BK PRECISION

Instruction Manual

Models 750, 751, 752 Dataloggers

User manual for Models 750, 751, & 752

1. Overview
The datalogger family 75X integrates several data recorders that can be programmed and read by IR link. The recorded data can be read, displayed, processed, printed and stored by using external PC software (AK-75X). The software can export data into text or Excel files for other applications.

2. Special Care
- Do not exceed 30V for Input voltage. Alarm output 20V max
- Do not exceed the operating temperature range -40°F to 185°F (-40°C to +85°C)
- The IR link operating range is 32°F to 185°F (0°C to 85°C)
- Be sure that the IR window is clean (free of ice, scratches, dirt, etc...)
- Using the AK-75X software in Instantaneous Measurement Mode will significantly reduce the battery life (do to continuous IR exchange)
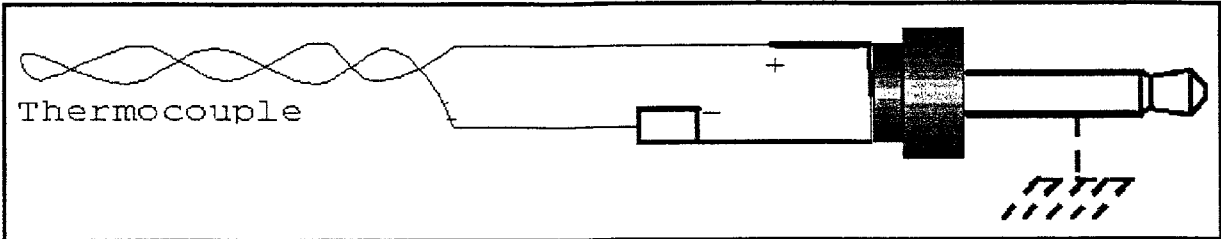
3. Operating the Datalogger
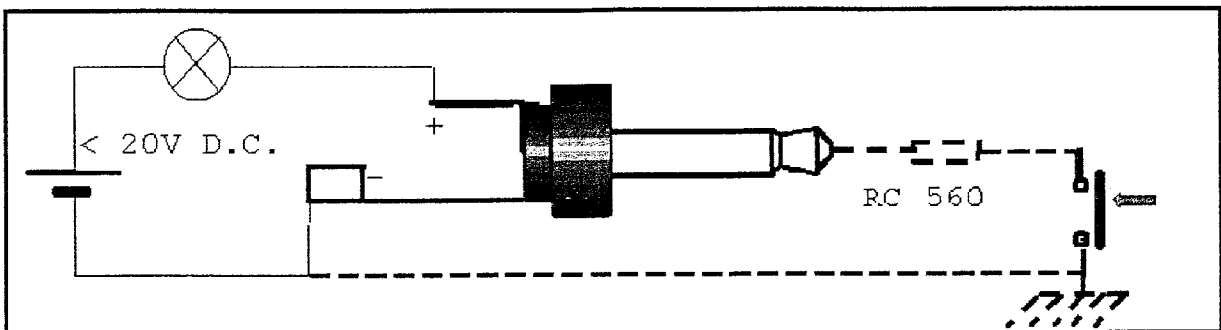For the first use of your datalogger, proceed as follows :
- Setting up the PC for programming the datalogger : install the AK-75X software (see software instructions). Connect the IR interface to the serial interface port of the computer (COM1 or COM2). Start AK-75X and verify the proper serial port number and speed (19200 bps) through the [Option] Menu.
- Search for the datalogger with the [Scan] function : position the IR interface of the datalogger facing the IR interface connected to the PC. In the [Datalogger] menu select [Search for datalogger] or click directly on the [Scan] Icon. Caution : do not scan 2 dataloggers which have been programmed at the same address. If you do not know the address programmed, scan only one datalogger at a time.
- Time and date setup : use menu [Option] + [Date & Time] + Transfer. The date and time of the PC will be transferred to the datalogger.
- Datalogger Setup :
  This function can be accessed through the [Setup] icon or [Datalogger] + [Datalogger Setup] menu.
  - Give a name to the datalogger (10 characters max.)
  - Select the measurement to be stored using the appropriate check box
  - Select the sampling rate (from 0.5s to 1H) – Don't forget that fast sampling rates will reduce battery life
  - Select the Start of measurements:
    - Measurements start immediately after clicking on the [Start] icon if no preprogrammed start date and time has been set. If the unit has been preprogrammed then the measurements will start on the programmed date and time, after clicking on [Start] icon
  - Select the end of measurements :
    - When memory is full
    - Using a programmed date and time
    - Using overwrite mode : the memory will contain the most recent data
  - A text box displays the record duration
  - Use the check boxes to validate the alarm. Select the threshold level and the sign by clicking on < or >. Select the input to be monitored (2 alarms can be programmed separately) When an alarm occurs, the corresponding red LED will flash. (using alarm will reduce battery life due to flashing LED's)
  - All units (°C, °F, V,...) can be programmed by the user in the [Setup] menu, by clicking Units command button.
  - Send the Setup to the datalogger by clicking on command button SEND SETUP
  - Start Measurements by clicking the [Start] icon: the measurement will begin as defined in the setup configurations sent to the datalogger. The green LED will flash (every 3s) to indicate that the START command has been received and processed.
  - Stop Measurements by clicking the [Stop] icon : the red LED will flash once to acknowledge the STOP command. The green LED will stop flashing.
  - To read the measurements stored: click on the [read] icon to transfer measurements to the computer. The data will be displayed on a chart
  - Processing data: the software allows you to zoom, move cursors, adjust scales, add comments, display legend and parameters and print the graph. It is also possible to export data to text or Excel files. Be sure to save your data. The software will only read the data stored into a file with a T15 type extension (e.g. 750sample.T15).
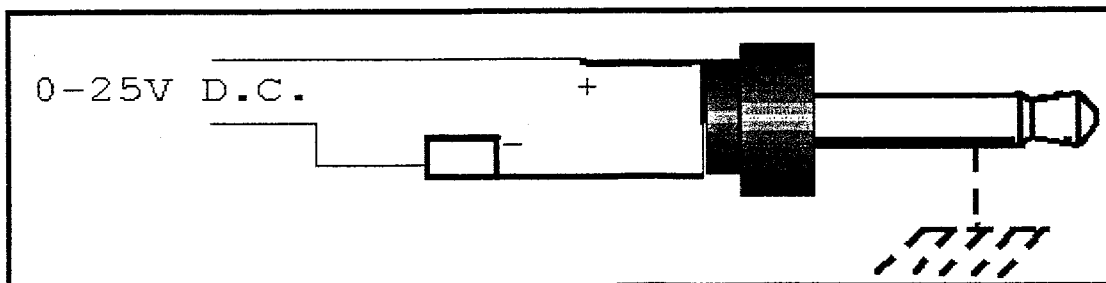
4. External Connections

- The Alarm output is provided by an open collector schematic with a 560 ohms serial resistor. Be sure not to exceed 20 volts. Please remember that all inputs have common ground connections. (no isolation between channels)

For K thermocouple – Connect Green cable to +

Alarm output : be sure not to overload this output – Maximum voltage : 20 Volts

Voltage Input : Maximum voltage must not exceed 25 Volts

5. Replacing the lithium battery

- Check the battery status with the AK-75X software menu [Measurements] + [Instantaneous measurements]. The battery status is displayed on the right side of the window. Once "replace battery" is displayed, the average life time for that battery is one month.
- If the user schedules a long duration of measurements, it is recommended that you replace the battery (expected battery life is 2 years for a new unit). All data is stored in non-volatile memory.
- Remove the cover (one screw on the bottom of the instrument). Change the battery and be sure to note the battery polarity. Be sure to use an appropriate replacement battery (3.6V 1/2AA Lithium – B&K part number BP-75X).
- Note: Model 750 is waterproof. When replacing the battery, it is necessary to replace the seal to maintain IP68 protection. If the current seal is defective use a replacement seal from B&K Precision (part number SL-750).

6. Specifications

	Model 750	Model 751	Model 752
Range : Internal Temperature	-40° ~ 85°C (-40°~ 185°F)	-40° ~ 85°C (-40°~ 185°F)	-40° ~ 85°C (-40°~ 185°F)
External Temperature	-	-40° - 150°C (-40°-302°F)	-40° - 150°C (-40°-302°F)
Voltage	-	-	0-2.5,0-10.0-25VDC
Resolution Internal Temperature	12 bit ± 0.1°C (0.2° F)	12 bit ±0.1°C (±0.2° F)	12 bit ±0.1°C (±0.2° F
External Temperature	-	±0.1°C (±0.2° F)	±0.1°C (±0.2° F)
Voltage	-	-	0.01V
Accuracy : Internal Temperature	±1° C (+ 2° F)	±1° C (+ 2° F)	±1° C (+ 2° F)
External Temperature	-	± 1° C (+ 2° F)	± 1° C (+ 2° F)
Voltage	-	-	1/1000
Sampling Rate	0,5s to 1 hour		
Memory :	21,333 Measurements		
Operating Temp. & Humidity:	-40°~85°C (-40°~185° F) & 10-90% RH		
Storage Temp & Humidity :	-40°~85°C (-40°~185° F) & 10-90% RH		
Battery	½ AA Lithium 3.6 V Battery		
Battery Life :	Approx. 3 years (recommend replacement every 2 years)		
IP Rating :	IP68	IP32	
Case Material :	Polycarbonate Thermoplastic		
Dimensions :	45 mm x 57 mm x 25 mm (LxWxH) (1.77 x 2.24 x 0.98")		
Mounting :	Screw, magnetic or velcro-strip on back		

Accessories:

TP-75X	-General Purpose K-type Temperature Probe (with jack connector)
TP-K	-K to Jack Adapter
AD-75X	-Banana (4mm) to Jack Adapter
MT-75X	-Mounting Kit with 5 Magnets and 5 "Velcro" Strips
RCU-1	-Remote Control Unit
DIN-1	-0-25mA Adapter (with special DIN/OMEGA rail holder)
DIN-2	-Adapter for DIN/OMEGA Rail

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Service Information

Warranty Service: Please return the product in the original packaging with proof of purchase to the below address. Clearly state in writing the performance problem and return any leads, connectors and accessories that you are using with the device.

Non-Warranty Service: Return the product in the original packaging to the below address. Clearly state in writing the performance problem and return any leads, connectors and accessories that you are using with the device. Customers not on open account must include payment in the form of a money order or credit card. For the most current repair charges contact the factory before shipping the product.

Return all merchandise to B&K Precision Corp. with pre-paid shipping. The flat-rate repair charge includes return shipping to locations in North America. For overnight shipments and non-North America shipping fees contact B&K Precision Corp..

B&K Precision Corp.
1031 Segovia Circle
Placentia, CA 92870
Phone: 714- 237-9220
Facsimile: 714-237-9214
Email: service@bkprecision.com

Include with the instrument your complete return shipping address, contact name, phone number and description of problem.

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Limited One-Year Warranty

B&K Precision Corp. warrants to the original purchaser that its product and the component parts thereof, will be free from defects in workmanship and materials for a period of one year from the data of purchase.

B&K Precision Corp. will, without charge, repair or replace, at its' option, defective product or component parts. Returned product must be accompanied by proof of the purchase date in the form a sales receipt.

To obtain warranty coverage in the U.S.A., this product must be registered by completing and mailing the enclosed warranty card to B&K Precision Corp., 1031 Segovia Circle, Placentia, CA 92870 within fifteen (15) days from proof of purchase.

Exclusions: This warranty does not apply in the event of misuse or abuse of the product or as a result of unauthorized alternations or repairs. It is void if the serial number is alternated, defaced or removed.

B&K Precision Corp. shall not be liable for any consequential damages, including without limitation damages resulting from loss of use. Some states do not allow limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific rights and you may have other rights, which vary from state-to-state.

Model Number: _____   Date Purchased: _____

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