SERIES 200-400 ON OFF
FIRMWARE SUPPORT DOCUMENT

USER GUIDE VERSION 10.7

- Screen by screen user guide
- Covers Smart Series On Off, Failsafe and Hi Speed
- For Modulating, Modbus, Multi Turn or Timer, see specific guides.
- Firmware guides are updated on a continuous basis for on going development and improvement of our actuators.
- We will release an update to show changes between software as and when we release new firmware versions.
- Check our Product Library online at www.avactuators.co.uk/support

Version 001: 13/10/22 subject to change without notice

SMART ACTUATORS WITH OLED SCREEN, TOUCH BUTTONS AND SMARTMENU™

All of our Smart actuators have a colour OLED screen and 3 x touch buttons. The screen will typically tell you all you need to know about your actuator, from the input command to the actual position, any problems with the actuator such as loss of power (if failsafe) or flash ALERT if the actuator as an alarm condition such as an over torque situation or valve jam. As standard, all of our actuators have Local Control as explained below. The touch buttons are used to navigate our onboard firmware to adapt and change the actuator settings to enable you, the user to customise our Smart actuators to your application and own specific requirements. Need to change the working angle, no problem. Need to change the speed, no problem. Need to setup a 3 position configuration, no problem. It's all possible using our Smart actuator series.

How to access the main customer accessible menus:	
Main Menu:	Hold M for 3 seconds and enter the password 333 to access main user Main Menu.
Local Control:	Hold K3 (bottom button) for 3 seconds and enter the password 111 to access Local Control / manual override
Reset:	Need to go back to factory reset/default settings? Hold all 3 buttons for 3 seconds and enter 6666.
Note:	If the actuators is left in a menu screen without a change in 120 seconds, the actuator will exit the menu.

Understanding the default screen: this is the screen you will see when not in a menu but the actuator is powered					
1.	BUS ID: *Only used on Modbus actuators*	5.	Internal Temperature in ℃	9.	Firmware version number shown on power up/exiting menu. Cycles count shows how many times actuator has operated open/close.
2.	Set Value: *Input command and % 0-100*	6.	Internal humidity shown as a %		
3.	Angle: *Actual position of actuator 0-100%*	7.	Motor RPM		
4.	Input Signal type & Precision Sensor	8.	Failsafe Capacitor charge: *if applicable*		

New feature, we are adding a QR label to all of our products that will enable users of our product to have quicker and more direct access to support documents via our new purpose built QR website. Simply scan the QR code using your Smart phone camera and you will be taken directly to the specific actuator you have on site and will have access to Technical Datasheets, Firmware guides and product support videos.

SCAN ME

English version. Available in Spanish

Screen by Screen Firmware guide for Smart Actuators Series 200-400 only	
UserSET **PassWord: XXX**	User settings are accessed by holding down the 'M' button for ~3 seconds, after this time the screen will request a password. The User Settings password is simply: 333 Use 'K2' to select the column and 'K3' to change the number.
UserSET **DisMod: English**	Display Mode allows the user to choose English or Chinese. If you hard reset the actuator using 6666 password, this will default the actuator to Chinese. To change back to English, simply hold M, enter 333, press M to go to the first screen and press K2 to select English.
UserSET **HUB_BusID: XX**	Hub Bus ID designed for ModBus / CanBus users to give the actuator an allocated ID Number. *Only applicable if you have ordered Modbus actuator*
UserSET **DeadZone: X.X%**	DeadZone is a sensitivity feature which allows for much more accurate positioning. The AVA default setting stops the actuator from hunting on a signal.
UserSET **StallTime: 1X**	Stall Time represents the delay between the actuator detecting an error and the actuator triggering the alert signal (LED will light BLUE).
UserSET **BrkDelay: 100ms**	Break Delay allows the actuator to delay its movement from one position to another.
UserSET **SWDIR_Dly: 0ms**	Switch Direction Delay is similar to the above setting, although this is based on a sudden change of direction rather than end of travel.
UserSET **PDChk_Time: 20x**	Power Down Check Time dictates the delay on the actuator using the capacitors to close on loss of power. E.g. if loss if power lasts 2 seconds the actuator would not immediately begin to close. *Only applicable if actuator is Failsafe type*
UserSET **PDAction: 20x**	Power Down Action allows the user to dictate the failsafe position. Whether that be Open, Close, complete the last signal given or Keep in position. *Only applicable if actuator is Failsafe type*

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UserSET CapCharge: XXX%	Failsafe actuator capacitors should be fully charged before the actuator is operable and therefore the default setting reflects this. But with this setting you can change the actuator to power on at an earlier %. *Only applicable if actuator is Failsafe type*
UserSET TestAlarm: ON	To replicate an 'Alert' situation we can set the 'Test Alarm' to 'ON'. This will turn the LED **Blue**, if you purchased your actuator with an alarm relay, this will also generate a signal.
UserSET Manu_Spd: XXX%	Manual Speed allows the user to dictate the speed in which the 'Manual' operation runs.
UserSET Posi_4mA: XXX%	This allows you to set your 4mA or 0V position. Default is 0.0%.
UserSET Posi20mA: XXX%	This allows you to set your 20mA or 10V position. Default is 100.0%
UserSET B33Posi: XX%	B33 is the AVA version of a 3rd position. This setting allows the user to adjust the angle of that 3rd position. For example you can set 0-90-180 or 0-45-90 degree operation.
UserSET Speed_PUL: XXX%	PULSE mode (PUL): the bigger the setting is the slower the working time is, the smaller the setting is the faster the working time is. Note that this cannot increase the standard set working time, it can only slow it down. *Note speed control can reduce torque output*
UserSET Speed_PWM: XXX%	The method of speed control. The bigger the value the faster the actuator will operate, the lower the value the slower the actuator will work. *Note speed control can reduce torque output*
UserSET CMD_Swap: Yes	Command swap is to reverse the input command from the standard. You can reverse the signal so that the standard ON command would be OFF and OFF would be ON.

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UserSET
PassWord: 168

UserSET
SavCCWopen: XXXX

UserSET
SavCWClose: XXXX

Setting new working angle, for example 0-180 degree operation:

Hold M and K3, screen will show MK3. Hold for 3 seconds. Enter password 168.

1. First screen is to adjust current position. Press M to second screen. T

2. Second screen is used to set the Open position. Move actuator to desired open position. Position is shown as 4 digit number. Number generated via digital encoder.

3.Third screen is used to set the Closed position. Move the actuator to the desired position. Please note that on saving and exiting this screen via the final screen, you will not only set the open / close position but also the end of travel limit switches. Number is generated by digital encoder. The close position number must be less than the open.

Final screen: press K3 (bottom button to exit)

For setting 0-180, follow this simple step. Set the open position to show Yellow/Yellow and for closed position, rotate 180 degrees to show Yellow/Yellow. Example below to show our meaning.

Open 100% 90°= Yellow/Yellow

Closed 0% 0°= Red / Red Red LED

Standard 0-90 will show this configuration.

If you were to change the working angle from 0-180 for example the indicator will be the same colour for both open and close. However the LED light will change to show Green for Open and Red for closed. Examples below.

Local Control / Manual Control under power:

This mode is to control the actuator locally when power is applied to the actuator. Simply hold the bottom button (K3) for 3-4 seconds and enter the password 111 and press M.

Once in the menu you will see Manual displayed on screen, the actuator can now be controlled by pressing K2 (middle button) and K3. This will open/close the actuator. To exit the screen simply press M and you will return to the powered mode and the actuator will return to the signal currently being applied. If the actuator is left in Local Control, after approx. 45 seconds the actuator will return to the powered mode.

Remember to not use the Manual Override via Allen key when power is applied. Refer to the Installation, Operation and Maintenance guide.

SetV:100.0%
Angle: 99.3%

Manual: OFF
Angle: XX.XX%
**   K2 OFF**

For more support documents, video and general product information visit www.avactautors.co.uk.

To view other Firmware guides for Modulating actuators and Series 200-400, click on the image of the actuator. As we update our Firmware guides, we will make superseded versions available for download on our website.

English version. Available in Spanish