SK SATO

General Catalog

Corporate Profile

Name	Sato Keiryoki Mfg. Co., Ltd.
Activities	Manufacturing and distribution
Products	Meteorological instruments, scientific instruments and industrial products
Foundation	April, 1950
Establishment	April, 1958

Contact International Trade Division
Hotline: +81-3-3254-8117   Fax: +81-3-3254-8123
E-mail: query@sksato.co.jp
URL: http://www.sksato.co.jp/english/

*Head Office 3-4, Kanda-kajicho, Chiyoda-ku, Tokyo 101-0045 Japan
Tel: +81-3-3254-8111   Fax: 03-3254-8119

*Branches

Osaka 2-1-10, Uchihiranomachi, Chuo-ku, Osaka-shi, Osaka 540-0037 Japan
Tel: 06-6944-0921   Fax: 06-6994-0926

Sendai 25-1, Nishigaoka, Murata-machi, Shibata-gun, Miyagi 989-1304 Japan
Tel: 0224-83-4781   Fax: 0224-83-4770

Nagoya 1-3-16, Osu, Naka-ku, Nagoya-shi, Aichi 460-0011 Japan
Tel: 052-204-1234   Fax: 052-204-1123

Toyama 5-2-3, Futakuchimachi, Toyama-shi, Toyama 939-8211 Japan
Tel: 076-494-3088   Fax: 076-494-3090

Fukuoka 4-3-2, Sumiyoshi, Hakata-ku, Fukuoka-shi, Fukuoka 812-0011 Japan
Tel: 092-451-1685   Fax: 092-451-1688

*Factories

Tokyo 2-9-18, Minami-tokiwadai, Itabashi-ku, Tokyo 174-0072 Japan
Tel: 03-3958-2321   Fax: 03-3958-2325

Miyagi 25-1, Nishigaoka, Murata-machi, Shibata-gun, Miyagi 989-1304 Japan
Tel: 0224-83-2110   Fax: 0224-83-4770

*Delivery Center / Warehouse

1-3-38, Sakaecho, Asaka-shi, Saitama 351-0012 Japan
Tel: 048-465-5977   Fax: 048-465-7929
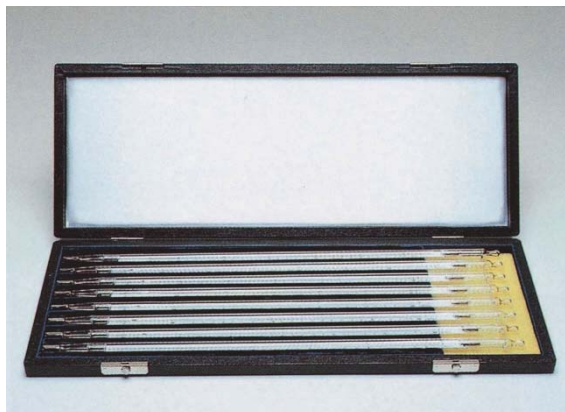
The certificates we have been registered:

JCSS   ISO9001

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No. 0022-38 STANDARD THERMOMETER SET
(Set of 8 pcs. in a case)

Used for calibration and test of all thermometers as stable and reliable reference. These thermometers can help you issue the documents dealt with ISO 9001 certificate and traceability.

* Dual tubing with a scale plate enclosed.
* Mercury-filled thermometers with an ice-point determination
* Diameter of the thermometer: 9.5 to 10.5 mm. Length: 400 mm.
* Calibration certificate issued by JCSS is attached.
  (JCSS: Japan Calibration Service System)

No.	Range	Div.	No.	Range	Div.
0	−50 to 0°C	0.1°C	4	150 to 200°C	0.1°C
1	0 to 50°C	0.1°C	5	200 to 250°C	0.1°C
2	50 to 100°C	0.1°C	6	250 to 300°C	0.1°C
3	100 to 150°C	0.1°C	7	300 to 360°C	0.1°C

— Can be sold loose —

No. 0022-08 STANDARD THERMOMETER SET
(Set of 8 pcs. in a case)
- same as the above, but calibration certificate is issued by manufacturer.

No. 0021-10 STANDARD THERMOMETER SET
(Set of 8 pcs. in a case)

* Dual tubing with a scale plate enclosed.
* Mercury-filled thermometers
* Diameter of the thermometer: 6.5 to 7.5 mm. Length: 300 mm.
* Calibration certificate issued by manufacturer is attached.

No. 0020-10 STANDARD THERMOMETER SET
(Set of 8 pcs. in a case)
- same as the above, but thermometers are etched-stem type.
* Diameter of the thermometer: 6.0 to 7.0 mm. Length: 300 mm.

ALCOHOL-FILLED ETCHED-STEM GLASS THERMOMETERS
— Total immersion type —

* Scale is etched on the surface of the glass tube

Minimum quantity: 10 pcs.

Cat No.	Range	Div.	Length	Metal case
0110-00	0 to 100°C	1°C	300 mm	
0120-00	−5 to 105°C	1°C	300 mm	
0140-00	−20 to 105°C	1°C	300 mm	
0220-00	0 to 50°C	1°C	300 mm	No. 0955-00 for 300 mm thermometer
0230-00	−20 to 50°C	1°C	300 mm	
0240-00	−30 to 50°C	1°C	300 mm	
0260-00	−50 to 50°C	1°C	300 mm	
0280-00	0 to 150°C	1°C	300 mm	No. 0956-00 packed in a blister pack for 300 mm thermometer
0290-00	0 to 200°C	1°C	300 mm	
0315-00	−30 to 105°C	1°C	300 mm	
0320-00	−70 to 50°C	1°C	300 mm	
0330-00	−40 to 50°C	1°C	300 mm	
0335-00	−80 to 50°C	1°C	300 mm	
0340-00	−100 to 50°C	1°C	300 mm	
0600-00	−20 to 50°C	1°C	150 mm	No. 1710-90 for 150 mm thermometer
0610-00	0 to 50°C	1°C	150 mm	
0620-00	0 to 100°C	1°C	150 mm	

Material of the metal cases: SUS304

Anti-rolling rubber

Glass thermometer

Metal case
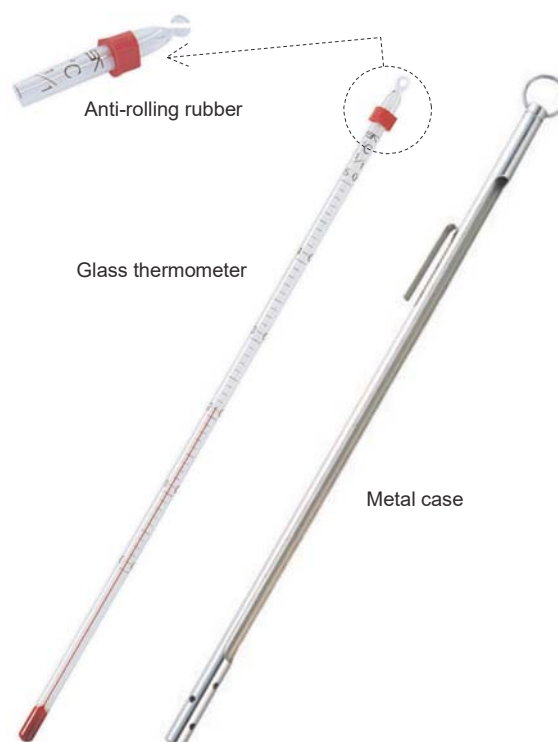
No. 8800- 00 DATALOGGER MODEL SK-L751 (2-channel for Temperature measurement)
No. 8870- 00 DATALOGGER MODEL SK-L754 (1-channel each for Temperature and humidity measurement)

SK-L751 w/SK-L751-1

SK-L754 w/SK-L754-1

SK-L751 w/SK-L751-1 and SK-L751-2

SK-L754 w/SK-L754-2

FEATURES

- The memory capacity is 16000 data items per channel.
  With logging interval of 90 minutes, the data of approx. 2 years and 9 months can be stored.
- The method of storing data is selectable among four logging options; "Once", "Repeatedly", "Ends at…" and "By pages".
- Logged data ca be copied to microSD card.
- Data analysis software and real-time transmission software are included as standard accessories on CD-ROM.
- The power supply can use both of batteries and an AC adapter (option).
- The date and time to start logging automatically can be specified by setting the preset start.
- The measurement data can be transmitted in real-time to a personal computer.
- The upper and lower thresholds for warning can be set. When the temperature or humidity threshold is triggered, the alarm mark (Hi/Lo) and alarm lump will light.
- The probes are interchangeably used with the main units.
- The storage memory can be verified with the memory indicator.
- The logging interval can be selected from 14 options: 1 sec, 2 sec, 5 sec, 10 sec, 15 sec, 30 sec, 1 min, 2 min, 5 min, 10 min, 15 min, 30 min, 60 min and 90 min.
- Even if batteries run out, the data will not be lost. Measured data is saved in the internal memory.
- The datalogger ID (6 digits) can be set. It helps you identify multiple dataloggers.
- By using the data analysis software attached, the acquired data can be evaluated easily and quickly, and also evaluated by using commercial spreadsheet software supporting CSV extension such as Microsoft Excel.
- Displayable in °C/°F.

Graph Displays on PC screens
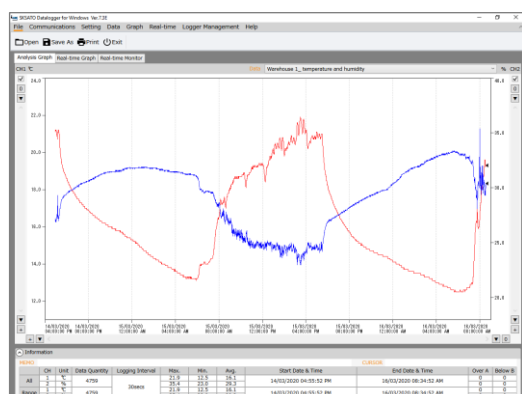
Main Screen
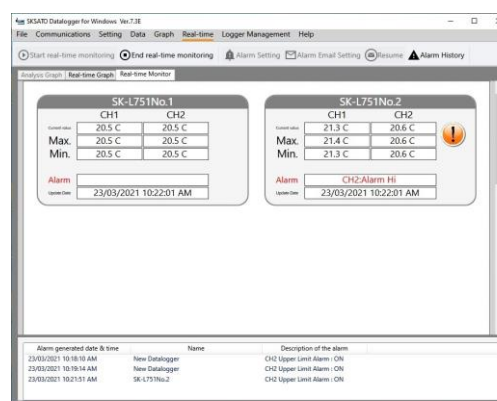
Real-Time Monitoring

SPECIFICATIONS

1. Main Units

Cat. No.	8800-00	8870-00
Model	**SK-L751 (Temperature measurement)**	**SK-L754 (Temperature and humidity measurement)**
Measuring channel	2 channels for temperature	1 channel each for temperature & humidity
Measuring range	Depends on the probe connected	
Resolution	0.1°C / 0.1°F	0.1°C / 0.1°F / 0.1%rh
Display Accuracy	±0.2°C (0 to 40°C) ±0.3°C (other than above)	Temp.: ±0.2°C (0 to 40°C) ±0.3°C (other than above) Humid: ±0.2%rh (0 to 40°C) ±0.3%rh (other than above)
Temperature unit (°C/°F)	Temperature unit switch (Celsius/Fahrenheit) is equipped	
Display sampling	Approx. 1 second	
Display	Temperature/Humidity Alarm (ALM), logging option, status display (REC /RES), memory indicator (in bars), SD memory, low battery indicator, key-lock mark, error codes, setting value at each setting	
Memory capacity	16,000 data items for each channel	
Logging intervals	14 options: in seconds (1, 2, 5, 10, 15, 30) and in minutes (1, 2, 5, 10, 15, 30, 60, 90)	
External memory	microSD/SDHC up to 32GB	
Operating ambient	−10.0 to 60.0°C, lower than 85%rh (no condensing)	
Storage ambient	−10.0 to 60.0°C, lower than 85%rh (no condensing)	
Power requirement	Two AA alkaline batteries or AC adapter	
Battery life	Approx. 500 hours in continuous measurement mode 16,000 data items can be logged at any logging interval (When LCD is off)	
Dimensions	Approx. 114 (W) x 80 (H) x 35 (D) mm (exclusive of protrusions)	
Weight (approx.)	232 g (inclusive of batteries)	227 g (inclusive of batteries)
Waterproof property	IP65 (when w/-sensor-cord-type probe connected)	------
Standard accessories	CD-ROM: Data analysis software and real-time software, USB cable, 2 AA alkaline batteries, English manual	

2. Optional accessories

No. 8229-50 AC adapter for SK-L751 / SK-L754 Dataloggers

SPECIFICATIONS
Primary input voltage : 100 to 240VAC 50/60Hz
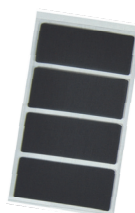Plug : USB mini-B
Cord length : 1.5 m

No. 8229-60 Sensor filter (a pack of 4 pcs.)
No. 8229-61 Sensor filter (a pack of 20 pcs.)

Available for SK-L754-1 and SK-L754-2 Plug-in type probes

 * Recommended for use in a dusty environment

a pack of 4 pcs.   Filter installed

SK sato KEIRYOKI MFG. CO., LTD.

3. Optional Probes for SK-L751 Datalogger (Temperature measurement)

No.8810-01 Model SK-L751-1
Plug-in type

No.8810-02 Model SK-L751-2
W/-sensor-cord type

Sleeve type
No.8810-21 Model SK-L751-21
No.8810-22 Model SK-L751-22 (Silicone cable) *3

Immersion type
No.8810-31 Model SK-L751-31
No.8810-32 Model SK-L751-32 (Silicone cable) *3

Cat. No.		8810-01	8810-02	8810-21	8810-22	8810-31	8810-32
Model		**SK- L751-1 Plug-in type**	**SK- L751-2 W/-sensor-cord**	**SK- L751-21 Sleeve type**	**SK- L751-22 Sleeve type *3**	**SK- L751-31 Immersion type**	**SK- L751-32 Immersion type *3**
Measuring range		−10.0 to 60.0°C	−40.0 to 80.0°C	−40.0 to 80.0°C	−40.0 to 105.0°C	−40.0 to 80.0°C	−40.0 to 105.0°C
Accuracy	−40.0 to −10.0°C	-----		±1.5°C			
	−9.9 to 60.0°C	±0.5°C (*2)	±0.5°C	±0.6°C			
	60.1 to 80.0°C						
	80.1 to 105.0°C	-----	-----	-----	±0.8°C	-----	±0.8°C
Sensing element		Thermistor					
Waterproof		-----	JIS C 0920 IP65 (*1)	JIS C 0920 IPX7 (*1)			
Materials	Sensing part	PC resin	SUS304	SUS304		SUS303	
	Grip	-----	-----	SUS303		-----	
	Connector	PVC resin					
	Cord	-----	PVC resin	PVC resin	Silicone	PVC resin	Silicone
Dimensions	Sensing part	Ø11 x 60(H) mm	Ø3.3 x 13(L) mm	Ø3 x (L)220 mm (point end)		Ø17 x 90(L) mm	
	Grip	-----		Ø7 x 55(L)mm		-----	
	Connector	Ø9 x 30(L) mm		Ø12 x 40(L) mm			
	Cord	-----	1.6 m	3 m		5 m	
Weight		Approx. 9 g	Approx. 23 g	Approx. 45 g	Approx. 90 g	Approx. 175 g	Approx. 240 g
Accessories		Test Result, English manual					

*1 When the probe is connected with a main unit
*2 When the temperature is between −10.0 and 60.0°C
*3 Probes with silicone cables are make-to-order products. Also, we offer a variety of tailor-made probes not listed here. Visit our website for details.

4. Optional Probes for SK-L754 Datalogger (Temperature/Humidity measurement)

Cat. No.		8880-01	8880-02
Model		**SK- L754-1**	**SK- L754-2**
Measuring range	Temp.	−10 to 60.0°C	−20.0 to 80.0°C
	Humid.	5.0 to 95.0%rh	
Accuracy	Temp.	±0.5°C	
	Humid.	Refer to the graphs below	
Sensor	Temp.	Thermistor	
	Humid.	Capacitance humidity	
Materials	Sensing part	PC resin	
	Connector	PVC resin	
	Cord	-----	PVC resin
Dimensions	Sensing part	Ø11 x 60 (H) mm	Ø11 x 34 (L) mm
	Connector	Ø9 x 30 (H) mm	Ø12 x 40 (L) mm
	Cord	-----	1.6 m
Weight		Approx. 9 g	Approx. 35 g
Accessories		Sensor filter x 1, Test Result	

No.8880-01 Model SK-L754-1
Plug-in type

No.8880-02 Model SK-L754-2
W/-sensor-cord type

5. Measuring range and Accuracy of R. Humidity

SK-L754-1

SK-L754-2
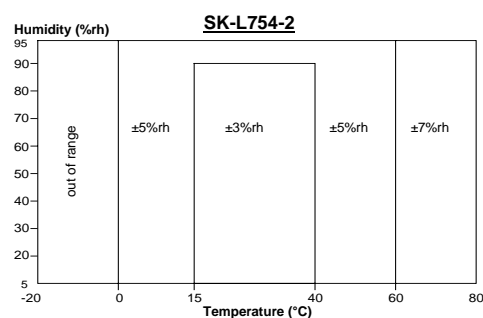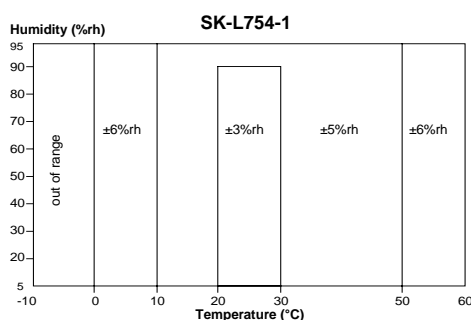
SK-110TRH-B DIGITAL THERMOHYGROMETER

- Stores 200 pairs of temperature and humidity data
- Displays maximum/minimum temperature and humidity, wet bulb temperature, and dew point
- Detachable probes for versatile use
- Calibration available

Cat. No.		8138-00
Range		Depends on probes
Accuracy	Temperature	Main unit: ±0.2°C (0 to 40°C), ±0.3°C (other)
		Probe: ±0.3°C (10 to 50°C), ±0.5°C (other)
	Humidity	Main unit: ±0.2%rh (0 to 40°C), ±0.3%rh (other)
		Probe: Refer to the specs of each probe
Resolution		0.1°C, 0.1%rh
Sampling rate		Approx. 1 second
Operating ambient		−10 to 60°C, less than 80%rh without condensing
Power		AAA alkaline battery x2
Battery life		Approx. 1000 hours
Material		PC resin
Dimensions		65 (W) x 168 (H) x 35 (D) mm except protrusion
Weight		159 g including batteries

S110TRH-20 Wired Probe

S110TRH-40 Flexible Probe

S110TRH-10 Plug-in Probe

S110TRH-30 Telescoping Probe
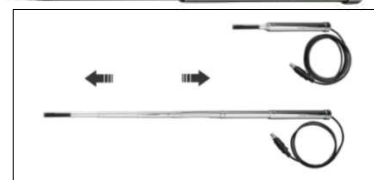
PROBES		**Plug-in Probe**	**Wired Probe**	**Telescoping Probe**	**Flexible Probe**
Model name		SK-110TRH-10	SK-110TRH-20	SK-110TRH-30	SK-110TRH-40
Catalog no.		8141-10	8141-20	8141-30	8141-40
Range	Temperature	−10 to 60°C	−20 to 80°C		
	Humidity	5 to 95%rh			
Accuracy	Temperature	±0.3°C (10 to 50°C), ±0.5°C (other)			
	Humidity	See below			
Weight		13 g	68 g	107 g	31 g
Dimensions	Probe	Ø15 x 90 mm	Ø15–20 x 200 mm	Ø9–14 mm x varies btwn 200 and 930 mm	Ø9 x 35 mm
	Cable	—	1.5 m	Varies btwn 0.7 and 1.5 m	1.6 m
Material	Probe	PC	PC	POM + SUS304	POM
	Cable	—	PVC		
	Connector	PVC			

Accuracy of Humidity

SK-110TRH-10

Humidity (%rh)
±5%rh
±4%rh ±2.5%rh ±4%rh
Out of range
Temperature (°C)
-10 0 15 40 60

SK-110TRH-20/30/40

Humidity (%rh)
±5%rh
±4%rh ±2.5%rh ±4%rh ±6%rh
Out of range
Temperature (°C)
-20 0 15 40 60 80

7
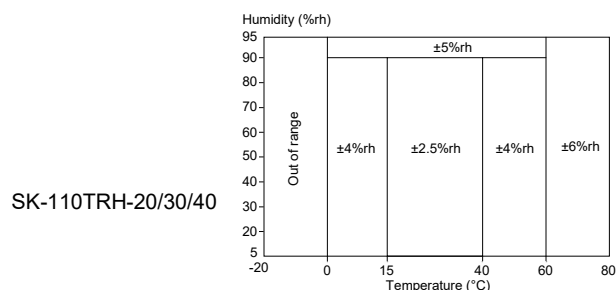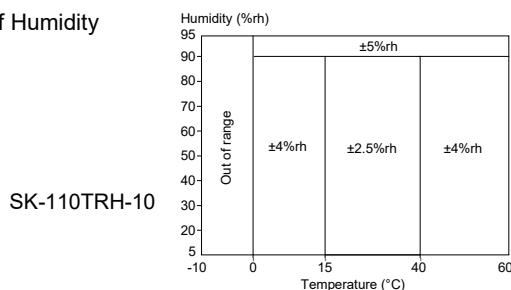
SK-RHC SERIES TEMPERATURE/HUMIDITY TRANSMITTERS

FEATURES
・Selectable output: voltage, electric current and RS-485 signals are provided.
・Three optional probes are interchangeably used with the main units

SK-RHC transmitter with SK-RHCS-1 probe

SK-RHC transmitter with SK-RHCS-2 probe

SPECIFICATIONS

Cat. No.	8920-01	8920-02	8920-03	8920-04
Model	SK-RHC-V	SK-RHC-V	SK-RHC-I	SK-RHC-C
Output signals	Voltage output: 0 to 1V	Voltage output: 0 to 100mV	Current output: 4 to 20mA	Digital output: RS-485
Outputs	Temp.:-100 to 600mVDC: -10 to 60°C Humi.:0 to 1000mVDC: 0 to 100%rh	Temp.: -10 to 60mVDC: -10 to 60°C Humi.:0 to 100mVDC: 0 to 100%rh	Temp.:4 to 20mA:-15 to 65°C Humi.:4 to 20mA:0 to 100%rh	RS-485
Display range	Temperature: -15 to 65.0°C		Humidity: 5 to 99.9%rh	
Display accuracy	Temperature: ± (0.1 + 1 digit) °C		Humidity: ± (0.1 + 1 digit) %rh	
Measuring range	Depends on the probe connected			
Resolution	Temperature: 0.1°C (–9.9°C or higher), 1°C (other range) Humidity: 0.1%rh (15%rh or higher), 1%rh (other range)			
Power requirement	12 to 24 VDC or Optional AC adapter			
Functions	Upper/Lower limit alarm output (No voltage ON-OFF 2 position control)			
Sampling time	Switchable (1 sec. /10 sec.)			
Dimensions	118 (w) x 100 (H) x 42 (D)mm			
Weight	Approx. 220g			
Accessories	Fixing screw for probe x 1, English manual			

OPTIONAL PROBES

SPECIFICATIONS

Cat. No.	8921-00	8922-00	8922-10
Model	SK-RHCS-1	SK-RHCS-2	SK-RHCS-3
Sensing elements	Temperature: Thermistor		
	Humidity: High polymeric resistance change type		
Measuring range	–10 to 60.0°C 20.0 to 95.0%RH (at 23°C)		–10 to 60.0°C 25.0 to 95.0%RH (at 23°C)
Accuracy	±0.5°C (20.0 to 30.0°C) ±1°C (other range) ±3%RH (20 to 30°C / 30 to 90%)		±0.7°C (20.0 to 30.0°C) ±1.2°C (other range) ±4%RH (20 to 30°C / 30 to 90%)
Dimensions (sensing part)	29(w) x 121(H) x 24(D)mm	19dia.x 118.5(L)mm	6 dia. x 35(L)mm
Cord length	—	5m (*)	1.5m
Weight	Approx. 42g	Approx. 228g	Approx. 87g

* SK-RHCS-2: available to extend sensor cord up to 20m at option

TEMPERATURE/HUMIDITY INDICATORS

No. 8091-00 Temperature Indicator
Model SK-M460-T

No. 8091-50 Temperature & Humidity Indicator
Model SK-M460-TRH

No. 8092-00 Temperature Indicator
Model SK-M350-T

No. 8092-50 Temperature & Humidity Indicator
Model SK-M350-TRH

SPECIFICATIONS

Cat. No.		8091-00	8091-50	8092-00	8092-50
Model		SK-M460-T	SK-M460-TRH	SK-M350-T	SK-M350-TRH
Display range	Temp.	−50.0 to 199.9°C	0.0 to 65.0°C	−50.0 to 199.9°C	−15.0 to 65.0°C
	Humid.	—	5.0 to 99.9%rh	—	5.0 to 99.9%rh
Display accuracy	Temp.	± (0.3+ 1 digit) °C			
	Humid.	—	± (0.3+ 1 digit) %rh	—	± (0.3+ 1 digit) %rh
Height of character		100 mm	57 mm	57 mm	57 mm
Input	Temp.	Pt100Ω	0 to 650 mVDC	Pt100Ω	−150 to 650 mVDC
	Humid.	—	50 to 999 mVDC	—	50 to 999 mVDC
Operating ambient		0 to 50°C, less than 85%rh (no condensing)			
Power requirement		12 VDC (exclusive AC adapter is attached)			
Installation		Wall-mount/Pendant		Desktop (multi-angle type)	
Dimensions		463(W)×213(H)×65(D)mm		350(W) ×165(H)×85(D)mm	360(W) ×202(H)×85(D)mm
Weights		3.7 kg	3.5 kg	3.0 kg	3.7 kg
Accessories		AC adapter, mount fitting x 4 pcs.		AC adapter	
Options		Alarm function (upper and lower limits setting), current input (4 to 20 mA)			

* Probes can be separately purchased

* SK-M460-TRH and SK-M350-TRH are connectable with SK-RHC-V transmitter (0 to 1V)

OPTIONAL ITEMS

No. 8091-10 Air temperature probe Model SR-56A-015
 (Usable with SK-M460-T and SK-M350-T Indicators)
Input   : Pt100Ω (JIS class B) 3-wire type
Cord length : 1.5 m: (available to extend up to 10 m at option)
Dimensions : 18(w) x 51.3(H) x 10.3(D)mm
Weight   : approx. 50g

No. 7687-52 Dedicated AC Adapter (option)
Input voltage: 100 to 240VAC 50/60Hz
Cord length: 1.6m

Application Diagram
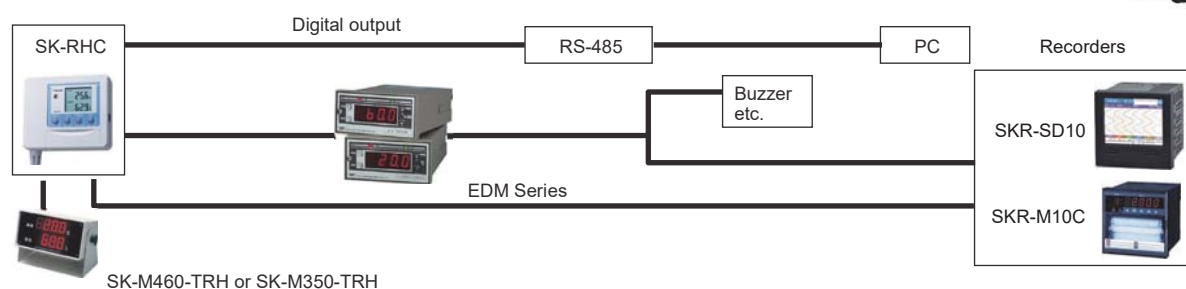
No.7435-50 MULTIPLE MEASURING SYSTEM FOR TEMPERATURE AND HUMIDITY WITH PAPERLESS RECORDER MODEL SK-5RAD-MR

FEATURES

· This model consists of a sensor section based on the principle of an Assmann psychrometer and a paperless recorder
· Long term measurement with stability: use of Pt100 ohm sensor that eliminates aged deterioration, compared to electrical humidity sensor
  Simultaneous display of all four factors: dry bulb & wet bulb temperatures, relative humidity and dew point
· Digital display with various functions such as trend display
· Using SD card to save measured values, the collected data can be used for data analysis and graphs with usage of a spread sheet software

SPECIFICATIONS

Model	No. 7435-50 SK-5RAD-MR			
Elements	Dry bulb temperature	Wet bulb temperature	Relative humidity	Dew point temperature
Measuring range	5.0 to 50.0°C	5.0 to 50.0°C	—	—
Operating range	—	—	0.0 to 99.9%rh	−40.0 to 50.0°C
Measuring accuracy	±(0.1%rdg+0.2)°C	±(0.1%rdg+0.2)°C	—	—
Detecting element	Pt 100 Ω	Pt 100 Ω	—	—
Airflow speed	More than 3 m/s			
Display	5' 7" TFT LCD touch panel			
Recording method	SD memory card (SD/SDHC standard) (*1)			
Waterproof rate	JIS C 0920 IP65 (*2)			
Power requirement	100 to 240 VAC±10%, 50/60 Hz Continuous operation: within 24 hours.			
Dimensions Recorder	150 (W) × 155 (H) × 186 (D) mm (protuberance not included)			
Detector	80 (W) × 264 (H) × 110 (D) mm			
Weight	Recorder: approx. 1.0 kg Detector: approx. 1.5 kg			
Standard accessories	CD-ROM (various tools), tweezers, water supply bottle, hook for wall-mount, stand, protection cover, 20 wicks, fixture band, power cord (for 100 VAC), fixture for panel, packing for water protection x2			

* 1. SD memory card is not included in the set.
* 2. Only for the front of the recorder in use of packing for the panel mount

VARIOUS DISPLAY FUNCTIONS

Digital Display
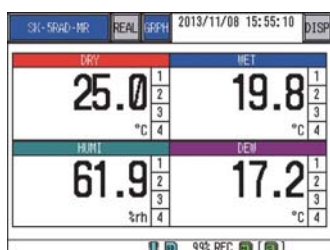
Bar-graph Display
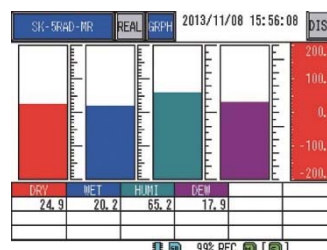
Trend Display (Horizontal)
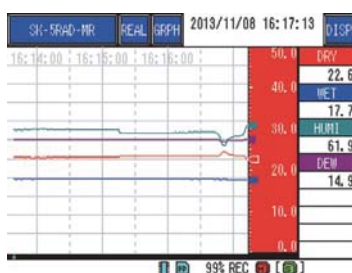
Trend Display (Vertical)
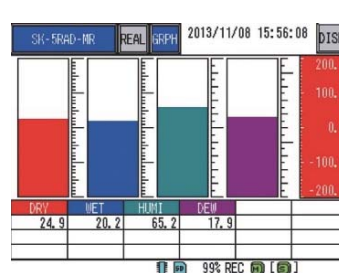
ASSMANN PSYCHROMETER MODEL SK-RHG

No. 7450-00 Mercury-filled dual tube glass thermometer type
No. 7450-20 Alcohol-filled dual tube glass thermometer type

FEATURES

- Can be used with both AC and DC Power supplies.
- Easy to fix thermometer to the main unit using a screw cap.
- Use of the dedicated wick is no longer need to wrap the wet bulb with cotton gauze

SPECIFICATIONS

Measuring range	: 0 to 50°C (division: 0.2°C)
Accuracy	: ±0.2°C
Sensing elements	: Mercury or Kerosene (Alcohol)
Length of thermometer	: 30 cm
Speed of air flow	: 3 m/s to 5 m/s
Power requirements	: 3 VDC (D battery x 2) or AC adapter
Battery life	: About 20 hours (continuously use at more than 3 m/s)
Outer dimensions	: 80 (W) x 450 (H) x 110 (D) mm
Weight	: 0.74 kg (without batteries)
Standard accessories	: Water supply bottle, Dustproof cover, Humidity conversion table, Humidity conversion rule, Test result for thermometers, 20 wicks, 2 D batteries, AC adapter (100 to 240 VAC use), manual, Carrying case (possible to accommodate all accessories)

OPTIONS

· **Spare glass thermometers:** a set of 2 pcs. with test result

		Range	Min. div.	Accuracy
No. 7450-50	Mercury-filled Thermometer	0 to 50°C	0.2°C	±0.2°C
No. 7450-60	Mercury-filled Thermometer	−30 to 50°C	0.2°C	±0.2°C
No. 7450-90	Alcohol-filled thermometer	0 to 50°C	0.2°C	±0.2°C
No. 7450-92	Alcohol-filled thermometer	−30 to 50°C	0.5°C	±0.5°C

· **Stand**

No. 7450-30	Dedicated compact stand for SK-RHG
No. 7450-40	Tripod in general use for Assmann Psychrometer

· **Others**

No. 7450-70	Spare wicks for SK-RHG (60 pcs. /box)
No. 7450-75	AC adapter (in 100 to 240 VAC use)
No. 7450-80	Humidity conversion rule

SK **SATO KEIRYOKI MFG. CO., LTD.**

SIGMA II THERMOHYGROGRAPH

SPECIFICATIONS

Cat. No		No. 7210-00	No. 7211-00	No. 7215-00
Model		NSII-Q	NSII-Q	NSII-S
Measuring range	Temperature	−15 to 40°C	−10 to 50°C	−15 to 40°C
	Humidity	0 to 100%rh	0 to 100%rh	0 to 100%rh
Drum rotation		1-day, 7-day and 32-day changed by change-over switch		1-day and 7-day changed by gear
Clock		Quartz type		Spring-wound type
Sensing elements		Aged bimetallic strip for temperature Human hair bundle for humidity		
Accuracy		±1°C (10 to 30°C), ±2°C (other range) for temperature ±3%rh (20 to 95%rh, 15 to 25°C), ±5%rh (other range) for humidity		
Min. graduation		1°C for temperature, 1% for humidity		
Recording pens		Cartridge pens (violet)		
Power requirement		2 C manganese batteries		-----
Battery life		1 year for continuous use		-----
Dimensions		336 (W) x 295 (H) x 148 (D) mm		
Weight		Approx. 3.1 kg		Approx. 3.5 kg
Accessories		7-day chart (55 sheets/box), 2 C manganese batteries, Test result, English manual		7-day chart (55 sheets/box), Test result, English manual
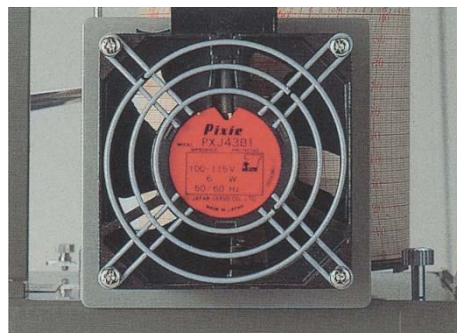
Use an external fan for faster response and more accurate measurement. It is in combination with this fan that the maximum capability of measurement for temperature and humidity can be achieved.

The fan inhales fresh air into the instrument and makes the response of sensor faster, resulting in the detection of accurate data. It is effective, particularly in warehouses which are excluded from the open air, laboratories where ventilation is poor or air tight small space.

Cat. No.	7238-22
Model	Axial AC Fan
Power requirements	100 to 115 VAC ±10% 50/60 Hz
Power consumption	70/55 mA *
Revolution of fan	2700/3300 rpm *
Max. airflow	0.73/0.94 m³/min *
Max. static pressure	3.4/5 mmAq *

* Figures in the left and the right of the slash show data when AC input frequency is 50 Hz and 60 Hz respectively.

SIGMA II THERMOGRAPH

SPECIFICATIONS

Cat. No.:	No. 7230-00
Model:	NSII-TQ
Measuring range:	−15 to 40°C
Clock:	Quartz type
	1-day, 7-day and 32-day by change-over switch
	Battery: C battery x 2
	Battery life: 1 year for continuous use
Sensor:	Aged bimetallic strip
Accuracy:	±1°C (10 to 30°C)
	±2°C (other range)
Chart graduation:	1°C
Recording pen:	Cartridge pen (violet)
Dimensions:	336 (W) x 295 (H) x 148 (D) mm
Weight:	Approx. 2.9 kg
Accessories:	7-day chart for 1-year use (55 sheets/box)
	C manganese battery x 2,
	English manual

SIGMA II HYGROGRAPH

SPECIFICATIONS

Cat. No.:	No. 7234-00
Model:	NSII-HQ
Measuring range:	0 to 100% for relative humidity
Clock:	Quartz type
	1-day, 7-day and 32-day by change-over switch
	Battery: C battery x 2
	Battery life: 1 year for continuous use
Sensor:	Human hair bundle
Accuracy:	±3%rh (20 to 95%RH at 15 to 25°C)
	±5%rh (other range)
Chart graduation:	1%
Recording pen:	Cartridge pen (violet)
Dimensions:	336 (W) x 295 (H) x 148 (D) mm
Weight:	Approx. 2.9 kg
Accessories:	7-day chart for 1-year use (55 sheets/box)
	C manganese battery x 2,
	English manual

SIGMA II BAROGRAPH

SPECIFICATIONS

|	
Cat. No.:	No. 7237-00
Model:	NSII-BQ
Measuring range:	940 to 1045 hPa
Clock:	Quartz type
	1-day, 7-day and 32-day by change-over switch
	Battery: C battery x 2
	Battery life: 1 year for continuous use
Sensor:	Bellows
Temperature compensation:	
	Bimetal
Accuracy:	±1 hPa (950 to 1040 hPa)
	±2 hPa (other range)
Chart graduation:	1 hPa
Recording pen:	Cartridge pen (violet)
Dimensions:	336 (W) x 295 (H) x 148 (D) mm
Weight:	Approx. 3.1 kg
Accessories:	7-day chart for 1-year use (55 sheets/box)
	C manganese battery x 2,
	English manual

SATO KEIRYOKI MFG. CO., LTD.

No. 7008-00 THERMOHYGROGRAPH MODEL MINI-CUBE
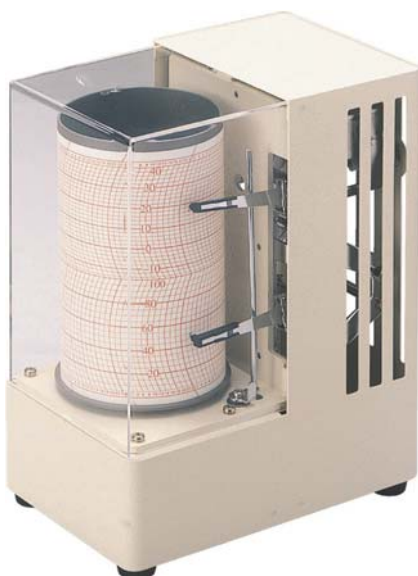
SPECIFICATIONS

Measuring range:	−15 to 40°C for temperature
	5 to 100%rh for humidity
Accuracy:	±2°C (10 to 30°C) for temperature
	±3°C (other range)
	±5%rh (30 to 90%rh, 15 to 25°C) for humidity
	±7%rh at other range
Min. graduation:	2°C for temperature
	5%rh for humidity
Sensors:	Aged bimetallic strip for temperature
	Human hair bundle for relative humidity
Clock:	Quartz type
Drum rotation:	7 days
Power requirements	AA battery x 1 pc.
Recording pens:	Cartridge pens (violet)
Dimensions:	148 (W) x 190 (H) x 97 (D) mm
Weight:	Approx. 1.6 kg
Accessories:	1 box of 7-day chart (55 sheets/box) for 1-year use
	AA manganese battery x 1, English manual

No. 7200-00 SIGMA II REMOTE ONE-POINT THERMOGRAPH MODEL NSII-ES1

SPECIFICATIONS

Measuring range:	−15 to 50°C
Accuracy:	±1°C
Min. graduation:	1°C
Sensor:	Liquid in stainless steel capillary tube
Clock:	Quartz type
Drum rotation:	7-day and 32-day by change-over switch
Power requirements	C battery x 2 pcs.
Recording pen:	Cartridge pen (violet)
Lead length:	5 m (vinyl coated)
Dimensions:	336 (W) x 295 (H) x 148 (D) mm
Weight:	Approx. 3.6 kg
Accessories:	7-day chart (55 sheets/box) for 1-year use
	C manganese battery x 2,
	English manual

No. 7202-00 SIGMA II REMOTE TWO-POINT THERMOGRAPH MODEL NSII-ES2

SPECIFICATIONS

Measuring range:	−15 to 50°C
Accuracy:	±1°C
Min. graduation:	1°C
Sensor:	Liquid in stainless steel capillary tube
Clock:	Quartz type
Drum rotation:	7 days
Power requirements	C battery x 2 pcs.
Recording pen:	Cartridge pens (violet)
Lead length:	5 m (vinyl coated)
Dimensions:	336 (W) x 295 (H) x 148 (D) mm
Weight:	Approx. 4.2 kg
Accessories:	7-day chart (55 sheets/box) for 1-year use
	C manganese battery x 2,
	English manual

Exclusive Charts for "SK" Brand Recorders

Recorder	Recording cycle	Cat. No.	Quantity	Remarks
No. 7210-00/7215-00 Thermohygrograph	1-day	7210-60	400 sheets	C 241540
	7-day	7210-62	55 sheets	C 1681540
	32-day (*)	7210-84	55 sheets	NTH 321540
No. 7211-00 Thermohygrograph	1-day	7211-60	400 sheets	
	7-day	7211-62	55 sheets	
	32-day	7211-64	55 sheets	
No. 7012-00 Thermohygrograph	3-month	7012-60	1 roll	3L 1002050-III
	1-month	7012-70	1 roll	1L 1002050-III
No. 7230-00 Thermograph	1-day	7230-60	400 sheets	AT 241540
	7-day	7230-62	55 sheets	AT 1681540
	32-day	7230-64	55 sheets	AT 321540
No. 7234-00 Hygrograph	7-day	7234-62	55 sheets	AH 1680100
No. 7237-00 Barograph	1-day	7237-60	400 sheets	NB 244045
	7-day	7237-62	55 sheets	AB 1684045
	32-day	7237-64	55 sheets	AB 324045
No. 7200-00 Remote One-point Thermograph	7-day	7200-62	55 sheets	AR 140-1
No. 7202-00 Remote Two-point Thermograph	7-day	7202-62	55 sheets	AR 140-2
No. 7005-00 MINI-STAR Thermohygrograph	7-day	7005-62	55 sheets	S168-5100X640
No. 7006-00/7006-10 MINI-ALPHA Thermohygrograph	7-day	7006-62	55 sheets	S168-1550
No. 7008-00 MINI-CUBE Thermohygrograph	7-day	7008-62	55 sheets	S168-5100X1540

* 32-day chart is not usable with No.7215-00 Thermohygrograph.

Consumables

Items	Cat. No.	Quantity	Remarks	Applicable recorder
Cartridge pen (violet)	7238-02	1 box	12 pcs./box	Recorders listed above
Cartridge pen (violet)	7238-04 (7210-90)	1 pc.	SK-051-079	Recorders listed above
Cartridge pen (red)	7238-06	1 box	12 pcs./box	Recorders listed above
Cartridge pen (red)	7238-08 (7210-92)	1 pc.	SK-051-079	Recorders listed above
Dustproof mesh cover	7238-20	1 pc.		"Sigma II" Series recorders
Axial fan	7238-22	1 pc.	100 to 115VAC±10% 50/60Hz	"Sigma II" Series recorders

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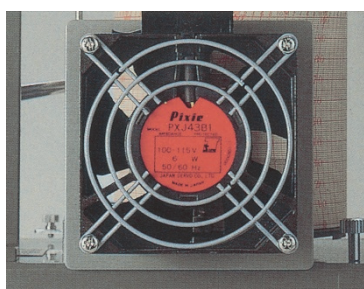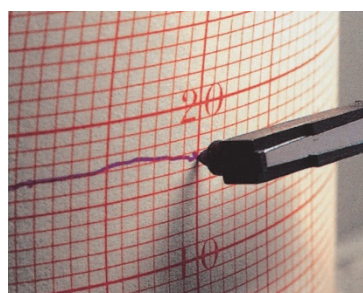
No. 7540-00 HAIR HYGROMETER WITH GLASS THERMOMETER

SPECIFICATIONS

Sensors:	Human hair bundle for humidity
	Glass thermometer for temperature
Measuring range:	20 to 100%rh for humidity
	−10 to 50°C for temperature
Min. graduation:	1%rh for humidity
	2°C for temperature
Accuracy:	±3%rh (40 to 80%rh, 15 to 25°C)
	±5%rh (other range)
	±2°C for temperature
Dimensions:	150 mm dia. x 40 (D) mm
Weight:	Approx. 280 g
Accessories	Test result, English manual

No. 7542-00 HYGROMETER WITH DIGITALTHERMOMETER

SPECIFICATIONS

Sensors:	Human hair bundle for humidity
	Thermistor for temperature
Measuring range:	20 to 100%rh for humidity
	0 to 50°C for temperature
Min. graduation:	2%rh for humidity
	0.1°C for temperature
Accuracy:	±4%rh (40 to 80%rh, 15 to 25°C)
	±7%rh (other range)
	±1°C (0 to 40°C)
	±2°C (other range)
Dimensions:	135 mm dia. x 33 (D) mm
Weight:	Approx. 230 g
Accessories:	Bracket (160 mm dia. x 4 (D) mm),
	AA battery x 2, English manual

No. 7562-00 HYGROTHERMOMETER MODEL PALMA II

SPECIFICATIONS

Sensors:	Synthetic hair for humidity
	Glass thermometer for temperature
Measuring range:	20 to 99%rh for humidity
	−10 to 50°C for temperature
Min. graduation:	1%rh for humidity
	5°C for temperature
Accuracy:	±4%rh (40 to 80%rh, 15 to 25°C)
	±8%rh (other range)
Dimensions:	95 mm dia. x 18 (D) mm
Weight:	Approx. 100 g
Accessory	English manual

No. 1013-00 THERMOHYGROMETER MODEL TH-300

SPECIFICATIONS

Sensors:	Coil for humidity
	Bimetallic strip for temperature
Measuring range:	20 to 100%rh for humidity
	−30 to 50°C for temperature
Min. graduation:	5%rh for humidity
	2°C for temperature
Accuracy:	±5%rh (40 to 70%rh, 15 to 25°C)
	±8%rh (other range)
	±2°C for temperature
Dimensions:	285 (W) x 285 (H) x 35 (D) mm
Weight:	Approx. 750 g
Accessory	English manual

No. 1074-00 DIGITAL THERMOHYGROMETER MODEL PC-5400TRH

SPECIFICATIONS

Sensors:	Electric resistance change type for humidity
	Thermistor for temperature
Measuring range:	20.0 to 95.0%rh for humidity
	0.0 to 50.0°C for temperature
Accuracy:	±5%rh (40 to 70%rh, 20 to 30°C)
	±8%rh (other than above)
	±1.0°C (10 to 40°C)
	±1.5°C (other range)
Dimensions:	225 (W) x 165 (H) x 25 (D) mm
Weight:	Approx. 480 g (includes batteries)
Accessories:	AA manganese battery (R6P) x 3, English manual
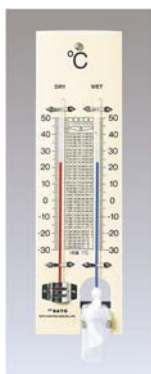
No. 1518-00
WOODEN BASE PSYCHROMETER

SPECIFICATIONS
Measuring range: −30 to 50°C
Min. graduation: 1°C
Accuracy: ±1°C
Sensing element: Kerosene
Materials (body): Wood
Dimensions: 79 (W) x 271 (H) x 29 (D) mm
Weight: Approx. 125 g
Accessory: English manual
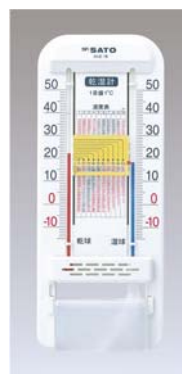
No. 1519-00
PSYCHROMETER MODEL SK-1

SPECIFICATIONS
Measuring range: −10 to 50°C
Min. graduation: 1°C
Accuracy: ±1°C
Sensing element: Kerosene
Materials (body): ABS resin
Dimensions: 104 (W) x 260 (H) x 28 (D) mm
Weight: Approx. 110 g
Accessory: English manual

No. 1740-50 DIGITAL MIN-MAX THERMOMETER MODEL PC-3500

SPECIFICATIONS
Measuring range: −50 to 70°C (External Sensor)
−5 to 50°C (Internal Sensor)
Accuracy: ±1°C (0 to 40°C)
±2°C (other range)
Drip-proof rate (probe): Conforms to JIS C 0920 IP:X4
Cord length: 3 m
Dimensions: 67 (W) x 65 (H) x 20 (D) mm
Weight: Approx. 50 g (including a battery)
Accessories Button battery (LR44) x 1, external probe, English manual

No. 7308-00 MIN-MAX THERMOMETER WITH HYGROMETER

SPECIFICATIONS
Measuring range: Temperature: −30 to 50°C
Humidity: 25 to 95%rh
Min. graduation: Temperature: 2°C
Humidity: 5%
Accuracy: Temperature: ±2°C
Humidity: ±5%rh (30 to 80%rh, 15 to 25°C)
±8%rh (other range)
Materials: Body: ABS resin
Window: Acrylic resin
Dimensions: 180 (W) x 180 (H) x 35 (D) mm
Weight: 240 g

No. 1069-00 DIGITAL THERMOHYGROMETER MODEL PC-7700II
SPECIFICATIONS
Measuring range: Temperature: −10 to 50°C
Humidity: 20 to 95%rh
Accuracy: Temperature: ±1°C (10 to 40°C)
±2°C (other range)
Humidity: ±5%rh (15 to 35°C, 40 to 70%rh)
±7%rh (other range)
Sensing elements Temperature: Thermistor
Humidity: High polymer resistance change type sensor
Dimensions: 150 (W) x 85 (H) x 17 (D) mm
Weight: 135 g (including a battery)
Accessories: AAA battery x 1, English manual

No. 1747-50 WATERPROOF DIGITAL THERMOMETER MODEL PC-9215II

SPECIFICATIONS
Measuring range: −30 to 150°C
Resolution: 0.1°C
Accuracy: ±1°C (0 to 140°C)
±2°C (other range)
Drip-proof rate: Conforms to JIS C 0920 IPX5
Materials: Body/sheath: ABS resin
Sensing stem: SUS304
Dimensions: Display section:47 (W) x 20 (T) x 176 (L) mm (including sensing part)
Sensing part: 3.5 dia. x 116 (L) mm
Weight: 25 g (including a battery)

No. 8012-00 PRECISION DIGITAL THERMOMETER MODEL SK-810PT

FEATURES

- **High resolution**

  Displays temperature readings with 0.01°C in the range of −100 to 360°C.

- **Excellent accuracy with PT100 sensor**

  The sensing element is a platinum resistance temperature detector (Pt100, 4-wire).

  High accuracy of ±0.16°C in the whole range is maintained.

- **Various calculation function**

  The maximum (MAX), minimum (MIN), relative (REL) and moving average
  (AVG) values can be displayed.

- **High waterproofness (IPX7 compliant)**

  The main unit can be touched by wet hands or
  splashed with water without risk when the sensor is
  securely connected.

- **Runs for up to 1000 operating hours**

  1000 hour-measurement is available with four AAA
  alkaline batteries.

- **Functional, durable and stylish design**
  - ・ The display uses large numeric characters.
  - ・ The body tilts at about seven degrees when placed on a desktop.
  - ・ The wall-mount hook can be pulled out when necessary, so the design remains flat.
  - ・ Damage due to dropping is minimized by the protective rubber around the case.

Front view   Side view   Rear View

SPECIFICATIONS (MAIN UNIT)

Cat. No.	No.8012-00
Model	SK-810PT
Display range	−105.00 to 365.00°C
Resolution	0.01°C
Accuracy (Main unit)	±(0.05+1 digit)°C at 23°C±5°C
Temperature coefficient	±(0.002%rdg+0.008)°C/°C at other than 23°C ±5°C
Waterproof property	Conforming IPX7 (when probe is connected)
Main functions	Max. value (MAX), Min. value (MIN), Measurement of variation (REL), Moving average (AVG)
Power	AAA alkaline battery x 4 pcs.
Battery life	Approx. 1000 hours in use of alkaline batteries
Materials	ABS resin
Dimensions	70(W) × 169(H) × 42(D) mm (exclusive of connector)
Weight	Approx. 220 g (inclusive of batteries)
Accessories	AAA alkaline battery x 4 pcs, vinyl cover, neck strap, English manual

OPTIONAL PROBES

No. 8012-30 S810PT-30 Lower temperature probe (Grip)
Ø3.2 x 250 mm (round end), Cord length 1.5 m

No. 8012-50 S810PT-50 Lower temperature probe (Sleeve)
Ø3.2 x 250 mm round end w/1.5 m cord

No. 8012-32 S810PT-32 Medium temperature probe (grip)
Ø3.2 x 250 mm round end w/1.5 m cord

No. 8012-52 S810PT-52 Medium temperature probe (Sleeve)
Ø3.2 x 250 mm round end w/1.5 m cord

No. 8012-34 S810PT-34 High temperature probe (grip)
Ø3.2 x 300 mm round end w/1.5 m cord

No. 8012-54 S810PT-54 High temperature probe (Sleeve)
Ø3.2 x 300 mm round end w/1.5m cord

No. 8012-10 S810PT-10 General purpose probe
Ø3.2 x 150 mm round end w/1.0 m cord

OPTIONAL ITEMS

No. 8012-90 Carrying case
Demensions: 470(W) x 153(H) x 168(D) mm
Weight: 1.3 kg
Accessories: Shoulder belt, clip for holding probe

No. 8012-92 Clip for holding probe
Material: SUS304 stainless steel
Weight: 60 g

No. 8012-90 Carrying case   **No. 8012-92 Clip**

SPECIFICATIONS (PROBES)

Range	For lower temperature		For medium temperature		For high temperature		General purpose type
Handhold shape	Grip	Sleeve	Grip	Sleeve	Grip	Sleeve	Grip
Cat. No.	8012-30	8012-50	8012-32	8012-52	8012-34	8012-54	8012-10
Model	S810PT-30	S810PT-50	S810PT-32	S810PT-52	S810PT-34	S810PT-54	S810PT-10
Range	−100.00 to 50.00°C		0.00 to 200.00°C		150.00 to 360.00°C		−100.00 to 200.00°C
Accuracy	±0.10°C						±(0.15 + 0.002|t|)°C |t|=absolute temperature
Waterproof Property	IPX7 (when connected with main unit)	---	IPX7 (when connected with main unit)	---	IPX7 (when connected with main unit)	---	IPX7 (when connected with main unit)
Element	Pt100 (4 wires)						
Sensing part	SUS316						SUS304
Handhold	SUS304						Phenol resin
Cord	Silicone coating						Flourine resin coating
Sensing part	Ø3.2×250 mm round end				Ø3.2×300 mm round end		Ø3.2 x 150 mm round end
Handhold	Ø18×107 mm	Ø8×40 mm	Ø18×107 mm	Ø8×40 mm	Ø18×107 mm	Ø8×40 mm	Ø15 x 100 mm
Cord length	1.5 m						1 m
Weight	208 g	65 g	208 g	65 g	210 g	67 g	80 g
Accessory	Instruction manual Test result (at 0°C)		Instruction manual Test result (at 100°C)		Instruction manual Test result (at 200°C)		Instruction manual Test result (at 0°C)

SK **SATO KEIRYOKI MFG. CO., LTD.**

SK-270WP SERIES WATERPROOF DIGITAL THERMOMETERS

NO. 8078-00 MODEL SK-270WP (WITH A HOLE FOR WALL-MOUNT)
NO. 8078-20 MODEL SK-270WP
NO. 8078-40 MODEL SK-270WP-K (SIMPLE OPERATION TYPE)

FEATURES
- Waterproof/dust-proof construction is conformed to **IP67** rated
- Suitable to the site that hygiene is specially required
  Available to wash the unit in running water when a probe is installed to it and wipe it with alcohol.
- HACCP function (3 different temperature and heating time can be set)
- Serial number and calibration date are indicated on LCD when the power is turned on

No. 8078-00
with a hole for wall-mount

No. 8078-20
without a hole for wall-mount

No. 8078-40
Simple operation type

SPECIFICATIONS (MAIN UNITS)

Model	SK-270WP		SK-270WP-K
Cat. No.	8078-00	8078-20	8078-40
Hole for wall-mount	✓	✕	
Display range	−50.0 to 300.0°C		
Display accuracy (When operation ambient is 0 to 40°C)	± (0.1 + 1 digit)°C (−40.0 to 200.0°C), ±0.5°C (other than above)		
Resolution	0.1°C		
Display sampling	About 0.5 to 1 sec. When the temperature changes a lot, the sampling time is 0.5 sec. When it is calm, it automatically changes to 1 sec.		
Dustproof / Waterproof property	Conforming IP67 (when probe is connected)		
Functions	Display of serial number and calibration date, Hold, Auto power-off, Low battery mark		
	Max value (MAX), Min. value (MIN), HACCP (Temp./time), Buzzer (about 70 dB)		-----
Power requirements	AAA alkaline battery x 2 pcs.		
Battery life	About 1000 hours at normal measurement		
	About 500 hours when buzzer function activates		-----
Materials	Body: Polycarbonate resin, Display section/key operation section: PET resin		
Dimensions	70(W) × 171(H) × 40(D) mm (exclusive of protrusion)		
Weight	Approx. 155 g (inclusive of batteries)		
Accessories	S270WP-01 standard probe, AAA alkaline battery x 2 pcs., vinyl cover, neck strap, English manual		

OPTIONAL PROBES

No. 8079-01   S270WP-01 Standard probe
Sensing stem: Ø3 × 100 mm

No. 8079-02   S270WP-02 Penetration probe
Sensing stem: Ø3 × 200 mm

No. 8079-03   S270WP-03 Long stem probe
Sensing stem: Ø3 × 400 mm

No. 8079-04   S270WP-04 Penetration probe
Sensing stem: Ø2 × 150 mm

No. 8079-05   S270WP-05 Tapered stem probe
Sensing stem: Ø2 × 45 mm + Ø3 × 55 mm

No. 8079-06   S270WP-06 Low temperature probe
Sensing stem: Ø3 × 100 mm

No. 8079-21   S270WP-21 Sleeve type probe
Sensing stem: Ø3 × 420 mm

No. 8079-31   S270WP-31 Immersion type probe
Sensing part: Ø17 × 90 mm

No. 8079-41   S270WP-41 Surface temperature probe
Sensing part: Ø9mm

SPECIFICATIONS (PROBES)

Cat. No.	8079-01	8079-02	8079-03	8079-04	8079-05	8079-06	8079-21	8079-31	8079-41
Model	S270WP-01	S270WP-02	S270WP-03	S270WP-04	S270WP-05	S270WP-06	S270WP-21	S270WP-31	S270WP-41
Measuring range	−40.0 to 250.0°C					-40.0 to 40.0°C	-40.0 to 200.0°C	-40.0 to 105.0°C	25.0 to 200.0°C
Measuring accuracy −40.0 to -30.1°C	±1.5°C					±1.3°C	±1.5°C		--------
−30.0 to -20.1°C						±1.0°C			
−20.0 to -10.0°C						±0.5°C			
−9.9 to 40.0°C	±0.5°C					±0.3°C	±0.6°C		±0.8°C
40.1 to -105.0°C									±1.0°C
105.1 to 150.0°C	±0.7°C					--------	±0.7°C	--------	±1.5°C
150.1 to 199.9°C	±1.0°C						±1.0°C		±2.0°C
200.0 to 250.0°C	±1.5°C						--------		--------
Waterproof property	Compliant to JIS C 0920 IPX7 (When a main unit is connected) * Protected against effects of temporary immersion 1 m in water under normal temperature								-------
Sensing element	Thermistor								
Materials Sensing stem	SUS304					SUS316	SUS304		SUS303	Cupper + Ni plating
Grip	SUS303							--------	Polyacetal resin
Cord	PVC							Silicone	
Shape of stem end	Pointed end	Round end	Pointed end				Round end	Cylindrical shape	Flat end
Dimensions Grip	Ø15 x 120 mm						Ø7 x 55 mm	--------	Ø12 x 105 mm
Cord length	0.7 m						1.0 m	5 m	0.8 m
Weight	123 g	126 g	130 g	123 g	123 g	123 g	50 g	240 g	50g
Accessory	Test result, English instruction manual								

* Cord length can be extended up to 5 m at option.

SK **SATO KEIRYOKI MFG. CO., LTD.**

No. 8080-05 WATERPROOF DIGITAL THERMOMETER MODEL SK-1260

FEATURES

● Both inputs of thermistors and K thermocouples provided from us are available.

● Measured data can be stored in memory with a simple operation.
  * The memory can store up to 180 data in the manual mode.
  * The memory can store up to 120 data in the automatic mode.

● Upper and lower limit alarm can be set.
  When the temperature reaches the set upper or lower limit, the warning buzzer sounds and "V" flashes on the panel.

● Waterproof property: Conforms to JIS C 0920 **IP X4**
  No adverse effects of water splashes from any direction.

● Various kinds of optional probes for a wide variety of applications.

● Print function
  Temperature data stored in memory can be printed on an optional printer.

SPECIFICATIONS

Model	Waterproof Digital Thermometer SK-1260		
Measuring range	Thermistor : −30.0 to 199.9°C K Thermocouple : −99.9 to 1250°C		
Resolution	Thermistor : 0.1°C at −30.0 to 150.0°C K Thermocouple : 0.1°C at −99.9 to 199.9°C : 1°C at 200°C to 1250°C		
Accuracy	Thermistor	Main unit	: ±0.2°C
		Sensor	: ±(0.1% rdg + 0.3)°C at 0.0 to 150.0°C : ±(0.2% rdg + 0.4)°C at other than above
	K Thermocouple	Main unit	: ±(0.1% rdg + 0.3)°C at 0.0 to 199.9°C : ±0.5°C at −99.9 to −0.1°C : ±(0.2% rdg + 1)°C at 200 to 1250°C
		Sensor (JIS class 1)	: ±1.5°C at −40.0 to 375°C : ±0.004|t| at 375 to 1000°C
Operational functions	MAX: maximum memory data, MIN: minimum memory data, HOLD: data hold, ALARM: upper and lower limit setting, REL: measurement of variation, TIME: time settings, REC/PRINT: record and print function, Auto Power-off		
Waterproof property	Conforming to **IP X4** rated		
Sampling time	1 sec.		
Sensing elements	Thermistor / K Thermocouple		
Power requirement	6 VDC (AAA battery x 4) or AC adapter (option)		
Battery life	About 180 hours continuous with manganese batteries About 280 hours continuous with alkaline batteries		
Materials	Main unit : ABS resin Probe : Sensing stem: Stainless (SUS304) Handle Polyphenylene Oxide		
Dimensions	Main unit: 66 (W) x 175 (H) x 25 (D) mm		
Weight	Approx. 200 g (main body including batteries)		
Standard accessories	Standard probe (SK-S100K), soft pouch with neck strap, 4 AAA manganese batteries, English manual		

OPTIONAL ITEMS
No. 8080-10 DEDICATED PRINTER

SPECIFICATIONS
Power requirements : AC adapter
Printing method : Direct thermal printing
Dimensions/Weight : 145 (W) x 58 (H) x 135 (D) mm / 380 g
Standard accessories : Printing paper 1 roll (about 28 m), AC cable, Communication cable,
Connection cable, D-Sub connector pin, English manual

No. 8009-82 PRINTING PAPER
Thermal paper: 10 rolls/pack

No. 8008-90 AC ADAPTER (input voltage: 100 to 240VAC, 50/60Hz)

K TYPE THERMOCOUPLE PROBES

No. 8080-20 SK-S100K Standard probe
Range: −100 to 300°C (class 1)
Ø2.3 x 150 mm (SUS316 flat-end), Cord length: 1.1 m

No. 8080-22 SK-S100WK Waterproof type penetration probe
Range: −100 to 300°C (class 1)
Ø2.3 x 150 mm (SUS316 flat-end), Cord length 1.1 m

No. 8080-24 SK-S101K General purpose probe
Range: −100 to 700°C (class 1)
Ø3.2 x 250 mm (SUS316 flat-end), Cord length: 1.1 m

No. 8080-26 SK-S102K High temperature probe
Range: 0 to 800°C (class 1),
Ø4.8 x 500 mm (SUS316 flat-end), Cord length 1.1 m

No. 8080-28 SK-S103K Asphalt temperature probe
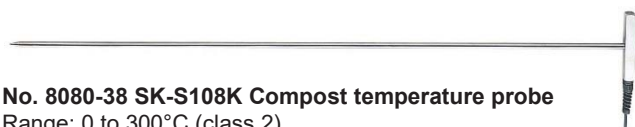**(w/ stainless steel grip)**
Range: 0 to 300°C (class 2)
Ø5 x 250 mm (SUS304 pointed end), Heat resist cord length: 1.1 m

No. 8080-30 SK-S104K High sensitivity probe
Range: −100 to 300°C (class 2)
Ø1 x 1000 mm (SUS316 flat-end), Cord length:1.1 m

No. 8080-32 SK-S105K Duplex wire probe
(stainless steel shield wire)
Range: −100 to 300°C (class 2)
Ø0.65 mm x 10 m (round-end), Cord length: 0.3 m

No. 8080-36 SK-S107K High temperature probe
Range: 0 to 1000°C (class 1)
Ø4.8 x 1000 mm (Inconel flat-end), Cord length: 1.1m
(Option: Range: 0 to 1250°C, Ø8.0 x 1000 mm)

No. 8080-38 SK-S108K Compost temperature probe
Range: 0 to 300°C (class 2)
Ø8.0 x 900 mm (SUS304 pointed end), Cord length: 1.1 m

No. 8080-50 SK-S301K Surface temperature probe
Range: 0 to 600°C (class 2)
Sensing part: Ø25 x 40 mm w/ 1.1 m cord

No. 8080-58 SK-S305K surface temperature probe
Tilting (in 90°) type
Range: −30 to 500°C (class 2)
Sensing part Ø17 x 36 mm, Cord length: 1.1 m

No. 8080-60 SK-S306K Point surface temperature probe
Range: −30 to 250°C (class 2)
Sensing part Ø10 x 12 mm, Cord length: 1.1 m

No. 8080-62 SK-S307K Surface temperature probe
Range: −30 to 400°C (class 2)
Sensing part Ø17 x 25 mm, Cord length: 1.1 m

No. 8080-64 SK-S308K L shape type surface temperature probe
Range: −30 to 600°C (class 2)
Sensing part Ø17 x 30 mm, Cord length: 1.1 m

THERMISTOR PROBES

No. 8080-80 SK-S100T Standard probe
Range: −30.0 to 199.9°C
Ø2 x 100 mm (SUS304 round-end), Cord length: 1.1m

No. 8080-82 SK-S101T Penetration probe
Range: −30.0 to 199.9°C
Ø3 x 100 mm (SUS304 pointed end), Cord length: 1.1 m

No. 8080-84 SK-S101WT Waterproof type penetration probe
Range: −30.0 to 199.9°C
Ø3 x 120 mm (SUS304 pointed end), Cord length: 1.1 m

No. 8080-86 SK-S102T Water temperature probe
Range: −30.0 to 100.0°C
Ø17 x 110 mm (SUS304), Cord length: 10 m

No. 8080-90 SK-S201T Air temperature probe
Range: −30.0 to 150.0°C
Ø5 x 100 mm (SUS304), Cord length: 1.1 m

Accuracy of Thermocouple

Class 1:	±1.5°C (−40 to +375°C)
	±0.004 |t| (375 to 1000°C)
Class 2:	±2.5°C (−40 to +333°C)
	±0.0075 |t| (333 to 1200°C)

* |t| is an absolute value of temperature in Celsius.

* There are also probes other than described. Visit our website.

SK SATO KEIRYOKI MFG. CO., LTD.

No. 8191-00 4-CHANNEL DATALOGGER MODEL SK-L400T

* Probes are not included in the main unit (See page 26 for the optional probes)

FEATURES

- Simultaneously measures temperature at four locations
- Logged data can be copied to SD card
- Manual logging, preset logging, memo function available
- Upper and lower limit alarm can be set for each channel
- Display of various calculation results
- Data analysis software is provided as a standard accessory
- Backlight function

SPECIFICATIONS

Display range	−202.0 to 1372°C
Resolution	0.1°C (−202.0 to 999.9°C) 1°C (other than above)
Accuracy	±(0.3%rdg + 1)°C at 23°C ±5°C * Measuring accuracy is different depending on the probe connected
Display sampling	Approx. 1 second
Temperature coefficient	±(0.01%rdg + 0.1°C)/ °C
Sensing element	K thermocouple Connecter: ASTM (former ANSI) miniature connector for thermocouple
Logging interval	In seconds (1, 2, 5, 10, 15, 30) and in minutes (1, 2, 5, 10, 15, 30, 60, 90)
Operating ambient	0 to 50°C, lower than 85%rh (no condensing)
Storage ambient	0 to 50°C, lower than 85%rh (no condensing)
Power requirement	4 AA alkaline batteries or 4 AA nickel hydrogen chargeable batteries, exclusive AC adapter (option)
Battery life	Approx. 500 hours In use of alkaline batteries under room temperature at 1-min. interval (backlight: OFF, display: OFF)
Weights (approx.)	420 g (including batteries)
Dimensions	Approx. 158 (W) × 106 (H) × 40 (D) mm
Material	ABS resin
Accessories	4 AA alkaline battiries, SD card, CD-ROM for data analysis software, carrying case, English manual

OPTIONAL ITEMS

No. 8191-90 AC adapter Model AD-09650-2 (in use of 100 to 240 VAC)

No. 8191-92 Waterproof case for outdoor installation

Minimum system requirements

OS   : Windows10 (32-bit/64-bit)
          Windows 8/8.1 (32-bit/64-bit)
          Windows 7 (32-bit/64-bit)
          Windows XP (SP3 or later)

CPU   : Capable of properly running one of the above OSs

Memory : Capable of properly running one of the above Oss
          (Recommendation):
          Windows XP   : 512MB or more
          Windows 7/8/8.1/10 : 2GB or more

Hard disk drive   : 150MB or more free space

Internet environment : NET Framework 3.5 being installed.

* When .NET Framework 3.5 is not activated, install it via internet at
  installation of this software.

Graph display on the PC Screen
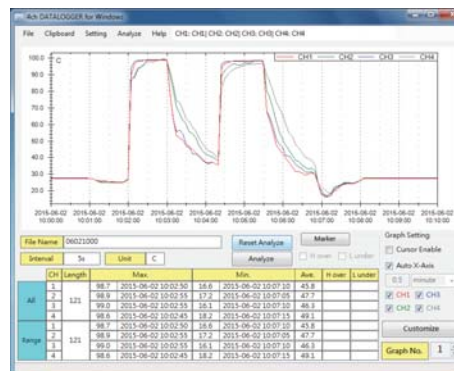
JUMBO LCD DIGITAL THERMOMETERS

No. 8014-03 MODEL SK-1110 1-CHANNEL TYPE   **No. 8014-04 MODEL SK-1120 2-CHANNEL TYPE**

* Probes are not included in the main unit.
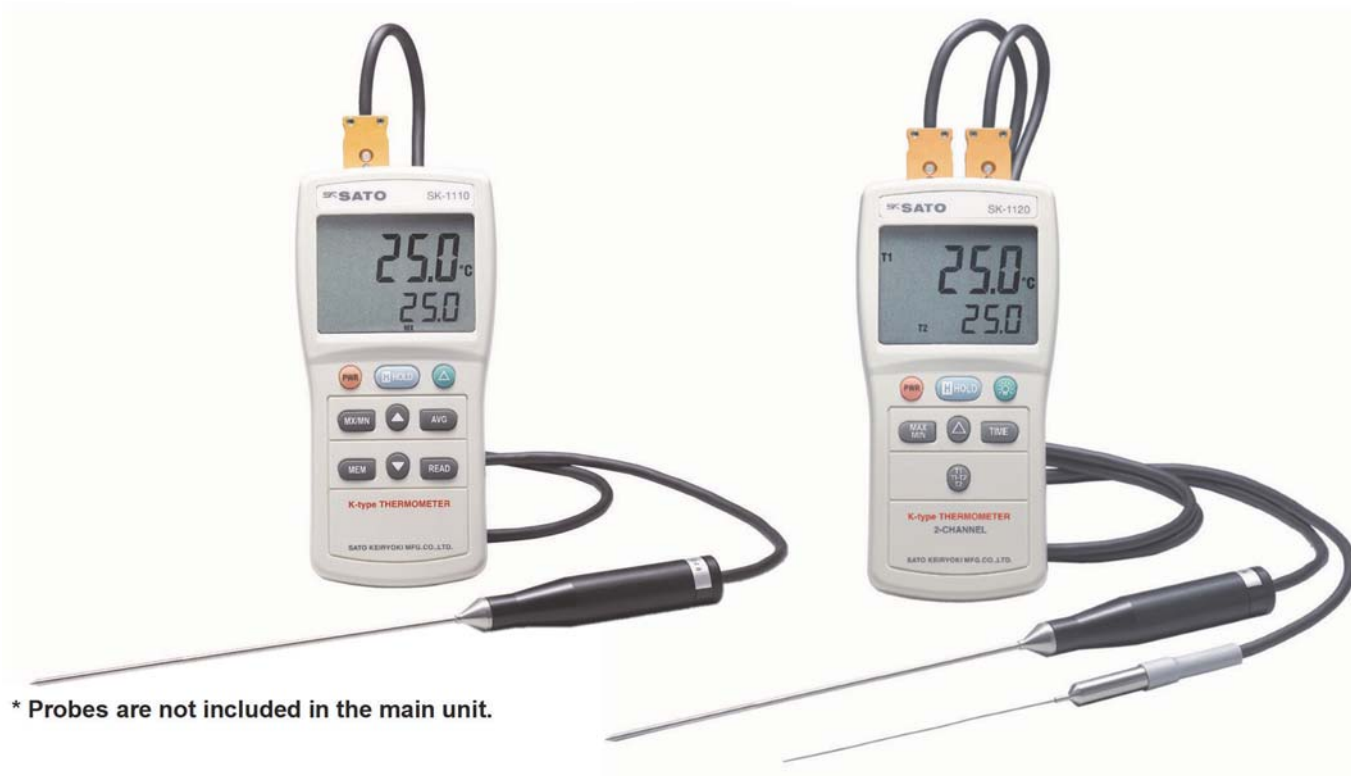
SPECIFICATIONS

Model	SK-1110	SK-1120
Cat. No.	8014-03	8014-04
Number of channels	1 channel	2 channels
Display range	−73.3 to 1371.0°C	−203.3 to 1368°C
Measuring range	−50 to 1300°C (depending on the probe connected)	
Accuracy (main body)	±(0.3%rdg + 1)°C (0.1 to 1000.0°C) ±(0.5%rdg + 1)°C (−50 to 0.0, 1001.0 to 1300.0°C)	±(0.3%rdg + 1)°C (0.1 to 1000°C) ±(0.5%rdg + 1)°C (−50 to 0.0, 1001 to 1300°C) When the resolution is 1°C, deviation increases by 1 digit in addition to the above
Functions	MAX/ MIN: maximum/minimum value display AVG: average value HOLD: data hold OFFSET: offset value Auto power-off (available to release) Memory function (max. 150 data)	MAX/ MIN: maximum/minimum value display AVG: average value HOLD: data hold OFFSET: offset value Auto power-off Measurement of variation (CH1 – CH2) Back light. Time
Resolution	0.1°C	0.1°C/1°C (Automatic resolution switching)
Sampling time	About 0.5 sec.	
Sensing element	Type K thermocouple, Connector: ANSI standard (yellow)	
Operating ambient	Temperature: 0 to 50°C, Humidity: less than 70%rh (no condensing)	
Power requirements	6 AAA manganese batteries	6 AAA alkaline batteries
Battery life	About 110 hours continuous	About 80 hours continuous (Backlight OFF)
Material	Main unit: ABS resin Probe: PVC resin Sensor cable: PVC resin	
Dimensions	Main unit: 72(W) x 151(H) x 35(D) mm	
Weight	approx. 240 g (including batteries)	approx. 255 g (including batteries)
Standard accessories	AAA manganese battery (P03) x 6 pcs., vinyl cover, English manual	AAA alkaline battery (LR03) x 6 pcs., vinyl cover, English manual

OPTIONAL PROBES (TYPE K THERMOCOUPLES)

No. 8014-30 SK-K010 Standard probe
Range: –50 to 300°C (class 1), Ø2.3 x 150 mm (point-end)
Cord Length: 0.75 m

No. 8014-31 SK-K020 Quick response probe
Range: –50 to 300°C (class 1), Ø1.0 x 100 mm (flat-end)
Cord Length: 0.75 m

No. 8250-50 MC-K7100 General purpose probe
Range: –100 to 300°C (class 1), Ø2.3 x 150 mm (flat-end)
Cord length: 1.5 m

No. 8250-52 MC-K7101 General purpose probe
Range: –100 to 700°C (class 1), Ø3.2 x 250 mm (flat-end)
Cord length: 1.5 m

No. 8250-54 MC-K7102 Middle/High temperature probe
Range: 0 to 800°C (class 1), Ø4.8 x 500 mm (flat-end)
Cord length: 1.5 m

**No. 8250-56 MC-K7103 Asphalt temperature probe
(w/ stainless steel grip)**
Range: 0 to 300°C (class 2), Ø5 x 250 mm (point-end)
Cord (heat resistance type) length: 1.5 m

**No. 8250-57 MC-K7105 Duplex wire probe
(Stainless steel shield wire)**
Range: –100 to 300°C (class 2), Ø0.65 mm x 10 m (round-end)
Cord length: 0.3 m

**No. 8250-58 MC-K7106 Asphalt temperature probe
(PBT resin grip)**
Range: 0 to 300°C (class 2), Ø5 x 250 mm (point-end)
Cord length: 1.5 m

No. 8250-67 MC-K7108 Compost temperature probe
Range: 0 to 300°C (class 2), Ø8 x 900 mm (point-end)
Cord length: 1.5 m

No. 8250-68 MC-K7109 Asphalt temperature probe
Range: 0 to 300°C (class 2), Ø5 x 250 mm (point-end)
Cord length: 1.5 m

No. 8250-60 MC-K7301 Surface temperature probe
Range: 0 to 600°C (class 2), Ø25 x 40 mm
Cord length: 1.5 m

**No. 8250-63 MC-K7304 Surface temperature probe
(Mount on flat surface with screws)**
Range: 0 to 300°C (class 2), 14 x 17 x (t)0.6 mm
Cord length: 3 m

No. 8080-64 MC-K7307 Surface temperature probe
Range: −30 to 400°C (class 2), Sensing part Ø17 x 25 mm
Cord length: 1.5 m

No. 8080-66 MC-K7308 L shape type surface temperature probe
Range: −30 to 600°C (class 2), Sensing part Ø17 x 30 mm
Cord length: 1.5 m

No. 8250-70 MC-K7500 Water temperature probe
Range: −30 to 100°C (class 2), Ø17 x 132 mm
Cord length: 10 m

**No. 8250-74 MC-K7504 Waterproof temperature probe
(Waterproof property: IPX7)**
Range: −50 to 200°C (class 2), Ø5 x 20 mm (SUS430)
Cord length: 3 m (Teflon-covered wire Ø0.65 mm)

No. 8250-75 MC-K7505 Air temperature probe
Range: −20 to 60°C (class 2), 18(W) x 51.3(H) x 10.3(D) mm
Cord length: 3 m (vinyl-covered wire Ø0.32 mm)

Accuracy of Thermocouple		
Class 1:	±1.5°C (–40 to 375°C)	
	±0.004 |t| (375 to 1000°C)	
Class 2:	±2.5°C (–40 to 333°C)	
	±0.0075 |t| (333 to 1200°C)	
* |t| is an absolute value of temperature in Celsius.		

* Other optional probes are available. Visit our website.

No. 8050-00 WALL-MOUNT WATERPROOF DIGITAL THERMOMETER MODEL SK-100WP

SPECIFICATIONS

Display range	: −12.0 to 112.0°C
Measuring range	: Depends on the probe connected
Resolution	: 0.1°C
Sampling time	: Approx. 10 sec.
Waterproof property	: JIS C 0920 IP X7 rated (When probe is connected)
Operation ambient	: 0 to 50°C
Storage ambient	: −10 to 50°C
Power requirement	: AAA battery x 4 pcs.
Battery life	: Approx. 1 year continuous (use of alkaline batteries)
Dimensions	: 122(W) x 85(H) x 30(D)mm
Weight	: 205 g (including batteries)
Accessories	: 4 AAA manganese batteries, English manual

No.8051-00 STANDARD PROBE MODEL S100WP-01

Measuring range	: −10.0 to 110.0°C
Accuracy	: ±1°C
Sensing element	: Thermistor
Waterproof property	: IP X7 rated
Dimensions	: Sensing part: Ø5 x 500 mm (L) (round-end) Grip: Ø12.5 x 65 mm
Cord length	: 1.5 m (available to lengthen the cord by order)
Weight	: Approx. 90 g
Accessories	: Clip for holding thermometer, English manual

No. 8312-00 WBGT HEAT STRESS MONITOR MODEL SK-170GT

SPECIFICATIONS

Measuring range:	Temp.: 0.0 to 50.0°C, Globe temp.: 0.0 to 80.0°C WBGT Index: 0.0 to 50.0°C, Humid.: 10.0 to 95.0%rh
Resolution:	Temp., Globe temp., WBGT Index: 0.1°C Humidity: 0.1%rh
Accuracy:	Temp.: ±0.6°C Globe temp.: ±1.2°C (20.0 to 60.0°C), ±2°C (other range) WBGT Index: ± 2.0°C Humidity.: ±3.0%rh (30.0 to 90.0%rh, 20 to 40°C), ±5.0%rh (other range)
Sampling time:	2 sec.
Alarm setting range:	in WBGT 20.0 to 49.9°C by 0.1°C step
Wind speed setting range:	0.1 to 3.0m/s in 0.1m/s step
Power requirement:	9VDC battery 6F22 (006P) x 1 pc.
Battery life:	Approx. 600 hours continuous (without alarm operation)
Sound volume:	75dB
Operation ambient:	0 to 50°C, lower than 95%rh (no condensing)
Dimensions:	71(W) x 275(H) x 30(D)mm (excluding globe) Globe: 60mm dia.
Weight:	250g (including battery)
Accessories:	9VDC battery 6F22 (006P) x 1 pc., carrying case, English manual.

OPTIONAL ITEMS

No. 8310-20 Shield Plate from Radiant

Installing this shield, temperature/humidity detection section and the case of the main unit can be protected from radiant.
For accurate measurement, this shield is useful.
Use this shield together with the tripod model M45.

No. 8310-90 Tripod Model ZF-400WSH

SPECIFICATIONS

Total height:	1550 mm
Weight:	1280 g
Accessory:	carrying case

SATO KEIRYOKI MFG. CO., LTD.

No. 8269-00 WATERPROOF INFRARED THERMOMETER WITH CIRCLE LASER MARKER MODEL SK-8950
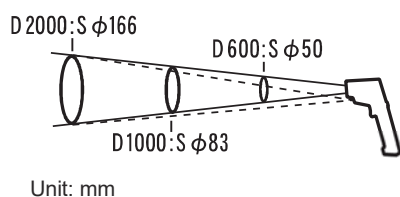
FEATURES
- Waterproof/dustproof rate: IP54 (can be operated even with wet hands)
- Non-contact, sanitary and safety measurement
- Various functions (Max. Min. AVG. DIF. Alarm)
- Circular laser marker surrounds measurement area
- Settable emissivity between 0.10 to 1.00 with 0.01 step

SPECIFICATIONS

Measuring range	:	−60 to 550°C
Accuracy	:	Either ±2°C or ±2%rdg which is larger (0.0 to 550°C)
		± (2°C + 5%rdg) (other range)

(where operating ambient is 23±3°C, emissivity (ε) = 0.95)

Resolution	:	0.1°C
Emissivity	:	Settable between 0.10 and 1.00 in 0.01 step
Distance to spot ratio (D:S):		approx. 12:1 (D: Distance, S: Spot size)
Laser Marker	:	Red circular laser (Class II laser product with PSC mark)
Sampling time	:	Approx. 1 second (90% response)
Operating ambient	:	0 to 50°C for temperature
		less than 85%rh for humidity (no condensing)
Power requirement	:	2 AAA alkaline batteries (LR03)
Functions	:	Alarm, MAX (Maximum temperature value), MIN (Minimum temperature value), AVG (Average temperature value), DIF (Difference between max. and min. temperature values), Backlight, Auto power-off
Dimensions	:	42(W) x 143(H) x 80(D) mm
Weight	:	Approx. 196 g (including batteries)
Accessories	:	Neck strap, AAA alkaline battery x 2, English manual

D 2000:S φ166
D 600:S φ50
D1000:S φ83

———— Measurement area
– – – – Circular laser

Unit: mm

No. 8268-00 LASER MARKER INFRARED THERMOMETER MODEL SK-8300

FEATURES
- A wide range of temperature from −30 to 1550°C
- Emissivity can be set in increment of 0.01 within the range of 0.10 and 1.00
- The backlit LCD facilitates reading even in dark places
- Various functions
- Continuous measurement without holding the trigger down

SPECIFICATIONS

Measuring range	:	−30 to 1550°C
Accuracy	:	±3°C (−30.0 to −20.1°C)
		±2°C (−20.0 to 100.0°C)
		±2%rdg (other range)

(operating ambient 23±5°C, ε = 0.95)

Resolution	:	0.1°C
Emissivity	:	Settable between 0.10 and 1.00 in 0.01 step
Distance to spot size (D:S)		50:1
Laser Marker	:	Class II laser product with PSC mark
		Wavelength: 650 mm Output: less than 1 mW
Sampling time	:	Approx. 0.5 sec. (90% response)
Operating ambient	:	0 to 50°C, less than 85%rh (no condensing)
Power requirement	:	9VDC (6F22) battery x 1
Functions	:	Backlight ON/OFF, Laser marker ON/OFF
		Auto power-off, HOLD
Dimensions	:	51(W) x 200(H) x 166(D) mm
Weight	:	Approx. 280 g (including battery)
Accessories	:	Carrying case, hand strap, 6F22 battery x 1, English manual

64@2000
20@1000
19@500

Unit: mm

No. 8260-00 LASER MARKER INFRARED THERMOMETER MODEL SK-8700

FEATURES

- The backlit LCD facilitates reading even in dark places
- Emissivity is fixed at 0.95
- Laser marker is switchable in ON and OFF
- Temperature unit Celsius (°C) and Fahrenheit (°F) is selectable

SPECIFICATIONS

Measuring range	: −20 to 420°C/0 to 786°F
Accuracy (at 23°C±5°C)	: ±2°C (−20 to 100°C)
	±2%rdg (other range)
(operating ambient 23±5°C)	
Resolution	: 1°C/1°F
Emissivity	: 0.95 (fixed)
Distance to spot size (D:S): 8:1	
Laser sighting	: 1 point / class II laser (less than 1 mW of power)
Sampling time	: Approx. 0.5 sec.
Operating ambient	: 0 to 50°C, less than 80%RH (no condensing)
Power requirement	: 9VDC (6F22) battery x 1
Functions	: °C/°F selectable, Backlight ON/OFF, Laser marker ON/OFF
	Auto power-off
Dimensions	: 41.5(W) x 160(H) x 65(D) mm
Weight	: Approx. 140 g (including battery)
Accessories	: Soft pouch, vinyl cover, lens cap, hand strap, 6F22 battery x 1
	English manual

Distance (D)

Spot Diameter (S)

D	0.8	0.4	0.2m
S	φ100	φ50	φ25mm

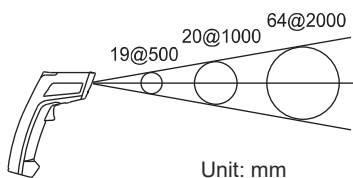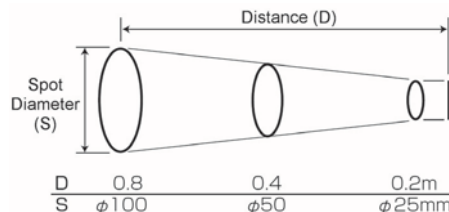## No. 8266-00 LASER MARKER INFRARED THERMOMETER MODEL SK-8940

FEATURES

- A wide range of temperature from −40 to 500°C
- Emissivity can be set in increment of 0.01 within the range of 0.30 and 1.00
- The backlit LCD facilitates reading even in dark places
- Auto power off function
- A measured value is automatically held (fixed) for about six seconds

SPECIFICATIONS

Measuring range	: −40 to 500°C
Accuracy	: ±2°C or ±2%rdg, whichever is larger (−19.9 to 450°C)
	±4°C or ±4%rdg, whichever is larger (other range)
(operating ambient 23±5°C, ε = 0.95)	
Resolution	: 0.1°C (−40.0 to 99.9°C)
	1°C (100°C or higher)
Emissivity	: Settable between 0.30 and 1.00 in 0.01 step
Distance to spot size (D:S): 10:1	
Laser sighting	: 1 point / class II laser (less than 1 mW of power)
Sampling time	: Approx. 0.5 sec.
Operating ambient	: 0 to 50°C, less than 80%rh (no condensing)
Power requirement	: 9VDC (6F22 battery x 1)
Functions	: Backlight ON/OFF, Laser marker ON/OFF
	Auto power-off, HOLD
Dimensions	: 45(W) x 157(H) x 80(D) mm
Weight	: Approx. 151 g (including battery)
Accessories	: Soft pouch, hand strap, 6F22 battery x 1, English manual

Distance (D) Spot Diameter (S)

D	0.14	0.5	1	m
S	φ14	φ50	φ100	mm
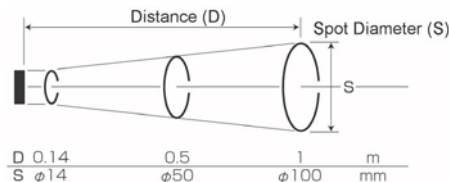
No. 2150-10 BIMETAL THERMOMETER FOR ASPHALT (Black scale plate)
No. 2150-20 BIMETAL THERMOMETER FOR ASPHALT (White scale plate)

SPECIFICATIONS

Measuring range:		0 to 200°C (div. 5/1)
Dimensions	Case:	Ø80 mm
	Dial:	Ø75 mm
	Stem:	Ø8 x 200 mm, pointed end
Materials	Case:	SPCC Nickel plating
	Cover:	SUS304
	Window:	Glass
	Stem:	SUS304
Weight:		120 g

No. 2250-10 BIMETAL THERMOMETER FOR ASPHALT (LARGE TYPE II)

SPECIFICATIONS

Measuring range:		0 to 200°C (div. 2/1)
Dimensions	Case:	Ø175 mm
	Dial:	Ø150 mm
	Stem:	Ø8 x 200 mm, pointed end
Materials	Case:	Polyamide resin
	Cover:	Polyamide resin
	Window:	Glass
	Stem:	SUS304
Weight:		465 g

No. 2340-20 BIMETAL THERMOMETERS FOR SURFACE TEMPERATURE   WITH MAGNET

SPECIFICATIONS

Measuring range:		No. 2340-20: 0 to 200°C (div. 2/1)
		No. 2340-40: 0 to 400°C (div. 2/1)
Accuracy:		No. 2340-20: ±2°C (150 to 200°C)
		±4°C (other range)
		No. 2340-40: ±5°C
Dimensions	Case:	Ø64 mm x 16 mm (t)
	Bulb:	Ø25 x 7 mm (t)
Materials	Case:	Brass with chrome plating
	Bulb:	SUS304
	Window:	Glass
Weight:		105 g
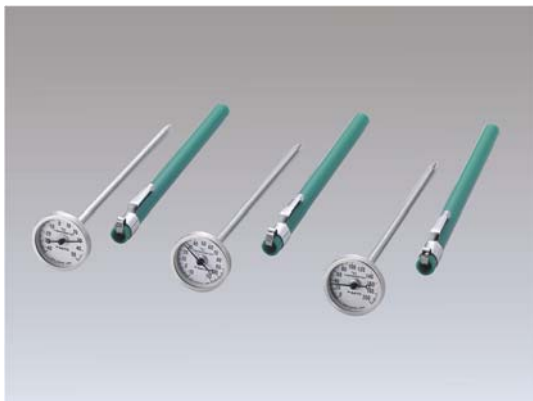
No. 2060-B POCKET BIMETAL THERMOMETERS

SPECIFICATIONS

Measuring range:		No. 2060-45: −40 to 50°C (div. 1/1)
		No. 2060-11: −10 to 110°C (div.1/1)
		No. 2060-20: 0 to 200°C (div. 5/1)
Dimensions	Case:	Ø26 mm
	Dial:	Ø24 mm
	Stem:	Ø4 x 130 mm, pointed end
Materials Case & cover:		SUS304
	Window:	Glass
	Stem:	SUS304
	Sheath:	Polyvinyl chloride
Accessories:		Plastic window cover, sheath
Weight:		Thermometer: 13 g, Sheath: 7 g
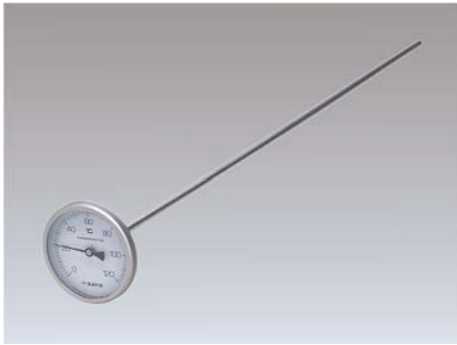
No. 1407-00 BIMETAL THERMOMETER FOR COMPOST

SPECIFICATIONS

Measuring range:		0 to 120°C (div. 2/1)
Accuracy:		±2°C
Dimensions	Case:	Ø80 mm
	Dial:	Ø75 mm
	Stem:	Ø8 x 900 mm, pointed end
Materials	Case:	Stainless steel
	Window:	Glass
	Stem:	Stainless steel
Weight:		210 g

No. 2180-00 BIMETAL THERMOMETERS FOR GRAIN

SPECIFICATIONS

Measuring. range:		–10 to 50°C (div. 1/1)
Dimensions	Case:	Ø80 mm
	Dial:	Ø75 mm
	Stem:	Ø8 x 250 mm pointed end
Materials	Case:	SPCC Nickel plating
	Cover:	Aluminum
	Stem:	SUS304
	Window:	Glass
Weight:		122 g

No. 2185-00 BIMETAL THERMOMETERS FOR GRAIN (for flexible container)
- ditto -, but   Stem: Ø8 x 500 mm pointed end, Weight: 160 g

No. 2350-00 BIMETAL THERMOMETERS FOR DEEP POT

SPECIFICATIONS

Measuring range:		0 to 120°C (div. 2/1)
Accuracy:		±2°C
Dimensions	Case:	Ø80 mm
	Dial:	Ø75 mm
	Stem:	Ø8 x 400 mm, pointed end
Materials	Case:	Stainless steel
	Window:	Polycarbonate (transparent)
	Stem:	Stainless steel
Weight:		Thermometer 130g
		Clip: 62 g
Accessory:		Clip for holding thermometer

No. 1720-00 BIMETAL THERMOMETER FOR DEEP FRY TYPE II

SPECIFICATIONS

Measuring range:		0 to 200°C (div. 5/1)
Dimensions	Case:	Ø45 mm
	Stem:	Ø4 x 150 mm
Materials	Case:	Stainless steel
	Window:	Tempered glass (transparent)
	Stem:	Stainless steel
Weight:		41 g

BIMETAL THERMOMETERS MODEL BM-S-90S/BM-T-90S/BM-T-75S

BM-S-90S

BM-T-90S

BM-T-75S

SPECIFICATIONS

Cat. No.	2030-B	2010-B	2110-B
Model	BM-S-90S	BM-T-90S	BM-T-75S
Case dia.	103 mm		80 mm
Dial dia.	90 mm		75 mm
Materials Case	SUS304		
Window	Glass		
Sensing stem Materials	Ø8 mm		
	SUS304		
Screw	PT1/2		
Materials	SUS304		
Withstand pressure	5 kgf/cm^2		2 kgf/cm^2

* "B" in the catalog number is replaced with branch numbers shown below
  according to the measuring range and the stem length of your choice.

BM-S-90S

Measuring range	Stem length	BM-S-90S	BM-T-90S	BM-T-75S
−30 to 50°C (div. 1/1)	60mm	2030-20	2010-10	2110-10
	100mm	2030-22	2010-12	2110-12
	150mm	2030-24	2010-14	2110-14
	200mm	2030-26	2010-16	—
0 to 100°C (div. 2/1)	50mm	2030-40	2010-30	2110-20
	100mm	2030-42	2010-32	2110-22
	150mm	2030-44	2010-34	2110-24
	200mm	2030-46	2010-36	—
0 to 150°C (div. 2/1)	50mm	2030-60	2010-50	—
	100mm	2030-62	2010-52	—
	150mm	2030-64	2010-54	—
	200mm	2030-66	2010-56	—
0 to 200°C (div. 5/1)	50mm	—	2010-70	—
	100mm	—	2010-72	—
	150mm	—	2010-74	—
	200mm	—	2010-76	—
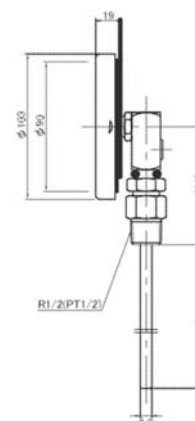
BM-T-90S
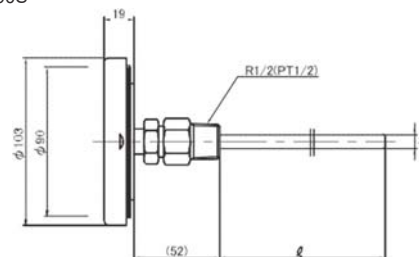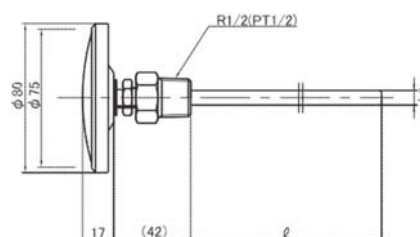
BM-T-75S

BIMETAL THERMOMETERS MODEL BM-T-75P/BM-S-75P/BM-T-100P/BM-S-100P

BM-S-75P
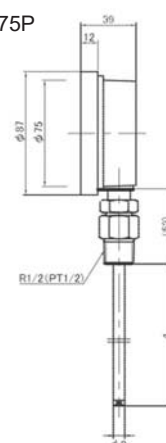
BM-T-75P
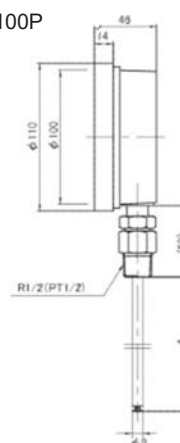
BM-S-75P

BM-S-100P

BM-T-75P
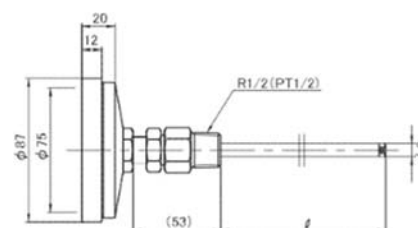
BM-T-100P
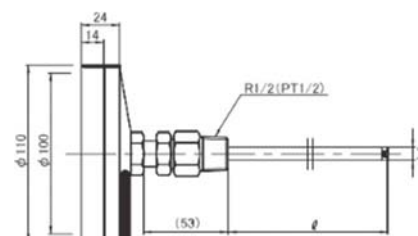
SPECIFICATIONS

Cat. No.	2075-B	2078-B	2080-B	2085-B
Model	BM-T-75P	BM-S-75P	BM-T-100P	BM-S-100P
Case dia.	87 mm		110 mm	
Dial dia.	75 mm		100 mm	
Material Case Window	Polyamide resin (PA) Glass			
Sensing stem Material	Ø8 mm Brass plating (BS)			
Screw Material	PT1/2 Brass plating (BS)			

Tell us the catalog number given below according to the measuring range and the stem length of your choice.

Measuring range	Stem length	BM-T-75P	BM-S-75P	BM-T-100P	BM-S-100P
0 to 50°C (div. 1/1)	50 mm	2086-00	2098-00	2080-02	2085-02
	100 mm	2087-00	2099-00	2080-04	2085-04
	150 mm	2088-00	2100-00	2080-06	2085-06
0 to 100°C (div. 2/1)	50 mm	2089-00	2101-00	2080-12	2085-12
	100 mm	2090-00	2102-00	2080-14	2085-14
	150 mm	2091-00	2103-00	2080-16	2085-16
0 to 150°C (div. 2/1)	50 mm	2092-00	2104-00	2080-52	2085-52
	100 mm	2093-00	2105-00	2080-54	2085-54
	150 mm	2094-00	2106-00	2080-56	2085-56
0 to 200°C (div. 5/1) (Made to order)	50 mm	2095-00	2107-00	2080-22	2085-22
	100 mm	2096-00	2108-00	2080-24	2085-24
	150 mm	2097-00	2109-00	2080-26	2085-26

SATO KEIRYOKI MFG. CO., LTD.

BIMETAL THERMOMETERS (BACK CONNECTION)
MODEL BM-T-40S/BM-T-60S/BM-T-70S/BM-T-90S

SPECIFICATIONS

Cat. No.	2440-B	2460-B	2470-B	2490-B
Model	BM-T-40S	BM-T-60S	BM-T-70S	BM-T-90S
Dimensions Case	44 mm dia.	63 mm dia.	80 mm dia.	103 mm dia.
Dial	42 mm dia.	60 mm dia.	70 mm dia.	90 mm dia.
Case construction	Splash-proof type			
Measuring range	See page 36			
Materials Case	SUS304			
Window	Glass	Glass (option: Acryl)		
Sensing stem	SUS304 or SUS316			
Sensing stem dia.	4,6,8,10 mm	6, 8, 10, 12 mm		
Withstand pressure	2 kgf/cm^2	5 kgf/cm^2		

BIMETAL THERMOMETERS (BOTTOM CONNECTION)
MODEL BM-S-60S/BM-S-70S/BM-S-90S

SPECIFICATIONS

Cat. No.	2465-B	2475-B	2495-B
Model	BM-S-60S	BM-S-70S	BM-S-90S
Dimensions Case	63 mm dia.	80 mm dia.	103 mm dia.
Dial	60 mm dia.	70 mm dia.	90 mm dia.
Case construction	Splash-proof type		
Measuring range	See page 36		
Materials Case	SUS304		
Window	Glass (option: Acryl)		
Sensing stem	SUS304 or SUS316		
Sensing stem dia.	6, 8, 10, 12 mm		
Withstand pressure	5 kgf/cm^2		

BIMETAL THERMOMETERS (TILTING TYPE)
MODEL BM-F-70S/BM-F-90S

SPECIFICATIONS

Cat. No.	2700-B	2710-B
Model	BM-F-70S	BM-F-90S
Dimensions Case	80mm dia.	103mm dia.
Dial	70mm dia.	90mm dia.
Case construction	Splash-proof type	
Measuring range	See page 36	
Materials Case	SUS304	
Window	Glass (option: Acryl)	
Sensing stem	SUS304 or SUS316	
Sensing stem dia.	6, 8, 10, 12 mm	
Withstand pressure	5 kgf/cm^2	

BIMETAL THERMOMETERS (BACK CONNECTION) MODEL BM-T-100A

SPECIFICATIONS

Cat. No.	2630-B
Model	**BM-T-100A**
Dimensions Case	127 mm dia.
Dial	100mm dia.
Case construction	Waterproof type
Measuring range	See page 36
Materials Case	Aluminum casting
Window	Glass (option: Acryl)
Sensing stem	SUS304 or SUS316
Sensing stem dia.	6, 8, 10, 12 mm

BIMETAL THERMOMETERS (BACK CONNECTION) MODEL BM-T-150P

SPECIFICATIONS

Model	**BM-T-150P**
Dimensions Case	175 mm dia.
Dial	150 mm dia.
Case construction	Waterproof type
Measuring range	See page 36
Materials Case	Polyamide resin (PA)
Window	Glass (option: Acryl)
Sensing stem	SUS304 or SUS316
Sensing stem dia.	6, 8, 10, 12 mm

BIMETAL THERMOMETERS MODEL BM-R-100P (45° LEANING TYPE)

SPECIFICATIONS

Model	**BM-R-100P**
Dimensions Case	110mm dia.
Dial	100mm dia.
Measuring range	See page 36
Materials Case	Polyamide resin (PA)
Window	Glass (option: Acryl)
Sensing stem	BS (Brass plating)
Screw	BS (Brass plating)
Sensing stem dia.	8 mm
Screw	PT1/2

SK SATO KEIRYOKI MFG. CO., LTD.

STANDARD SPECIFICATIONS OF BIMETAL THERMOMETERS

A. CASE (Material: SUS304)

Type	Dial dia. (mm)	Model	Cat. No.
T	Ø 40	BM-T-40S	2440-B
	Ø 60	BM-T-46S	2460-B
	Ø 70	BM-T-70S	2470-B
	Ø 75	BM-T-75S	2472-B
	Ø 90	BM-T-90S	2490-B
S	Ø 60	BM-S-60S	2465-B
	Ø 70	BM-S-70S	2475-B
	Ø 90	BM-S-90S	2495-B
F	Ø 70	BM-F-70S	2700-B
	Ø 90	BM-F-90S	2710-B

Type T: Back connection type

Type S: Bottom connection type

Type F: Tilting type

B. SCALE PLATE STANDARD

Temp. range (°C)	Min. div.	Stem diameter (mm)						
		Ø40	Ø60	Ø70	Ø75	Ø90	Ø100	Ø150
−50 to 50	2/1	✓	✓	✓	✓	✓	✓	✓
−30 to 50	1/1	✓	✓	✓	✓	✓	✓	✓
0 to 50	1/1	✓	✓	✓	✓	✓	✓	✓
0 to 100	2/1	✓	✓	✓	✓	✓	✓	✓
0 to 120	2/1	✓	✓	✓	✓	✓	✓	✓
0 to 150	2/1	✓	✓	✓	✓	✓	✓	✓
0 to 200	5/1	✓	✓	✓	✓	✓	✓	✓
0 to 300	10/1	✓	✓	✓	✓	✓	✓	—
0 to 400	10/1	—	✓	✓	✓	✓	✓	—
0 to 500	10/1	—	✓	✓	✓	✓	—	—

✓: Available   —: Not available

C. SENSING STEM STANDARD (Max. length: 800 mm)

Material	Stem diameter (mm)			
	Ø 6	Ø 8	Ø 10	Ø 12
SUS304	✓	✓	✓	✓
SUS316	✓	✓	✓	✓

✓: Available

D. STANDARD FOR SCREW
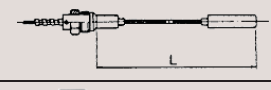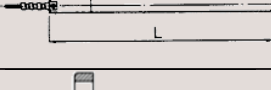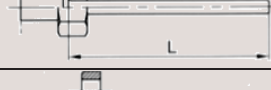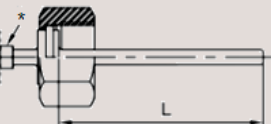
Thread type and size	Applied bulb dia. (mm)	Material		
		SUS304	SUS316	SUS304*
PT/PF 1/4	Ø 6	✓	✓	—
PT/PF 3/8	Ø 6. 8. 10	✓	✓	✓
PT/PF 1/2	Ø 6. 8. 10, 12	✓	✓	✓
PT/PF 3/4	Ø 6. 8. 10, 12	✓	✓	✓
PT/PF 1/1	Ø 6. 8. 10, 12	✓	✓	✓

✓: Available   —: Not available

* SUS304 with slide screw type

E. SHAPE OF CONNECTORS

B: For bimetal   L: For remote sensing dial   ✓: Available   ✕: Not available

	Name	Drawing	B	L		Name	Drawing	B	L
SW	Union type		✓	✓	SC	Fixed screwed connection type		✓	✕
SF	Semi-union type		✓	✓	UW	Union type with thermowell		✓	✓
NB	Screwless type		✓	✓	TM	Bent type		✕	✓
NS	Plain connection w/o pipe thread type		✕	✓	SG	Fixed position cap swivel connection type		✓	✓
FG	Flange type		✓	✓	FW	Flange type with thermowell		✓	✓
SJ	Slide screw type		✓	✓	Fe	Ferrule type		✓	✓
FeG	Liner tube with hexagonal nut type		✓	✓					

* Regarding NB (screwless), SJ (slide screw), FeG (liner tube with hexagonal nut), and Fe (ferrule), shapes and sizes may vary depending on the size and the material of the case used.

STANDARD SPECIFICATIONS OF REMOTE SENSING DIAL THERMOMETERS

A. CASE

Type		Dial dia. (mm)	Model name	Cat. No.
Wall-mount bottom outlet (*1)		Ø 75	LB-75S	3050-L
		Ø 100	LB-100S	3010-L
		Ø 150	LB-150S	3020-L
Flush-mount back outlet (*2)		Ø 75	LD-75S	3060-L
		Ø 100	LD-100S	3030-L
Rigid stem type	S	Ø 100	LAS-100S	3012-L
	L		LAL-100S	3014-L
	T		LAT-100S	3015-L
	F		LAF-100S	3058-L
Waterproof type	*1	Ø 100	LBW-100S	3005-L
	*2		LDW-100S	3025-L
	S		LASW-100S	—*3
	T		LATW-100S	—*3
Oil-filled type	*1	Ø 100	LBW-100SO	—*3
	*2		LDW-100SO	—*3
	S		LASW-100SO	3053-L
	T		LATW-100SO	—*3

S: Bottom connection type   L: L-shape type
T: Back connection type   F: Tilting type
*3 Available even though a catalog number is not given above.

B. SCALE PLATE

Temp. range (°C)	Dial diameter		
	Ø 75 mm	Ø 100 mm	Ø 150 mm
−150 to 50	–	5/1	–
−100 to 50	5/1	2/1	2/1
−50 to 50	2/1	2/1	2/1
−30 to 50	2/1	1/1	1/1
0 to 50	1/1	1/1	1/1
0 to 80	2/1	1/1	1/1
0 to 100	2/1	2/1	2/1
0 to 120	2/1	2/1	2/1
0 to 150	5/1	2/1	2/1
0 to 200	5/1	5/1	5/1
0 to 300	10/1	10/1	10/1

—: Not available

* Other ranges and Fahrenheit scale available upon quantity.

C. LEAD WIRE

Name	Cat. code	Specification
Flexible tube SUS304	FS	An SUS304 lead wire is coated with SUS304 flexible tube.
Flexible tube coated with PVC	FSB	Same as above FS type, but coated with PVC (polyvinyl chloride) further.
Lead wire only	LS	An SUS304 lead wire without any coating.
Lead wire and bulb coated with Teflon tube	TTC	The lead wire and the bulb in the above FSB type are coated with Teflon tube.

D. STANDARD FOR STEM

Diameter	Ø 8 mm	Ø 10 mm	Ø 12 mm
Length (mm)	Up to 500	Up to 1000	Up to 2000
Material	SUS304 or SUS316		

E. SHAPE OF CONNECTORS FOR STEM

(Refer to page 36)

F. STANDARD FOR SCREW

Thread type and size	Bulb dia. (mm)	Material			
		SUS304	SUS316	SUS304*4	SUS304*5
PT/PF 3/8	Ø8. 10	✓	✓	✓	–
PT/PF 1/2	Ø8. 10, 12	✓	✓	✓	✓
PT/PF 3/4	Ø8. 10, 12	✓	✓	✓	✓
PT/PF 1/1	Ø8. 10, 12	✓	✓	✓	✓

✓: Available   —: Not available

*4 SUS304 with slide screw type
*5 SUS304 with fixed position cap swivel connection type

G. MINIMUM LENGTH OF SENSING STEM

Unit: mm

Connection type	Dia. (mm)	Measuring Range (°C)								
		0 to 50	−30 to 50	0 to 80	−50 to 50	0 to 100	0 to 120	0 to 150	0 to 200	0 to 300
SW: Union type	Ø 8	90	75	75	70	70	70	70	70	45
	Ø 10	70	60	60	60	60	60	60	60	45
	Ø 12	65	65	65	50	50	50	50	50	40
NS: Plain connection w/o thread	Ø 8	105	90	90	85	85	85	85	–	–
	Ø 10	85	75	75	75	75	75	75	–	–
	Ø 12	110	110	110	100	100	90	90	–	–

—: Not available

SK SATO KEIRYOKI MFG. CO., LTD.

REMOTE SENSING DIAL THERMOMETERS (WALL-MOUNT BOTTOM OUTLET)
MODEL LB-100S / LB-150S

LB-100S

LB-150S
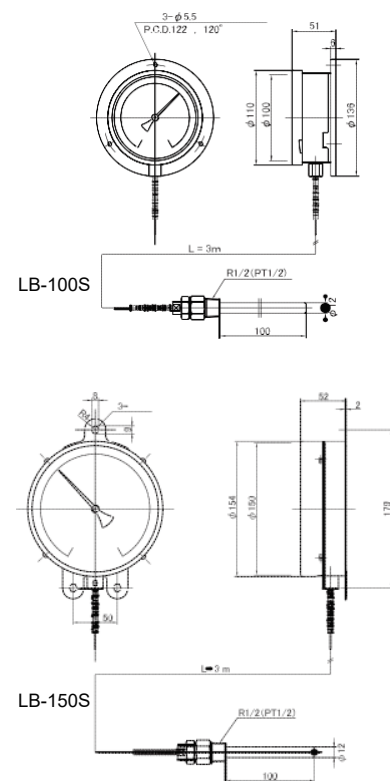
LB-100S

LB-150S

MUTUAL SPECIFICATIONS

Cat. No.		3000-L	3020-L
Model		LB-100S	LB-150S
Type		Wall-mount bottom outlet	
Sensing element		Liquid	
Dimensions	Case dia.	110 mm	154 mm
	Dial dia.	100 mm	150 mm
Material:	Case	SUS304	
	Window	Glass	
Sensing stem		Ø12 mm x 100 mm (L)	
		Material: SUS304	
Screw		PT1/2	
	Material	SUS304	
Lead wire	Length	3 m	
	Material	SUS304	

Measuring range	LB-100S	LB-150S
–50 to 50°C (div. 2°C)	3000-55	3020-55
0 to 50°C (div. 1°C)	3000-05	3020-05
0 to 100°C (div. 1°C)	3000-01	3020-01
0 to 150°C (div. 2°C)	3000-15	3020-15
0 to 200°C (div. 5°C)	3000-20	3020-20
0 to 300°C (div. 5°C)	3000-30	—

Tell us the catalog number given above according to your desired measuring range when ordering.

REMOTE SENSING DIAL THERMOMETER (WALL-MOUNT BOTTOM OUTLET)
MODEL VB-100P
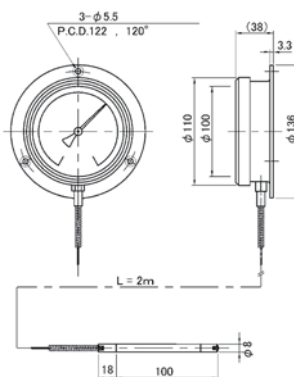
SPECIFICATIONS

Model	VB-100P
Measuring range	0 to 80°C (Cat. No. 4300-08)
	0 to 100°C (Cat. No. 4300-01)
	0 to 120°C (Cat. No. 4300-12)
Scale	Unequal division
Sensing element	Vapor
Case dia.	110 mm (Dial dia.: 100 mm)
Case construction	Splash-proof type
Materials Case	Six nylon + glass 30%
Window	Glass (acryl is available at option)
Sensing stem	Plain connection w/o pipe thread
	Ø8 mm x 100 mm (L)
Materials	CuT. + Nickel plating
Lead wire Length	2 m (but, 1 m for No. 4300-08)
Materials	CuT. + Nickel plating

REMOTE SENSING DIAL THERMOMETERS (WALL-MOUNT/BOTTOM OUTLET)
MODEL LB-75S / LB-100S / LB-150S

LB-100S   LB-75S   LB-150S

SPECIFICATIONS

Cat. No.		3050-L	3010-L	3020-L
Model		LB-75S	LB-100S	LB-150S
Dimensions	Case	80 mm dia.	110 mm dia.	154 mm dia.
	Dial	75 mm dia.	100 mm dia.	150 mm dia.
Case construction		Splash-proof type (IPX1)		Indoor use
Sensing element		Solid liquid		
Measuring range		See page 37		
Materials	Case	SUS304		
	Window	Glass (option: Acryl)		
	Sensing stem	SUS304 or SUS316		
	Lead wire	SUS304		
Sensing stem dia.		8, 10, 12 mm		
Mount (Q'ty x hole dia.)		3 x Ø5 mm	3 x Ø5.5 mm	3 x Ø8 mm

REMOTE SENSING DIAL THERMOMETERS (FLUSH-MOUNT/ BACK OUTLET)
MODEL LD-75S / LD-100S

SPECIFICATIONS

Cat. No.		3060-L	3030-L
Model		LD-75S	LD-100S
Dimensions	Case	80 mm dia.	110 mm dia.
	Dial	75 mm dia.	100 mm dia.
Case construction		Splash-proof type (IPX1)	
Sensing element		Solid liquid	
Measuring range		See page 37	
Materials	Case	SUS304	
	Window	Glass (option: Acryl)	
	Sensing stem	SUS304 or SUS316	
	Lead wire	SUS304	

RIGID STEM TYPE DIAL THERMOMETERS
MODEL LAF-100S / LAS-100S / LAL-100S / LAT-100S
MODEL LAS-100SO (OIL-FILLED FOR VIBRATION-PROOF TYPE)

LAL-100S

LAT-100S

LAF-100S
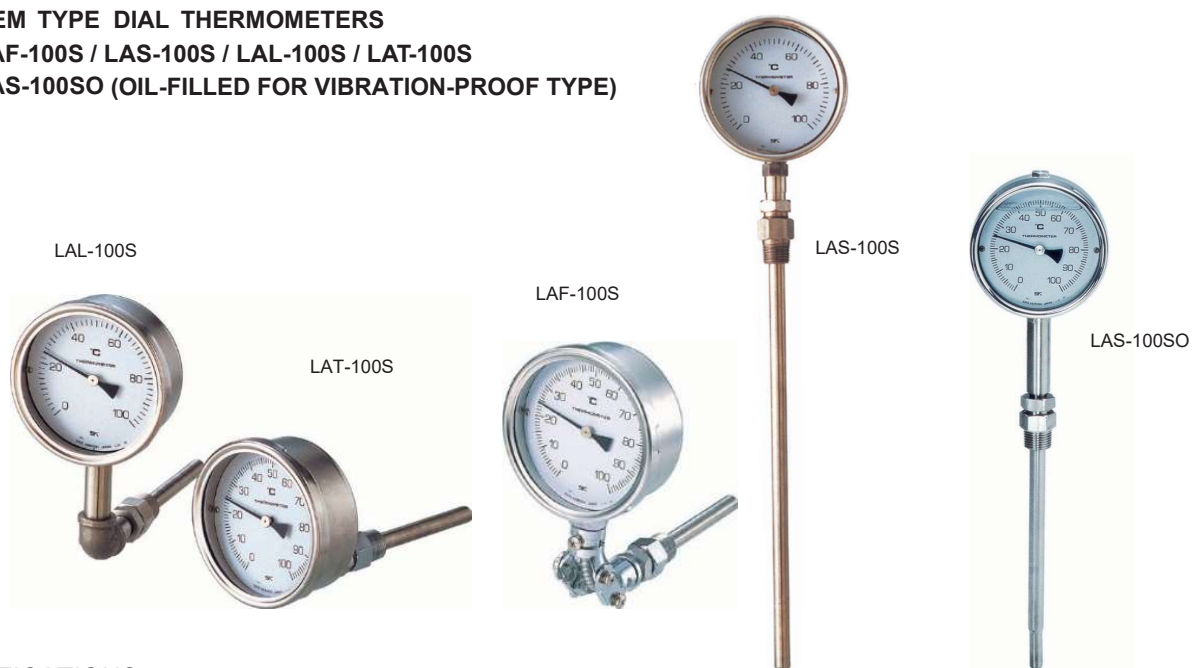
LAS-100S

LAS-100SO

SPECIFICATIONS

Cat. No.	3014-L	3015-L	3058-L	3012-L	3053-L
Model	LAL-100S	LAT-100S	LAF-100S	LAS-100S	LASW-100SO
Connection	Bottom	Back	Bottom	Bottom	Bottom
Stem shape	L-shape	Straight	Tilting	Straight	Straight
Dimensions Case	110 mm dia.				101 mm dia.
Dial	100 mm dia.				90 mm dia.
Case construction	Splash-proof type (Rate: IPX1)				Waterproof type (IPX4)
Sensing element	Solid liquid				
Range	See page 37				
Material of oil	—				Silicone oil or liquid paraffin
Material Case	SUS304				
Window	Glass or acrylic glass				
Sensing stem	SUS304 or SUS316				

REMOTE SENSING DIAL THERMOMETER w/ELECTRIC CONTACT (WALL-MOUNT BOTTOM OUTLET)
MODEL LB-75E / LB-100SE

LB-100SE

LB-75E

SPECIFICATIONS

Cat. No.	3150-L	3110-L
Model	LB-75E	LB-100SE
Dimensions Case	85 mm dia.	110 mm dia.
Dial	75 mm dia.	100 mm dia.
Sensing element	Solid liquid	
Range	See page 37	
Contact capacity	100VAC: 0.3A	100VDC: 0.02A
Wire connection	Terminal block	
Contact adjustment	External adjustment (option: internal adjustment)	
Method	Contact	
Material Case	ADC (aluminum casting)	SUS304
Window	Acryl	
Sensing stem	SUS304	
Lead wire	SUS304	

No. 3750-L ULTRA LOW TEMPERATURE RECORDER MODEL LMMC-1

SPECIFICATIONS

Materials
Case:	SPCC (Finish: Melamine-baked Plating)
Window:	AS resin, transparent
Standard sensing bulb:	SUS304
	Plain connection w/o pipe thread (NS) type
	(Length: up to 200mm)
Lead wire:	SUS304
	Flexible tube (Length: up to 3 m)

Electric contact point:	Lead switch type 1-point contact (option)
Chart drive:	Quartz motor
Power requirements:	1.5 VDC (C manganese battery x 1)
Battery life:	Approx. 1 year (in continuous use)

Chart:	Fold type (73 (W) mm x 4.2 (L) m)
Recording period:	60 days
Chart feed speed:	2.5 mm/h
Recording pen:	No. 3750-53 CPV-77 Cartridge pen (violet)
Accessories:	One box (6 pcs. /box) of chart for 1-year use,
	2 cartridge pens, a set of mounting brackets
	One C manganese battery, manual
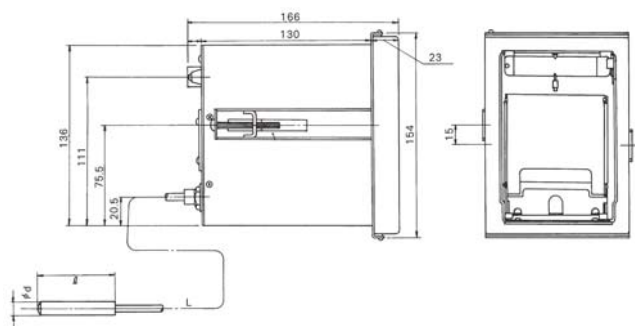
TEMPERATURE RANGES AND CHART NUMBERS

Temp. range (°C)	Min. div. (°C)	Chart No.	Alarm preset (°C)
−100 to 50	5	2L-10040	−80 to −10
−50 to 50	2.5	2L-T40	−30 to 0
−50 to 100	5	2L-50100	−30 to 30
0 to 100	2.5	2L-T40	20 to 10
0 to 150	5	2L-0150	20 to 80
0 to 200	5	2L-T40	40 to 100

No. 3720-L TEMPERATURE RECORDER MODEL LSY-A1

SPECIFICATIONS

Materials
Case & cover:	Aluminum Cast Alloy
(ADC) Finish:	Melamine-baked plating
Window:	Glass
Standard sensing bulb:	SUS304
	Union (SW) type connection (L= up to 200 mm)
	Screw: PT1/2
Lead wire:	SUS304 Flexible tube (L= up to 3 m)

Chart drive	AC type (100 to 200 VAC)
(select at ordering):	Quartz type (one C manganese battery)
	Spring-wound type
Recording pen:	No. 7238-04 Cartridge pen (violet)
Accessories:	One box (100 sheets/box) of chart, manual
	A cartridge pen is factory set

TEMPERATURE RANGES AND CHART NUMBERS

Temp. range	Min. div.	12H/REV.	24H/REV.	168H/REV.
−50 to 50	2	—	Y245050	Y1685050
−20 to 50	1	—	Y242050	Y1682050
0 to 50	1	—	Y2450	Y16850
0 to 100	2	Y12100	Y24100	Y168100
0 to 120	2	Y12120	Y24120	Y168120
0 to 150	5	Y12150	Y24150	Y168150
0 to 200	5	—	Y24200	Y168200
0 to 250	5	—	Y24250	Y168250
0 to 300	5	—	Y24300	Y168300

(100 sheets/box)

SR SATO KEIRYOKI MFG. CO., LTD.
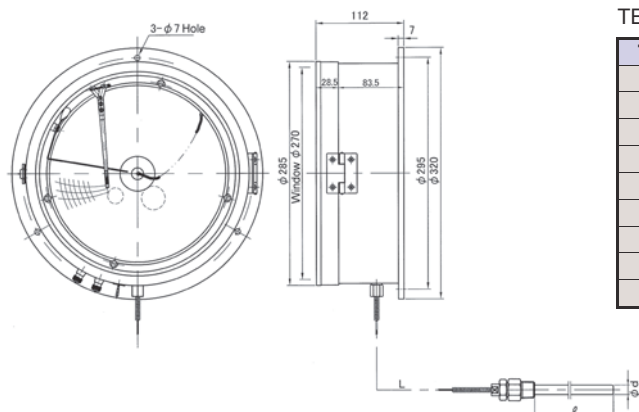
No. 7630-00 DIGITAL BAROMETER MODEL SK-500B

FEATURES

• Wide measuring range of 600 to 1100 hPa

• High resolution of 0.01 hPa

• Red LED for easy visibility

• Display of various arithmetic results

The values of maximum (MAX), minimum (MIN), moving average (AVG) and relative (REL) are calculated and displayed.

• 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.

• RS-232C and Printer outputs

Equipped with the RS-232C and printer outputs. Measured values can be displayed on a computer in real time and printed out with the dedicated printer (optional).

No. 7630-60 OPTIONAL PRINTER
Method: Thermal printing
Power requirements:
AC adapter (in use of 100 to 240VAC)
Dimensions/Weight:
145 (W) x 58 (H) x 135 (D) mm / 380 g

Pressure port: Rc1/4

RS-232C/Printer output

Alarm output port (upper and Lower)

AC adapter connection port

SPECIFICATIONS

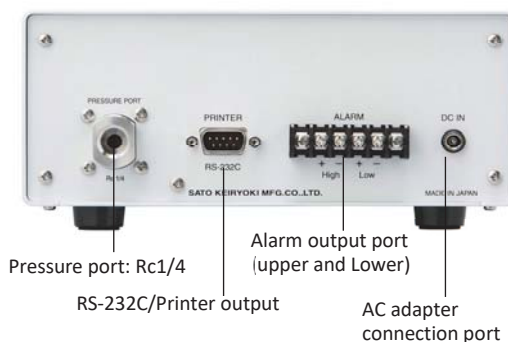| Cat. No.	No. 7630-00
Model	SK-500B
Measuring range	600.00 to 1100.00 hPa
Accuracy	±0.50 hPa (700.00 to 1100.00 hPa, 10 to 40°C) ±1.00 hPa (other range)
Resolution	0.01 hPa
Sampling time	approx. 1 sec.
Sensing element	Piezo resistance pressure sensor
Graph	7-segment red LED (6 digits)
Outputs	RS232C/Printer output/ Upper and lower limits
Accuracy (Clock)	±1 min. per month
Operation ambient	−10 to 50°C, less than 85%rh (no condensing)
Power requirements	9VDC / 660mA by AC adapter
Materials	Main unit: SPCC Display: acrylic resin Pressure port: SUS304
Dimensions & Weight	200(W) x 90(H) x 280(D) mm, approx. 3.0 kg
Accessories	Test result, RS232C cable, USB serial cable, AC adapter (in use of 100 to 240VAC), English manual
Option	No. 7630-60 dedicated printer, No. 8009-82 printing paper (10 rolls/pack)

SOFTWARE

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

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

No. 7610-20 ANEROID BAROMETER WITH THERMOMETER

SPECIFICATIONS

Barometric pressure:

Measuring range:	930 to 1,070 hPa, 700 to 800 mmHg
Min. graduation:	1 hPa / 1 mmHg
Accuracy:	±1 hPa (980 to 1,020 hPa)
	±3 hPa (other range)

Temperature:	Glass thermometer
Measuring range:	−10 to 50°C
Accuracy:	±2°C

Temperature compensation:	Bimetal
Usable altitude:	Up to 500 m
Case material:	Brass
Dimensions:	Ø158 x 50 (D) mm
Weight:	Approx. 690 g
Accessories:	Test result, English manual

No. 7612-00 BAROMETER WITH DIGITAL THERMOMETER

SPECIFICATIONS

Barometric pressure:

Measuring range:	945 to 1,045 hPa (black scale)
	710 to 780 mmHg (red scale)
Min. graduation:	1 hPa / 1 mmHg
Accuracy:	±1 hPa (980 to 1,020 hPa)
	±3 hPa (other range)

Temperature:

Measuring range:	0 to 50°C
Resolution:	0.1°C
Accuracy:	±1°C (0 to 40°C)
	±2°C (other range)
Dimensions:	Ø135 x 33 (D) mm
Weight:	Approx. 220 g
Accessories:	Bracket (Ø160 x 4 (D) mm), AA battery x 1pc., English manual

No. 7693-00 HOT WIRE ANEMOMETER MODEL SK-73D

SPECIFICATIONS

Measuring range:	Velocity:	0.0 to 30.0 m/s
	Air temperature:	0 to 80°C
Sensing element:	Coated platinum element	
Accuracy:	Velocity:	± (3% F.S.+ 1 digit) m/s
	Air temperature:	± (0.5+1 digit) °C
Resolution:	Velocity:	0.1 m/s
	Air temperature:	0.1°C
Power requirements:	7.5 VDC (AA alkaline battery x 5 pcs.)	
Materials of case:	ABS resin, Acyl resin	
Dimensions: Body	84 (W) x 206 (H) x 42 (D) mm	
Probe	Ø8 to 18.7 mm x 180 to 930 (L) mm (telescoping type)	
Cord	Ø6 mm x 2 (L) m	
Weight:	Approx. 475 g (with batteries)	
Standard accessories:	Vinyl case, AA battery x 5 pcs., test result, English manual	

No. 7687-10 VANE TYPE ANEMOMETER MODEL SK-93F-II

SPECIFICATIONS

Measuring range:	Velocity:	0.70 to 25.00 m/s
	Air temperature:	−10 to 50°C
	Wind run:	0.01 to 99.00 m/s
Accuracy:	Velocity:	± (5%rdg + 0.5) m/s
	Air temperature:	±1°C
	Wind run: Accuracy of velocity + calculation error	
Power requirements:	9VDC (9V battery (6F22 (006P)) x 1)	
Materials of case & vane:	ABS resin	
Dimensions: Body	71 (W) x 181 (H) x 38 (D) mm	
Vane	70mm dia.	
Cord length	0.5 m	
Weight:	Approx. 360 g (with batteries)	
Standard accessories:	Carrying case, 9V battery (6F22 (006P)) x 1, English manual	

No. 7910 DIGITAL WIND SPEED AND DIRECTION INDICATOR WITH ALARM

SPECIFICATIONS

No. 7910-00 Wind Speed and Direction Sensor

Wind direction:	Brushless Potentiometer
Wind speed:	Photoelectric pulse type
Starting speed:	Less than 2 m/s
Withstand windspeed:	108 m/s (in wind tunnel)
Measuring range:	Wind direction: 0 to 360°
	Wind speed: 2 to 90 m/s
Measuring Accuracy:	Wind direction: within ±5°
	Wind speed: within ±0.5 m/s at less than 10 m/s
	within ±5%rdg at more than 10 m/s
Output voltage:	Wind direction: 0 to 1 VDC / 0 to 540°
	(540°= N.E.S.W.N.E.S.)
	Wind speed: 0 to 1 VDC / 0 to 90 m/s
Power supply:	12VDC ±2V (supplied from indicator)
Dimensions, weight:	250 dia. x 510 (D) x 660 (H) mm, 3 kg
Accessories	20 m cable, test result, English manual

No. 7910-50 Digital Indicator with Alarm

Display range:	Wind direction:	0 to 360° (16 cardinal points), LED (dot display)
	Wind speed:	0 to 99.9 m/s, 7-segment LED, 4 digits
Input voltage:	Wind direction:	Brushless Potentiometer 0 to 360°
	Wind speed:	60 photoelectric pulse / 1 propeller rotation
Display content:	Wind direction:	Instant or Mean: selectable by a switch button
	Wind speed:	Instant (upper) and Mean (lower)
Alarm output:	Wind direction:	Instant or Mean (Setting value: 0 to 359°)
		Non-voltage make contact, LED blinking
	Wind speed:	Instant or Mean (Setting value:5 to 90m/s)
		Non-voltage make contact, LED blinking,
		Buzzer sound
Power requirement:		100VAC ±10% 50/60 Hz (Other voltage is available)
Power consumption:		100 mA max.
Dimensions:		200 (W) x 110 (H) x 200 (D) mm,
Weight:		approx. 3.5 kg
Accessories:		3 m power cord, 2 fuses, English manual

No. 7790-00 WIND SPEED AND DIRECTION INDICATOR

SPECIFICATIONS

Wind speed and direction sensor

Wind direction:	Counterbalanced tail - Synchro motor
Wind speed:	4-blade propeller - AC generator
Starting speed:	Less than 2 m/s
Withstand windspeed:	108m/s (in wind tunnel)
Measuring range:	Wind direction: 0 to 360°
	Wind speed: 2 to 70 m/s (option: 2 to 80 m/s)
Measuring Accuracy:	Wind direction: within ±5°
	Wind speed: within ±0.5 m/s at less than 10 m/s
	within ±5%rdg at more than 10 m/s
Wind speed output:	45VAC ±1V (no load) at 60 m/s
Dimensions:	510 (W) x 600 (H) mm
Weight:	3.0 kg
Accessories:	20 m cable, test result, English manual

Indicator

Wind speed:	Rectifying Voltmeter
Measuring range:	Wind direction: 360° continuous (16 divisions)
	Wind speed: 2 to 70 m/s (min. scale 1 m/s)
Power requirement:	100VAC±10% (Other voltage is available)
Electric power consumption:	
	30VA (sensor + indicator)
Dimensions:	300 (W) x 170 (H) x 150 (D) mm
Weight:	3.6 kg
Accessories:	3 m power cord, 2 fuses, English manual

No. 7915 3-CUP ANEMOMETER WITH ALARM

SPECIFICATIONS

No. 7915-00 Wind speed sensor

Detection method:	3-Cup AC generator
Measuring range:	2 to 60 m/s
Measuring Accuracy:	within ±0.5 m/s at less than 10 m/s
	within ±5%rdg at more than 10 m/s
Starting speed:	Less than 2 m/s
Withstand windspeed:	90 m/s (in a wind tunnel)
Output signal:	30±1 VAC (no load) at 60m/s
Remote distance:	Up to 2 km (in use of CVVS 1.25mm^2 cable)
Dimensions, weight:	Ø 304 x 353 (H) mm, 1 kg
Accessories:	10 m cable, test result, English manual

No. 7915-50 Digital Indicator with Alarm

Display:	7-segment red LED, 4 digits
Display range:	0.00 to 99.9m/s
Input signal:	30±1 VAC (no load) at 60m/s
Display content:	Instant (upper) and Mean (lower)
Alarm output	Instant or Mean (Setting value:5 to 90m/s)
	Non-voltage make contact, LED blinking,
	Buzzer sound
Power requirement:	100VAC ±10% 50/60 Hz (Other voltage is available)
Dimensions:	200 (W) x 110 (H) x 200 (D) mm
Weight:	Approx. 3.5 kg
Accessories	3m power cord, English manual

No. 7760-00 3-CUP ANEMOMETER

SPECIFICATIONS

Wind speed sensor

Detection method:	3-Cup AC generator
Measuring range:	2 to 60 m/s
Measuring Accuracy:	within ±0.5 m/s at less than 10 m/s
	within ±5%rdg at more than 10 m/s
Starting speed:	Less than 2 m/s
Withstand wind speed:	90 m/s (in a wind tunnel)
Dimensions:	Ø 304 x 353 (H) mm
Accessories:	10 m cable, Test result, English manual

Indicator

Wind speed:	Rectifying Voltmeter
Display range:	0 to 60 m/s
Power requirement:	Self-generated
Dimensions:	180 (W) x 131 (D) 180 (H) x mm
Weight:	1.7 kg
Accessories:	Test result, English manual

No. 7720-00 HAND HELD ANEMOMETER

SPECIFICATIONS

Wind speed sensor:	3-cup AC generator
Indicator:	Rectifying Voltmeter
Measuring range:	2 to 30 m/s
Min. graduation:	1m/s
Accuracy:	Within ±1 m/s at less than 10 m/s
	Within ±10% at more than 10 m/s
Starting wind speed:	1.5 m/s
Withstand wind speed:	40 m/s
Outer dimensions:	Ø174 x 313 (H) mm
Weight:	Approx. 0.7 kg
Standard accessories:	Remote measuring cable (2 m), carrying case
	Test result

No. 7730-00 HAND HELD COMBINATION ANEMOMETER

SPECIFICATIONS

Wind speed:	3-cup AC generator
Wind direction:	Counterbalanced vane
Indicator:	Rectifying Voltmeter
Measuring range:	Wind speed: 2 to 30 m/s
	Wind direction: 360°
Min. graduation:	Wind speed: 1 m/s
	Wind direction: 10° (8 cardinal points)
Accuracy:	Wind speed: within ±1 m/s at less than 10 m/s
	within ±10% at more than 10 m/s
	Wind direction: ±5°
Starting wind speed:	1.5 m/s
Withstand wind speed:	40 m/s
Outer dimensions:	360 (W) x 351 (H) mm
Weight:	1.5 kg
Standard accessories:	Remote measuring cable (2 m), carrying case
	Test result

INSTRUMENT SCREENS

SPECIFICATIONS

	Type 45	Type 60
Features	Single louvered, Single roof	Single louvered, Single roof
Cat. No.	No. 7960-46 (Steel legs) No. 7960-47 (Stainless steel legs) No. 7960-45 (Wooden legs)	No. 7960-49 (Steel legs) No. 7960-50 (Stainless steel legs) No. 7960-48 (Wooden legs)
Inner dimensions	425 (W) x 440(H) x 425 (D)x mm	600(W) x 650(H) x 600 (D) mm

* Double louvered type is available for both types at option.
* Steel anchor bolts are used with stainless steel legs also.

COMPACT TYPE INSTRUMENT SCREENS

SPECIFICATIONS

| Cat No.	No. 7960-20	No. 7960-30
Features	Wall-mount type, Single louvered	Pole-mount type, Single louvered
Model	Type 20	Type 30
Inner dimensions:	203 (W) x 390 (H) x 127(D) mm	330 (W) x 330 (H) x 300 (D) mm

No. 7821　RAINFALL INDICATOR WITH ALARM

SPECIFICATIONS
No. 7821-50 Digital Indicator with Alarm

Applicable sensor:	No. 7821-00 Tipping bucket type rainfall sensor
Display:	7-segment red LED, 4 digits
Display range:	0.0 to 999.5 m/s
Input signal:	Non-voltage make contact
	One tip of rainfall amount:　0.5 mm (option: 1.0 mm)
	Contact time:　　　　　　0.1 sec. or more
	Max. number of pulses:　　10 pulses per minute
Display content:	Instant (upper) and Mean (lower)
	(Effective rainfall amount is displayed by key operation)
Alarm output:	Time rainfall:　　　　1 to 450 mm
	Continuous rainfall: 1 to 999 mm
	Effective rainfall:　 1 to 999 mm
Power requirement:	100 VAC ±10% 50/60 Hz approx. 15 VA
	(Other voltage is available)
Dimensions:	200 (W) x 110 (H) x 200 (D) mm
Weight:	Approx. 3.5 kg
Accessories:	3 m power cable, fuse, English manual

No. 7821-00 Tipping Bucket Rainfall Sensor
(ref. No. 7980-S-40)

SPECIFICATIONS

Output:	1 contact point pulse per 0.5 mm of rainfall amount
Accuracy:	Within 0.5mm when rainfall amount at up to 20mm
	Within 3% when rainfall amount at more than 20mm
Contact:	Reed switch
Contact time:	0.1 sec. or more
Contact capacity:	Current: Max. 1 ADC, Voltage: Max. 200 VDC
Use capacity:	15 W
Remote distance:	approx. 500 m (in use of CVVS 1.25mm^2 cable)
Material of body:	Stainless steel
Dimensions:	Ø220 x 450 (H) mm (orifice: Ø200 mm)
Weight:	Approx. 2.2 kg
Accessories:	20m cable, Test result, English manual

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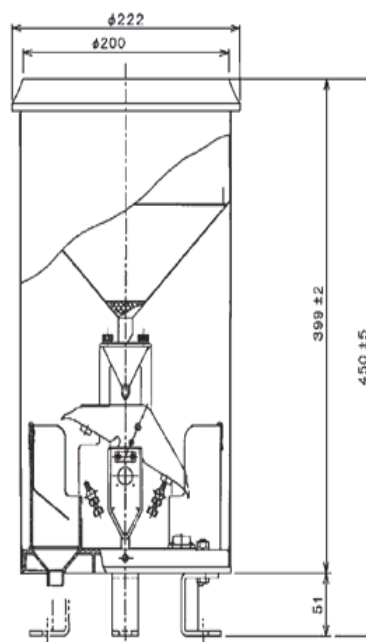
No. 6435-00 HANDY TYPE DIGITAL PH METER MODEL SK-620PHII

SPECIFICATIONS

Measuring range:	pH:	0.00 to 14.00pH
	Temp.:	0.0 to 50.0°C
Accuracy:	pH:	±(0.3+1 digit)pH (0 to 2pH)
		±(0.1+1 digit)pH (2 to 12pH)
		±(0.4+1 digit)pH (12 to 14pH)
	Temp.:	±0.5°C (20 to 30°C),
		±0.7°C (other range)
Resolution:	0.01pH / 0.1°C	
Elements:	pH:	Glass electrode
	Temp.:	Thermistor
Power requirements:	9 VDC (6F22 (006P) x 1 pc.) or AC adapter (optional)	
Materials:	Case: ABS resin Probe: Glass	
Dimensions:	72(W) x 182(H) x 31.5(D) mm	
Weight:	about 220 g (including battery)	
Standard accessories:	PHP-31 probe, bottle for glass electrode, vinyl cover, carrying case, 6F22 (006P) battery x 1, standard liquid set (Phthalate solution, Neutral phosphate solution, Carbonate solution), English manual	

 * Visit our website for the optional probes and other accessories.

No. 6410-00 PEN TYPE DIGITAL PH METER MODEL SK-610PHII

SPECIFICATIONS

Measuring range:	pH:	2.0 to 12.0pH
	Temp.:	0.0 to 50.0°C
Accuracy:	pH:	±0.2pH
	Temp.:	±0.6°C (20 to 30°C)
		±0.8°C (other range)
Resolution:	0.01pH / 0.1°C	
Elements:	pH:	Glass electrode
	Temp.:	Thermistor
Power requirements:	6 VDC (3V Lithium button battery CR2032 x 2)	
Materials:	Case: ABS resin Probe: Glass	
Dimensions:	37(W) x 150(H) x 42(D) mm	
Weight:	about 77 g (including batteries)	
Standard accessories:	Vinyl pouch, Lithium button battery x 2, English manual	

SK-630PH SERIES POCKET TYPE DIGITAL PH METERS

FEATURES

- Calibration function
- HOLD function
- Auto power-off function
- Auto temperature compensation (ATC)
  (Not applicable for model SK-630PH)

SK-630PH   SK-631PH   SK-632PH

SPECIFICATIONS

Cat. No.		No. 6416-00	No. 6418-00	No. 6420-00
Model		**SK-630PH**	**SK-631PH**	**SK-632PH**
Measuring range	pH	2.0 to 12.0pH	2.0 to 12.0pH	2.00 to 12.00pH
	Temp.	–	0.0 to 50.0°C	0.0 to 50.0°C
Accuracy	pH	±0.6pH	±0.5pH	±0.4pH
	Temp.	–	±1.0°C	±0.5°C
Resolution	pH	0.1pH	0.1pH	0.01pH
	Temp.	–	0.5°C	0.1°C
Elements	pH	Glass electrode (no need to refill internal liquid)		
	Temp.	–	Thermistor	
Operation ambient		0 to 50°C		
Power requirement		6 VDC (Button battery LR44 1.5VDC x 4 pcs.)		
Battery life		about 20 hours in continuous use		
Materials		Case: ABS resin Sensor: Glass		
Dimensions		36 (W) x 150 (H) x 25 (D) mm		
Weight		approx. 65 g (including batteries)		
Standard accessories		Button battery LR44 (GPS76E) x 4, English manual		

No. 6433-00 PEN TYPE DIGITAL PH METER MODEL SK-670PH

FEATURES

- Slender rod-shaped sensor section (Ø12 x 115 (L)mm).
  Available to directly insert it in a small container such as flask at measurement
- Waterproof construction conforming to JIS C 0920 IPX4 (can be operated even with wet hands)

SPECIFICATIONS

Display range:	pH: 2.0 to 12.0pH Temp.: 0.0 to 50.0°C
Resolution:	pH: 0.01pH Temp.: 0.1°C
Functions:	3-point calibration (at pH4.01, pH6.86 and pH10.01)
	Auto power-off, Hold function
	Auto temperature compensation (ATC)
Power requirements:	Coin lithium battery CR2032 x 2 pcs.
Dimensions:	36(W)×224(H)×20(D) mm
	Sensing section: 12 mm dia. x 115 (L) mm
Weight:	approx. 63g (including batteries)
Accessories:	Glass electrode protection bottle 1 pc.
	Coin lithium battery (CR2032) x 2 pcs., English manual

SK-660PH SERIES PEN TYPE DIGITAL PH METERS

FEATURES

- Waterproof construction conforming to JIS C 0920 IPX5 (can be operated even with wet hands)
- Sensor sensitivity display
- Replaceable sensors

SPECIFICATIONS

| Cat. No.		No. 6428-00	No. 6429-00	No. 6430-00
Model		**SK-660PH**	**SK-661PH**	**SK-662PH**
Measuring range	pH	2.0 to 12.0pH	0.0 to 14.0pH	0.0 to 14.00pH
	Temp.	0.0 to 50.0°C	0.0 to 50.0°C	0.0 to 50.0°C
Accuracy	pH	±0.3pH	±0.2pH	±0.05pH
	Temp.	±1.0°C	±1.0°C	±0.5°C
Resolution	pH	0.1pH	0.1pH	0.01pH
	Temp.	0.1°C	0.1°C	0.1°C
Sensing elements	pH	Glass electrode (no need to refill KCl)		
	Temp.	Thermistor		
Functions		Auto Power-off, Hold function, Sensor sensitivity display, stability display		
Power requirement		6VDC (Button battery (LR44) x 4)		
Materials		Case: ABS resin Sensor: glass		
Dimensions & weight		Ø38 x 171(L) mm, approx. 82 g (including batteries)		
Accessories		Button battery (LR44) x 4, hand strap		
Consumable		No. 6431-00 Model 660S Replacement sensor, English manual		

Waterproof property

IPX4: Water splashed against the enclosure from any direction shall have no harmful effects.
IPX5: Water projected in jets against the enclosure from any direction shall have no harmful effects.

SK **SATO KEIRYOKI MFG. CO., LTD.**

R SERIES HAND HELD REFRACTOMETERS

FEATURES

- Easy to read boundary of the blue field of the scale
- The body is made with environment-friendly materials.
- Auto temperature correction function in the range of 10 to 30°C
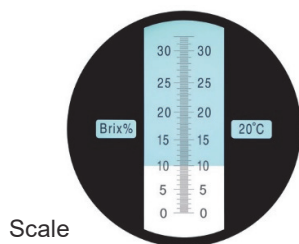
Scale

Accessories

SK-100R

SPECIFICATIONS

Cat. No.	0180-00	0181-00	0182-00	0184-00	0186-00	0187-00	0189-00	0190-00
Model	SK-100R	SK-101R	SK-102R	SK-104R	SK-106R	SK-107R	SK-109R	SK-200R
Scale (Brix)	0.0 to 32.0%	28.0 to 62.0%	0.0 to 18.0%	0.0 to 10.0%	58.0 to 92.0%	45.0 to 82.0%	0 to 50%	0.0 to 28.0% (*1)
Min. Scale	0.2%	0.2%	0.1%	0.1%	0.2%	0.5%	0.5%	0.2%
Grip dia.	29 mm	29 mm	29 mm	29 mm	29 mm	29 mm	29 mm	29 mm
Length	170 mm	160 mm	195 mm	195 mm	150 mm	145 mm	155 mm	170 mm
Weight	105 g	105 g	120 g	120 g	100 g	100 g	100 g	105 g
Materials	Main unit: Aluminum alloy Cover plate: Polycarbonate Prism: Optical glass Grip: Synthetic rubber Adjusting screw: Copper							
Standard accessories	Wipe-out cloth, carrying case, screwdriver, dropper, distilled water (*2), saturation salt water (*3), oil for adjustment (*4), block for adjustment (*5)							

(*1) Salt concentration
(*2) Applicable for SK-100R, SK-102R, SK-104R, SK-109R and SK-200R
(*3) Applicable for SK-101R only
(*4) Applicable for SK-106R and SK-107R
(*5) Applicable for SK-106R and SK-107R

No. 1737-00 CO2 MONITOR MODEL SK-50CTH

FEATURES

- Three-colored LED and buzzer to alert CO2 level
- Temperature/humidity shown together
- Self-recalibration available
- Long-life NDIR sensor for CO2 detection

SAFE
800 ppm or less

VENTILATE REGULARLY
801–1000 ppm

VENTILATE IMMEDIATELY
Over 1000 ppm

SPECIFICATIONS

Cat. No.& Name	No. 1737-00 CO2 Monitor Model SK-50CTH		
Elements	CO$_2$ level	Temperature	Humidity
Measuring range	200 to 5000 ppm	0.0 to 50.0°C	10.0 to 95.0%rh
Accuracy	±5%rdg or ±50 ppm, whichever is larger (200 to 3000 ppm) ±7%rdg (other)	±0.6°C (20.0 to 40.0°C) ±1.0°C (other)	±5.0%rh (40.0 to 70.0%rh, 20 to 30°C) ±7.0%rh (other)
Sampling time	5 sec.	2 sec.	2 sec.
Buzzer volume	64 dB (from 10 cm away), available to be turned off		
Power	5VDC, 500mA via USB Type-C terminal		
Dimensions & Weight	226 (W) x 152 (H) x 45 (D) mm, 450g		
Accessories	USB cable (Type-C to A, 3 m), AC adapter (100 to 240VAC)		

SATO KEIRYOKI MFG. CO., LTD.

No. 1707-20   NON-CONTACT COUNT-DOWN TIMER MODEL TM-27
No. 1707-30   NON-CONTACT COUNT-DOWN TIMER MODEL TM-29

FEATURES

- The non-contact sensor enables to start the timer by putting your hand over the sensor
- When the alarm is sounding, you can stop it without touching but putting your hand over the sensor
- Non-contact switch senses only 3 cm long avoiding false activation when people walking by the timer

Model TM-27   **Model TM-29**

SPECIFICATIONS

Cat. No.	1707-20	1707-30
Model	TM-27	TM-29
Functions	Countdown, Repeat	
Sensor	Non-contact type	
Count-down setting time	From 5 to 90 sec. in steps of 5 sec.	From 1 sec. to 99 min. 59 sec. in steps of 1 sec.
Alarm	Sound (beep beep)	Sound (selectable 3 types) Flashing LED lump, flashing LCD
Volume level	65 dB	70 dB
Waterproof property	---	The front panel has a drip-proof structure
Power requirement	AAA manganese battery (R03) x 3 pcs.	
Battery life	approx. 1 year (in use of 20 times/day)	approx. 1 year (in use of 50 times/day)
Material (Body)	ABS resin	
Dimensions	114 (W) × 62 (H) × 24 (D) mm	120 (W) × 62 (H) × 22 (D) mm
Weight	approx.110 g (including batteries)	approx. 130 g (including batteries)
Accessories	3 AAA manganese batteries, adapter plate, English manual	

OTHER PRODUCTS   Visit http://www.sksato.co.jp/en for detail

No. 8070-10   Pen Type Digital Thermohygrometer Model PC-5110
Range: −10.0 to 50.0°C, 5 to 95%rh

No. 1756-00   Waterproof Digital Thermometer Model PC-9230
No. 1758-00   Waterproof Digital Thermometer Model PC-9235
Range: −50.0 to 240.0ºC
- Fast response with ultra-narrow Ø 1.5 mm sensor
- Shows min/max temperature by pressing a key

← 88 mm →   PC-9230

← 299 mm →   PC-9235

No. 1840-00   Min-Max Digital Thermometer Model PC-3510
Range:
Internal sensor: −5.0 to 50.0°C
External probe: −50.0 to 70.0°C

- Displays min/max temperature permanently

No. 1850-00   2-ch Digital Thermometer Model PC-3710
Range:
Internal sensor: −5.0 to 50.0°C
External probe: −50.0 to 70.0°C

- Can monitor temperatures in both fridge and freezer
- Shows min/max temp. by pressing a key

Ordering Information

HOW TO ORDER

STOCK ITEMS:

To order instruments, parts or accessories, please indicate the appropriate catalog number and name. Where applicable, indicate power requirements, or any optional features listed in the specifications.

MAKE-TO-ORDER ITEMS:

Upon request, we, SATO KEIRYOKI MFG. CO., LTD. will provide a complete quotation on individual system requirements. The quote will detail all necessary components, list fixed prices for a given period of time, and provide ordering instructions.

PRICES:

The prices listed in Price List are subject to change without notice. It is suggested to verify prices prior to ordering, at which time, we will also inform you of the validity period of the price. Prices include the cost of standard export packing. Our shipment term is Ex-works Tokyo basis.

TERMS OF PAYMENT:

Shipment to foreign destinations is against cash transfer (by T/T) to our bank account (advance payment).

BANK INFORMATION:

Beneficiary: Sato Keiryoki Mfg. Co., Ltd.
                  3-4, Kanda-kajicho, Chiyoda-ku, Tokyo 101-0045 Japan

Bank name: MUFG Bank, Ltd., Muromachi Branch (branch no. 430)
                  1-3-2, Nihonbashi-Hongokucho, Chuo-ku, Tokyo 103-0021 Japan
                  Tel: +81-3-3241-1251
Account No.   308700
Swift address: BOTKJPJT

Bank name: Sumitomo Mitsui Banking Corporation, Nihonbashi Branch (branch no. 695)
                  2-1-1, Nihonbashi-Muromachi, Chuo-ku, Tokyo 103-0022 Japan
                  Tel: +81-3-3241-1121
Account No.   1022064
Swift address: SMBCJPJT

SHIPPING:

Unless specific instructions accompany the order, we will use our judgment as to the best method of shipment. Export shipments in wooden case packing may incur an extra packing charge.

SPECIFICATIONS:

We reserve the right to discontinue any item without prior notice and to change specifications as required without incurring any obligation to incorporate new features on instruments or equipment previously sold.

SERVICE:

We, SATO KEIRYOKI MFG. CO., LTD., maintain a complete repair and calibration service in our factories.

WARRANTY POLICY

Warranty

Our products are warranted to be free from defects in materials and workmanship for a period of one year from date of shipment. If repair or adjustment is necessary and has not been the result of abuse or misuse within the one-year- period, please return the units on - Freight Prepaid - and correction of the defect will be made without charges. We alone will determine if the product problem is due to deviations or customer misuse.

Out-of-warranty products will be repaired on charge basis. Return of items

Authorization must be obtained from us before returning items for any reason. When applying for authorization, please include data regarding the reasons the items are to be returned.

V.03

Distributed by

SATO KEIRYOKI MFG. CO., LTD.

3-4, Kanda-kajicho, Chiyoda-ku, Tokyo 101-0045 JAPAN
TEL:+81(0)3-3254-8117   FAX:+81(0)3-3254-8123