



# KM940

## Combustion Analyzer

# **TAKE CONTROL OF INDUSTRIAL BOILER EFFICIENCY & POLLUTION**

### ■ New

- Optional high range CO sensor 0~10%
- High suction double-headed diaphragm pump
- Now add up to 3 toxic gas sensors

### ■ Measures:

- Oxygen (O<sub>2</sub>), Inlet Temperature, Flue Temperature, Differential Pressure (draft)

### ■ Calculates:

- Efficiency, Carbon Dioxide (CO), Losses, Excess Air, CO/CO<sub>2</sub>, Poison Index, Net Temperature Differential

### ■ Features

- Memory to store 150 test results
- IR link to optional Printer
- Long-life Rechargeable Battery

### ■ Customize to meet your needs:

- Standard model comes with O<sub>2</sub> and Differential Pressure (draft)
- Add up to 3 sensors:
  - CO Hydrogen compensated
  - CO High range (reads in %)
  - NO<sub>1</sub>, or NO<sub>1</sub> low range
  - NO<sub>2</sub>, or NO<sub>2</sub> low range
  - SO<sub>2</sub>



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The KM940 handheld analyser is ideal for industrial boiler flue gas measurement and analysis. It operates on all boiler types and can display 8 parameters simultaneously showing measurements and calculations of boiler efficiency and pollution.

The KM940 base unit measures O<sub>2</sub>, flue and nett temperature and calculates CO<sub>2</sub>, boiler efficiency, excess air and losses. Specify the toxic gas sensors to meet your needs.

## The KM940 has the following features:

- Measures O<sub>2</sub> and CO
- Calculates CO<sub>2</sub>, efficiency and excess air
- Large 4 line display
- Long life rechargeable battery
- Large cordura case
- 150 memory positions
- One year limited warranty
- Two year limited warranty on O<sub>2</sub> sensor

## Options: Up to 3 additional sensors

| GAS                     | RANGE         | PART# |
|-------------------------|---------------|-------|
| CO Hydrogen Compensated | 0 ~ 10,000ppm | 12933 |
| CO High Range           | 0 ~ 10%       | 13911 |
| NO1                     | 0 ~ 5,000ppm  | 13251 |
| NO1 Low Range           | 0 ~ 100ppm    | 18079 |
| NO2                     | 0 ~ 1,000ppm  | 10533 |
| SO2                     | 0 ~ 5,000ppm  | 13910 |
| SO2 Low Range           | 0 ~ 100ppm    | 18131 |

\* Toxic gas sensors need to be specified at time of purchase or may be added at a later time.

## Specifications

| Parameter                                                 | Resolution | Accuracy                                                                                                  | Range                     |
|-----------------------------------------------------------|------------|-----------------------------------------------------------------------------------------------------------|---------------------------|
| <b>Measurement</b>                                        |            |                                                                                                           |                           |
| Flue Measurement with probe                               | 1.0°F/C    | ±2.0°F/C, ±0.3% of rdg                                                                                    | 32° - 1112°F (0° - 600°C) |
| Inlet Temperature                                         | 0.1°F/C    | ±1.0°F/C, ±0.3% of rdg                                                                                    | 32° - 122°F (0° - 50°C)   |
| Pressure                                                  | 0.1 mbar   | ±2% of full scale                                                                                         | +150 mbar to -150 mbar    |
| <b>Gas Measurement*1</b>                                  |            |                                                                                                           |                           |
| Oxygen (O <sub>2</sub> )                                  | 0.1%       | ±0.2%                                                                                                     | 0 - 21%                   |
| Carbon Monoxide (CO) (standard: H compensated) (optional) | 1 ppm      | ±20 ppm <400 ppm<br>±5% >5000 ppm<br>±10% <5000 ppm                                                       | 0 - 10,000 ppm            |
| Carbon Monoxide (CO) (High range)(optional)               | 0.01%      | ±5% reading from 0.1% to 10%                                                                              | 0 ~ 10%                   |
| Nitric Oxide (NO) (standard)(optional)                    | 1 ppm      | ±5 ppm <100 ppm<br>±5% >100 ppm                                                                           | 0 - 5000 ppm              |
| Nitric Oxide (NO) (Low range)(optional)                   | 1 ppm      | ±2 ppm <30 ppm<br>±5 ppm <30 ppm                                                                          | 0 ~ 100 ppm               |
| Nitrogen Dioxide (optional)                               | 1 ppm      | ±5 ppm <100 ppm<br>±10 ppm <500 ppm<br>±5% >500 ppm                                                       | 0 ~ 1000 ppm              |
| Sulphur Dioxide (optional)                                | 1 ppm      | ±5 ppm <100 ppm<br>±5% >100 ppm                                                                           | 0 ~ 5000 ppm              |
| <b>Calculations</b>                                       |            |                                                                                                           |                           |
| Carbon Dioxide*2                                          | 0.1%       | ±0.3% reading                                                                                             | 0 ~ 99.9%                 |
| Losses                                                    | 0.1%       | ±1.0% reading                                                                                             | 0 ~ 99.9%                 |
| Efficiency                                                | 0.1%       | ±1.0% reading                                                                                             | 0 ~ 99.9%                 |
| Excess Air                                                | 0.1%       | ±0.2%                                                                                                     | 0 ~ 2885.0%               |
| Temp (Nett)                                               | 1.0°C/F    | ±2°C ±0.3% reading                                                                                        | 32 ~ 1112°F (0 ~ 600°C)   |
| CO/CO <sub>2</sub> Ratio                                  | 0.0001     | ±0.0001                                                                                                   | 0 ~ 0.9999                |
| Poison Index                                              | 0.01%      | ±0.01                                                                                                     | 0 ~ 99.99                 |
| <b>Parameter</b>                                          |            | <b>Description</b>                                                                                        |                           |
| Preprogrammed fuels                                       |            | Natural Gas, Town Gas, Gascon, Light Oil, Heavy Oil, Propane, Butane, Anthracite, Coke, Coal, Kinsale Gas |                           |
| Dimensions:                                               | Weight     | 1 Kg                                                                                                      |                           |
|                                                           | Handset    | 220 x 55 x 120 mm                                                                                         |                           |
|                                                           | Probe      | (L) 420 x (Dia) 8mm with stainless steel shaft, K-type thermocouple and 3m hose                           |                           |
| Ambient operating range                                   |            | 0°C to 45°C/10% to 90% RH non condensing                                                                  |                           |
| Power supply (Battery charger)                            |            | Input: 110V AC / 220V AC nominal<br>Output: 12V AC off load                                               |                           |
| Battery life                                              |            | >6 hours from full charge                                                                                 |                           |

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