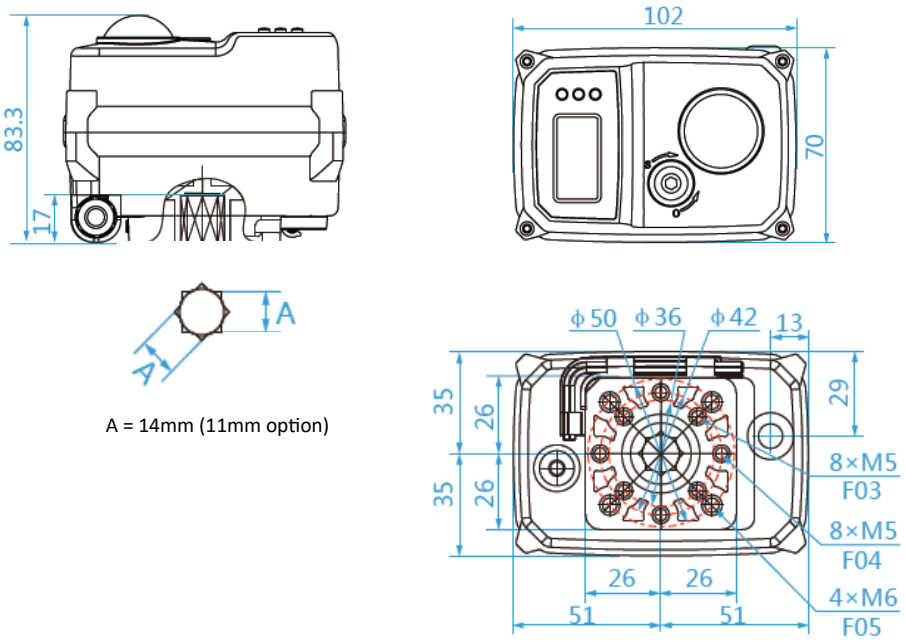
COMPACT QUARTER TURN SMART ELECTRIC ACTUATOR

AVS-S20.14 SMART ON-OFF FAILSAFE 15Nm

Model	AVS-S20.14 15Nm 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, DC2 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)	
Noise 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)	
Weight	With standard ABS housing 0.62kg (With optional aluminium housing 0.82kg)	

DIMENSIONS	AVS-S20.14 15Nm SMART ON-OFF FAILSAFE ELECTRIC ACTUATOR

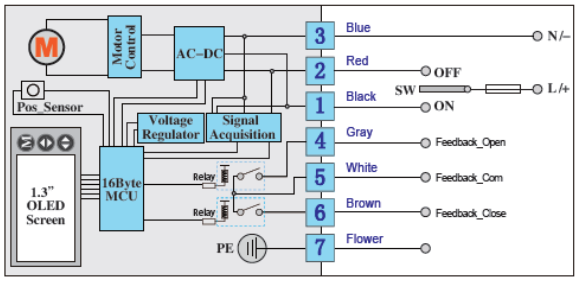


PART NUMBERING	AVS-S20.14 15Nm SMART ON-OFF FAILSAFE ELECTRIC ACTUATOR

Model	Voltage	Housing	Heater	Control of on-off function
AVS-S20.14-	5 AC 230V or	P Plastic (ABS)	0 None	E SPDT. Switchable +ve/ live Relay end of travel confirmation
	5 AC 110V	A Aluminium	H 2W/24kΩ	G SPST. Make/ break +ve/ live Relay end of travel confirmation
	6 AC 24V or			
	6 DC 24V			*NOTE: UK STANDARD STOCK IS WITH WIRING 'E', ANY OTHERS ARE FACTORY OPTIONS.*
	Multi-voltage:			
	95-265V AC/DC			
	24V AC/DC			

STANDARD WIRING DIAGRAM	AVS-S20.14 15Nm SMART ON-OFF FAILSAFEELECTRIC ACTUATOR

AVS-S20.14 ON-OFF WIRING 'E'

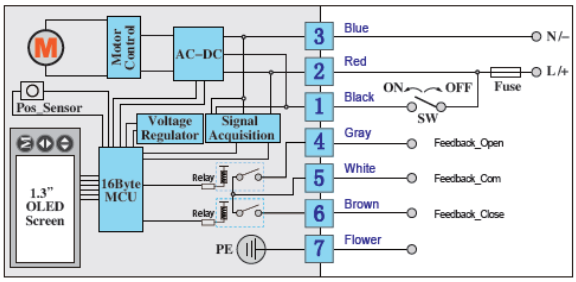


SW	Valve Position	Confirmation	Notes
OFF	Closed	5 & 6 connected	No signal without external power. No signal mid-travel
ON	Open	5 & 4 connected	

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

WIRING OPTIONS	AVS-S20.14 15Nm SMART ON-OFF FAILSAFE ELECTRIC ACTUATOR

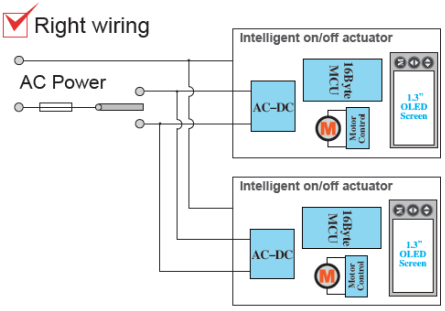
AVS-S20.14 ON-OFF FAILSAFE WIRING 'G'



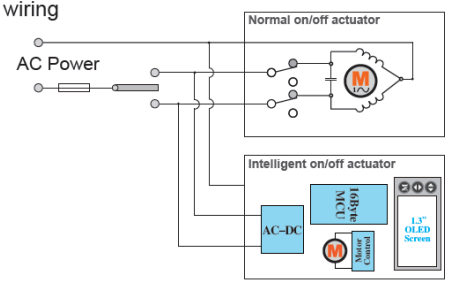
SW	Valve Position	Confirmation	Notes
OFF	Closed	5 & 6 connected	No signal without external power. No signal mid-travel
ON	Open	5 & 4 connected	

NOTE: THIS WIRING IS A FACTORY OPTION

☑ Right wiring

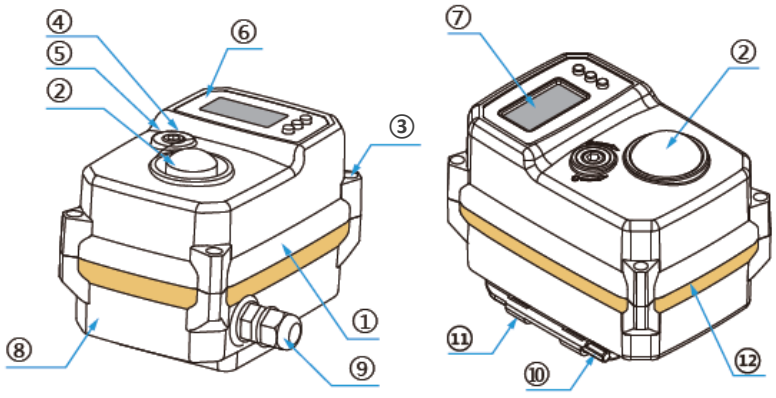


☒ Error wiring



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

MATERIALS	AVS-S20.14 15Nm SMART ON-OFF FAILSAFE ELECTRIC ACTUATOR

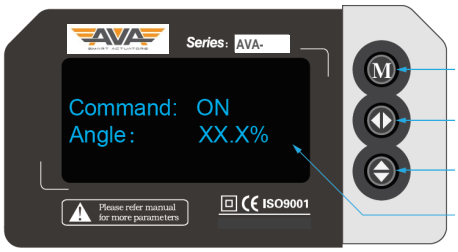


No	PART	MATERIAL
1	Housing	Aluminium base, ABS cover
2	Indicator	Clear plastic
3	Cover screws	304SS
4	Override drive	304SS
5	Seal	NBR
6	Screen cover	Rubber
7	Screen	OLED
8	ID Label	PVC
9	Connector	Plastic
10	Allen key	Tool steel
11	Allen key clip	ABS
12	Cover seal	NBR

LOCAL CONTROLS	AVS-S20.14 15Nm SMART ON-OFF FAILSAFE ELECTRIC ACTUATOR

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)