

# TEL AFA 1000/1 MK2 SM7 Fume Hood Monitor — Installation and Operation Guide

## Startup

The AFA 1000/1 must be field-calibrated after an HVAC professional balances the laboratory air supply and exhaust. The monitor will not display a face velocity reading until a successful calibration is completed. Visit [hollandsafety.com](http://hollandsafety.com) for a video tutorial.

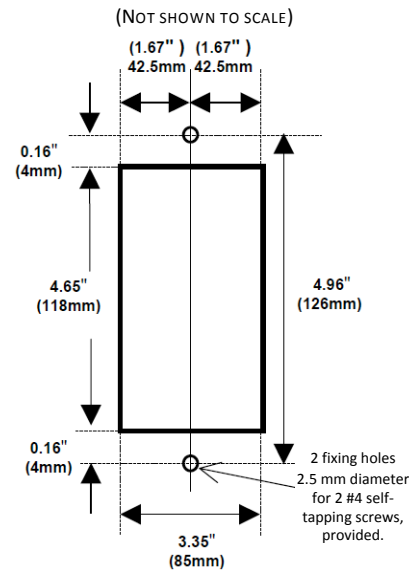
## Calibration

1. Press and hold the ENTER button to bring up RUN/SET UP menu.
2. Using the +/- buttons, select SET UP, then select CALIBRATION, then enter the password (the **default password is 0-0-0-0**; press the ENTER button four times to proceed to the next step).
3. Open the sash to normal operating height and measure the face velocity with a calibrated instrument. Use the +/- buttons to input the measured value, then press ENTER and wait as the unit takes an air sample.
4. Lower the sash by half and again measure the face velocity with a calibrated instrument. Use the +/- buttons to input the measured value, then press ENTER and wait as the unit takes an air sample.
5. If calibration is successful, select DONE. You will return to the RUN/SET UP menu. Select RUN and the monitor will switch to normal operating mode, displaying the face velocity.

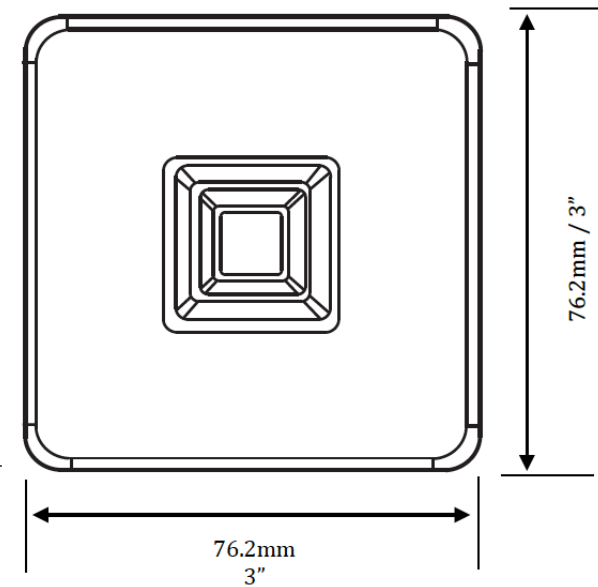
## Troubleshooting

Problem	Check For
No lights	<ul style="list-style-type: none"> <li>• Power cord plugged securely into back of monitor</li> <li>• Power supply plugged into outlet</li> <li>• Correct voltage to outlet</li> </ul>
Red light on, no alarm sound	Horn is disabled (display should show horn icon with a line through it). Horn may be re-enabled in CalConfig menu.
Velocity displayed does not match anemometer	Air pattern in the room may have changed since last calibration. Perform a new calibration per above instructions.
Velocity displayed although fan is off	Make sure air hose is connected properly at the sidewall and to the SM7 sensor. If disconnected, reconnect and recalibrate. If needed, consider manually shortening length of air hose between sidewall hole and SM7 post sensor.
Calibration tips	<ul style="list-style-type: none"> <li>• Make sure fan is running and air is being exhausted through the hood.</li> <li>• Make sure hose is connected properly at the sidewall and to the rear of the sensor. If disconnected, reconnect and calibrate again per the above instructions.</li> <li>• Use a thermoanemometer or vane anemometer to collect velocity readings. Take extra time (at least 15 to 20 seconds, more on larger hoods) to wait for the airflow to settle between capturing the low velocity reading (sash high) and the high velocity reading (sash low). This will minimize the chance for a calibration error due to excessive fluctuations.</li> <li>• Avoid movement around the front of the hood while sensor is taking air sample.</li> <li>• High air value and low air value must be different by at least 60 fpm. This parameter can be adjusted in CalConfigure menu.</li> <li>• Do not use fully open and fully closed as the two calibration points. Try using normal operating height for the low velocity sample and reducing the opening by half for the high velocity sample. With a bypass hood, the recommended positions are full open for the low velocity reading, and for the high velocity reading, open the sash to where the top just covers the bypass opening.</li> </ul>
Outside influences	If repeated attempts at calibration fail to yield acceptable results, try to determine if airflow patterns or influences are present around the hood.

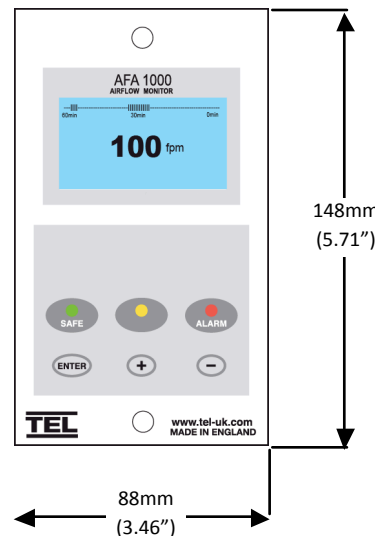
## MONITOR PANEL CUTOUT DIMENSIONS



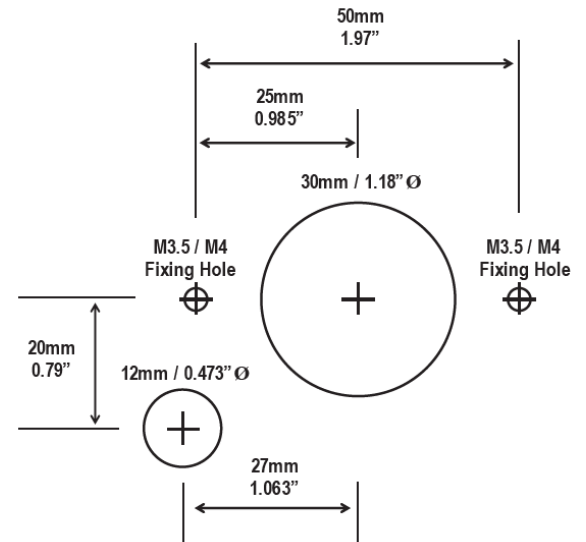
## SM7 SENSOR DIMENSIONS (FRONT VIEW)



## ALARM PANEL DIMENSIONS



## SM7 PANEL CUTOUT DIMENSIONS (FRONT VIEW)

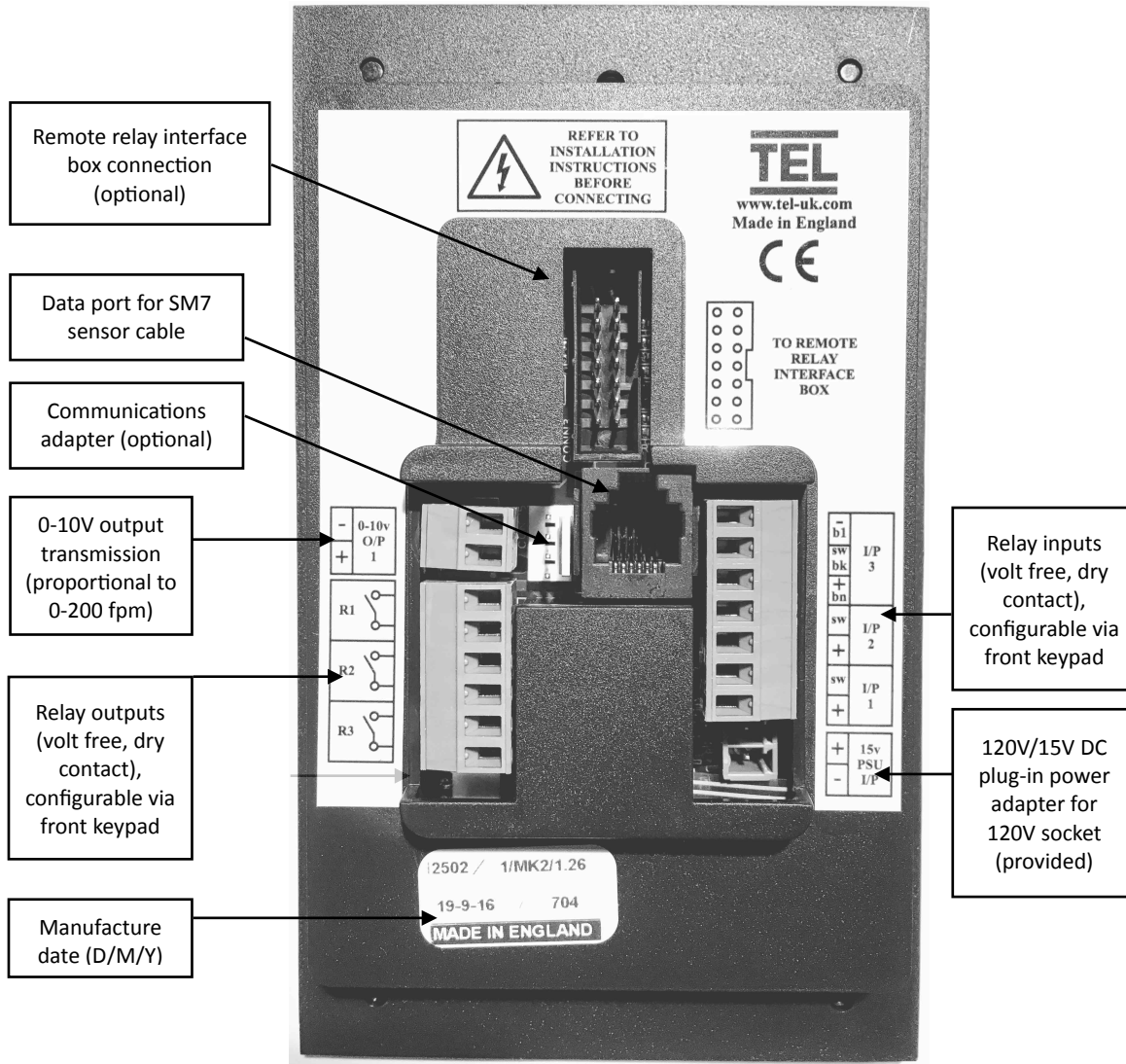


## Screen Dimming

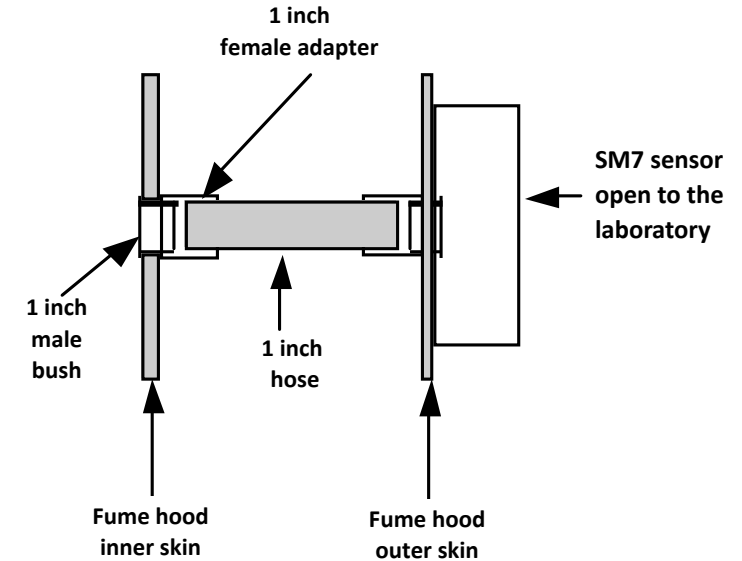
The AFA 1000/1 has a parameter that allows the screen to dim if the velocity reaches an established point. This saves power and prolongs the display life. The screen will return to normal brightness any time a button is pressed, if there is an alarm or if the velocity drops below the screen dimming set point. To adjust this parameter, press and hold the ENTER button to get to the RUN/SET UP screen. Choose SET UP, then choose CONFIGURE, then use the +/- buttons to scroll to AUTO SCREEN DIM.

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## Connection Details

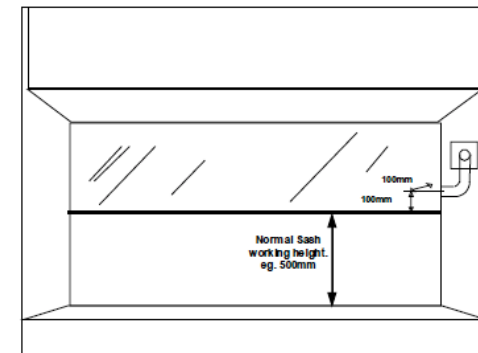


## SM7 Front Post Installation



## Sidewall Sensor Placement

The monitor must be positioned where it can “see” the room pressure of the laboratory. The back connection spigot of the sensor will accept the provided air hose, which should be connected to the inner chamber of the fume hood. The **ideal position** for the other end of the hose, for most fume hoods, is 100mm (4 inches) back from the sash and 100mm higher than the normal sash opening height through the inner side wall.



Mount the monitor on the front of the fume hood and use the provided hose. For fume hoods with a single skin sidewall or a double skin with a small gap between them, it may not be possible to achieve the ideal sensing position using the provided hose. With a single skin sidewall it is possible to fix the sensor on the outside of the fume hood and connect directly to the inner chamber in the ideal position. This method can only be used for up to two fume hoods when they are positioned side by side (using the two outer walls).

The sensor should not be mounted in a position where it is subject to drafts from the laboratory air input or ventilation system.

For complete manual and product information,  
log on to [hollandsafety.com/literature](http://hollandsafety.com/literature).

For support, call/text Holland Safety Equipment at 847-680-9930.