KANE455 Infra-Red Analyser

it's easy with Kane

Direct Measurement of CO_2 using Infra-Red Technology

455

O_2
CO
CO_2
CO/CO_2
Efficiency
Diff. Temp
Diff. Pressure

INDEPENDENTLY APPROVED TO **EN50379**

Display readings:
P 0.000
R 0.0000
CO 00
O_2 20.9

On/Off · ✳ · Pump · Send

Aux · O_2/Eff · Ratio · Prs · Tight ness · Status · Diff Temp · Menu · Room CO

Optional Extras

- Plug-in gas leak detector
- Bluetooth™ module with xml compatible data transfer
- KMIRP infra-red thermal paper printer
- KANE ImPrint infra-red plain paper printer
- 12v in-vehicle charger
- Range of temperature probes

Colours shown may differ from those received.

Infra-red printer emitter

Features

- **Long Life CO Sensor (>5 years expected life)**
- **Long Life IR based CO_2 Sensor (>5 years expected life)**
- **Low Annual Service Costs**
- **Easy to use rotary switch**
- **Protective rubber sleeve with magnet for "hands free" use**
- **Multi-fuel: Natural Gas, Propane, Butane, LPG, Light Oils (28/35 sec), and Wood Pellets**
- **High accuracy manometer**
- **Differential thermometer**
- **Separate reports for:**
  Combustion
  Pressure
  Let-by and Tightness
  Temperature
  CO build up
- **Designed to meet BS7967**
- **Easy transfer of test results**
- **5 year extended warranty if serviced annually by Kane**

KANE®

```
K455  1.0
YOUR COMPANY NAME &
PHONE NUMBER HERE

TEST       10

DATE       12/07/07
TIME       12:00:08


COMBUSTION
.....................

FUEL       NAT GAS

O2  %         5.4
CO2 %         8.8
CO  PPM        12
FLUE  °C     55.1
INLT  °C     17.2
NETT  °C     37.9

EFF (C)      98.3
LOSSES        1.7
XAIR %       34.8

CO/CO2     0.0001

PRS   MBAR   0.00


.....................
Customer

.....................
Appliance

.....................
Ref.

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```

```
K455  1.0
YOUR COMPANY NAME &
PHONE NUMBER HERE
ROOM CO TEST
.....................

LOG          01
TIME  12:50 12/07/07

TEST       CO PPM
0             00
1             00
2             10
3             04
4             01
5             00
6             00
7             10
8             03
9             00
10            00
11            00
12            07
13            11
14            02
15            00
.....................
MAXIMUM CO     11

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Customer

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Appliance

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Ref.

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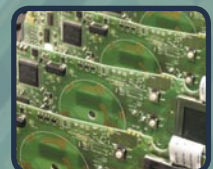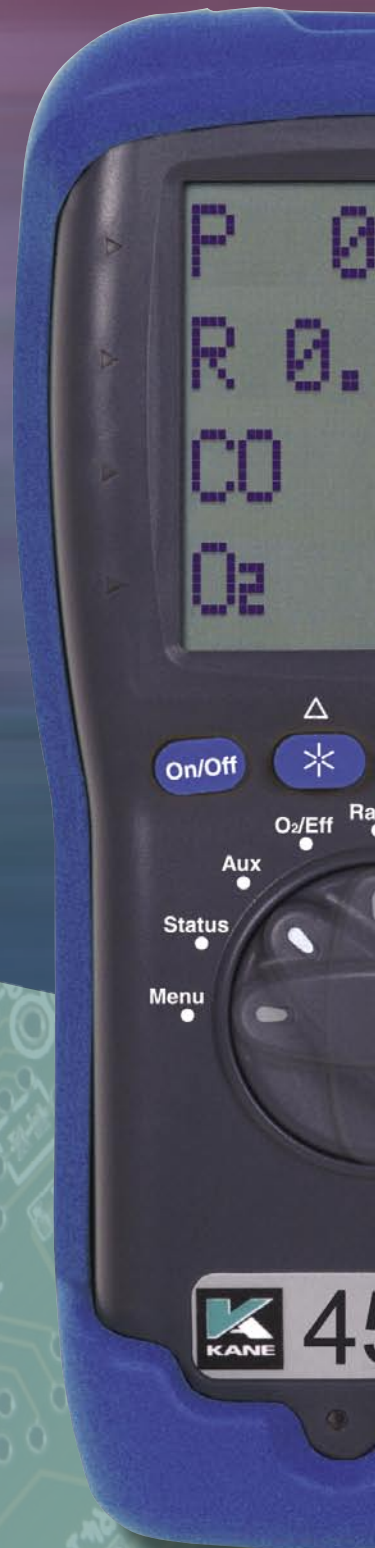
Combustion Analyser *(#1)*

- Select "Ratio" on the rotary switch to view current fuel, CO/CO_2 ratio, CO, and CO_2
- Select "O_2/Eff" to view O_2, temperatures and efficiency
- Select "Aux" to view any 4 parameters, user selectable
- Measures CO_2, CO, inlet and flue temperatures
- Calculates O_2, CO/CO_2 ratio, excess air, losses and combustion efficiency, (nett, gross or condensing)
- Multi fuel - Natural gas, Propane, Butane, LPG, Light Oils (28/35 sec) and Wood Pellets
- Readings can be sent via an infra-red printer, (see printout example) or by Bluetooth™
- Memory stores up to 99 combustion tests

CO Meter *(#4)*

Calibrate the analyser in fresh air to set the CO sensor to zero

- Select "Ratio" or "Aux" to check the ambient CO level in a room
- Select "Room CO" to perform a 15 minute CO test
- The CO level is logged at 1 minute intervals
- "Room CO" tests are automatically stored in the memory
- Tests can be sent via an infra-red printer or by Bluetooth™
- Memory stores up to 20 "Room CO" tests

Gas Leak Detector *(#5), optional*

- Plug-in, handheld unit with the sensor at the tip of a flexible shaft
- LED's and a variable buzzer enable the user to pinpoint a gas leak
- Can detect leaks down to 50ppm of methane / natural gas

Direct Measurement of CO_2

Differential Pressure Meter *(#2)*

- **Select "Prs"** on the rotary switch for high accuracy single or differential pressure readings

- Range ± 80mBar, maximum resolution 0.001mBar
  Ideal for difficult applications such as flue draught

- Readings can be smoothed to damp out pressure pulsing
  Ideal for setting air/gas ratio valves

- Display includes a clock for manual timing

- Readings can be sent via an infra-red printer, (see printout example) or by Bluetooth™

- Memory stores up to 20 pressure tests

- **Select "Tightness"** to perform a let-by test and stabilisation/tightness test

- The let-by period defaults to 1 minute
  The stabilisation period defaults to 1 minute
  The tightness test period defaults to 2 minutes
  All 3 times can be adjusted by the user

- Tests are automatically stored in the memory

- Tests can be printed via an infra-red printer, (see printout example)

- Memory stores up to 20 "Tightness" tests

Differential Thermometer *(#3)*

- Select "Diff Temp" to view flow (T1), return (T2) and differential (ΔT) temperatures

- Temperature probes are available to measure air, liquid and surface (pipe) temperatures

- Ideal for Benchmark log book

- Readings can be sent via an infra-red printer, (see printout example) or by Bluetooth™

- Memory stores up to 20 differential temperature tests

Torch Light *(#6)*

- Never got a torch when you need one? You have now!

- The KANE455 has a backlit display and an inbuilt LED torch

Printout 1:

```
K455  1.0
YOUR COMPANY NAME &
PHONE NUMBER HERE

PRESSURE
...................

TIME  12:56 12/07/07

PRS  mBAR   -0.037


...................
Customer

...................
Appliance

...................
Ref.

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Printout 2:

```
K455  1.0
YOUR COMPANY NAME &
PHONE NUMBER HERE


LOG          04
TIME  11:53 12/07/07

Let By Test
...................

PRS_1 mBAR    10.12
PRS_2 mBAR    10.11
LET BY    MINS  1:00

Tightness Test
...................

PRS_1 mBAR    20.12
PRS_2 mBAR    20.10
ΔPRS  mBAR   -0.02
STABIL'N MINS  1:00
TIGHTN'S MINS  2:00


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Customer

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Appliance

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Ref.

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Printout 3:

```
K455  1.0
YOUR COMPANY NAME &
PHONE NUMBER HERE

DIFF TEMP
...................

LOG          03
TIME  12:10 12/07/07

T1    °C    60.1
T2    °C    47.0
ΔT    °C    13.1

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Customer

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Appliance

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Ref.

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Parameter	Range	Resolution	Accuracy
Temp Measurement			
Flue Temperature	0-600°C *(0-1200°C with special probe)*	0.1°C	$\pm$1.5°C or $\pm$1% reading
Inlet Temperature			
(Internal sensor)	0-50°C	0.1°C	$\pm$1.0°C
(External sensor)	0-600°C	0.1°C	$\pm$1.5°C or $\pm$1% reading
Gas Measurement			
Oxygen[*2]	0-21%	0.1%	$\pm$0.3%
Carbon Dioxide	0-20%	0.1%	$\pm$0.2%[*1]
Carbon monoxide	0-2,000ppm nom 4,000ppm max for 15 mins	1ppm	$\pm$5ppm <100ppm[*1] $\pm$5% reading >100 ppm
Calculated values *3			
Efficiency	0-99.9%	0.1%	
Excess Air	0-250%	0.1%	
CO/CO$_2$ ratio	0-0.9999	0.0001	
Pressure (differential)			
Nominal range $\pm$80 mbar *(Maximum over range without damage to sensor is $\pm$400 mbar)*	$\pm$0.2 mbar $\pm$1 mbar $\pm$80 mbar	0.001 mbar to 24.999 bar then 0.01 mbar	$\pm$0.005 mbar $\pm$0.03 mbar $\pm$3% of reading

[*1] Derived from CO$_2$ measurement
[*2] Derived from O$_2$ measurement
*3 All calculations in accordance with BS EN50379 approval.

Pre-programmed Fuels	Natural gas, Propane, Butane, LPG, Light Oils (28/35 sec), Wood Pellets.
Storage Capacity	99 Combustion tests 20 Pressure tests 20 Tightness tests 20 Temperature tests 20 Room CO tests
Ambient Operating Range	0°C to +45°C 10% to 90% RH non-condensing Atmospheric Pressure: 850 to 1100 mbar
Battery Type / Life	4 AA cells >8 hours using Alkaline AA cells
Chargers (optional)	220v charger, for NiMH batteries only 12v in vehicle charger, for NiMH batteries only
Dimensions Weight: Handset: Standard Probe:	 0.8kg handset with protective cover 200 x 45 x 90mm 300mm long including handle. 6mm diameter x 240mm long stainless steel shaft with 3m long neoprene hose. Type K thermocouple.

KeiSon

PRODUCTS

Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.

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