

1. DESCRIPTION AND OPERATING PRINCIPLES

The KM4007/KM4107 Air Velocity Meter is a hand-held battery-powered instrument for measuring air velocity and temperature. There are two versions. The KM4007 is calibrated in metres/second and °C, and the KM4107 in feet/minute and °F, but otherwise the two versions are the same. For convenience the number KM4007 is used throughout.

The 400 mm probe, on its extensible cable is permanently connected to the instrument and carries 2 thermistors at the top. The small thermistor is held at a constant temperature (above ambient) and, when the probe is in moving air, the voltage required to maintain that temperature is measured. The large thermistor measures the air temperature.

The voltage reading, corrected for the temperature, is converted into air velocity, and the instrument can display either air velocity or temperature, as selected on the 3-way switch.

The display is a 4¹/₂ digit LCD, with decimal point, ± indication for temperature and a low battery warning.

SCOTIA
INSTRUMENTATION

5. SPECIFICATION

MEASUREMENT RANGE

KM4007

KM4107

Air velocity

0 to 30 m/s

0 to 6000 ft/min.

in temperature range

0 to 40°C

32 to 104°F

Temperature

-10 to 70°C

14 to 135°F

Note:

The instrument may be used over the full temperature range, but the air velocity measurement accuracy is reduced outside the 0 to 40°C range.

ACCURACY

Air velocity

±3% reading

±1% full scale

Temperature

±1°C

±2°F

RESOLUTION

Air velocity

0.1 m/s

10 ft/min

Temperature

0.1°C

0.1°F

BATTERY

9 volt Alkaline Manganese (MN 1604)

BATTERY LIFE

25 hours intermittent use