

Thus, in order to compare the readings measured at different spots (heights), it is necessary to convert it into the same altitude as mean sea level. The converted atmospheric pressure is called Sea level pressure.

The relation between Altitude and Atmospheric Pressure

Altitude m	Pressure hPa	Altitude m	Pressure hPa	Altitude m	Pressure hPa	Altitude m	Pressure hPa
0	1013.2	1100	887.9	2100	785.2	3200	683.6
100	1001.2	1200	877.2	2200	775.5	3400	666.6
200	989.5	1300	866.6	2300	765.7	3600	649.3
300	977.7	1400	856.0	2400	756.3	3800	632.7
400	966.0	1500	845.5	2500	746.9	4000	616.5
500	954.5	1600	835.1	2600	737.5	4200	600.5
600	943.2	1700	824.9	2700	728.3	4400	585.1
700	932.0	1800	814.9	2800	719.9	4600	569.7
800	920.8	1900	804.9	2900	709.9		
900	909.7	2000	795.0	3000	701.1		
1000	898.8						