



Installation & Calibration Guide

Airflow Monitor AFA1000/1 MK2

Startup

The AFA1000 must be field-calibrated once the room air supply and exhaust is balanced. When the unit is powered up, the following sequence of events occurs:

1. The alarm performs a self-test of its functions, LEDs and audible alarm (approximately 3 seconds)
2. At the end of the delay, the unit will do one of two things:
 - a. **If the monitor has been calibrated**, the unit enters normal operating mode (displays airflow velocity, LED's and audible alarm enabled).
 - b. **If the unit has not been calibrated**, the monitor will display " Requires set up, press Enter to continue"

Calibration

1. Press Enter from the "Requires set up" screen or if the monitor is in the Run screen Press and Hold the Enter button for 5 seconds until the Main Menu is displayed.
2. Using the + / - buttons select SET UP, then select CALIBRATION, then enter the password (factory default password is 0-0-0-0, press Enter to continue.
3. Open the sash to the normal operating height and measure the face velocity using a calibrated instrument. Using the + / -buttons enter the measured face velocity then press Enter, the monitor will then sample the airflow for 5 seconds.
4. If the airflow sample is unstable the monitor will display "Deviations too High", follow the instructions to repeat the sample or quit the calibration.
5. If the sample is accepted, lower the sash by half and measure the face velocity using a calibrated instrument. Using the + / - buttons enter the measured face velocity and press Enter, the monitor will then sample the airflow for 5 seconds.
6. If the calibration is successful the monitor will return the Main Menu, select RUN to go to normal operating mode.
7. If the airflow sample is unstable the monitor will display "Deviations too High", follow the instructions to repeat the sample or quit the calibration.

continued over...



8. The monitor will display "Increase higher airflow sample" if the second sample value is too close to the first value entered, close the sash a little and repeat the higher sample. The minimum difference between the samples that the monitor will accept is 0.3m/sec (60fpm).
9. The monitor will display "Sensor diff too low" if the monitor doesn't detect any difference in the sensor output between the 2 airflow samples, check that the sensor hose is connected and repeat the calibration.
4. Avoid movement in front of the Fume Cupboard whilst calibrating the monitor.
5. The Low and High air samples must be at least 0.3m/sec (60 fpm) apart to calibrate the monitor. This is to avoid inaccuracy in the calibration due to insufficient difference between the samples. The minimum difference can be changed in the "Low High diff" parameter in the Cal Config menu.

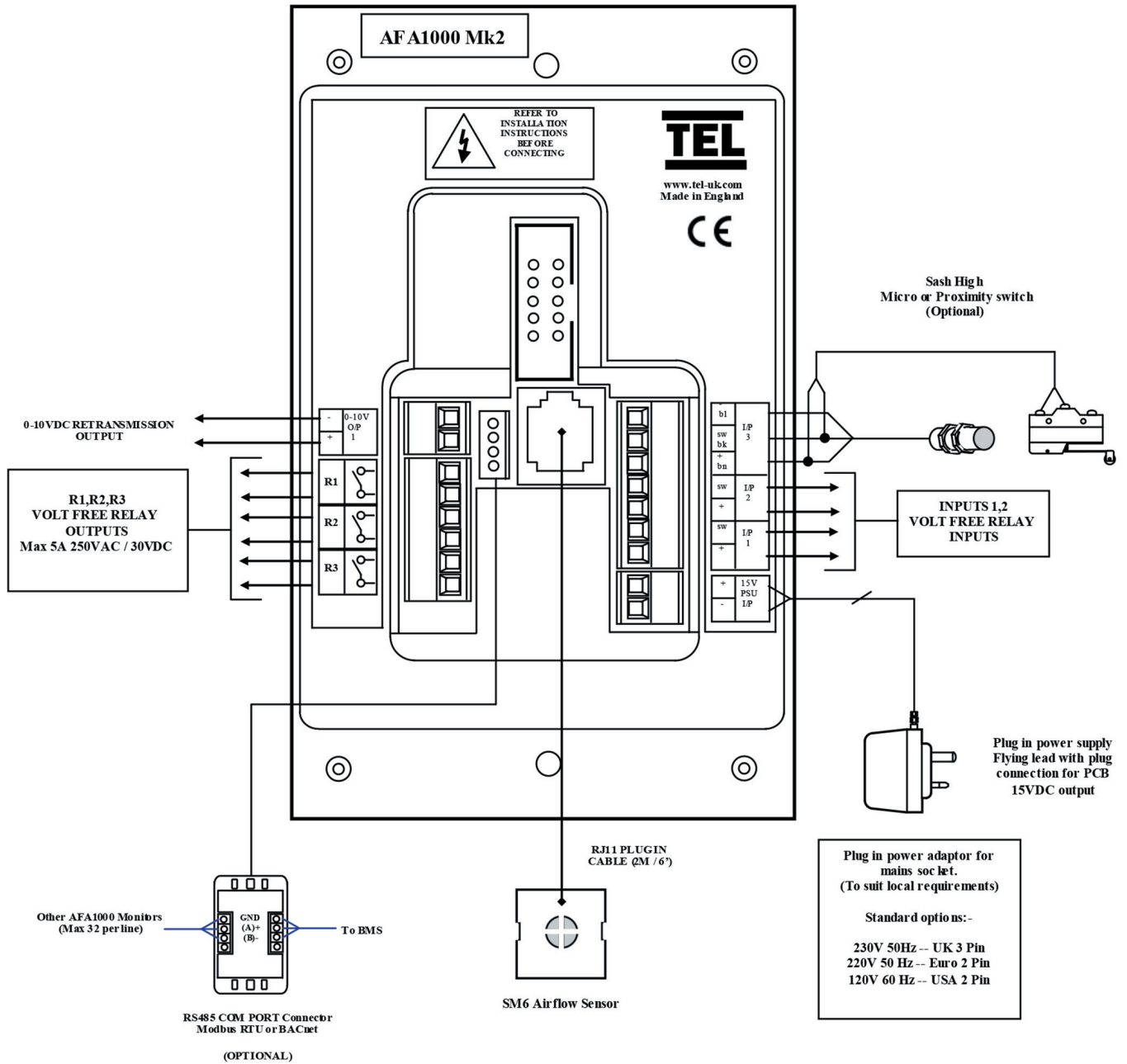
Calibration Tips

1. Ensure that the sensor hose is connected correctly at the side wall and rear of the sensor.
2. Ensure that the extract fan is running and the Fume Cupboard is balanced before calibrating the monitor.
3. Take extra time (at least 15 to 20 seconds) to wait for the airflow to settle before capturing the airflow samples. This will minimize the chance of a calibration error due to turbulence or fluctuations.
6. Do not use fully open and fully closed sash positions for the calibration points, the recommended positions are normal operating height (e.g. 500mm 20") for the first sample and approximately half the sash opening (e.g. 250mm 10") for the second sample.
7. If the Fume Cupboard is under separate VAV control then a different set up may be required to achieve the airflow difference required for calibration. Normal extract for the low sample and Purge for the high sample may be used.

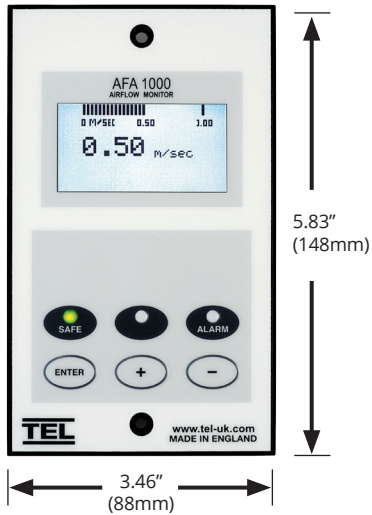
Troubleshooting

Problem	Check for
No LED's, Screen blank	Check the power supply is securely plugged into the monitor Check the power supply is securely plugged into the mains power socket Check that there is 15VDC power supply on the monitor terminals (broken wire or snagged cable sheath)
Sensor Error message	Check the sensor cable is securely plugged into the sensor Check the sensor cable is securely plugged into the monitor Replace the sensor If Sensor Error message still displayed replace the sensor cable If Sensor Error message still displayed replace the monitor
Audible alarm not working	Check for screen messages - if SETBACK is displayed the monitor has been remotely muted Check if alarm has been disabled in Cal Config menu

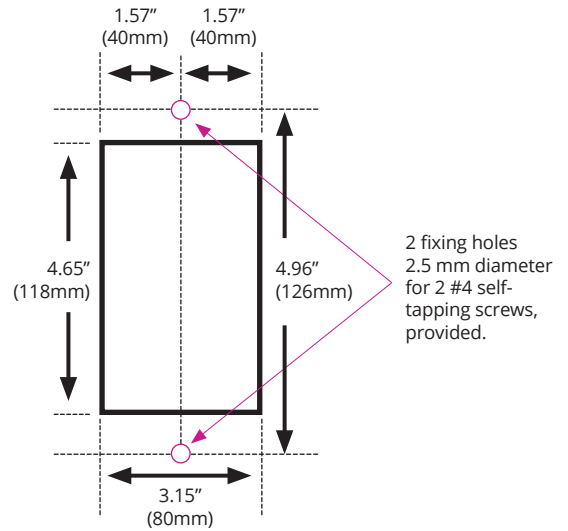
Connection Details



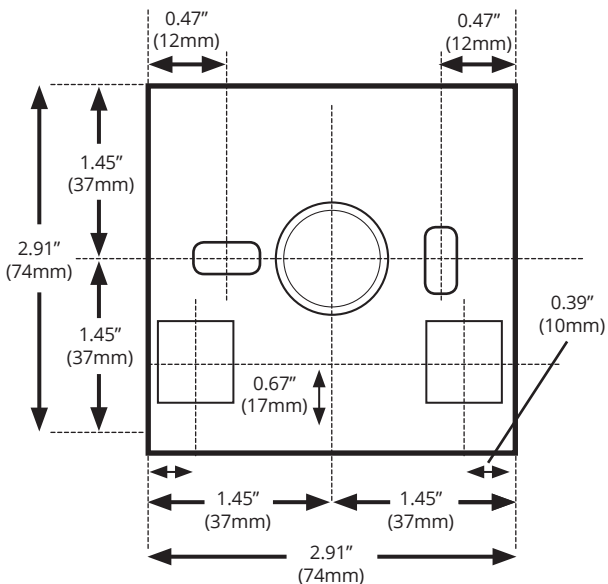
Monitor Panel Dimensions



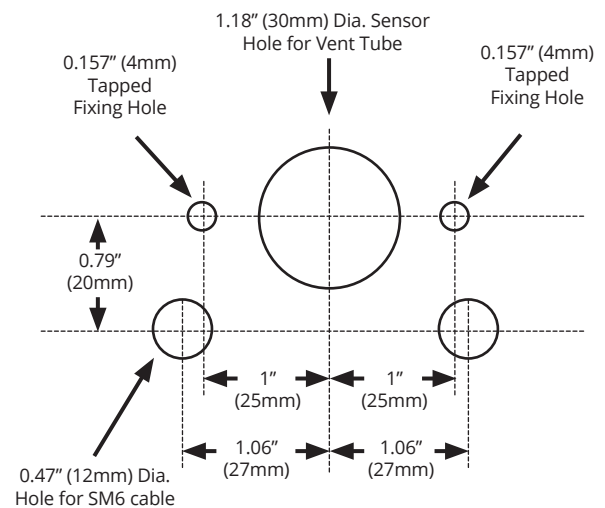
Monitor Panel Cutout Dimensions (NOT shown to scale)



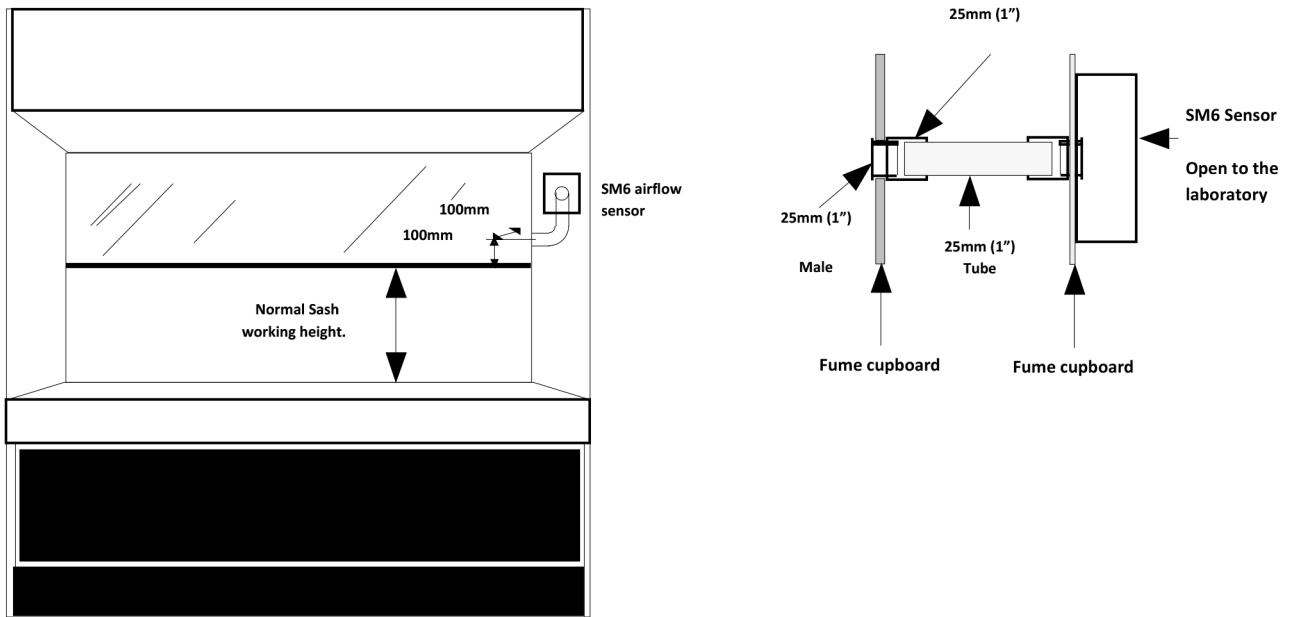
SM6 Sensor Dimensions (rear view)



SM6 Panel Cut Out Dimensions



Remote Airflow Sensor Installation Diagram



For complete manual and product information, log on to www.tel-uk.com