

LIST OF PRODUCTS

- * UL Approved Digital Multimeter
- * Digital AC & AC/DC Clampmeter
- * Transistorised Electronic Analog & Digital Insulation Resistance Testers
- * Earth Resistance Testers
- * Digital Sound Level Meter & Sound Level Calibrator
- * Digital contact & Non-contact Type Tachometer
- * Digital Non-contact (infrared) Thermometer
- * Thermo Hygrometer & Thermo Anemometer
- * Wood / Paper / Grain Moisture Meter
- * Distance Meter
- * Digital Hand Held Temperature Indicators
- * Digital Lux Meter
- * Power Factor Regulator
- * Maximum Demand Controller/Digital Power Meter
- * Gas Analysers
- * Calibrators
- * Laboratory Instruments
- * Phasing Sticks
- * 500KV High Voltage Non contact detector.
- * Transducers & Transmitters
- * Programmable Panel Meters

KUSAM-MECO

17, Bharat Industrial Estate, T. J. Road, Sewree (W),
Mumbai-400015. INDIA

Sales Direct: 24156638 Tel.:(022)2412 4540, 2418 1649 Fax:(022)2414 9659

E-mail : kusam_meco@vsnl.net, Website : www.kusamelectrical.com

www.kusam-meco.co.in

KUSAM-MECO

**OXYGEN
DETECTOR
MODEL-KM 5490**

**OPERATION
MANUAL**

KUSAM-MECO

OXYGEN DETECTOR MODEL-KM 5490



KUSAM-MECO

As this meter is a precision measurement apparatus, it is very important that you read these instructions before using the meter.

I. INTRODUCTION

This oxygen (O₂) detector can detect the oxygen content between the 0 ~ 25% VOL (the unit of volume size) and display the oxygen volume on LCD Display.

The product features :

- As it uses a high quality oxygen sensor, it is very precise and its performance is stable.
- It uses the advance technology design and has multiple functions.
- With highlight backlight display and acousto-optic alarming, it is easily configured.
- The in built temperature compensation makes the meter measure the correct value of oxygen in the environment temperature of -10 ~ 40°C.
- As its case is ergonomically designed, it looks elegant, and is easy to carry.

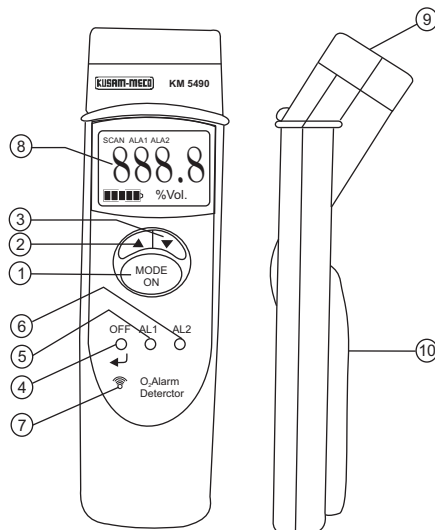
Applications :

- Oxygen manufacturing factory.
- Petroleum refining and petrochemical plants.
- Oxygen content detecting in trains and automobiles
- Oxygen content detecting in mines.
- Oxygen content detecting during mountain climbing and in sealed places
- Other Industries and plants using oxygen.

II TECHNICAL FEATURES

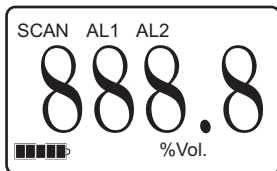
- **Measurement display** : Displays 4 digit LCD
- **Measuring range** : 0~25% (VOL)
- **Resolution** : 0.1% (VOL)
- **Measurement error** : $\pm 0.5\%$
- **Over measurement range display** : "OL"
- **Alarming method** : acousto-optic alarming
- **Working principle of the sensor** :
source cell sensor
- **The service life of the sensor** : 2 years
(it can then be replaced)
- **Operation temperature**: -10°C~40°C(14°F~104°F)
- **Storing temperature** : 0°C~30°C (32°F~86°F)
- **Operating humidity** : 0~99% RH
(relative humidity)
- **Storing humidity** : 20%~80% RH
(relative humidity)
- **Power supply** : 3x1.5VAAA
alkaline batteries
- **Batteries service life** : about 100 hours of
continuous use (when the backlight is off).
- **Dimension** : 172 x 51 x 26 (mm)
- **Weight** :

III PRODUCT DESCRIPTION



1. **MODE ON** : Press \blacktriangle & hold for 2s to enable it
2. Position shifting button (\blacktriangle)
3. Digit (0-9) adjust button (\blacktriangledown)
4. **MODE OFF** : Press \blacktriangledown & hold for 2s to disable it
5. The first alarm (AL1) (yellow indicator)
6. The second alarm (AL2) (red indicator)
7. Buzzer
8. Display
9. Sensor
10. Battery compartment cover (push the cover downwards to open it)

IV DISPLAY



888.8	Displays the measured value
SCAN	Measurement prompt
AL1	Prompt for the grade I alarming-line
AL2	Prompt for the grade II alarming-line
%VOL.	Unit prompt
	Battery volume prompt

V. Operation Procedure:

1. Enable and Disable

Press and hold the MODE ON for 2s after the batteries are ready to enable it; the meter is in the measuring mode after it is enabled and “SCAN” shows in the display; press and hold the “MODE OFF” for 2s to disable it.

2. Backlight On/Off

You can switch the backlight on or off by slightly touching the MODE OFF when the instrument is in the “SCAN” mode.

3. How to set up the alarms for the meter

Switch the meter to the preset status of the level I alarm by slightly pressing the MODE ON button when the meter is in the “SCAN” mode and the “ALA1” is shown on the display. Press the Position Shift button and digit adjusting button (0~9) to set up the data of the level I alarm (if you press the MODE ON button now, you would exit the setting mode of level I alarm and enter into the measurement status). Press the MODE OFF button to save the setup value for the level I alarm and switch the meter to the status for setting up the level 2 alarm and the “ALA2” shows in the display. Press the Position Shift button and digit adjusting button (0~9) to set up the data of the level 2 alarming-line (if you touch the MODE ON button now, you would exit setting up the level 2 alarm and enters into the measurement status).

Press the MODE OFF button to save the setup value for the level 2 alarm & switch the meter to the status of 21% calibration. Press the MODE OFF button slightly to exit 21% calibration & the alarms of the meter is setup. (The factory default setup value for the level 1 alarming-line is 19.5% & 18% for the level 2 alarming-line).

4. The 21% calibration for the meter (the oxygen content in clean air is about 21%VOL)

Switch to the status of the grade I alarming-line by slightly touching the MODE ON button when the meter is in the status of "SCAN"; then touch the MODE OFF button to skip the status for setting up the grade I & grade II alarming-line & enter into the status of 21% calibration; "021.0" shows & flickers in the display; you must keep the meter in clean air for more than 1 minute & then touch the MODE OFF to save the value of 21% calibration; then the 21% calibration is finished. The meter will switch to the status of measurement "SCAN" automatically.

5. Meter alarming

The meter alarms when the meter measurement value is less than the preset value. The buzzer alarms & the yellow indicator flickers when the meter measurement value is less than the value preset for the grade I alarming-line; & the buzzer alarms & the red indicator flickers when the meter measurement value is less than the value preset for the grade II alarming-line.

VI. Attentions: Precautions

- 1 This meter is a precise measurement apparatus. To avoid damaging the meter, keep it away from water and hot objects (more than 60°C).
- 2 If the meter will be measuring for a long time, please turn off the backlight to save power consumption and prolong the service life of the battery.
- 3 When "■■■■■" is displayed, the battery is fully charged; the small black frame in the battery sign reduces as the battery power value reduce. When "□□□" is displayed, it indicates the power value of the battery is too weak and the meter cannot work normally. Please promptly replace the battery to avoid any unnecessary loss. First turn off the meter, then take out the used batteries and put new batteries in. All batteries must be changed at a time.
- 4 The meter is disabled automatically if no button is pressed in 10 minutes when it is in the setup status.
- 5 When the buzzer alarms, the measured value is less than the alarming level you have set up; so please take measures to protect people's lives and property.
- 6 If you are not going to use this meter for a long period of time, turn off meter and take out the batteries to avoid damage due to the battery oozing liquid. If you take out the batteries when the meter is on, the data preset for the grade I and grade II alarming-line will be lost; when the meter is powered on an enabled, the previous values preset for the grade I and grade II alarming will return. If you are going to save the values preset for the two grades of alarming lines, you must turn off the meter normally once.

7 When there is a big difference between the displayed value measured in the clean air by the meter and the 21% value, a 21% calibration is required for the meter.

VII Tips about oxygen

Oxygen content (VOL)	Explanation
21%	Oxygen content in the normal air environment
18%	The minimum value of oxygen content as per the safety and hygiene standards
14%---18%	Person breathes quicker and deeper and limbs cannot be Moved properly
10%---14%	Person may be tired and lose attention
6%---10%	Person may be dizzy, nauseas, lose consciousness and go into a coma
Less than 6%	Person may stop breathing and die

MUMBAI
TEST CERTIFICATE
OXYGEN ANALYSER

This Test Certificate warrants that the product has been inspected and tested in accordance with the published specifications.

The instrument has been calibrated by using equipment which has already been calibrated to standards traceable to national standards.

MODEL NO. KM 5490

SERIAL NO.

DATE:

ISO 9001
REGISTERED



WARRANTY

Each "KUSAM-MECO" product is warranted to be free from defects in material and workmanship under normal use & service. The warranty period is one year (12 months) and begins from the date of despatch of goods. In case any defect occurs in functioning of the instrument, under proper use, within the warranty period, the same will be rectified by us free of charges, provided the to and fro freight charges are borne by you.

This warranty extends only to the original buyer or end-user customer of a "KUSAM-MECO" authorized dealer.

This warranty does not apply for damaged Ic's, fuses, burnt pcb's disposable batteries, carrying case, test leads, or to any product which in "KUSAM-MECO's" opinion, has been misused, altered, neglected, contaminated or damaged by accident or abnormal conditions of operation or handling.

"KUSAM-MECO" authorized dealer shall extend this warranty on new and unused products to end-user customers only but have no authority to extend a greater or different warranty on behalf of "KUSAM-MECO".

"KUSAM-MECO's" warranty obligation is limited, at option, free of charge repair, or replacement of a defective product which is returned to a "KUSAM-MECO" authorized service center within the warranty period.

THIS WARRANTY IS BUYER'S SOLE AND EXCLUSIVE REMEDY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. "KUSAM-MECO" SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LOSSES, INCLUDING LOSS OF DATA, ARISING FROM ANY CAUSE WHATSOEVER.

All transactions are subject to Mumbai Jurisdiction.

G 17, Bharat Industrial Estate, T. J. Road,
Sewree (W), Mumbai - 400 015. INDIA.

Sales Direct : (022) 24156638

Tel. : (022) 24124540, 24181649.

Fax : (022) 24149659

Email : sales@kusam-meco.co.in;

kusam_meco@vsnl.net

Website : www.kusamelectrical.com