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1. FEATURES

* **Thermal anemometer**, available for very low air velocity measurement.
* **Slim probe**, ideal for grilles & diffusers.
* **Combination of hot wire and standard thermistor**, deliver rapid and precise measurements even at low air velocity values.
* **Microprocessor circuit assures maximum possible accuracy**, provides special functions and features.
* **Super large LCD with dual function display** reads the air velocity & temp. at the same time.
* **Heavy duty & compact housing case.**
* **Records Maximum and Minimum readings with recall.**
* **Data hold.**
* **Power supplied by 1.5 V AAA (alkaline) battery x 6 PCs.**
* **The portable anemometer provides fast, accurate readings**, with digital readability and the convenience of a remote probe.
* **Multi-functions for air flow measurement**: m/s, km/h, ft/min, knots. mile/h.
* **Built in temperature °C, °F measurement.**
* **Thermistor sensor for Temp. measurement**, fast response time.
* **Durable, long-lasting components**, including a strong, light weight ABS-plastic housing case.
* **Deluxe hard carrying case.**
* **Applications**: Environmental testing, Air conveyors, Flow hoods, Clean rooms, Air velocity, Air balancing, Fans/motors/blowers, Furnace velocity, Refrigerated cases, Paint spray booths.
## 2. SPECIFICATIONS

### 2–1 General Specifications

<table>
<thead>
<tr>
<th>Component</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Circuit</strong></td>
<td>Custom one–chip of micro–processor LSI circuit.</td>
</tr>
<tr>
<td><strong>Display</strong></td>
<td>* 13 mm(0.5&quot;) Super large LCD display.</td>
</tr>
<tr>
<td></td>
<td>* Dual function meter’s display.</td>
</tr>
<tr>
<td><strong>Measurement</strong></td>
<td>m/s (meters per second)</td>
</tr>
<tr>
<td></td>
<td>km/h (kilometers per hour)</td>
</tr>
<tr>
<td></td>
<td>ft/min (feet/per minute)</td>
</tr>
<tr>
<td></td>
<td>knots (nautical miles per hour)</td>
</tr>
<tr>
<td></td>
<td>mile/h (miles per hour)</td>
</tr>
<tr>
<td><strong>Temp.</strong></td>
<td>°C, °F.</td>
</tr>
<tr>
<td><strong>Data hold</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Sensor Structure</strong></td>
<td>* Air velocity:</td>
</tr>
<tr>
<td></td>
<td>Tiny glass bead thermistor.</td>
</tr>
<tr>
<td></td>
<td>* Temperature:</td>
</tr>
<tr>
<td></td>
<td>Precision thermistor.</td>
</tr>
<tr>
<td><strong>Memory</strong></td>
<td>Maximum and Minimum with recall.</td>
</tr>
<tr>
<td><strong>Sampling Time</strong></td>
<td>Approx. 0.8 sec.</td>
</tr>
<tr>
<td><strong>Operating</strong></td>
<td>0 °C to 50 °C(32 °F to 122 °F).</td>
</tr>
<tr>
<td><strong>Temperature</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Operating</strong></td>
<td>Less than 80% RH.</td>
</tr>
<tr>
<td><strong>Humidity</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>1.5 V AAA (UM – 4) battery x 6 PCs. (Alkaline).</td>
</tr>
<tr>
<td>Power Current</td>
<td>Approx. DC 30 mA.</td>
</tr>
<tr>
<td>---------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Weight</td>
<td>355 g/0.78 LB.</td>
</tr>
<tr>
<td>Dimension</td>
<td>Main instrument:</td>
</tr>
<tr>
<td></td>
<td>185 x 78 x 38 mm (7.1 x 3.1 x 1.5 inch).</td>
</tr>
<tr>
<td></td>
<td>Telescope Probe:</td>
</tr>
<tr>
<td></td>
<td>Round, 12 mm Dia x 280 mm (min. length).</td>
</tr>
<tr>
<td></td>
<td>Round, 12 mm Dia x 940 mm (max. length).</td>
</tr>
<tr>
<td>Accessories Included</td>
<td>Instruction manual........................1 PC.</td>
</tr>
<tr>
<td></td>
<td>Telescope Probe........................1 PC.</td>
</tr>
<tr>
<td></td>
<td>Hard carrying case......................1 PC.</td>
</tr>
</tbody>
</table>

2-2 Electrical Specifications (23 ± 5 °C)

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Range</th>
<th>Resolution</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>m/s</td>
<td>0.2–20.0 m/s</td>
<td>0.1 m/s</td>
<td>± (5% + 1d)</td>
</tr>
<tr>
<td>km/h</td>
<td>0.7–72.0 km/h</td>
<td>0.1 km/h</td>
<td>reading</td>
</tr>
<tr>
<td>ft/min</td>
<td>40–3940 ft/min</td>
<td>1 ft/min</td>
<td>or</td>
</tr>
<tr>
<td>mile/h</td>
<td>0.5–44.7 mile/h</td>
<td>0.1 mile/h</td>
<td>± (1% + 1d)</td>
</tr>
<tr>
<td>knots</td>
<td>0.4–38.8 knots</td>
<td>0.1 knots</td>
<td>full scale</td>
</tr>
</tbody>
</table>

Note:
- m/s – meters per second
- km/h – kilometers per hour
- ft/min – feet/per minute
- mile/h – miles per hour
- knots – nautical miles per hour
- (international knot)

Remark:
Spec. tested under the environment RF Field Strength less than 3 V/M & frequency less than the 30 MHz only.
3. FRONT PANEL DESCRIPTION

Fig. 1

3-1 Display
3-2 Power Off/On Button
3-3 Data Hold Button
3-4 °C/°F Button
3-5 Memory "Record" Button
3-6 Memory "CALL" Button
3-7 Zero Button
3-8 Unit Button
3-9 Battery Compartment/Cover
3-10 Probe Input Socket
3-11 Sensing Head
3-12 Probe Handle
3-13 Probe Plug
4. MEASURING PROCEDURE

1) Connect the "Probe's Plug" (3-13, Fig. 1) to the "Probe Input Socket" (3-10, Fig.1).
2) Power on the meter by pushing the "Power On/Off Button" (3-2, Fig.1) once.
3) Select the desired temperature units, using the "°C/°F Button" (3-4, Fig. 1).
4) Select the desired air velocity units, m/s, km/h, ft/min, knots, mile/h, using the "Unit Button" (3-8, Fig. 1).
5) Zero setting:
   a. Utilizing the "Sensing Head" (3-11, Fig.1), slide the sensor cover to the up position to let the air velocity sensor become isolated from the environment, refer to Fig. 2.
   b. Push the "Zero Button" (3-7, Fig. 1) to let the reading value of air velocity display zero value.

![Diagram showing "Sensor cover" slide to the up position.](Fig. 2)
6) a. Slide the sensor cover to the down position, to let the air velocity sensor contact the air, refer Fig. 3.
b. Extend the telescope probe to the convenient length, refer Fig. 4

Caution !!!

Do not let the fingers or any tool touch the air velocity sensor, otherwise the meter may be permanently damaged.
7) **Direction of the sensor head:**
   There is a mark on the top of the "Sensor Head", when making the measurement, this mark should be against the measured wind, refer Fig. 6, Fig. 7. When the sensor head faces against the measurement air, then the upper display will show the air velocity value. The lower display will show the temperature value.

[Diagram]

- **Sensor head (side view)**
- **Direction mark should face the measured wind.**
- **Probe Handle**
- **Fig. 6**

- **Sensor head (top view)**
- **Direction mark should face the measured wind.**
- **Fig. 7**
8) Data Hold:
   a. During measurement, pushing the "Data Hold Button" (3–3, Fig. 1) will hold the display values & the LCD will display the "D.H." symbol.
   b. To cancel the Data Hold function, Press the Data Hold Button once more.

9) Data Record (Max. & Min. reading)
   a. The Data Record function displays the maximum & minimum readings. To start the Data Record function, press the "Record Button" (3–5, Fig. 1) once. "REC" symbol will appear on the LCD display.
   
   b. With the "REC" symbol indicated on the display
      * Push the "CALL Button" (3–6, Fig. 1) once, then the "Max." symbol with the maximum values recorded will appear on the LCD display.
      * Push the "CALL Button" once again, the "Min." symbol with the minimum values recorded will appear on the LCD display.
      * To de-activate the Data Record function, Press the "Record Button" (3–5, Fig. 1) once again. All associated annunciators will disappear from the display.
10) For quick measurement, follow the procedures shown below:

**Main procedures:**

- Power On
- * Select the °C or °F
- * Determine the display unit
- Zero

**Optional measuring procedures:**

- DATA HOLD
- MEMORY RECORD
  - Max., Min.

5. BATTERY REPLACEMENT

1) When the left corner of LCD display shows "LBT", it is necessary to replace the battery. However, in—spec measurement may still be made for several hours after low battery indicator appears before the instrument becomes inaccurate.

2) Slide the "Battery Cover" (3—9, Fig. 1) away from the instrument and remove the battery.

3) Install the 1.5 V AAA battery x 6 PCs. Please use the Alkaline type battery. After installing the batteries, reinstate the battery cover.
WARRANTY DISCLAIMER

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 is unfaulty, 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 in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by the company will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive, and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a “Basic Component” under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity; or (2) in medical applications or used on humans, OMEGA assumes no responsibility as set forth in our basic WARRANTY/ DISCLAIMER language, and, additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

RETURN REQUESTS / INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA’S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

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

For Warranty returns, please have the following information available BEFORE contacting OMEGA:
1. Purchase Order number under which the product was purchased,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

For Non-Warranty repairs, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:
1. Purchase Order number to cover the cost of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA’s policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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