

.1 YEAR
WARRANTY



User's Guide

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OM-NOMAD-340

Thermo Recorder

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OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's Warranty adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components which wear are not warranted, including but not limited to contact points, fuses, and triacs.

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I. SAFETY INFORMATION

- Read the following safety information carefully before attempting to operate or service the meter.
- Only qualified personnel should perform repairs or servicing not covered in this manual.
- Periodically wipe the case with a dry cloth. Do not use abrasives or solvents on this instrument.
- Safety symbols:



Dangerous, refer to this manual before using the meter.



Apply with European CE.

II. FEATURES

- LCD With Back Light
- Battery Status Display
- Memory Status Display
- Easy To Setup
- Windows Interface Software
- Memory: 64,000 Records
- Water Proof.(IP66)

III. GENERAL SPECIFICATIONS

Measurement Range: -30°C to 70°C ; -22°F to 158°F

Accuracy: $\pm 0.7^{\circ}\text{C}$ ($\pm 1.3^{\circ}\text{F}$)

Resolution: 0.1°C / 0.1°F

Data Logger: 64,000 Records

Storage Condition: -30°C to 70°C

Operating Condition: -30°C to 70°C

Response time: 20minutes to 95% under slow air.

Battery: Size AAA 1.5V x 2 (alkaline battery)

Battery Life: more than 1 year (1 minute interval @ 25°C)

Dimension: Recorder: 92 x 55 x 21mm

Base: 107.5 x 62 x 28 mm

Weight: Recorder: 95g Approx.; Base: 60g Approx.

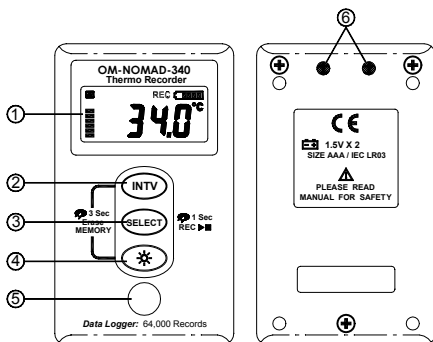
Standard Accessory:

Instruction Menu, Wall Hanger, Alkaline Battery Size AAA
1.5V x 2,

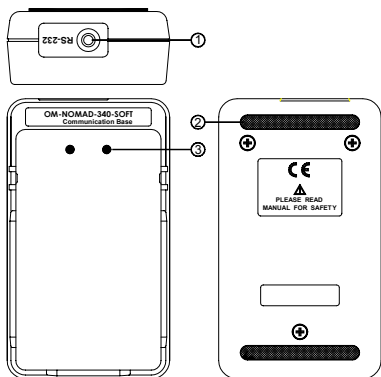
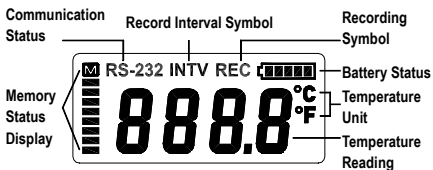
Optional Accessory:

Communication Base, RS-232 Connection Cable, Windows
Software Disk.

IV. NAME AND FUNCTION



-
- | | |
|----------------------------|---------------------|
| ① LCD Display | ③ Select Button |
| ② INTV Setup Button | ④ Back Light Button |
| ⑤ Temperature Sensor | |
| ⑥ Infrared RS232 Interface | |
-



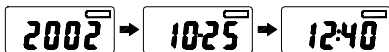
- ① RS-232 Jack
- ② Slip Proof Rubber
- ③ Infrared RS232 Port

V. OPERATION INSTRUCTIONS

5.1 Setup

Date And Time Setup:

1. Hold **INTV** **SELECT** buttons simultaneously for 3 seconds to enter date and time setup mode.
2. Press **INTV** to select year, month, day, hour and minute setup.



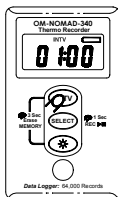
3. Press **SELECT** to set value on year, month, day, hour and minute.

Note:

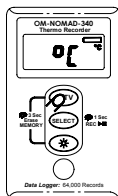
Be sure to setup date and time again after replacing battery. The user can also setup the time through the PC software. This is done by simply clicking on the button that says "Adjust to PC time" that is available in the logger setup window in the software.

Setup Recording Interval and Temperature Unit:

1. Press and hold **INTV** for 2 seconds to recording interval setup mode.(P-1)
2. Press **SELECT** to select record interval. Options are 1,2,5,10,15,20,30 seconds and 1,2,5,10,20,30,60 minutes.
3. Press **INTV** to finish record interval setup and go to temperature unit setup mode. (P-2)
4. Press **SELECT** to select °C or °F.
5. Press **INTV** to save and exit setup mode.



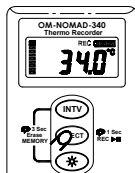
P-1



P-2

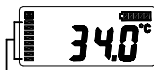
5.2 Temperature Recording

1. Press and hold **SELECT** for 1 second to start recording and LCD will display "REC".
2. To stop recording, press and hold **SELECT** for 1 second again. The "REC" symbol will disappear.
3. After step 1 and 2, a data set is stored in the Recorder.



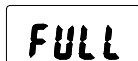
Note:

1. It is important to check the memory status before starting recording.



64,000 records available totally and each segment represents about 8,000 records available.



2. LCD will show "FULL" when 64,000 records are stored in Recorder or 15 data sets are stored in Recorder.

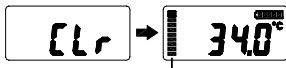
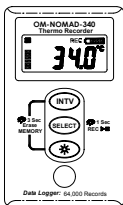


3. If temperature recording is not active, recorder will power off automatically after 60 seconds. It can be powered on by pressing any button.

- During temperature recording, recorder will turn on the LCD for 2 seconds and then go into power saving mode during each record interval.

5.3 Erase Memory

- Press and hold   simultaneously for 3 seconds to clear memory.
- LCD will display "CLR".

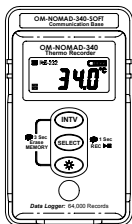


Memory display will resume in full status

Note: Memory cannot be erased when temperature recording is active.

5.4 Download Data

- Dock the recorder to the communication base and connect the RS-232 cable to PC.
- Run the SE-345 software, LCD will display "RS-232" to indicate the linking status.



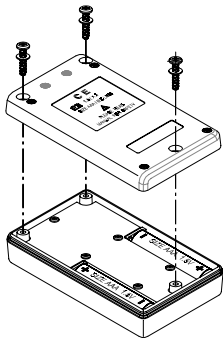
3. Click "DataLogger" from SE-345 menu to download data.

Note:

1. Refer to page 12(6.1) about installing SE-345 software.
2. Refer to page 13(6.2) about software introduction.

5.5 Replace Battery

1. Please stop data recording before replacing battery.
2. Use two Alkaline Battery Size AAA 1.5V .
3. After replacing the battery, please make sure to screw in the three screws tightly with the gasket to keep the unit airtight.



VI. Software

6.1 Installation

- System Required:

Windows 95/98/ME/NT 4.0. /2000/XP

- Minimum Hardware Required:

PC system with Pentium 233MHz or higher.

64 MB RAM.

4X CD-ROM Drive or higher.

Recommended resolution 1024X768(or 800X600).

At least 15 MB byte of free hard disk space available to install SE-345.

- Installation :

1. We recommend closing all other applications before installing the TestLink SE-345 software.

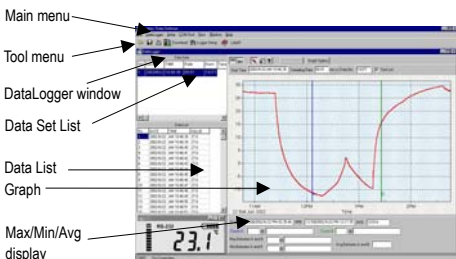
2. Insert the setup CD disc in the CD-ROM drive and the installation program should start automatically.

3.If installation does not start automatically, choose the start button on the Taskbar and select Run.

4.Type E:\SETUP and choose OK. The SE345.exe (executable file) and help file will then be copied to your hard disk (default is c:\program files\SE345).

6.2 Introduction

- **Main Screen**



- **Main Menu**

File : Open - Open files saved previously from the disk.

Save - Save the data to the disk.

Print - Print the data (graph or list).

Printer Setup - Select printer.

Exit - Terminates program.

DataLogger : By opening the DataLogger Window, the user can download recorded data from meter to PC in this window.

Setup : Setup Recorder from PC.


COM port : Select PC communication port manually.

View : Open LCD display window.

Window : Arrange windows

Help : On line help.

- **DataLogger**

When you have the Temperature Recorder connected to PC. Start SE345 software and select "DataLogger" from main menu or click  from tool bar to load recorded data from the logger. There will be a progress indicator to show the download progress. If error occurs, just click "DataLogger" again. After the data has been downloaded completely, on the top left hand side the widow will show how many data sets were loaded and information for each data set (start data, start time, recording rate and record numbers).

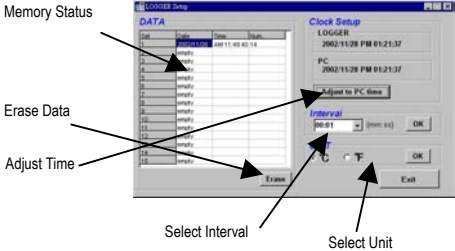
For examples, the figure below indicates that there are two data sets. Set 1 has 1325 records and set 2 has 19349 records.

Data Sets					
Set	DATE	TIME	Rate	Nums	Type
1	10/02/2001	21:10:25	00:00:02	1325	C
2	10/02/2001	21:56:26	00:00:02	19349	C

Note: It will transfer first data set to the graph on the right hand side and list data after loading; you can click another data set to view the graph and list of the data set you select.

- **Setup Logger**

You can setup Logger from software, just select "Setup" from main menu or click  from the tool bar.



Note: After you select interval or unit , you have to click the OK button to make this change valid.


• Tutorial Quick Start

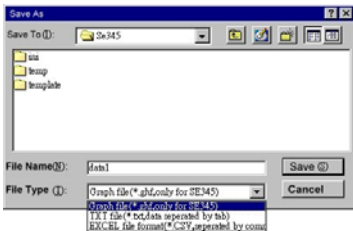
(1) Recording real time data from PC.

1. Put the Temperature Recorder on the Communication Base, and connect it to a PC serial port with the SE-120 cable.
2. Run the SE345 Software.
3. If the connection is successful, the LCD will display the same value as the Temperature Recorder. If the communication fails, there will be no "RS-232" symbol on the LCD window.




(2) How to save the recorded real time data to a file ?

1. Select the window you want to save by click it, then choose File|Save from main menu or click  from the tool bar.
2. There will be a save dialog window for you to assign the file name and file type to save.
3. There are three types of file you can choose. These are binary file(*.ghf), text file(*.txt) and EXCEL format file(*.csv). The *.ghf file uses much less disk space to save the data than the other two file formats, but it can only be used in TestLink SE345 software. Text file can be opened by TestLink SE345 and any other word processor program like word, notepad etc. EXCEL format file can be opened by TestLink SE345 and Microsoft EXCEL.



(3)How to download the recorded data from the memory of Temperature Recorder and save it to a file ?

1. Connect the Communication Base to PC
 2. Put the Temperature Recorder on the Communication Base.
 3. Start SE345 program.
 4. Choose Data Logger from main menu or click  from tool bar.
 5. See Page 14 for more information about the DataLogger window.
- **For more operation instructions, please refer to the online help while executing SE-345.**



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The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

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