



Type: EA-2105E

AVS Smart actuator shown direct mounted to 2" stainless ball valve



Very compact design

AVA Basic Modulating electric actuator features:

- Compact size.
- Fully weatherproof basic industrial actuator.
- All external electrical connections, no need to remove cover .
- Individual voltage motors.
- Position setting using cams and micro-switches.
- Manual override facility.
- Electronic torque limiter.
- Thermostatic anti-condensation heater.
- End of travel switches for remote open/ closed indication.
- CE Marked.
- ABS housing (aluminium option).

Ball valve information:

Full bore 3 piece construction offers in-line maintenance and provides full unrestricted flow and a very low pressure drop across the ball valve. Designed for automation with integrally cast ISO5211 actuator mounting platform. Anti-static device fitted. Turning the ball through 90° fully opens the valve, turning back through 90° fully closes the valve and isolates the flow. End connections are threaded BSP female. NPT, butt weld and socket weld ends are available as an option.

Typical KV Values

Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
KV	6	10	24	43	83	130
Size	1 1/2"	2"	2 1/2"	3"	4"	-
KV	205	340	520	1100	1820	-

$K_v = m^3$ per hour with a 1 bar pressure drop across the valve

CV = US gallons per hour with a 1psi pressure drop across the valve

$C_v = K_v / 0.86$

AVA Smart Failsafe electric actuator features:

- Compact size.
- Multi-function OLED Screen
- External push buttons for local parameter setting & local control
- Fully weatherproof smart industrial actuator.
- All external electrical connections, no need to remove cover .
- Multi-voltage power supply.
- Position control uses digital magnetic electronics, no cams.
- Manual override facility.
- Electronic torque limiter.
- Thermostatic anti-condensation heater.
- End of travel relays for remote open/ closed indication.
- CE Marked.
- ABS housing (aluminium option).
- Internal digital positioner system installed

Applications:

Potable water (ball valve is not WRAS approved), oil, air and many corrosive media, subject to compatibility with wetted parts in contact with media.

AVA Electric actuators sized on a maximum differential pressure of 10 bar wet service, operated at least once per day. If the intended duty differs from these parameters, or is dry (air or gas) call to check AVA actuator sizing as a larger output AVA valve actuator may be required.

Maximum working temperature of a direct mounted assembly is +70C. For higher working temperatures , consider models that have a mounting kit or TSM stem extension between the valve and actuator which uses air cooling to dissipate the rising heat from the valve away from the actuator. Should the AVA smart actuator see more than +70C it will malfunction.

AVA Electric Actuator Function: POWER OPEN - POWER CLOSE , FAILS SAFE ON POWER FAILURE


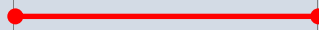



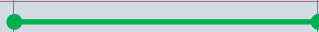
Specifications:

	AVA BASIC ACTUATOR	AVA SMART ACTUATOR
Actuator housing	-	ABS
Supply voltage range	-	12-24V AC/DC 85-265V AC/DC
Motor Control	-	Magnetic digital position sensing & control
Position Confirmation	-	Electronic relays
IP Rating	-	IP67
Actuator temp limits	-	-20 to +60°C
Control Signal	-	4-20mA, 0-10V, (Options:2-10V, 0-20mA)
Assembly temp limits	Not available with modulating function	EAS-2104E +60°C AVA Direct mounted
		EAS-2114E +95°C AVA mounted via kit
Valve body	-	Nickel plated brass
Valve ball	-	Chrome plated brass
Valve seats	-	PTFE
Valve seals	-	NBR
Ends	-	Screwed BSPP
Valve Pressure rating	-	UT1 1" 40 bar at ambient temp
Valve temp limits	-	-20 to +120°C
Valve Size range	-	1/4" to 3"

Wiring Diagrams:

Note: AVA Model 20 actuator supplied with approx 0.75m flying lead (9 colour coded cores as per wiring diagram below).

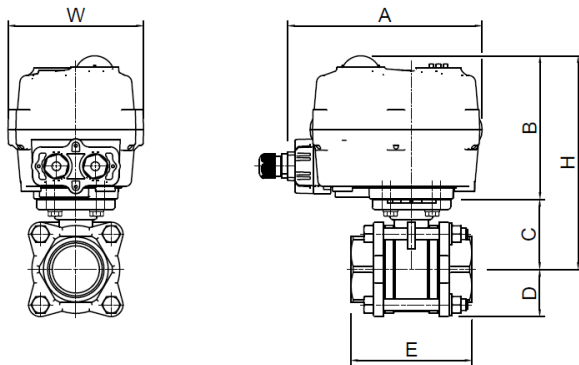
UK Stock wiring:

Neutral	Blue wire		N / -	MOTOR CONTROL
Live	Red wire		L / +	
Control Signal Output/ Feedback	Brown wire		-	CONTROL SIGNAL I/O (Typically 0-10V or 4-20mA)
Control (-)	White wire		-	
Control (+)	Grey wire		+	
Earth	Green wire		E	EARTH

AVA Electric Actuator Function: POWER OPEN - POWER CLOSE , FAILS SAFE ON POWER FAILURE

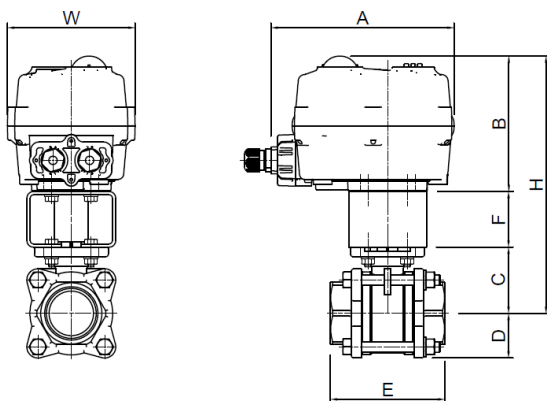
Typical Dimensions: Note: Overall dimensions are the same for basic and smart AVA actuators

Type: EA-2105E AVA Actuator (60Nm) direct mounted to valve



	Model	A	B	C	E	H	W	Kilos
1/4"	20	102	88		48		70	1.0
3/8"	20	102	88		48		70	1.0
1/2"	20	102	88		56		70	1.1
3/4"	20	102	88		73		70	1.5
1"	20	102	88		82		70	1.7
1 1/4"	20	102	88		91		70	2.5
1 1/2"	60	165	122		104		115	4.7
2"	60	165	122		120		115	5.8
2 1/2"	60	165	122		155		115	11.0
3"	110	165	122		182		115	15.0
4"	110	165	122		220		115	22.0

Type: EA-2115E AVA Actuator (60Nm) fitted to valve via a bracket and drive adapter



	Model	A	B	C	E	F	H	W	Kilos
1/4"	20	102	88		48	50		70	1.3
3/8"	20	102	88		48	50		70	1.3
1/2"	20	102	88		56	50		70	1.4
3/4"	20	102	88		73	50		70	1.8
1"	20	102	88		82	50		70	2.0
1 1/4"	20	102	88		91	50		70	2.8
1 1/2"	60	165	122		104	50		115	5.0
2"	60	165	122		120	50		115	6.1
2 1/2"	60	165	122		155	70		115	11.5
3"	110	165	122		182	70		115	15.5
4"	110	165	122		220	70		115	22.5

AVA Electric Actuator Function: POWER OPEN - POWER CLOSE , FAILS SAFE ON POWER FAILURE

Brief Comparison Between AVA Models:

AVA BASIC ACTUATOR	FEATURE	AVA SMART ACTUATOR
		
ABS plastic (aluminium base)	Housing	ABS plastic (aluminium base)
Internal cams and micro-switches	Motor Control	Digital magnetic position sensing
Internal cams and micro-switches	Position Confirmation Signal	Electronic relays
Dome mechanical indicator	Position Confirmation Visual	Dome mechanical indicator + OLED screen
IP67	Weatherproof	IP67
Yes, pre-wired	Anti-condensation Heater	Yes, pre-wired
-20°C to +60°C	Ambient Temperature	-20°C to +60°C
24VDC, 24VAC, 110VAC, 240VAC	Voltages/ Range	24V AC/DC or 95-265V AC/DC
Yes, with supplied hexagon tool	Manual Override	Yes, with supplied hexagon tool
Pre-wired with multi-colour 0.8m cable	Electrical Connection	Pre-wired with multi-colour 0.8m cable
F03, F04 (at 45°), F05 x 14mm octagon	Valve Mounting	F03, F04 (at 45°), F05 x 14mm octagon
Not available	Local Control	Yes with OLED screen and 3 push buttons
Remove cover and adjust cams	Working Angle Control	Yes with OLED screen and 3 push buttons
Not available	Speed Control	Yes with OLED screen and 3 push buttons
Not available	3 Position Control	Yes with OLED screen and 3 push buttons
	OPTIONS	
Yes	Aluminium Cover	Yes
Yes, by capacitor	Failsafe	Yes, by capacitor
Not available	Fast Acting	Yes, 1 second working time (90°) 24VDC only
Not available	Modulating	Yes, 0-10V, 2-10V, 4-20mA, 0-20mA
Not available	Bus Communications	Yes, Modbus, Profibus, Canbus
Not available	Wireless	Yes, RF Ocean, RF-Lora
Not available	Timer	Yes
Not available	Alarm Function	Yes