

ESEN-5000

Multipurpose Environmental
Sensing Nodes



ES Systems has developed an environmental sensing system featuring multiple sensors for environmental monitoring that can be utilized in a variety of applications and industries. The ESEN-5000 system integrates pressure, humidity, temperature, luminosity, accelerometer and magnetometer sensors that can be integrated in custom tailored designs that fit each end-user's tailored defined specifications. ESEN-5000 supports wireless communication enabling optimal connectivity capabilities. The wireless capability enables installation in remote locations with minimal installation cost. ESEN-5000 supports various wireless communication protocols making it easy to integrate in any network infrastructure.



57, I. Metaxa str.
19441 Koropi - Athens, Greece

T +30 216 2000500

F +30 216 2000555

info@esenssys.com

www.esenssys.com





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Specifications



Supply Voltage 3.7V (VBAT) / USB POWERED(5V)

Communication Interface WiFi, BLE

Pressure

Range 300 to 1100hPa

Total Error $\pm 0.5\%$ FS

Compensating Temperature -20°C ... +65°C

Humidity

Range 0-100% RH

Accuracy $\pm 3.5\%$ RH (20 to 80%RH)

Temperature

Range +0°C ... +80°C

Accuracy $\pm 1^\circ\text{C}$

Luminosity

Range 0 ... 65535lx ($\pm 20\%$)

Magnetometer

Range ± 1000 uT

Sensitivity 0.10 uT

Accelerometer / Gyroscope (3-axis)

Range $\pm 2g / \pm 4g / \pm 8g / \pm 16g$
 $\pm 250 / \pm 500 / \pm 1000 / \pm 2000$ °/s

Resolution 16bit – 10bit depending on FS selection

Initial Calibration Tolerance $\pm 3\%$



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