

Product Sheet  
AFA1000/E/Mk3



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# AFA1000/E/Mk3

## General Description

The AFA1000/E/MK3 model is a fully flush mounting airflow VAV controller that is suitable for Industrial Fume Cupboards, Schools type Fume Cupboards, Canopy Hoods, BSC's and LEV's and includes the following features:

Back lit graphic display with a visual area of 56x27mm showing the airflow velocity (fpm or m/sec) or airflow status (Air Safe / Air Fail) with VAV out Bar Graph. In an alarm condition the display will toggle between the airflow velocity and alarm condition.

Audio Visual Alarm – Audible alarm with Red, Amber and Green LED's.

Password protected pushbutton set up and calibration menus with on screen instructions.

3 Relay Inputs configurable as:- Night Setback /Alarm Disable / Sash High / External Alarm / High-Low.

3 Relay outputs activated by any of the 3 inputs or any of the alarm conditions.

3 Pushbuttons configurable as :-Fan On-Off / Light On-Off / UV Lights On-Off / Pump On-Off / Purge On-Off.

VAV output to control either VAV damper, Venturi valve or Fan Inverter drive.

Full PII VAV face velocity set point control with optional sash position sensor input.

Com Port – RS485 for connections to a laptop for diagnostics and configuration of the monitor or for connection via a local Modbus RTU network for remote logging with real time graphical displays using the AFA Network software or for direct connection to a BMS system.

# AFA1000/E/Mk3

## Specifications

Display range	0-1.5 m/s (0-1000fpm)
Alarm range	0-1.5 m/s (0-200fpm)
Control range	Face velocity control .15 to 1 m/sec (30-200fpm)
Control resolution	0.1 m/sec (2fpm)
Control output	0-10VDC control output for damper, valve or Inverter drive
Control response	Less than 1 second
Analog output	Additional 0-10v output, directly proportional to face velocity (optional)
Control Range	Face velocity control .15 to 1 m/sec (30-200fpm)
Accuracy	Sensor / display resolution 0.1m/sec (1fpm) Face velocity accuracy +/- 10%
Field set-up	2-point velocity calibration (with on-screen instructions)
Alarm delays	User configurable – 0 to 10secs
Relay output	1 (3 with remote interface unit)
Relay input	3
Comm. Port	RS485 – Can be connected via Serial interface to LAN network (Full software available)
Auxiliary pushbuttons	3 (typically used for fan start/stop, light on/off, scrubber pump on/off, emergency purge, etc. Buttons can be interlocked to each other.)
Sash high indication	Yes, with separate plug-in connection
Night setback	Yes
External alarm indication	Yes
Power Requirement	Input—240VAC, 50Hz (UK) 230VAC 50Hz (Euro) 120VAC 60Hz (US) Output—15VDC, 500ma
Units	English and Metric (user selectable)
Display—visual	VAV output Bar Graph LEDs: red, alarm; yellow, caution; green, normal Digital display of velocity reading (can be turned off) VAV output Bar Graph
Alarm indication	Red LED & audible alarm (to a certain sound spec)
Horn silence	Yes (temporary / permanent/automatic depending on type of alarm or external input )
Mounting	Flush (or surface with optional mounting box)

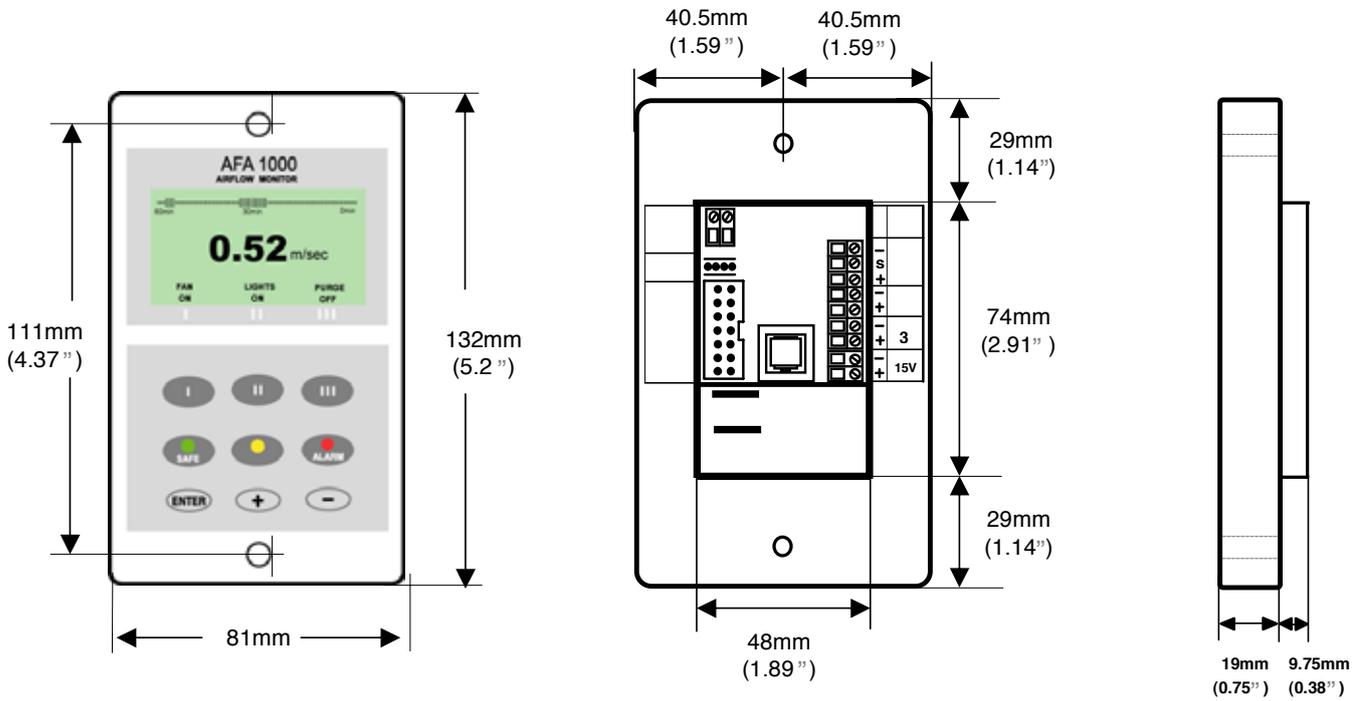
# AFA1000/E/Mk3

## Specifications

Monitor operating temp	55-86°F (13-30°C)
SM6 operating temp	15-25°C (Environmental limits)
SM6 working temp	ambient +25°C
SM6 output mV	0-90 mV over working range (0-1.5m/sec).
Storage temperature	-40-150°F (-40-65°C)
Agency listings	CE
Hazardous	area SM6 Suitable for Gas group IIC Temp Class T6 (With Atex certified MTL Zener Barriers).

# AFA1000/E/Mk3

## Dimensions

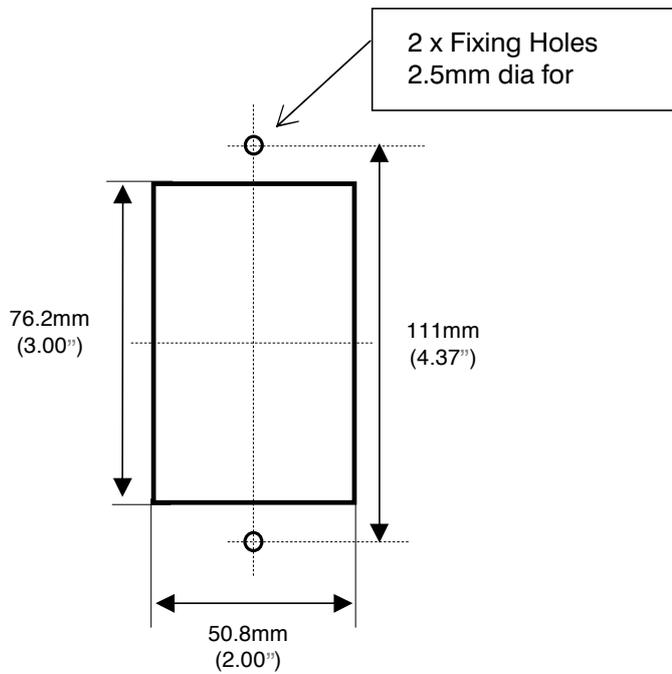


Front View

Rear View

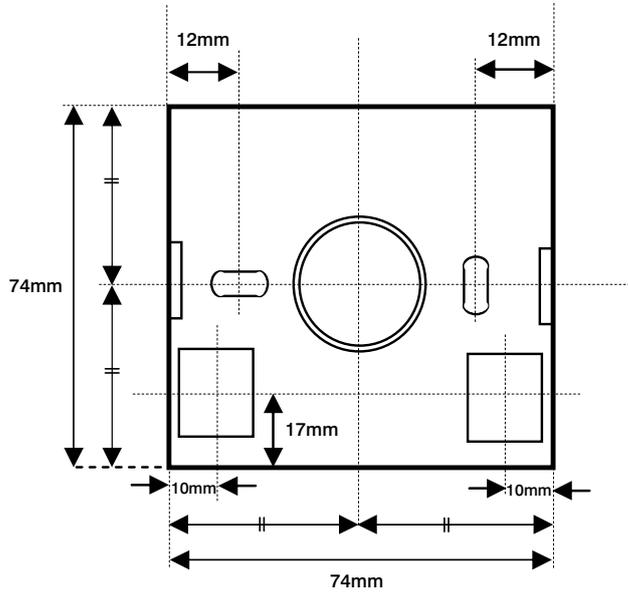
Side View

Panel Cutout Dimensions  
3.00" x 2.00"

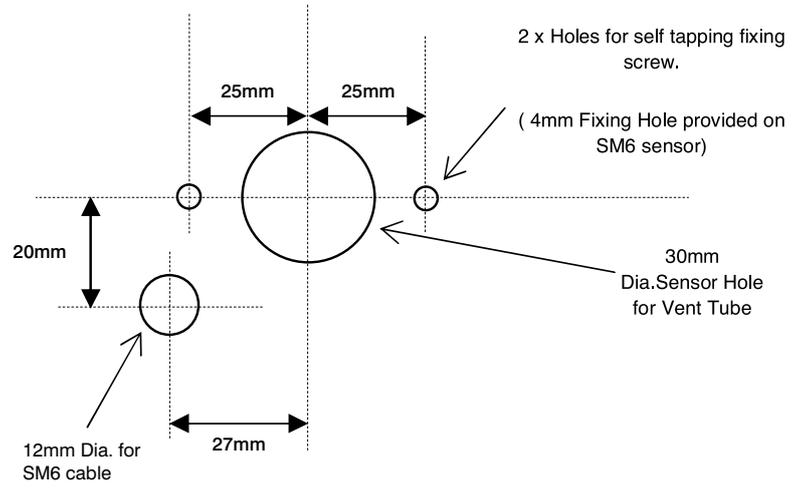


# AFA1000/E/Mk3

## Dimensions



Rear View  
SM6 Sensor  
Dimensions



Front View  
SM6 Sensor Panel  
Cutout Dimensions

# AFA1000/E/Mk3

## Ordering Options

E	Mk3	UK	SM6	2M	MCP
Model	Style	Power Supply	Airflow Sensor Type	Sensor Cable	Comms
E	Mk3	US 120v 60Hz Euro 230v 50Hz UK 240v 50Hz	SM6 12150 ILS	2M 5M	M-RS485 MPC (Modbus RTU)

### Power Supply

The AFA1000/E Airflow monitor is supplied complete with a plug in type power supply for connection to a single gang socket. The mains supply should be fused 3A. A desktop style power supply can be supplied with flying mains lead for connection to a fused spur or terminals.

For damper control a remote interface unit is supplied. The remote interface unit is supplied with a 2M figure 8 mains lead for connection to a single gang socket. The mains supply should be fused 3A. The interface unit provides power to the AFA1000/E and the damper actuator (30VDC unregulated).

### Airflow Sensor

The standard AFA1000/E is supplied with a remote type airflow sensor and has a plug in RJ11 socket on the rear of the case to accept the sensor cable.

A vent it can be supplied for connection to the Fume Cupboard inner sidewall, this comprises of 1M of 25mm vent tube, a 25mm Bush and Coupling and box lid. See EVK on accessories page.

### Sensor Cable

The standard length of a remote type sensor cable is 2M, a 5M version is also available. Custom lengths can be supplied on request.

### Comms

The AFA1000/E can be supplied with configuration software and cable for connections to a laptop for diagnostics and configuration of the monitor or for connection via a local Modbus RTU network for remote logging with real time graphical displays using the AFA Network software or for direct connection to a BMS system. See Modbus RTU Comms on additional features page.

## AFA1000/E/Mk3

### Additional features

The AFA1000/2 airflow monitor range includes the following additional features:

Mains Fail alarm – Audio visual alarm in the event of power loss

Battery Back Up – Full back up in the event of power loss

Temperature monitoring with High and Low Temp Audio visual alarms

0-10v Retransmission output over full scale (0-10v / 0-1m/sec)

Relay Interface Unit – Additional remote output relay unit in enclosure

Modbus RTU Comms – For connection to AFA Network or BMS

The AFA1000/2 MK2 can be supplied with a custom overlay (details on request).

### Accessories

The AFA1000/2 airflow monitor range includes the following accessories:

Surface mounting back box

EVK Vent Kit

Sash High Proximity Switch

Sash High Micro Switch

### Airflow sensor options

The AFA1000/2 airflow monitor will operate with any of the following airflow sensors:

SM6 Airflow Sensor

12150 Duct Sensor

ILS Airflow Sensor