

# Maxell Lead-Free Oxygen Sensors KE-LF Series

### Features:

- \* **Lead-free galvanic cell-type sensor**
  - no external power supply required for sensor operation
  - no warmup time required
  - meets RoHS2 directive
- \* **Weak acid electrolyte**
  - virtually no influence from CO<sub>2</sub>, H<sub>2</sub>S, SO<sub>2</sub>
  - long life - 5 years in ambient air

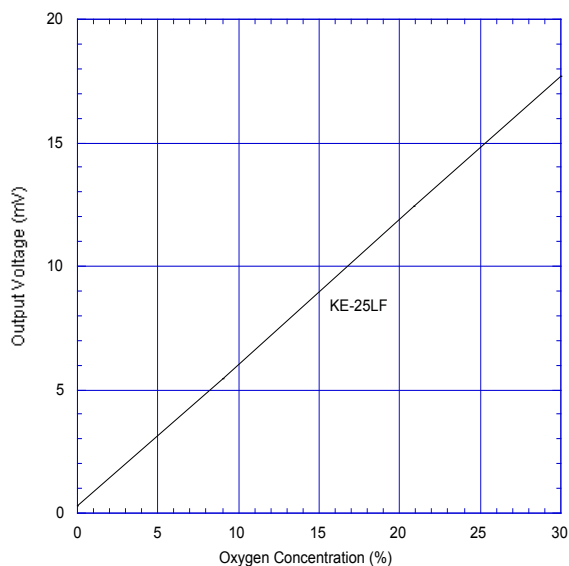
### Applications:

- \* **Safety - Oxygen detectors**
- \* **Environmental controls - Combustion gas monitoring**
- \* **Food industry - Refrigeration, greenhouses**
- \* **Educational material - Oxygen test kits**

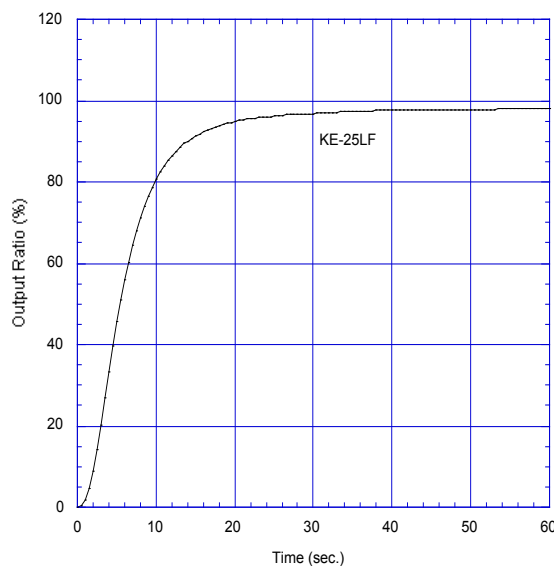
The Maxell Oxygen Sensor KE-LF Series (KE-25LF and KE-25F3LF) are unique galvanic cell-type oxygen sensors developed by Maxell, Ltd. in Japan. Their most notable features are lead-free, long life expectancy, excellent chemical durability, and no influence by CO<sub>2</sub>. KE-LF Series oxygen sensors are ideal to meet the ever-increasing demand for oxygen monitoring in various fields such as combustion gas monitoring, the biochemical field, domestic combustion appliances, etc.



**Sensitivity characteristics** (typical values under std. test conditions)

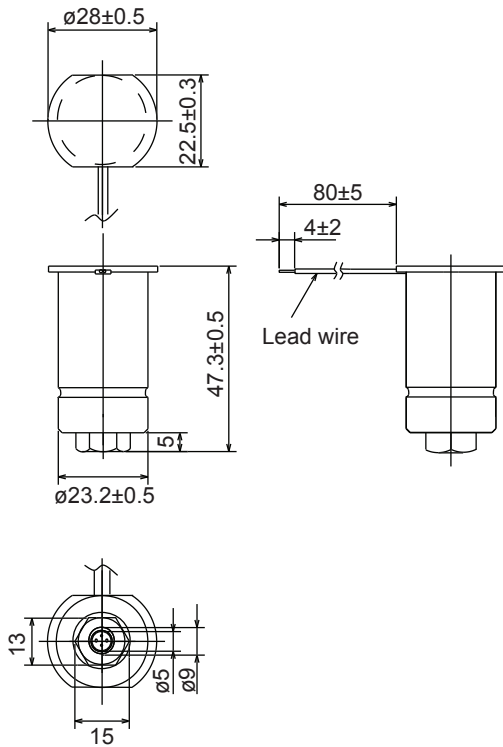


**Response time** (typical)

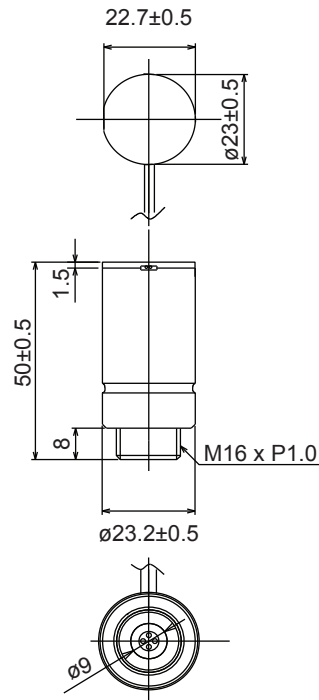


## Dimensions

KE-25LF standard version



KE-25F3LF (threaded top)



Unit = mm

## Specifications

| Item   |                      | Model                      |           |
|--|----------------------|----------------------------|-----------|
|  |                      | KE-25LF                    | KE-25F3LF |
| Measurement range  |                      | 0~30% O <sub>2</sub>       |           |
| Accuracy (Note 1)  |                      | ±1% full scale             |           |
| Operating conditions                                     | Atmospheric pressure | 811hPa~1216hPa             |           |
|  | Temperature          | 5~40°C                     |           |
|  | Relative humidity    | 10~90%RH (no condensation) |           |
| Response time (90%) (Note 2)                             |                      | approx 15 sec.             |           |
| Initial output voltage under factory std test conditions |                      | 10.0~15.5mV                |           |
| Life expectancy at 20°C in normal air (Note 3)           |                      | approx 5 yrs               |           |

### Notes:

1) When calibrated at both 0% and 30% of O<sub>2</sub>, accuracy in the range from 0-30% O<sub>2</sub> shall be within ±1% of full scale.

2) Sensors should be used under conditions where the air exchange is greater than 200~300ml per minute in order to obtain the response speed as shown in the Specifications.

3) Life expectancy at 20°C in normal air (1013hPa / 21%O<sub>2</sub>) is defined as the period until sensor output drops to 70% of its original value.

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