

*auto range + Type K Temp.
optional Humidity, Light, Anemometer*

SOUND LEVEL METER

Model : SL-4112

ISO-9001, CE, IEC1010



EM-900P probe
(optional)



LUTRON ELECTRONIC

The Art of Measurement

Auto range + Type K Temp.
Optional probe for Humidity, Light, Humidity
USB/RS232 computer interface

SOUND LEVEL METER

Model : SL-4112

FEATURES

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| * Large LCD display, easy to read. |
| * Frequency and Time weighting meet IEC 61672 class 2. |
| * A, C frequency weighting networks is selected. |
| * Time weighting (Fast & Slow) dynamic characteristic modes. |
| * 0.5" standard microphone head. |
| * AC output for system expansion. |
| * RS232/USB computer interface. |
| * Auto range & Manual range selection. |
| * Available for external calibration adjustment. |
| * Condenser microphone for high accuracy & long-term stability. |
| * Memory function to store the Max. & Min. value. |
| * Hold and Peak Hold functions. |
| * Build in type K and type J thermometer. |
| * Optional probe (EM-900P) for Humidity/Temp., Light and Anemometer measurement. |
| * Data logger with 1,600 no. memory, sampling time can select to 1, 2, 5, 10, 30, 60, 600, 1800 or 3600 seconds. |
| * DC 1.5 V battery (UM-4, AAA) X 6 or DC 9V adapter in. |
| * Operation key used push button. |
| * LCD display for low power consumption & clear read-out even in bright ambient light condition. |
| * Using the durable, long-lasting components, including a strong, light weight ABS-plastic housing case. |
| * Small and light weight design allow one hand operation. |
| * Patent. |

Electrical specification for Sound level meter

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|--------------------------------|---|
| Function | dB (A & C frequency weighting), Time weighting (Fast, Slow), Hold, Memory (Max. & Min.), Peak hold, AC output, RS232 output. |
| Meter default function | Range set to auto range. Frequency weighting set to A weighting. Time weighting set to fast. |
| Measurement Range | 30 - 130 dB. |
| Resolution | 0.1 dB. |
| Range selector | <i>Auto range :</i> 30 to 130 dB. <i>Manual range :</i> 3 range, 30 to 80 dB, 50 to 100 dB, 80 to 130 dB, 50 dB on each step, with over & under range indicating. |
| Frequency | 31.5 to 8,000 Hz. |
| Microphone type | Electric condenser microphone. |
| Microphone size | Out size, 12.7 mm DIA. (0.5 inch). |
| Frequency weighting network | Characteristics of A & C. <i>* A weighting :</i> The characteristic is simulated as "Human Ear Listing" response. Typical, if making the environmental sound level measurement, always select to A weighting. <i>* C weighting :</i> The characteristic is near the "FLAT" response. Typical, it is suitable for checking the noise of machinery (Q.C. check) & knowing the sound pressure level of the tested equipment. |
| Range selector | Manual range: 3 ranges (30 to 80 dB, 50 to 100 dB, 80 to 130 dB). Auto range: 30 - 130 dB. |
| Time weighting (Fast & Slow) | Fast - t = 200 ms, Slow - t = 500 ms, * "Fast" range is simulated the human ear response time. * "Slow" range is easy to get the avg. values of vibration sound level. * The "Fast" & "Slow" response range are designed to meet IEC 61672 class 2 requirement. |
| Calibrator | B & K (Bruel & kjaer), MULTIFUNCTION ACOUSTIC CALIBRATOR 4226. |
| Output Signal | * <i>AC output :</i> AC 0.5 Vrms corresponding to each range step. Out put impedance - 600 ohm. * <i>RS232 output.</i> |
| Output terminal | <i>Terminal 1 :</i> RS232 computer interface terminal, photo couple isolated. <i>Terminal 2 :</i> AC output terminal. <i>Terminal socket size :</i> 3.5 mm dia. phone socket. |
| Calibration VR | Build in external calibration VR, easy to calibrate on 94 dB level by screw driver. |

* Appearance and specifications listed in this brochure are subject to change without notice.

Electrical specification for Type K/J thermometer

| Sensor Type | Reso- lution | Range | Accuracy |
|-------------|--------------|--------------------|----------------------|
| Type K | 0.1 °C | -50.0 to 1300.0 °C | ± (0.4 % + 0.8 °C) |
| | 0.1 °F | -50.1 to -199.9 °C | ± (0.4 % + 1 °C) |
| Type J | 0.1 °C | -58.0 to 2372.0 °F | ± (0.4 % + 1.5 °F) |
| | 0.1 °F | -58.1 to -327.8 °F | ± (0.4 % + 1.8 °F) |
| Type J | 0.1 °C | -50.0 to 1100.0 °C | ± (0.4 % + 0.8 °C) |
| | 0.1 °F | -50.1 to -199.9 °C | ± (0.4 % + 1 °C) |
| Type J | 0.1 °C | -58.0 to 2012.0 °F | ± (0.4 % + 1.5 °F) |
| | 0.1 °F | -58.1 to -327.8 °F | ± (0.4 % + 1.8 °F) |

* Accuracy value is specified for the meter only.
* Temp. probe (Type K, TP-01 TP-02A, TP-03. TP-04) is the optional accessories.

GENERAL SPECIFICATION

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| Display | 51 mm x 37 mm LCD (Liquid crystal display), 5 digits with annunciator. |
| Data logger | Data logger with 1,600 no. memory, sampling time can select to 1, 2, 5, 10, 30, 60, 600, 1800 or 3600 seconds. |
| Operating Temp. | 0 to 50 °C (32 to 122 °F). |
| Operating Humidity | Less than 80% RH. |
| Power Supply | DC 1.5 V battery (UM4, AAA) x 6 PCs, or equivalent. |
| Power Consumption | Approx. DC 19 mA. |
| Dimension | 245 x 68 x 41 mm (9.6 x 2.7 x 1.6 inch). |
| Weight | 358 g/0.79 LB (including battery). |
| Accessory Included | Instruction Manual 1 PC. |
| Optional Accessories | 94 dB Sound Calibrator : Model : SC-941. SC-942. Sound wind shield ball Model : SB-01 USB cable Model : USB-01 RS232 cable (isolated RS232 cable) : Model : UPCB-02. * Data Acquisition software Model : SW-U801-WIN. * Data logger transfer software Model : SW-DL2005. Type K Temperature probe : Model : TP-01 TP-02A, TP-03. TP-04 Humidity, Light, Temp., Anemometer probe Model : EM-900P |

ELECTRICAL SPECIFICATIONS FOR OPTIONAL PROBE EM-900P

Anemometer

A. Air velocity

| Measure- ment | Range | Resolu- tion | Accuracy |
|---------------|-------------------|--------------|---------------------|
| m/S | 0.4 - 25.0 m/s | 0.1 m/s | ± (2% + 0.2 m/s) |
| km/h | 1.4 - 90.0 km/h | 0.1 km/h | ± (2% + 0.8 km/h) |
| mph | 0.9 - 55.9 mile/h | 0.1 mile/h | ± (2% + 0.4 mile/h) |
| knot | 0.8 - 48.6 knots | 0.1 knots | ± (2% + 0.4 knots) |
| FPM | 80 - 4930 ft/min | 1 ft/min | ± (2%+40 ft/min.) |

Note:
m/S - meters per second km/h - kilometers per hour
FPM - feet per minute knot - nautical miles per hour
mph - miles per hour (international knot)

B. Temperature

| | |
|-----------------|-------------------------------|
| Measuring Range | 0 °C to 50 °C/32 °F to 122 °F |
| Resolution | 0.1 °C/0.1 °F |
| Accuracy | ± 0.8 °C/1.5 °F |

Humidity/Temp. meter

A. Humidity

| | |
|-----------------|---|
| Measuring Range | 0 % to 95 % R.H. |
| Resolution | 0.1 % R.H. |
| Accuracy | ≥ 70%RH ± (3% reading + 1% RH). < 70%RH ± 3% RH. |

B. Temperature

| | |
|-----------------|-------------------------------|
| Measuring Range | 0 °C to 50 °C/32 °F to 122 °F |
| Resolution | 0.1 °C/0.1 °F |
| Accuracy | ± 0.8 °C/1.5 °F |

Light meter

| | | |
|-----------------|----------------------|------------------|
| Measuring Range | LUX | 0 to 20,000 LUX. |
| | Ft-cd | 0 to 1,860 Ft-cd |
| Resolution | LUX | 1 LUX |
| | Ft-cd | 0.1 Ft-cd |
| Accuracy | ± (5% rdg + 8 dgt) | |

Note: Ft-cd : Feet candle

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