KANE3200

Differential Pressure Meter

Stock No. 18950 November 2011

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OVERVIEW

+/-200 mbar range
8 user selectable scales
Temperature compensated
One button zeroing
Long battery life
Robust case with integrally moulded protective boot
Integral magnets for hands-free operation

GENERAL OPERATION

The meter is controlled using 2 buttons.

The two buttons have dual functions as follows:

ON / OFF

To switch ON press and hold ⏻/⏎ for 2 seconds until 3200 appears on the display.

(During this 2 seconds all the segments of the display will be actuated.)

The display will then show the following sequence

1.0	the firmware version
HPA	the units currently set
ZERO	the zeroing sequence
04	
03	
02	
01	
00	
00.0	the measured value

the meter is now ready for use.

To switch OFF press and hold ⏻/⏎ until OFF appears on the display. (During this period the meter will display the units currently set).

ZERO

Press and hold ZERO/△ until ZERO appears on the display. The meter will then do a zero countdown for a count of 4.

CHANGE UNITS

Quickly press and release ⏻/⏎.

The display will show the units currently set eg HPA.

Now press ZERO/△ to scroll through the selection of units available.

When the units of choice are displayed, press ⏻/⏎ to select.

1. BEFORE USING THE METER FOR THE FIRST TIME:

Remove the cover and fit a new battery in the battery compartment. **Take great care to ensure that the battery is fitted with the correct battery polarity**. Then replace the battery cover. Always check that the meter is working correctly after replacing the battery.

2. BEFORE USING THE METER EVERY TIME:

After switch on, check that the battery power is sufficient and the displayed units are the ones required.

SAFETY WARNING

Never connect to a pressure source where you are not sure what the maximum pressure might be. Always ensuer that the meter you are using is correctly rated for the pressure that you intend to measure. Excessive pressure (>5 times nominal range) can permanently damage the meter's pressure sensor.

NOTE: Use the $^{+}$ input for all single input measurement soft pressure or vacuum
Only use the $^{-}$ input when taking a differential measurement.

3. UNIT OPTIONS

PS UNITS

User selectable units are mBAR, inH20, hPa, mmHg, PSI, kPa, Pa, mmH2O

These are displayed as follows:

kPa	kPA
PSI	PSI
mmHg	mmHG
hPa	hPA
inH2O	inuG
mBar	mbAr
mmH2O	mmuG
Pa	PA

4. MEASURING

Make sure you do not exceed the meter's operating specifications.

Do not exceed the meter's internal temperature operating range
Do not put the meter on a hot surface

When taking critical draft measurements always re-zero the meter in the position you are taking the readings and hold the meter still during the test.

Always use the top right hand port (Port 1) for taking single channel measurements (pressure or vacuum). Only use the left hand port for differential measurements.

If the pressure being measured exceeds the meter's design range the display will show ---- for "over-range".

When taking draft readings at very low pressure or draft levels, for maximum accuracy, re-zero the meter in the orientation that it is being used. This eliminated gravity effects on the very sensitive pressure transducer. It is also recommended that the meter is switched on for at least five minutes and then re-zeroed before taking such sensitive measurements.

5. METER ANNUAL RECALIBRATION AND SERVICE

The meter should be re-calibrated and serviced annually by a Kane approved service centre.

Local regulations may require more frequent re-calibration.

Calibration is performed in firmware and there are no user accessible adjustments or user serviceable parts.

6. SPECIFICATION

Scale	Range	Highest Resolution
Mbar	± 200	0.01
Pa	± 9999	1
hPa	± 200	0.01
kPa	± 20	0.001
PSI	± 3.0	0.001
mm Hg	± 150	0.01
mm Wg	± 2100	0.01
In Wg	± 80	0.01

NOTE: The nominal range is plus and minus 200 mbar. The meter does not auto-range and so when Pa units are selected the full operating range cannot be displayed and the user must select an alternative range for measurements above 999 Pa.

ACCURACY: ± 0.5 mbar or ± 0.5% of reading whichever is greater. Maximum over-range without damaging the sensor is 1000 mbar.

BATTERY LIFE: Greater than 250 hours continuous operation with a 9 V PP3 alkaline battery.

AMBIENT TEMPERATURE RANGE: $0^{o}C$ to $^{+}50^{o}C$

AMBIENT HUMIDITY: 10% RH to 90% RH non-condensing

DIMENSIONS:

Weight:	295 grams with battery
Handset:	160mm x 80mm x 40mm (180mm including spigots)
Ambient Operating Range:	$^{+}0^{o}C$ to $^{+}45^{o}C$ 10% to 90% RH non-condensing
Power Supply:	9 Volt PP3 alkaline battery

7. ELECTROMAGNETIC COMPATIBILITY

European Council Directive 89/336/EEC requires electronic equipment not to generate electromagnetic disturbances exceeding defined levels and have adequate immunity levels for normal operation. Specific standards applicable to this meter are stated below.

As there are electrical products in use pre-dating this Directive, they may emit excess electromagnetic radiation levels and, occasionally, it may be appropriate to check the meter before use by:

Use the normal start up sequence in the location where the meter will be used.

Switch on all localized electrical equipment capable of causing interference.

Check all reading are as expected. A level of disturbance is acceptable.

If not acceptable, adjust the meter's position to minimize interference or switch off, if possible, the offending equipment during your test.

At the time of writing this manual (November 2011) Kane International Ltd are not aware of any field based situation where such interference has occurred and this advice is only given to satisfy the requirements of the Directive.

This product has been tested for compliance with the following generic standards:

EN 61000-6-3 : 2001
EN 61000-6-1 : 2001

and is certified to be compliant

Specification EC/EMC/KI/K455 details the specific test configuration, performance and conditions of use.

Please Note:

Batteries used in this instrument should be disposed of in accordance with current legislation and local guidelines.

At the end of its life the meter should be sent to the appropriate recycling centre in accordance with current legislation and local guidelines.

Thank you for buying this Differential Pressure Meter.

Before use, please register on our website

www.kane.co.uk