

ppb to 100% O₂ measurement Oxygen Analyzer Model LC-850 series

Toray Oxygen analyzer, Model LC-850K series are developed for the application of controlling and monitoring in Electronic Industry, based on a long experience with Toray unique zirconium oxide sensing technology. It enables to measure a very wide range, ppb to % level. It can perform for years with stable, reliable, precise measurement.

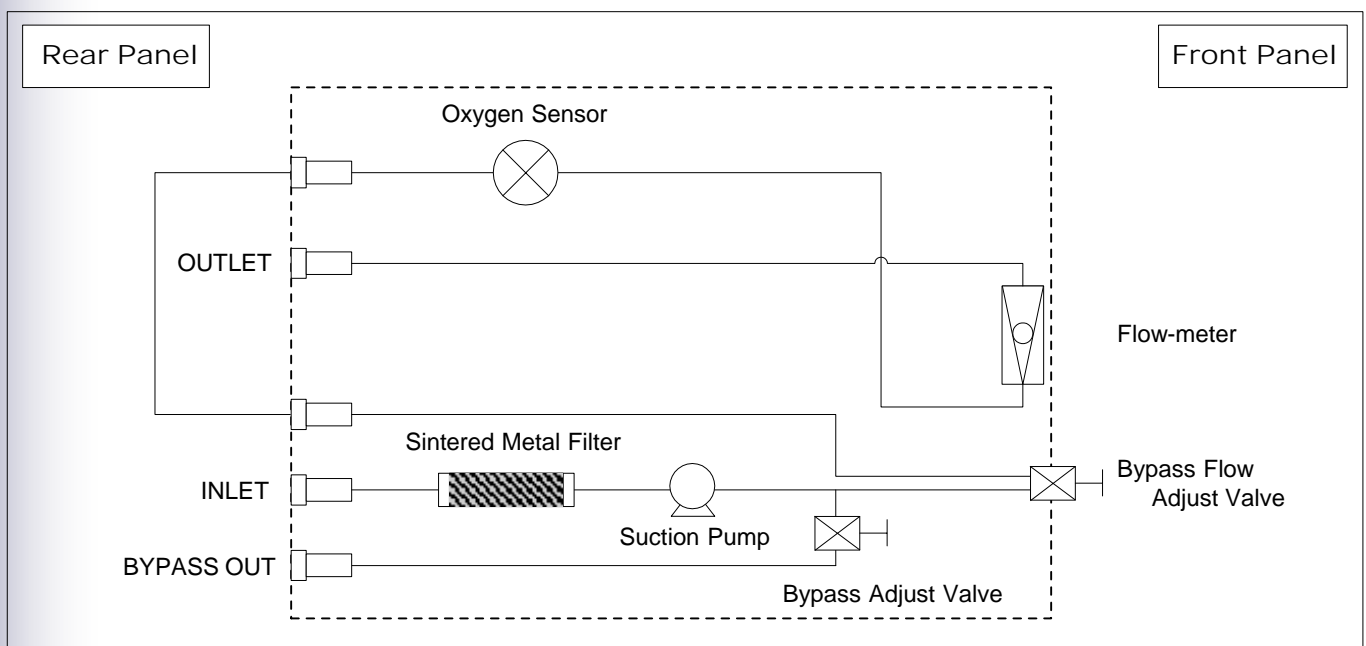
Features

- Measurement Range** ppb to 100% level
- Auto Range** Display; Auto range
Recorder Output; Auto/Fixed Selectable
- Measurement Alarm** Selectable for Normal Open or Closed
Alarm output for upper/lower limit is selectable.
- Rapid response due to Bypass out**
- External driving for Pump** Remote ON/OFF is available.
- Trend Graphic Software** Displays O₂ conc. with Graph on PC-screen.
(Optional, only for Model LC-850K)
- Durable Sensor** Sensor with built-in filter (Patent Pending)[Optional]



Measurement Principles

Toray's Zirconia Oxygen analyzers determine oxygen concentration using the conductivity of a zirconia ceramic cell. Zirconia ceramic cell only allows oxygen ions to pass through at high temperatures. With reference gas on one side and sample gas on the other, oxygen ions move from the side with the highest concentration of oxygen to with the lowest concentration. The movement of ions generates an Electro Motive Force, which can be measured to determine the oxygen content. And it is accordance with it so called Nernst Equation.



LC-850 Flow Diagram

Specifications

1. Instruments specifications

Type	Portable, or Panel Mounted
Display	O ₂ conc.; Digital, 4 Digits,
Meas. Range	0.1 ppm ~100%.
Analog Range	0-1000ppb/10/100/1000 ppm/1/10/100% (out of guarantee for 1-1000 ppb), Specified Range; Specify range max value.
Sampling	Continuous Suction
Flow-meter	30~300 ml/min/ 10 divided
Supplied Gas	1000 ~ 2000 ml/min
Sensor Gas	200 ± 50 ml/min
Gas Connection	INLET (Sample Gas); Rc 1/8 BYPASS OUT ; Rc 1/8 OUTLET; Rc 1/4
Reference Gas	Atmospheric Gas
Weight	Approx. 10 kg
Color	Munsell N3, Semi-Glossed (Black)

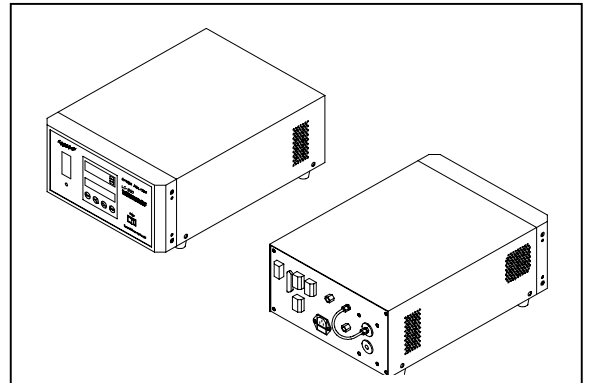
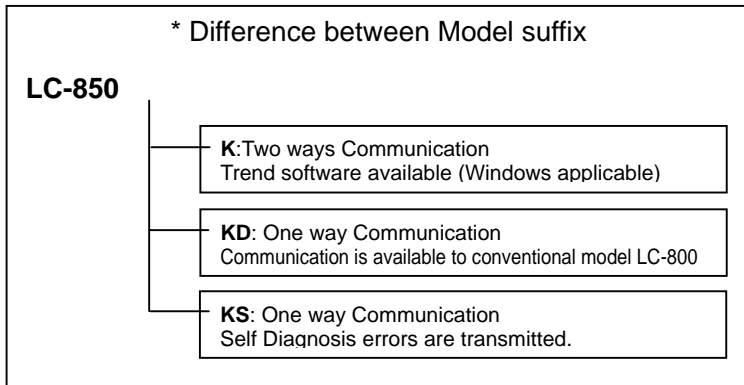
2. Performance

Repeatability	± 1% FS(at 1% Range or Higher) ± 2% FS(1% Range or Lower)or 0.05 ppm whichever is larger
Air point Stability	± 0.5% FS/day

FS: Full of Scale

3. Engineering specifications

External Outputs	DC4 ~20 mA, DC0 ~ 10V
Range Marker	BCD, 3 Contact Outputs Capacity; DC 24 V, 0.2A
Communication	Single Way, Conformed to RS-232C
Bit Rate	19200/9600/4800bps (in accordance)
Limit Alarm	LED Display (Upper/ Lower limits) Contact Output; Normal open Capacity; AC 110V, DC 24V, 3A
Self Diagnosis	Heater Error, Thermo-Couple Error, Instruments Over heat Error, EEPROM and RAM Errors, - Heater Un stable error, Conc. Unstable Error, Off-set Error, Sensor Resistance Error, Air & Span Calibration Error Conc. Error, Range over,
Sample Gas Conditions	No Flammable Gas, No Halogen Gas, Silica, Corrosive Gas nor Vapor shall be contained Pressure; Approx. 295 Pa. required Flow Rate; 1000~2000 ml/min Humidity; Dew point shall be lower than ambient Temperature.
Power Source	Voltage; AC 100V ± 10 V Frequency; 50/60 Hz
Installed Location	Indoors, Non Expressive Area Ambient Temperature; 0~ 40deg.C Ambient Humidity; 45~75% RH



Cautions. For your safety and to insure correct use of this product please read the instruction manual carefully before use.

The design and specifications may be changed without notice for improvement.

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