

DICKSON

SK4/SL4

Temperature Chart Recorder Operation

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SK4



SL4

Rev. 10/07

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Product Applications

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 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.

Useful Features

- Battery Powered, operates on a single AA battery for up to 3 years
- 2.5 more readable than a 3 inch chart recorder
- Totally self-contained and easy-to-use (place directly in the environment to be monitored)
- Battery access
- Portable and compact
- SL4 features easy to read LCD display

Product Specifications

Measurement Ranges:	SL4350: -22 to +122°F, -30 to +50°C, SL4100: 0 to +100°F, -18 to +37°C, SL490: +45 to +90°F, +7 to +32°C; SK4350: -22 to +122°F, -30 to +50°C, SK4100: 0 to +100°F, -18 to +37°C
Ambient Operating Temperature:	-22 to +122°F (-30 to +50°C); 0-95% RH (non-condensing)
Pen Accuracy:	±2% full scale
SL4 Display Accuracy:	±3.6°F (±2°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 (SL4 only)
Resolution:	0.1°F (0.1°C)
Mounting:	Desk or wall mount
Enclosure:	Black ABS & Polycarbonate
Dimensions:	5.2" x 5.2" x 2.4" (13.2 cm x 13.2 cm x 6.1 cm)
Weight:	0.65 lbs (295 g)
Approvals:	CE
Includes:	One "AA" alkaline battery, pen, and instruction manual

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Getting Started

- Set the switch on the back of the unit to the appropriate motor speed: 7 day or 24 hour.
- Place a new chart on the recorder.
- Set the time by inserting a coin into the chart hub and turning clockwise until the current hour is referenced by the time indicator. (Time Indicator is directly to the right and below the pen tip.)
- Remove protective pen cap.

Pen Replacement

- Slide the used pen cartridge off and slide the new one on. Typical pen life is one year.

Battery Replacement

- The battery compartment is located on the back of the unit. The recorder uses a standard "AA" battery for up to three years of battery life.
- Insert new battery with positive end up.

Charts

Range (F/C switchable)		24 Hour °F Chart	24 Hour °C Chart	7 Day °F Chart	7 Day °C Chart
-22 to +122°F	-30 to +50°C	C205	C180	C206	C181
0 to +100°F	-18 to +37°C	C010	C209	C012	C210
+45 to +90°F	+7 to +32°C	C090	C207	C070	C208

Accessories

Description	Order #
NIST Traceable Calibration 3-pt. (new unit)	N300
A2LA Accredited Calibration 3-pt. (new unit)	N400
Pens (6 red)	P222
Carrying Case	A708
Waterproof Pouch	A711

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Calibration Services - New Units

- **N100 - NIST Traceable Calibration 1-Point:** Includes documentation to one Dickson pre-selected point on new units only.
- **N300 - NIST Traceable Calibration 3-Point:** Includes documentation of three Dickson pre-selected points (a high, medium, and low) on new units only.

The Importance and Benefits of Regular Calibrations

Once you begin to use your precision Dickson instrumentation, regular calibrations are necessary to ensure accurate readings.

The following Calibration Services are available:

- **N150 - NIST Traceable Calibration 1-Point:** Includes documentation to one Dickson pre-selected point after re-calibration.
- **N350 - NIST Traceable Calibration 3-Point:** Includes documentation of three Dickson pre-selected points (a high, medium, and low) after re-calibration.

Why should I recalibrate my instrumentation?

Over time dirt, dust and normal handling can throw your precision instrumentation out of calibration. Regular calibrations ensure that you receive the most accurate readings possible.

How often should I recalibrate my instrumentation?

Depending on the environment your instrument is used in and how often it is handled you will want to recalibrate your instrument every 6 to 12 months. Instruments in environments where there are extreme temperatures, wide temperature ranges, humidity or pressure variations, high condensation, dirt, dust and other debris will require calibration at least every 6 months. Instruments that are frequently moved or in locations with heavy machinery that cause vibrations should also be calibrated at least every 6 months.

Why should I return my instrument to Dickson for calibration?

Dickson calibrates your instrument at the factory using proprietary production/calibration software that guarantees proper calibration.

Our Capabilities

Dickson is the first manufacturer of humidity and temperature instrumentation to receive A2LA accreditation. We are also NIST Traceable; our procedures conform to MIS-STD-45662A, ANSI/NCCL 2540-1-1994, ISO/IEC Guide 25 and ISO10012. We are experts in the manufacture and calibration of humidity and temperature instruments.

Fast Service: Our turnaround time is 3 days or less so you receive not only expert service but fast service as well.

Easy: We make it easy for you! No phone calls for Return Authorization Numbers are required. We remind you when your instrument is due for calibration. You simply send in the completed Calibration

Order Form with your unit for calibration with freight prepaid to Dickson.

Calibration

Periodically check accuracy with a test gauge. If pen adjustment is required, use the adjusting screw located inside the door on the upper left corner of the dial plate. Check two points on the scale when adjusting the pen to make sure recorder calibration is maintained.

Note: When no signal (no pressure) is being applied to the recorder, the pen may not rest exactly on the zero chart line. It is possible for the allowable 2% of scale error to occur at zero, while upscale readings are increasingly more accurate.

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Troubleshooting

For troubleshooting information, click here for the technical support page.

Warranty

Dickson warrants that the products it sells will be free from defects in material and workmanship under normal use and service 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 pre-paid) with a Return Authorization Number (see Return Information above). It will be repaired at Dickson's option without charge. This warranty DOES NOT cover routine calibration, pen, chart and battery replacement. The foregoing warranty and remedy are exclusive and in lieu of all other warranties either expressed or implied. Dickson shall not be liable for consequential or incidental damages resulting from failure or malfunction of its products. Dickson makes no warranty for products not manufactured by it or for any products modified by buyer, or subject to misuse or neglect.

Factory Service & Returns

Contact the factory (630-543-3747) for a Return Authorization (RA) Number before returning any instrument. The model number, serial number and a purchase order number will be requested before an RA number is issued.

- Carefully repack the instrument, label the outside of the box with the RA# and return the instrument (freight pre-paid) to Dickson.
- All instruments that do not have the RA# clearly marked on the outside of the box will be refused. When returning instruments for credit, please include all accessories in shipment.
- Calibration/Freight charges are non-refundable.

NOTE: Dickson shall not be liable for consequential or incidental damages resulting from failure or malfunction of its products.

Software Return Policy

IMPORTANT-Read your Software License Agreement carefully before installing software. Dickson will accept returns for replacement of defective disks and CDs only.

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4" teledetección de temperatura

Arranque rápido

1. Este registrador se entrega con una pila AA instalada.
2. Ajuste el interruptor en la parte posterior de la unidad a la velocidad adecuada del motor: 7 días ó 24 horas.
3. Reemplace el papel para gráficos con un gráfico nuevo.
4. Ajuste el tiempo insertando una moneda en el concentrador de gráficos y girando en el sentido de las agujas del reloj hasta que la hora correcta se referencia en el temporizador. (El temporizador se encuentra directamente a la derecha y por debajo de la punta del estilete).
5. Quite la tapa protectora del estilete.
6. El movimiento del gráfico es de arranque automático y funciona en forma continúa. Permita que la unidad se estabilice en el entorno durante 15 minutos.

La garantía Dickson

Garantía: Dickson garantiza que el SK4/SL4 no presentará defectos de material y de mano de obra en el uso y servicio normales durante un periodo de doce meses posteriores a la entrega.

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SK4 & SL4

4" Enregistreur de température

Débuter

1. Cet enregistreur est livré avec une pile AA installée.
2. Réglez le commutateur à l'arrière de l'unité selon la vitesse appropriée du moteur: 7 jours ou 24 heures.
3. Remplacez le graphe en papier par un nouveau graphe.
4. Réglez l'heure du graphe en insérant une pièce dans la fente du connecteur de graphe et en tournant dans le sens des aiguilles d'une montre jusqu'à arriver à l'heure correcte. (L'indicateur horaire est à droite et en dessous du bout du stylo.)
5. Retirez le bouchon protecteur.
6. Le mouvement du graphe est à démarrage autonome et fonctionne continuellement. Laissez l'unité se stabiliser dans l'environnement pendant 15 minutes.

La garantie Dickson

Garantie: Dickson garantit que la ligne SK4/SL4 d'instruments sera sans défauts en matériel et en fabrication sous un usage normal et sera sous service pour une période de douze mois après la livraison.

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4" Temperaturaufzeichnung durch Fernerkundung

Schnellstart

1. Bei diesem Aufnahmegerät ist 1 AA Batterie bereits vorinstalliert.
2. Stellen Sie den Schalter auf der Rückseite der Geräteeinheit auf die angemessene Motorendrehzahl ein: 7 Tage oder 24 Stunden.
3. Ersetzen Sie das Diagrammpapier mit einem neuen Diagramm.
4. Stellen Sie die Zeit ein, indem Sie eine Münze in die Diagrammnabe einfügen und dann solange im Uhrzeigersinn drehen, bis die korrekte Stunde durch den Zeitanzeiger angegeben wird (Zeitanzeiger befindet sich unmittelbar rechts unterhalb der Stiftspitze).
5. Entfernen Sie die Schutzkappe des Stifts.
6. Die Diagrammbewegung startet eigenständig und verläuft fortlaufend. Gewähren Sie der Geräteeinheit 15 Minuten, um sich gemäß der Umgebung zu stabilisieren.

Die Dickson Gewährleistung

Gewährleistung: Dickson gewährleistet für die Dauer von 12 Monaten nach der Auslieferung Dienstleistungen und dass der/die/das SK4/SL4 bei normaler Benutzung frei von Material- und Verarbeitungsmängeln ist.

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4" temperatura rilevata a distanza

Avvio veloce

1. Questo registratore è fornito con una batteria AA installata.
2. Impostare il selettore a tergo dell'unità sull'idonea velocità del motore: 7 giorni o 24 ore.
3. Sostituire il foglietto diagramma con un diagramma nuovo.
4. Impostare l'ora inserendo una moneta nel perno del diagramma e ruotando in senso orario fino all'indicazione dell'ora corretta nell'indicatore dell'ora. (L'indicatore dell'ora si trova direttamente a destra e sotto la punta del pennino.)
5. Togliere il cappuccino protettivo del pennino.
6. Il movimento del diagramma inizia da solo e continua ininterrottamente. Consentire all'unità di stabilizzarsi nell'ambiente per 15 minuti.

La garanzia Dickson

Garanzia: Dickson garantisce che SK4/SL4 sarà privo di difetti di materiale e manodopera nelle condizioni normali d'uso e di servizio per il periodo di dodici mesi dalla consegna.

