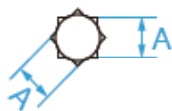
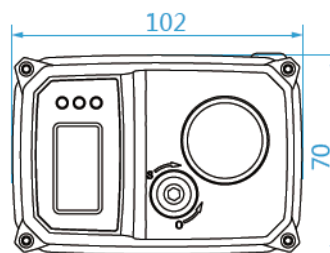
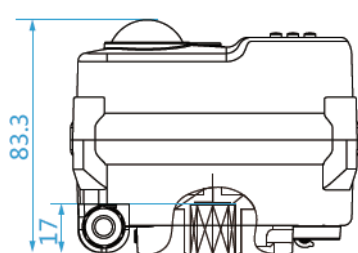


QUARTER TURN ELECTRIC ACTUATOR

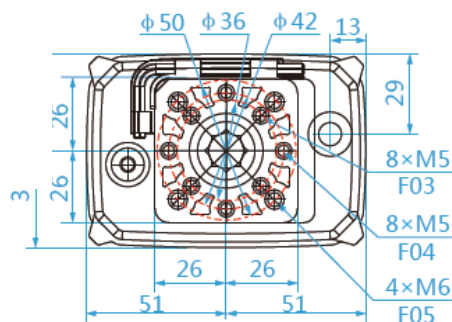
AVA-S20.10 SMART ON-OFF 20Nm




Model	AVA-S20.10 20Nm MULTI-VOLTAGE SMART ON-OFF ELECTRIC ACTUATOR	
	High voltage	Low voltage
Rated Voltage	230V AC/DC	24V AC/DC
Voltage Range	AC 95-265V 50/60Hz, DC 100-300V	AC 18-26V 50/60Hz, DC 2-32V
Consumption	9.6W run, 0.12W hold	9.6W run, 0.85W hold
Peak current	35mA (AC230V), 75mA (DC110V) for 5ms	350mA (DC 24V) for 5ms
Fuse	1A	2A
Maximum Break Torque Nm	20	20
Run & Reseat Torque Nm	15	15
Manual operation	Yes, by hexagonal wrench (supplied in clip) when no power is being applied	
Run time	≈ 10 sec	≈ 10 secs
STANDARD FEATURES:		
Operating frequency	Not continuous, 75% duty cycle but recommended to allow ≥ 1 minute between cycles	
Position sensing	Magnetic with digital sensing. No mechanical cams fitted.	
Maximum angle of rotation	330° ±5°	
Position indication (visual)	2 colour (red/ yellow) dome for local visual confirmation	
End Position indication	2 x Electronic relay	
Mounting restriction	None, can be mounted at any angle. Leave room for space to operate manually, and for electrical connection	
ISO:5211	F03 & F05 (+ F04 which mounts at 45 degrees)	
Female drive	11mm octagon x 17mm deep	
Ingress protection	IP67, recommend cover provided if exposed to direct rain or sun	
Max media temp	≤ 80C	
Ambient temp	-20 to +60C (ABS) -20 to +80C (Aluminium)	
Non-operating temp	≤ -40C to ≥80C	
Ambient humidity	5-95% RH non-condensing	
Explosion proof	No, absolutely prohibited. Do not use in hazardous areas	
Shock Resistance	≥300m/S2	
Vibration	10 to 55Hz, 1.5mm double amplitude (product damage most likely if exceeded)	
VNoise level	Around 50dB	
Flame Retardant Level	V0 using the UL94 Test method	
Certification	CE	
Maintenance	Maintenance free	
Cable Entry	Cable gland provides, actuator pre-wired with approx. 0.5m flying lead	
Housing	Plastic (ABS) cover	
Weight	With standard ABS housing 0.62kg (With optional aluminium housing 0.82kg)	



A = 14mm (11mm option)



PART NUMBERING

Model	Voltage	Cover	Heater	Control of on-off function		
AVA-S20.10-	5 AC 230V or	P Plastic (ABS)	O None	E SPDT. Switchable +ve/ live	Relay end of travel confirmation	
	5 AC 110V	A Aluminium	H 2W/24kΩ	F SPDT. Switchable +ve/ live	Relay end of travel confirmation with alarm	
	6 AC 24V or			G SPST. Make/ break +ve/ live	Relay end of travel confirmation	
	6 DC 24V			H SPST. Make/ break +ve/ live	Relay end of travel confirmation with alarm	
	Multi-voltage:			K 2 x SPST. Make/ break +ve/ live	Relay end of travel confirmation with alarm	
	95-265V AC/DC			M 2 x SPST. Make/ break +ve/ live	4 Positions. No end of travel confirmation	
	24V AC/DC			N 2 x SPST. Make/ break +ve/ live	3 Position. Relay end of travel confirmation with alarm	

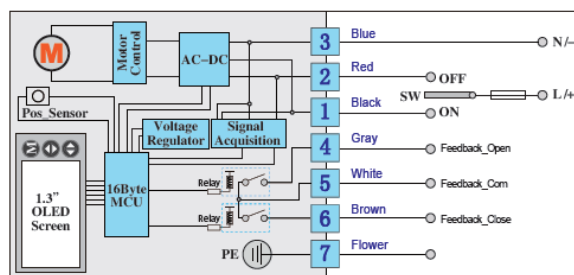
NOTE: UK STANDARD STOCK IS WITH WIRING 'E', ANY OTHERS ARE FACTORY OPTIONS.

STANDARD WIRING DIAGRAM

AVA-S20.10 20Nm SMART ON-OFF ELECTRIC ACTUATOR



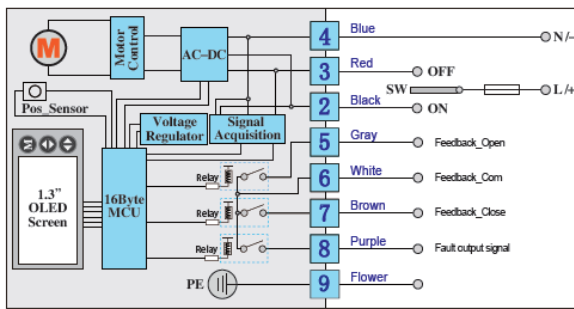
AVA-S20.10 ON-OFF WIRING 'E'



SW	Valve Position	Confirmation	Notes
OFF	Closed	5 & 6 connected	No signal without external power.
ON	Open	5 & 4 connected	No signal mid-travel

NOTE: UK STANDARD STOCK IS THIS WIRING, OTHERS ARE FACTORY OPTIONS.

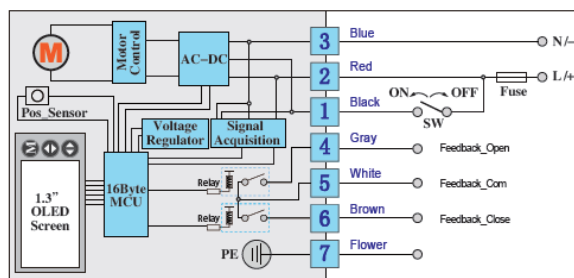
AVA-S20.10 ON-OFF WIRING 'F'



SW	Valve Position	Confirmation	Notes
OFF	Closed	6 & 7 connected	No signal without external power.
ON	Open	6 & 5 connected	No signal mid-travel
ALARM		6 & 8 connected	Output advises fault situation

NOTE: THIS WIRING IS A FACTORY OPTION

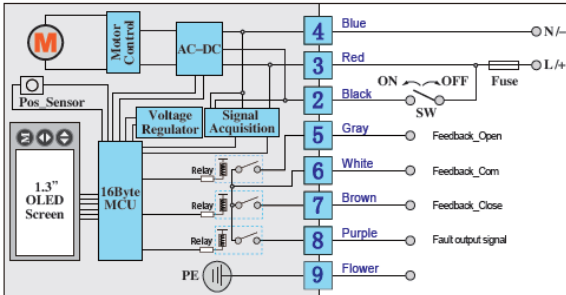
AVA-S20.10 ON-OFF WIRING 'G'



SW	Valve Position	Confirmation	Notes
OFF	Closed	5 & 6 connected	No signal without external power.
ON	Open	5 & 4 connected	No signal mid-travel

NOTE: THIS WIRING IS A FACTORY OPTION

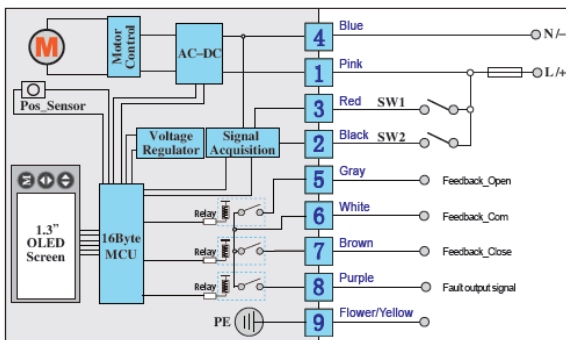
AVA-S20.10 ON-OFF WIRING



SW	Valve Position	Confirmation	Notes
OFF	Closed	6 & 7 connected	No signal without external power.
ON	Open	6 & 5 connected	No signal mid-travel
ALARM		6 & 8 connected	Output advises fault situation

NOTE: THIS WIRING IS A FACTORY OPTION

AVA-S20.10 ON-OFF WIRING 'K'

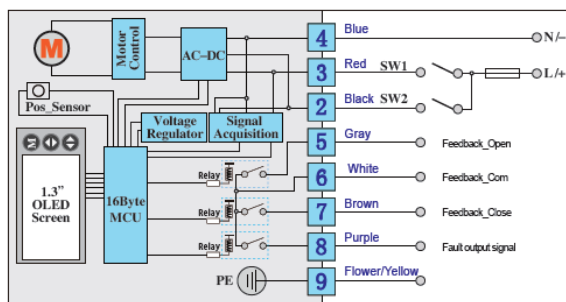


3 POSITION

SW 1	SW 2	Valve Position	Confirmation	Notes
OFF	OFF	Closed	6 & 7 connected	No signal without external power. No signal mid-travel.
ON	OFF	Closed	6 & 7 connected	
OFF	ON	Open	6 & 5 connected	3rd Position. Factory set at 45° Adjustable between 10 & 90% by local controls.
ON	ON	3rd Position	No confirmation	
ALARM			6 & 8 connected	Output advises fault situation.

NOTE: THIS WIRING IS A FACTORY OPTION

AVA-S20.10 ON-OFF WIRING

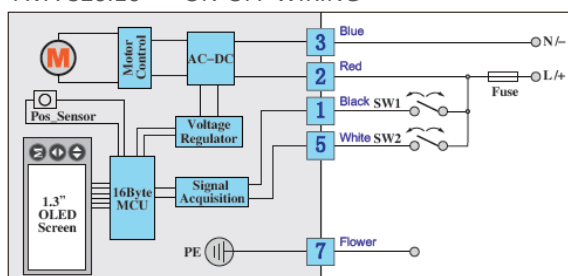


3 POSITION

SW 1	SW 2	Valve Position	Confirmation	Notes
ON	OFF	Closed	6 & 7 connected	No signal without external power. No signal mid-travel.
OFF	ON	Open	6 & 5 connected	
ON	ON	3rd Position	No confirmation	3rd Position. Factory set at 45° Adjustable between 10 & 90% by local controls.
ALARM			6 & 8 connected	Output advises fault situation.

NOTE: THIS WIRING IS A FACTORY OPTION

AVA-S20.10 ON-OFF WIRING

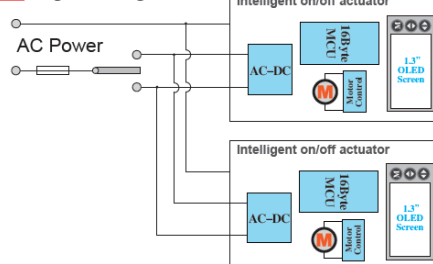


4 POSITION

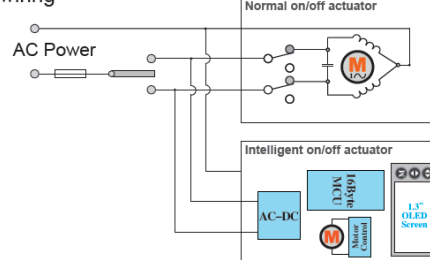
SW 1	SW 2	Valve Position	Confirmation	Notes
OFF	OFF	Closed	No confirmation	Fully closed
OFF	ON	Position 2	No confirmation	Opens 30% \pm 10%
ON	OFF	Position 3	No confirmation	Opens 60% \pm 10%
ON	ON	Open	No confirmation	Fully Open
ALARM			No alarm	

NOTE: THIS WIRING IS A FACTORY OPTION

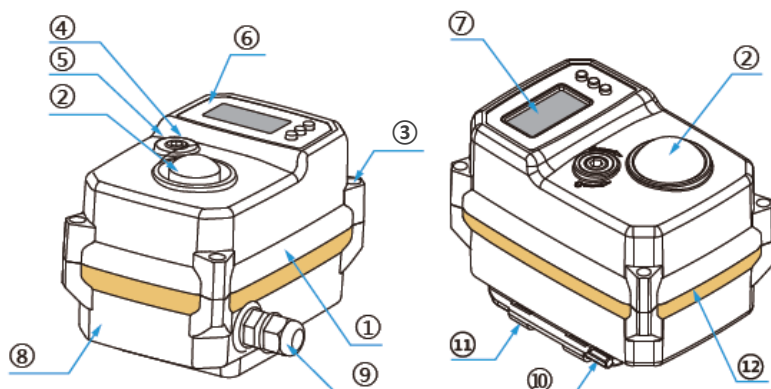
☒ Right wiring



X Error wiring



Note on wiring multiple actuators. Do not control AVA basic and Smart actuators in parallel using the same contactor.



No	PART	MATERIAL
1	Housing	Aluminium base, ABS cover
2	Indicator	Clear plastic
3	Cover screws	304SS
4	Override drive	304SS
5	Seal	NBR
6	Screen cover	Rubber
7	Screen	OLED
8	ID Label	PVC
9	Connector	Plastic
10	Allen key	Tool steel
11	Allen key clip	ABS
12	Cover seal	NBR

Overview: All AVA smart electric actuators have local controls as standard which combine an OLED screen and 3 positive feel push buttons to create local control and a variety of user friendly adjustments. The bright screen with blue letters on a black background are easy to read, and the use of the push buttons to adjust settings is intuitive. The local controls require power to be applied to the actuator to operate.

Local controls:



M button is used to enter and switch menus.
K2 is used in conjunction with K3 for adjusting values.
K3 is used for changing settings, navigating menus, exiting and saving.
OLED Screen with clear blue letters against a black background

Standard local control function options:

MANUAL CONTROL	The AVA smart actuator can be opened and closed using the K2 and K3 buttons
DEAD BAND	Adjusts the accuracy and sensitivity
SPEED CONTROL	The working time can be increased either by setting a step timer (run/stop/run/stop), or continuous running adjusting the PWM
CLOSED POSITION	Small adjustments can easily and quickly be made to the final close position angle (zero adjustment).
REVERSE ACTING	Receiving an open command signal sends the AVA smart actuator to the closed position and vice versa
EXTEND ANGLE	Adjust the open position by adjusting the span. Typically used to set 0-180 degree operation
3 POSITIONS	Sets the 3rd position (subject to wiring system)