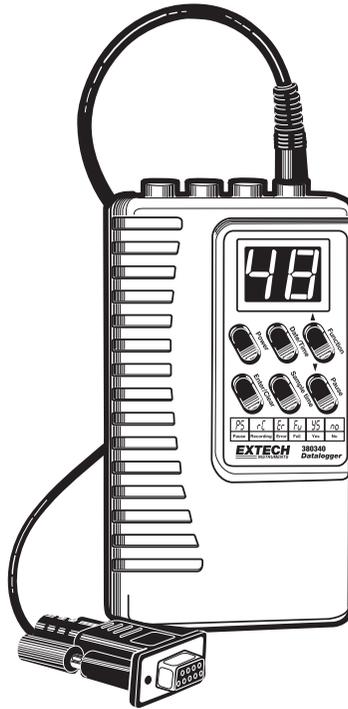


# User's Guide

# **EXTECH** INSTRUMENTS

## Heavy Duty Datalogger Module

### Model 380340



### ***Introduction***

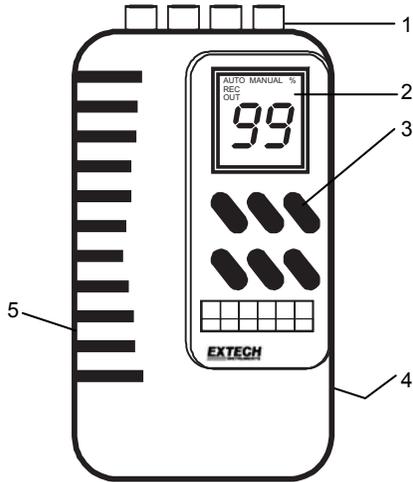
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Congratulations on your purchase of Extech's 380340 Datalogger Module. The Datalogger connects to and records data from Extech Heavy Duty Series Meters. The sample rate at which data is recorded is user selectable. Readings stored in the Datalogger can later be transferred to a PC using the supplied software and communication cables. This device is shipped fully tested and, with proper use, will provide years of reliable service.

# Meter Description

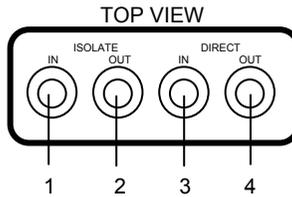
## FRONT PANEL VIEW

1. Input / Output terminals
2. LCD Display
3. Buttons
4. Battery compartment (on rear)
5. AC adaptor input



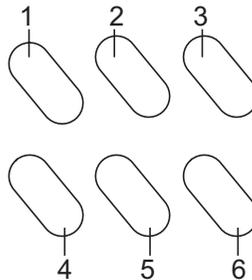
## TOP VIEW

1. Optically isolated INPUT jack
2. Optically isolated OUTPUT jack
3. Non-isolated INPUT jack
4. Non-isolated OUTPUT jack



## BUTTON DESCRIPTION

1. Power switch
2. Date/Time
3. Function
4. Enter/Clear
5. Sample Rate
6. Pause



## Compatible Meters

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| Model No. | Meter Type                      | Display | In/Out Port     | COM Cable      |
|-----------|---------------------------------|---------|-----------------|----------------|
| 407026    | Light Meter                     | Single  | Direct          | UPCB-01        |
| 407112    | Vane Anemometer                 | Dual    | Direct          | UPCB-01        |
| 407113    | Vane Anemometer                 | Dual    | Direct          | UPCB-01        |
| 407114    | CFM Thermo-Anemometer           | Dual    | Direct          | UPCB-01        |
| 407117    | Mini Vane Thermo-Anemometer     | Dual    | Direct          | UPCB-01        |
| 407119    | Hot Wire CFM Anemometer         | Dual    | Direct          | UPCB-01        |
| 407119A   | Hot Wire CFM Anemometer         | Dual    | <b>Isolated</b> | <b>UPCB-02</b> |
| 407123    | Hot Wire Anemometer             | Dual    | Direct          | UPCB-01        |
| 407227    | pH / mV / Temperature           | Dual    | Direct          | UPCB-01        |
| 407303    | Conductivity Meter              | Dual    | Direct          | UPCB-01        |
| 407401    | Dual Thermometer                | Dual    | Direct          | UPCB-01        |
| 407412    | Thermo-Anemometer / Humidity    | Dual    | Direct          | UPCB-01        |
| 407428    | IR Thermometer                  | Single  | Direct          | UPCB-01        |
| 407445    | RH / Temperature Meter          | Dual    | Direct          | UPCB-01        |
| 407495    | Pressure meter                  | Single  | Direct          | UPCB-01        |
| 407510    | Dissolved Oxygen (DO) Meter     | Dual    | Direct          | UPCB-01        |
| 407768    | Sound Level Meter               | Single  | <b>Isolated</b> | <b>UPCB-02</b> |
| 407777    | Moisture Meter                  | Single  | Direct          | UPCB-01        |
| 407820    | Torque Meter                    | Single  | Direct          | UPCB-01        |
| 407850    | Vibration Meter                 | Single  | Direct          | UPCB-01        |
| 407907    | RTD Thermometer                 | Single  | Direct          | UPCB-01        |
| 407910    | Differential Pressure Manometer | Single  | Direct          | UPCB-01        |
| 42525A    | IR Thermometer                  | Single  | <b>Isolated</b> | <b>UPCB-02</b> |
| 475055    | Force Gauge                     | Single  | Direct          | UPCB-01        |

## Operation

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**Note:** The Heavy Duty Meters have an Auto-Shutoff feature that automatically turns off the meter (after 10 to 30 minutes depending on the model). This feature **must** be disabled during a datalogging session. Press the 'RECORD' button on the meter to disable the Auto-Shutoff feature.

### Setting the Date and Time

The actual date and time should be programmed into the data logger prior to use. To program the date and time:

1. Turn the data logger on.
2. Press the **Date/Time button** to enter the date and time setting mode.
3. While in the date and time setting screen hold down the **Date/Time button** until "SET" appears on the screen, then release the Date/Time button. The screen will begin blinking.
4. While the screen is blinking, pressing the **Date/Time button** allows the user to scroll through Year, Month, Date, Hour, Min and Sec.
5. While the screen is **still blinking**, press the **up arrow, (Function Button)**, to adjust the number on the screen to the desired year, month, date, etc. Holding the up arrow button down allows for rapid changing of the numerical value.
6. When the desired date and time is programmed, the logger will exit the time and date setting function after a few seconds with no button presses.

### Automatic Datalogging

This function sets the Datalogger to automatically collect readings at a sample rate set by the user.

1. Connect the Dataloggers IN port to the Heavy Duty Meter as shown in the illustration. (The supplied UPCB-03 cable connects the meter to the Datalogger). Use the Isolated or Direct port on the Datalogger according to the chart on page 3.
2. Turn the power on.
3. Press the Function button until AUTO is displayed on LCD.
4. To set a new recording interval Press and Hold Sample Time button until display flashes SET and HOUR.



Press  $\uparrow\downarrow$  to set hour. Then press Sample time to go to minutes

Press  $\uparrow\downarrow$  to set minutes. Then press Sample time to go to seconds

Press  $\uparrow\downarrow$  to set seconds. Then press Enter to save your interval setting.

### Begin Automatic Datalogging

1. Press the PAUSE button to begin logging. The display will change from PS to RC and begin logging.
2. Press PAUSE again the stop logging.
3. Use the PAUSE button to toggle recording ON (resume) and OFF (pause). When datalogging is resumed, new readings are recorded right where the datalogger left off so that readings are not overwritten.

### **Clearing Logger Memory**

1. Press and hold Clear button until CLR appears and display begins to flash. The number displayed shows the % of memory used.
2. Press ↑↓ to select YS (Yes)
3. Press Enter. Display will flash 00. Memory is now clear.

**NOTE:** Data will remain in memory until the Datalogger memory is cleared (see previous section) or until the batteries are removed.

### **Manual Datalogging**

Manual datalogging allows the user to record one reading at a time.

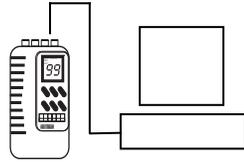
1. Turn the Datalogger On.
2. Press the Function button until MANUAL is displayed on the LCD.
3. Press the PAUSE button to log one measurement. Display will change from PS to RC and return to PS each time a recording is made..

# Transferring Data to a PC

Once data is collected, the next step is to connect the Datalogger to a PC and transfer the collected readings.

## Hardware Connection

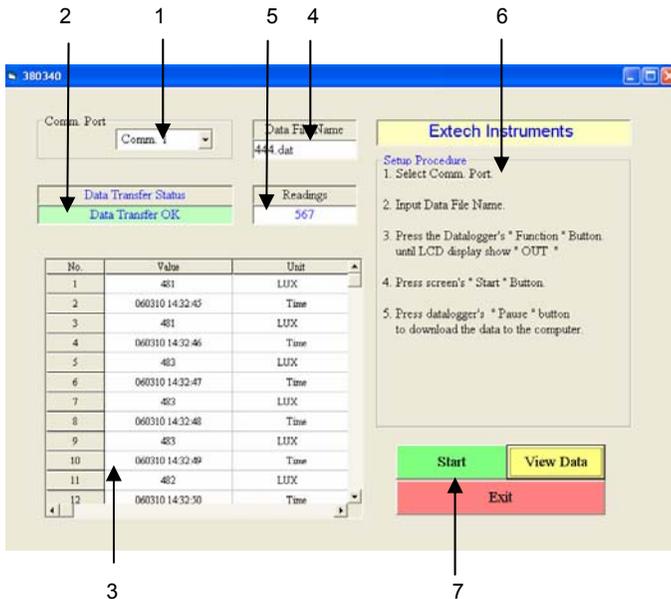
Connect the Datalogger's OUT port to the PC COM port (as shown) via the supplied 3.5mm phono to DB-9 cable. Refer to the compatible meter list for the correct cable and "OUT" port for your meter..



## Windows™ Datalogger Software

Install the supplied software from the Windows™ program CD-ROM using the instructions provided on the CD-ROM. The following software screen will appear.

## Software Screen Description



1. COM Port Selection (Use pull down menu to select port)
2. Data Transfer Status
3. Transferred Data View
4. Data File Name (type desired filename)
5. Number of readings
6. Instructional steps describing the data transfer process (additional steps are listed in the next section).
7. Function buttons: START (click to begin data transfer); VIEW DATA (click to see all transferred data as shown in item 3 above), and EXIT (click to close program)

## Data Transfer

To transfer data from a Heavy Duty meter to a PC.

1. Connect appropriate cable to PC and the logger. (See Compatible Meter List)
2. Power the Datalogger.
3. Select your com port.
4. Type a file name in the Data File Name field on the software screen.
5. Click on the START key in the software window
6. Press the Function button until LCD displays OUT
7. Press the PAUSE button on the Datalogger to begin the data transfer.
8. The LCD will count down as it transfers your data.
9. Press the PAUSE button to halt the transfer.
10. After the data points have been transferred, turn off the datalogger. Data will remain in the datalogger as long as the batteries are fresh.

The data points are transferred to the file named in step 4 above. To view the transferred data, click the VIEW DATA button on the software screen.

## Record Format

The file stored on the PC can now be opened in other applications such as spreadsheet, word-processor, database or graphics programs. Records are comma delimited.

When imported, each reading will appear as follows.

```
1, "060306120458", "Time "  
2, 1173, "LUX          "
```

```
Row ID, Time stamp, Unit  
Row ID, Reading, Unit
```

|  |
|--|
| <p><b>Note:</b> Each time stamp is saved as a 16 character reading as follows.<br/>Year, Month, Day, Hours, Minutes, Seconds</p> |
|--|

## Battery Replacement

Slide the rear battery cover off in the direction of the arrow. Replace the four 'AA' batteries and secure the battery compartment cover.

## **Specifications**

|                        |  |
|------------------------|--|
| Input type             | RS-232 data stream                                   |
| Data storage           | 8000 readings (16 bits each)                         |
| Display                | LCD  |
| Adjustable Sample Rate | 1 second to 8hrs 59 minutes 59 seconds               |
| Software compatibility | Windows™ 98, 2000, Me, and XP Operating Systems      |
| Internal Clock         | Crystal oscillator                                   |
| Memory                 | Non-volatile; Data is retained at power down         |
| Batteries              | Four 1.5V AA batteries (alkaline or heavy duty type) |
| Battery life           | 36 hours continuous (typical)                        |
| Power consumption      | Approx. 3.7mA DC                                     |
| Operating temperature  | 32 to 122°F (0 to 50°C)                              |
| Operating humidity     | < 80 % RH  |
| Weight                 | 0.45 lbs. (205g) including battery                   |
| Dimensions             | 5.2 x 2.8 x 1.0" (131 x 70 x 26mm) (H x W x D)       |

## Warranty

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**EXTECH INSTRUMENTS CORPORATION** warrants this instrument to be free of defects in parts and workmanship for **one year** from date of shipment (a six month limited warranty applies to sensors and cables). If it should become necessary to return the instrument for service during or beyond the warranty period, contact the Customer Service Department at (781) 890-7440 ext. 210 for authorization or visit our website [www.extech.com](http://www.extech.com) for contact information. A Return Authorization (RA) number must be issued before any product is returned to Extech. The sender is responsible for shipping charges, freight, insurance and proper packaging to prevent damage in transit. This warranty does not apply to defects resulting from action of the user such as misuse, improper wiring, operation outside of specification, improper maintenance or repair, or unauthorized modification. Extech specifically disclaims any implied warranties or merchantability or fitness for a specific purpose and will not be liable for any direct, indirect, incidental or consequential damages. Extech's total liability is limited to repair or replacement of the product. The warranty set forth above is inclusive and no other warranty, whether written or oral, is expressed or implied.

## Calibration and Repair Services

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Extech offers repair and calibration services for the products we sell. Extech also provides NIST certification for most products. Call the Customer Service Department for information on calibration services available for this product. Extech recommends that annual calibrations be performed to verify meter performance and accuracy.



**Support line (781) 890-7440**

Technical support: Extension 200; E-mail: [support@extech.com](mailto:support@extech.com)

Repair & Returns: Extension 210; E-mail: [repair@extech.com](mailto:repair@extech.com)

**Product specifications subject to change without notice**

For the latest version of this User's Guide, Software updates, and other up-to-the-minute product information, visit our website: [www.extech.com](http://www.extech.com)  
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