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AFA4000 Series Airflow Controller with Auto Sash  
Engineering Change Notification Rev01

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## 1.0 Overview

The AFA4000 hardware has been upgraded to incorporate a high resolution screen and snap fit method of fixing.

The AFA4000 firmware has been upgraded to include the TELBUS protocol and other minor improvements.

The Auto Sash Controller firmware has been upgraded to include Auto Stop, Motor Current limit detection features and has a new menu structure.

AFA4000 Hardware Release Date : January 2021.

Auto Sash Firmware v2.0 Release Date : January 2021.



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2.0 Table of changes

	Item		Previous Model <01/21	New Model 01/21>	Notes
<b>Hardware Changes</b>					
1	Display Screen	Viewable Area	52.56*70.08mm	48.96*73.44mm	
		Overlay Widow (Used area)	51.50*69.24mm	48.00*72.50mm	Increased viewing height 3.1mm, Decreased viewing width 3.5mm
		Dots (Resolution)	240*320 (76,800)	320*480 (153,600)	Higher Resolution, no pixilation
		Other Improvements		Anti-Glare, Anti-Ghosting	Improved screen quality
				Screen Graphic change	Removal of Alarm/Status window, now floating text, New Halo Bezel
				Screen Brightness	Now menu adjustable
2	Fixing Bracket		Bracket with fixing screw	Bracket with snap fit	Snap fit provides easier fit and release
<b>Firmware Changes</b>					
3	Menu Structure	Text Change	"Done"	"Exit menu"	More instructive / informative text
4	RS485 Coms	Protocol addition		TELBUS	New protocol for faster data transfer to AFA5000 RSC-2
		Data change		TELBUS only	Added AFA4000 Fire alarm activation over coms from AFA5000 RSC-2
5	Auto Sash Controls	Connection	Manual refresh	Live refresh	The Auto sash now appears in the set up menu when connected without having to quit and re-enter the Set Up menu
		Menu Structure change	Auto Sash firmware release v2.0 for all AFA4000 and Keypad versions (See separate Auto Sash ECN V2.00)		New menu structure
		Added Auto Stop feature			When manually raised, the sash will stop at the calibrated open position
		Added sash force limit			Motor current detection / sash force (motor current) limit



### 3.0 Display Screen

The screen graphics changes are the removal of the Alarm/Status window **A**, an improved Halo Bezel **B**. Display Brightness adjustment **C** has been added to the Set Up menu.

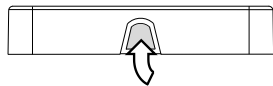
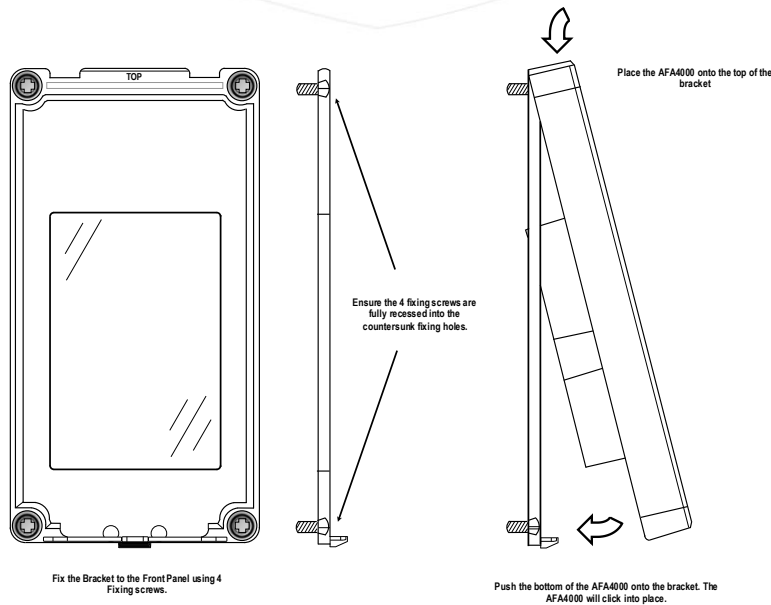
Previous Models

New Model

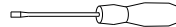


## 4.0 Fixing Bracket

The fixing bracket has been improved to allow snap fit and press to remove.



To remove the AFA4000 press the latch on the bottom edge to release the AFA4000 from the bracket. A screwdriver or blunt tool can be used if required.



5.0 TELBUS protocol

A new TELBUS protocol has been added to the AFA4000. The new protocol is for connection the TEL AFA5000 RSC-2 room space controller only. The new protocol handles data transfer at a faster rate and allows for future data packets to be added.

Protocol	Extended Properties	Baud Rate	No of AFA4000 Airflow controllers on the Network							Per AFA
			1	10	20	30	40	50	60	
Typical time in seconds to poll all AFA4000 devices connected to the AFA5000 RSC-2 room controller without timeouts										
TEL legacy / TEL	No	9600	0.125	1.25	2.5	3.75	5	6.25	7.5	0.125
TEL legacy / TEL	Yes	9600	0.25	2.5	5	7.5	10	12.5	15	0.25
TELBUS	No	9600	0.0469	0.469	0.973	1.4	1.875	2.34	2.81	0.0469
TELBUS	Yes	9600	0.0625	0.65	1.25	1.875	2.5	3.125	3.75	0.0625

Note - Extended properties is a secondary data packet including additional Airflow and Auto sash data allowing Fume Hood air changes to be calculated.



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## 6.0 Auto Sash Controls

The Auto Sash firmware has been updated to include Auto Stop and Motor current limit detection, the menu structure has been revised to allow faster navigation. As the number of menu items in the Set up menu has increased with the new features, the menu has now been divided into sub menus containing the relevant items for each sub menu.

See separate Auto Sash v2.0 ECN for further details of the new features and menu structure.

The new AFA4000 model has live Auto Sash refresh in the configure menu, whilst the Auto Sash is connected or disconnected the Auto Sash Set Up menu will appear or disappear whilst still in the Set Up menu, rather than having to exit and re-enter the menu as on previous models.

