

AVA Electric Actuator Function: MODULATING WITH PROPORTIONAL CONTROL



Type: EA-2305E

AVS Smart actuator shown
direct mounted to stainless
3 way ball valve



Very compact design

AVA Compact Basic 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).

AVA Compact Smart Modulating electric actuator features:

- Compact size.
- Fully weatherproof basic 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.
- Control I/O with signal options 4-20mA, 0-10V
- CE Marked.
- ABS housing (aluminium option).

Ball valve information:

3 Way stainless steel ball valve changes the direction of flow in pipes. Designed for automation with integrally cast ISO5211 actuator mounting platform. Stainless steel body, ball and stem, PTFE seats. Anti-static device fitted. End connections are threaded BSP female.

L Port version diverts the flow, typically with inlet via the centre port and out via either the left, or right port.
T Port versions can either mix with all 3 ports connected, or divert with one position offering straight through flow.

Typical Kv Values

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Kv	13	15	31	39	62	103

Kv = m³ per hour with a 1 bar pressure drop across the valve
CV = US gallons per hour with a 1psi pressure drop across the valve
Cv = Kv / 0.86

Applications:

Potable water, oil, air and most non-corrosive media, subject to compatibility with wetted parts in contact with media. This assembly is NOT recommended for use on steam.

Valve 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), please call to check the actuator sizing as a larger output electric actuator may be required.

Maximum working temperature of a direct mounted assembly is +60C. For higher working temperatures , consider models that have a mounting kit between the valve and the AVA electric actuator which uses air cooling to dissipate the rising heat from the valve away from the actuator. Should the AVA electric actuator see more than +60C it will malfunction.


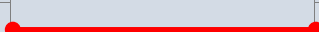

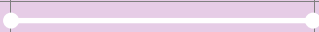


Specifications:

	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	-	0-10V, 4-20mA (Options 2-10V, 0-20mA)
Assembly temp limits	Not available with modulating function	EAS-2305 E +60°C AVS Direct mounted
	-	EAS-2315 E +120°C AVS mounted via kit
Valve body	-	CF8M Cast 316 Stainless Steel
Valve ball	-	316 Stainless Steel
Valve seats	-	RPTFE
Valve seals	-	PTFE/ Viton
Ends	-	Screwed BSP
Valve Pressure rating	-	UTI 2" 63 bar at ambient temp
Valve temp limits	-	-25 to +180°C
Valve Size range	-	1/2" to 2"

Wiring Diagrams:

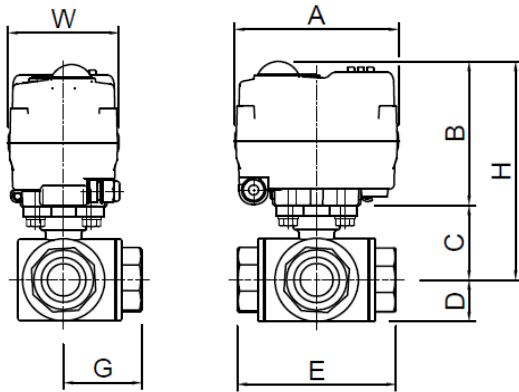
Note: AVS Model 20 actuator supplied with approx 0.8m flying lead (6 colour coded cores as per wiring diagram below).

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

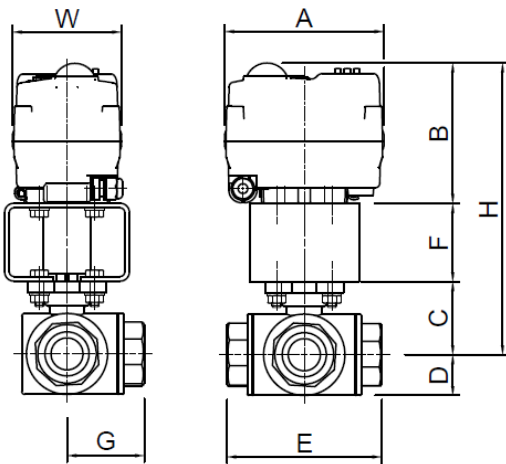
Typical Dimensions: Note: Overall dimensions are the same for basic and smart AVS actuators

Type: EA-2303E AVA Actuator direct mounted to valve, maximum working temperature +60C



	Model	A	B	C	E	H	W	Kilos
1/2"	20	102	90	37	75	127	70	1.53
3/4"	20	102	90	41	85	131	70	1.85
1"	20	102	90	47	100	137	70	2.30
1 1/4"	20	102	90	56	122	146	70	3.81
1 1/2"	60	165	122	60	131	182	115	5.80
2"	60	165	122	71	158	193	115	8.50



Type: EA-2313E AVA Actuator fitted to valve via a bracket and drive adapter, maximum working temperature +120C



	Model	A	B	C	E	F	H	W	Kg
1/2"	20	102	90	37	75	50	177	70	2.1
3/4"	20	102	90	41	85	50	181	70	2.4
1"	20	102	90	47	100	50	187	70	2.9
1 1/4"	20	102	90	56	122	50	196	70	4.5
1 1/2"	60	165	122	60	131	50	232	115	6.4
2"	60	165	122	71	158	70	263	115	9.5

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Brief Comparison Between AVS Compact Actuator Models:

AVA BASIC ACTUATOR	FEATURE	AVSA 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°)
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