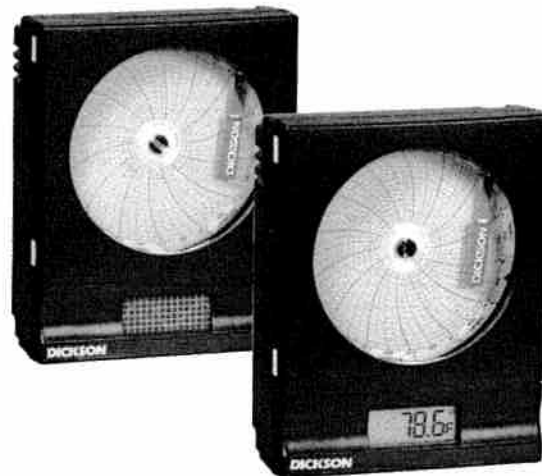


# DICKSON SL4/SK4

## Temperature Chart Recorders

These units are self-contained temperature recorders. The SK4 & SL4 recorders are portable, easy-to-use and provide a permanent record of temperatures. These recorders have an ON/OFF switch, locking door and built-in slot for an optional tie-down cable and lock.

The SK4 was designed for use in applications where recording long term temperature trends is most important. The SL4 was built to give you the best of both worlds: a permanent record of long term temperature recording combined with an easy-to-read, digital display.



### Specifications:

Measurement Ranges: -20 to +120°F, 0 to +100°F, +45 to +90°F, -30 to +50°C

Ambient Operating Temperature: -22 to +122°F (-30 to +50°C); 0-95% RH (non-condensing)

Pen Accuracy:  $\pm 2\%$  full scale

SL4 Display Accuracy:  $\pm 3.6^\circ\text{F}$  ( $\pm 2^\circ\text{C}$ )

Temperature Sensor: Precise spiral-wound bi-metallic strip transducer

Power Supply: One "AA" alkaline battery, up to 3 years average life

Chart Movement: Battery operated

Average Response Time: 11 minutes to move 63% of full scale

Recording Times: 24 hour or 7 day

Chart Size: 4" DIA

Calibration: User: none; Factory: zero (no display calibration)

Display Type: LCD

Resolution: 0.1°F (0.1°C)

Mounting: Desk or wall mount

Enclosure: Black ABS

Dimensions: 7.0" x 5.5" x 2.5" (175mm x 137mm x 70mm)

Weight: 1 lb., 1 oz (482 g)

Approvals: CE

Includes: One "AA" alkaline battery, pen, one box of 60 charts, instruction manual and 1 pt. NIST Traceable Certificate of Calibration

## DICKSON

[www.dicksonweb.com](http://www.dicksonweb.com)

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All prices and specifications are subject to change

Made in U.S.A.

# DICKSON SL4/SK4

## Ordering Information

### Ordering Information

Temperature Range	Recording Time	SL4 \$229	SK4 \$199	Chart No. \$18/pkg.
-20 to +120°F	24 hour	SL4120F24	SK4120F24	C015
-20 to +120°F	7 day	SL4120F7	SK4120F7	C017
0 to +100°F	7 day	SL4100F7	SK4100F7	C012
+45 to +90°F	7 day	SL490F7		C070
-30 to +50°C	7 day	SL4350C7	SK44350C7	C181

### Accessories

Description	Order No.	Price
Carrying Case	A708	\$39
Tie-Down Cable	A833	\$15
Pens (6 red)	P222	\$30
NIST Traceable Calibration 3-pt.*	N300	\$149
A2LA Accredited Calibration 3-pt.*	N400	\$259
Two Year Extended Warranty	E200	\$99

\*Must be requested when ordering, add one week to delivery time.

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## Unpacking

Carefully inspect the recorder and the shipping carton for any signs of obvious damage. Immediately report any damage to the carrier. Retain the original shipping container and contact your supplier.

- Your recorder is shipped with the following items:
1. One box of charts
  2. One Point NIST Traceable Certification of Calibration
  3. One "AA" alkaline battery
  4. One Operation Manual

## Statement of Accuracy

If you have purchased Model SL4, the digital display and the pen on your recorder have independent temperature sensing systems. The temperature sensor for the display has an accuracy of  $\pm 2^{\circ}\text{F}$  ( $\pm 1^{\circ}\text{C}$ ). The temperature sensor for the pen has an accuracy of  $\pm 2\%$  full scale range of the recorder.

Because of this independence it is

## Installation

Your portable recorder can be placed almost anywhere. Be sure the recorder is vertical and level on a vibration-free surface. For best performance and longevity,

## Specifications

- Temperature Sensor:** Precise, spiral-wound, bi-metallic strip transducer
- Pen Accuracy:**  $\pm 2\%$  full scale
- Display Accuracy:** (SL4 only)  $\pm 2^{\circ}\text{F}$  ( $\pm 1^{\circ}\text{C}$ )
- Recording Time:** 24-hour or 7-day
- Average Response Time:** 11 minutes to move 63% of full scale
- Chart Size:** 4" diameter

location should be in a clean environment—free from dust and corrosive fumes. Do not exceed temperature and humidity specifications.

- Ambient Operating Range:**  $-22$  to  $+122^{\circ}\text{F}$ ,  $-30$  to  $+50^{\circ}\text{C}$   
0 to 95% RH (non-condensing)
- Power Supply:** One "AA" alkaline battery
- Dimensions:** 7" x 5.5" x 2.5" (175mm x 135mm x 70mm)
- Weight:** 1 lb., 1 oz. (482g)
- Chart Movement:** Battery operated
- Battery Life:** One full year

- SL4:**
  - Display sensor: Thermistor
  - Display accuracy:  $\pm 2^{\circ}\text{F}$  ( $\pm 1^{\circ}\text{C}$ )

## Instrument Anatomy

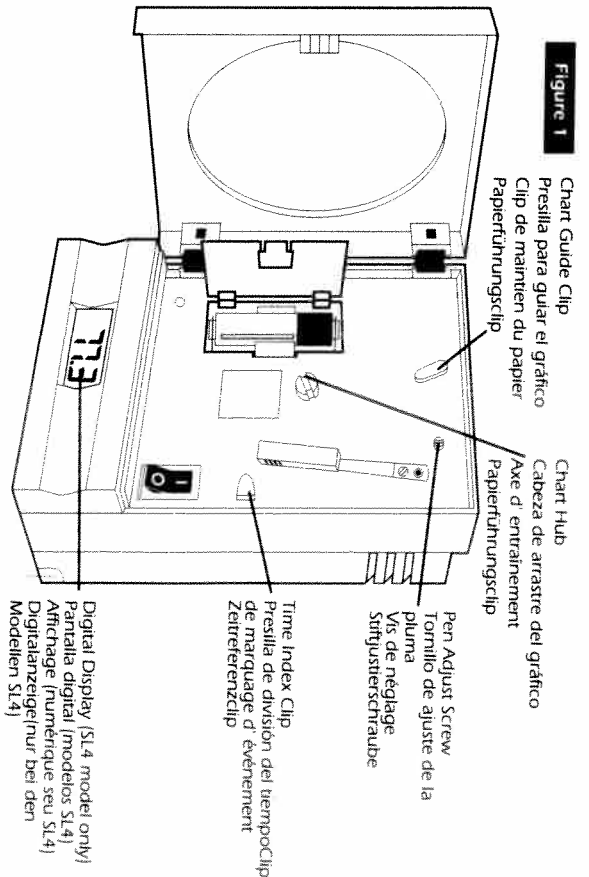
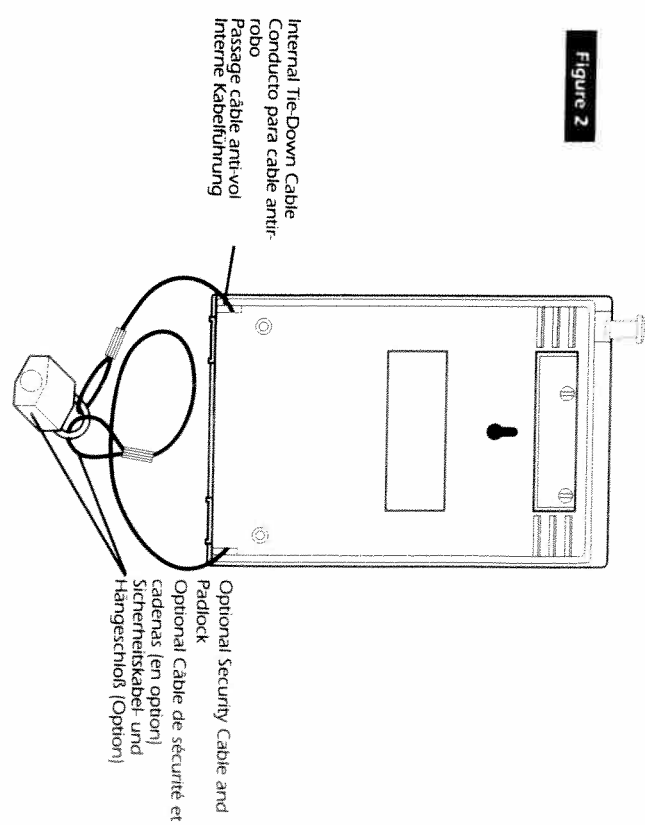


Figure 2



## Calibration/Pen Adjust

- Your recorder was carefully tested and calibrated to factory specifications before being shipped. However, if your recorder indicates an obviously incorrect temperature, you may wish to readjust it by following these steps:
1. Allow the temperature of the recorder to stabilize—usually about 15 minutes, or longer, depending on ambient temperature.
  2. Turn the pen adjust screw (Fig. 1) with a small screwdriver until the tip of the pen is directly over the correct temperature mark on the chart. Your chart recorder is now accurately set.
- Should recalibration become necessary, contact the seller for a Return Authorization Number and further instructions on returning the unit.

## Operation and Maintenance

**Recording Times** Self-contained temperature recorders are available in 7-day or 24-hour configuration.

**Chart Installation** If necessary, refer to section on "Paper Chart Installation".

**Locking Door** To open the door, simply press down the push button to release the latch. To permanently lock the door, remove the button and store it elsewhere. To remove it, grasp with thumb and forefinger and pull it up; it has a snug fit to prevent it from falling out.

**Recording** Place your Temperature Recorder where you want to record the temperature. Remove pen cap from pen tip. Activate On/Off switch.

**Optional Tie-Down Cable** At the bottom rear of the case you will see holes on either side of the case; these form the channel for the tie-down cable accessory. If you have purchased the cable, simply pinch the loop on one end of the cable to give it clearance into the channel, then thread it through the other end. Now you are able to lock or bolt down the unit.

**Power Source** Battery drives are designed to run approximately one year between battery changes. Replace with "AA" size alkaline battery.

**Note:** Replace pen cap when recorder is not in use.

## Paper Chart Installation

1. Open door of recorder case by pressing the push button release (located on top of case) to release lock.
  2. Remove the recorded chart if present.
  3. Place a new chart on the chart hub—being certain that the edge of the chart slides under the chart guide clips located at the outside of the chart.
  4. Set time by inserting a coin into the chart hub and turning clockwise to the correct time (and day for 7-day units) relative to the time index clip.
  5. Turn unit ON (if it was turned off).
- At the end of one cycle (24 hours or 7 days, depending on your recorder), simply repeat steps 1-5, replacing the used chart with a new one.

## Pen Installation

1. Carefully lift the pen arm.
2. While holding the pen arm, use your thumb and forefinger to grasp the pen cartridge by the finger grips near the tip of the pen.
3. Gently slide pen cartridge straight off pen arm.
4. With the pen tip facing the chart, thread a new pen cartridge onto the pen arm. Slide the pen cartridge back until you feel the notch in the pen arm seat securely around the plastic cartridge of the pen tip.
5. Lower the pen on the chart.
6. If the pen arm is bent in the process, carefully bend the arm back so the pen contacts the paper.
7. Remove the pen cap and store on the pen cap holder on the unit.

## Replacement Parts

The dataplate located on back of the recorder will give the proper chart number for your model. Your recorder is designed to use only factory supplied circular charts—the use of any other brand invalidates the guaranteed accuracy of the instrument. Replacement pens can be economically reordered in six-pack quantities.

Description	Quantity	Part#
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### Charts (Box of 60 charts)

(Refer to chart # printed on the center of the chart) Call Customer Service for reorder or selection.

### Accessories

Replacement Pen Pack	6 red	P222
Alkaline "M" Battery	1	19111
Tie-Down Cable	1	A833
Carrying Case	1	A708
NIST Traceable Certificate, 1 point		N15
NIST Traceable Certificate, 3-point		N35
NIST Traceable Certificate, 3-point ULTIMA		N45

**Note:** Before returning recorder for recalibration, please call Dickson Customer Service for Return Authorization Number.

## Troubleshooting

Problem	Solution
Inaccurate temperature range or time period	Charts are not interchangeable Check temperature range & recording time Instrument may need new clock or may be in need of calibration
Instrument is not running	Check On/Off switch Check proper battery installation Check motor, may be faulty, return to factory
Erratic movement of pen & reading	Place recorder on a level vertical surface that is vibration free
Pen trace is to fine or absent	Sand tip of pen or moisten or replace Deflect pen arm with thumb and forefinger until point just contacts the paper. Remove black pen cap
Chart speed is incorrect or chart is binding	Sand chart clips or pen lifting bar may be interfering with chart or faulty chart drive—Return to factory for repair (see Factory Service & Returns in manual for repair)
Out of calibration or Questionable accuracy	Hairish environments or stressful conditions or time may cause the recorder to loose calibration and service or re-calibration may be needed. See manual for instructions.
Lost push button latch	Door may be opened by inserting small screwdriver into push button opening Reorder replacement push button
Display not lit on SL4	Battery is loose or dead Make sure battery is pressed tightly into the display battery holder or replace battery
Display flashes or shows incorrect characters	Battery is weak and needs to be replaced

## Factory Service and Returns

We recommend that damaged instruments be returned to our factory for complete repair. Before returning any instrument or package, **please call for a "Return Authorization Number" (RA#).** When calling, please have the following information available:

1. P.O. number for out-of-warranty units.
2. Serial number of unit.
3. Model number of unit.
4. The problem you're experiencing with unit.

## The Dickson Warranty

The Dickson Company warrants the TempTrace family of recorders will be free from defects in material and workmanship or accidental damage for a period of twelve months after delivery. In the event of a claim under this warranty, the product or part must be returned to the factory for repair or replacement (shipping prepaid) with a Return Authorization Number (See "Factory Service & Returns information above). It will be repaired or replaced at Dickson's option without charge.

The foregoing warranty and remedy are exclusive and in lieu of all other warranties either expressed or implied. The Dickson Company shall not be liable for consequential or incidental damages resulting from failure or malfunction of its products. Products not manufactured by The Dickson Company are excluded from warranty.

Dickson manufactures a complete line of temperature, humidity, air quality & pressure instruments. Send or call for a free catalog of Dickson products.

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**DICKSON**  
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