Engineering Change Notification

**Software Upgrade with Additional Functions
And enhanced Hardware performance upgrade**

AFA1000/RmBld VAV Differential Pressure Controller

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General Overview 2.0

The next generation AFA1000 has been designed to incorporate additional features and performance upgrades considering the current trends in pressure controls and customer feedback.

The AFA1000 has been designed to fit into the existing mouldings with identical connections so that the AFA is backwards compatible and can be directly changed for an older unit in the field.

The AFA1000 is fitted with a new high resolution full colour backlit screen that dims when the AFA1000 is in Setback mode. The screen has a high contrast Blue background with White text and full colour alarm text.

Additional Features Overview 3.0

Item	New Feature	Location	Function	AFA1000 Version	Page
1	Diagnostics Menu	Access by pressing +/- buttons together	A full diagnostics menu showing I/O status, alarm test feature and Coms information.	AFA1000/RmBld	5
2	Factory Reset	Config menu	Resets all parameter values to Factory settings.	AFA1000/RmBld	6
3	Econ Status display	Not accessible	Display shows "Automatic" or "Manual" text above VAV output Bar Graph	AFA1000/RmBld	7
10	Display Backlight dim	Not accessible	Backlight reduces when in Setback	AFA1000/RmBld	12
12	Pressure Graph	Cal Config Menu	Shows airflow status in colour over last 60 minutes in graph format.	AFA1000/RmBld	13

1. Diagnostics Menu

A new Diagnostics menu has been added that includes the following features:-

a. Alarm Test
b. Coms data
c. I/O Status

From the run screen Press the "+" and "-"buttons together to access the diagnostics menu.
Use the +/- buttons to scroll and Enter to select the required parameter.

a. *Alarm Test* - the Screen will show "Testing Safe LED" and the Green Safe LED will illuminate. The screen will then show "Testing Warning LED" and the Amber Warning LED will illuminate. The screen will then show Testing Alarm" and the Red Alarm LED will illuminate and the audible alarm will sound.

The screen will then return to the Diagnostics menu.

b. *Coms data* - the Screen will show the coms setting data for the relevant selected protocol:-

Protocol = None/TEL/Modbus/BACnet
ID = Slave ID for Modbus or Device Instance for BACnet
Baud Rate = Shows selected Baud Rate
Parity = Shows selected Parity

Tx & Rx = the display will show the current data packets sent and received, the displayed value will rollover to zero when the maximum count is reached.

c. *I/O Status* - when selected the following options are shown:-

Input Data
Output Data
Sensor Data
Done

Input Data:-

Input 1 - 0 / Off / On / Not Used
Input 2 - 0 / Off / On / Not Used
Input 3 - 0 / Off / On / Not Used

0 = Analogue Input e.g. Input Voltage
Off = Input Open
On = Input Closed
Not Used = Input not assigned

Output Data:-

Output 1 - Off / On   A Out 1 - 10.0
Output 2 - Off / On
Output 3 - Off / On

Output Off = Output Open or not assigned
Output On = Output Closed
A Out 1 = Analogue Output 1 voltage

Sensor Data:-

Pressure 00.0 %

Pressure % = Input from pressure sensor in %, 100% = 5V from sensor.

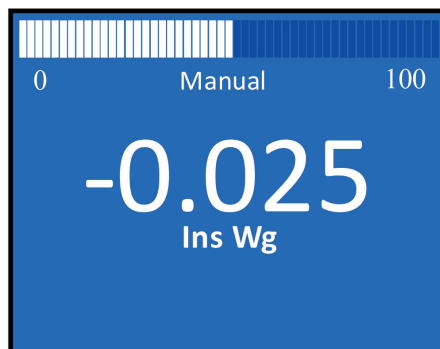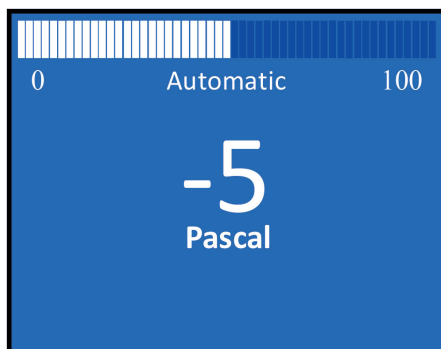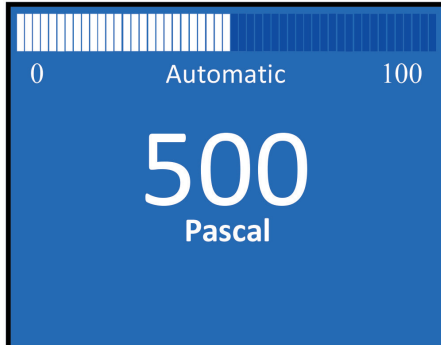Done - returns to Diagnostics menu.

2. Factory Reset

Factory Reset is a new password protected feature in the Config menu. When selected the Enter Password prompt appears. Once the password is entered a warning screen appears showing "Reset factory settings" Press "Enter" for Yes or "-" for No.

Yes - resets all of the parameter values back to factory settings.
No - returns to config menu.

Note - the pressure calibration is not affected by restoring factory settings.

3. Control Status Display.

The output status is now permanently displayed under the VAV output Bar Graph showing "Automatic" or "Manual" mode.

|	
0 Automatic 100 **500** **Pascal**	0 Manual 100 **0.250** **Ins Wg**
0 Automatic 100 **-5** **Pascal**	0 Manual 100 **-0.025** **Ins Wg**

4. Display Backlight.

The display backlight will dim in certain modes to save energy. The brightness level is not adjustable.

Modes:-.

Setback Input is active - display backlight reduces until input is not active. Backlight will resume to normal level whilst Set Up or Diagnostics menus are accessed.
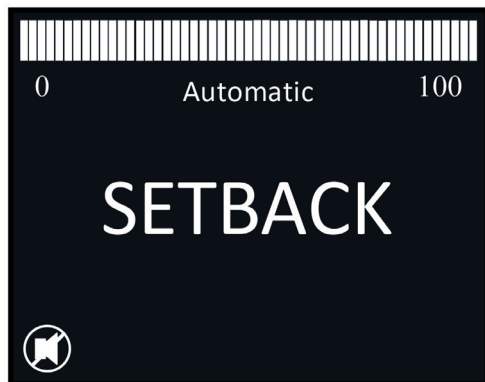
5. Pressure Bar Graph.

The Pressure Bar Graph has been enhanced to show a graphical colour display of the pressure over the last 60 minutes. The graph is ranged to match the pressure range in the controller and consists of 60 x 1 minute segments. The segments are coloured as follows:-

Safe Pressure = White
Warning level Pressure = Amber
Low level Pressure = Red
High level Pressure = Red

If the AFA1000 is power cycled the graph will start from zero time.