DT-8820
DATASHEET

1. INTRODUCTION

The 4 in 1 digital multi- Multi-Function Environment Meter has been designed to combine the functions of Sound Level Meter, Light Meter, Humidity Meter, and Temperature Meter. It is an ideal Multi-Function Environment Meter Instrument with scores of practical applications for professional and home use.

The Sound Level function can be used to measure noise in factories, schools, offices, airports, home, etc., checking acoustics of studios, auditoriums and hi-fi installations.

The Light function is used to measure illuminance in the field. It is fully cosine corrected for the angular incidence of light. The light sensitive component used in the meter is a very Stable, long life silicon diode.

The Humidity/Temperature is for use a humidity/semiconductor sensor and K type thermocouple. This operations manual contains general information and specification

2. FEATURES

- 4 functions measure Sound level, Light, Humidity and Temperature
- 3 1/2 large LCD display with units of Lux, ℃， ％RH and C & dB, A & dB indication.
- Easy to use
- Light measuring levers ranging from 0.01 lux to 20,000 lux.

- Sound level range:
  A LO (low) – Weighting: 35-100 dB
  A HI (High)- Weighting: 65-130 dB
  C LO (low) – Weighting: 35-100 dB
  C HI (High)- Weighting: 65-130 dB
  Resolution: 0.1 dB
- Humidity measurement from 25％RH to 95％RH with 0.1％RH resolution and fast time response.
- Temperature measuring levers ranging from – 20.0℃～＋750℃ /-4℉～＋1400℉

3. SPECIFICATIONS

Display: Large 1999 counts LCD display with function of Lux , x10 Lux, ℃, ℉, %RH and dB, A & dB ,C & dB, Lo & dB, Hi & dB, MAX HOLD, DATA HOLD indication.
Polarity: Automatic, (-) negative polarity indication.
Over-range: "OL" mark indication.
Low battery indication: The "BAT" is displayed when the battery voltage drops below the operating level.
Measurement rate: 1.5 times per second, nominal.
Storage temperature: -10℃ to 60℃(14℉ to 140℉) at＜ 80％ relative humidity
Auto Power Off: Meter automatically shuts down after approx.10 minutes of inactivity.
Power: One standard 9V, NEDA1604 or 6F22 battery.
Dimensions/Wt.: 251.0 (H) x 63.8 (W) x 40 (D) mm/250g
Photo Detector Dimensions: 115 X 60 X 27 mm

Sound Level

Measurement range:

A LO (low) – Weighting: 35-100 dB
A HI (High)- Weighting: 65-130 dB
C LO (low) – Weighting: 35-100 dB
C HI (High)- Weighting: 65-130 dB
Resolution: 0.1 dB

Typical instrument frequency range: 30Hz-10KHz
Frequency Weighting: A, C –weighting
Time Weighting: Fast
Maximum Hold: Decay＜1.5dB/3 min
Accuracy: ±3.5 dB at 94 dB sound level, 1KHZ sine wave.
Microphone: Electric condenser microphone.

Light

Measuring Range: 20, 200, 2000, 20,000lux
(20,000lux range reading x10)
Overrate Display: Highest digit of "1" is displayed.
Accuracy: ±5% rdg ＋10 dgts (calibrated to standard incandescent lamp at color temperature 2856k).
Repeatability:±2%.
Temperature Characteristic: ±0.1%/℃
Photo detector: One silicon photo diode with filter.

Humidity/Temperature

Measurement Range:
Humidity 25%～95%RH

Temperature	-20.0℃－＋50.0℃	-4℉－＋122℉
(K-type)	-20.0℃－＋200.0℃	-20℃－＋750℃;
	-4.0℉－＋200℉,	-4℉－＋1400℉.

Resolution: 0.1％RH, 0.1℃, 1℃/ 0.1℉, 1℉.
Accuracy (after calibration):
Humidity: ±5％RH (at 25℃ , 35％～95％RH)
Response time of the humidity sensor: approx. 6min.
Temperature:

±3%rdg±2℃(at-20.0℃～+200.0℃)
±3.5%rdg±2℃(at-20.0℃～+750℃)
±3%rdg±2℉(at-4.0℉～ +200.0℉)
±3.5%rdg±2℉(at-4℉～+1400℉)

Input Protection: 60V dc or 24V ac rms.