

**AVA**

**A80**  
**electric actuator**



# SPECIFICATIONS

High torque design electric actuator for rotary valves

100 to 9,000 Nm output torque for both on-off and modulating type actuators

Waterproof (NEMA 4, 4X, IP67), optional watertight IP68

AVA controls combines years of proven success and innovative engineering, has produced the A80 actuator. This compact, high performance electric actuator for rotary valves delivers highly reliable service.

A80 actuators mount direct to AVA valves without using external linkage. The mounting pattern complies with ISO5211.



## MOTOR (A)

A80 shall have a 110 or 220VAC 50/60Hz  $\pm$  10% single phase motor as standard. The 380 or 440VAC 50/60Hz  $\pm$  10% three phase motor and 24VDC motor shall be available upon request. Motor insulation shall be Class F or better. The motor shall contain a built-in thermal overload protector of a bi-metallic strip in the windings set at high 150C  $\pm$  5% or low 97  $\pm$  5% with automatic reset.

## DUTY CYCLE

The duty cycle for intermittent on-off operation shall be 30%, the continuous duty actuator with servo shall be rated 50%.

## SPUR GEAR SYSTEM

A80 shall have a self locking gear train consisting of a worm and worm gear output drive mechanism. The spur gear train shall have precision cut multi-staged gears which will withstand locked rotor conditions. The gear train is permanently lubricated at the factory.

## TERMINAL BLOCK (B)

The spring loaded push type block simplifies wiring connection.

## TRAVEL LIMIT SWITCHES(C)

A80 provides two SPDT switches 10A at 250VAC. Travel limit switches shall limit actuator in both the open and closed position of valve travel, provide the non-voltages feedback signals.

## TORQUE LIMITING SYSTEM (D)

With two SPDT mechanical switches 10A

at 250VAC calibrated at the factory. The switches independently respond to predetermined loads in both direction of travel. The switches operate at any point of actuator travel and shut down the unit if loads exceed the pre-set limit.

## O-RING SEAL FOR WATERTIGHT ENCLOSURE (E)

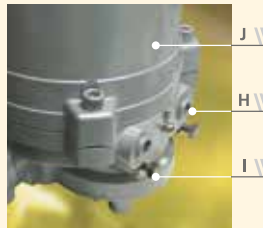
The large O-ring seal between the cover and base provides a waterproof enclosure and prevents internal corrosion. This O-ring seal is the best design for watertight enclosures.

## VALVE STATUS DISPLAY (F)

A80 features valve display to indicate the valve position throughout the full range of travel. Valve display with signal LED unit is optional. A80 has a highly visible clear polycarbonate display prominently labeled and color coded to indicate valve position.

## MANUAL OVERRIDE (G)

Upon power outage, A80 actuators shall be equipped with an aluminum manual override handwheel to rotate the valve in the desired position.



## CONDUIT ENTRIES (H)

A80 shall have two conduit entries PF 3/4".

## MECHANICAL TRAVEL STOPS (I)

Two mechanical stainless steel travel stops shall limit the actuator movement to specific degrees of rotation.

## ENCLOSURE (J)

The die-cast aluminum enclosure shall be waterproof (NEMA 4, 4X, IP67) rated and high quality polyester powder coated for exceptional corrosion, wear and impact. Optional explosion proof (Exd IIB T4), watertight IP68.

## TEMPERATURE RATING

A80 actuators shall be designed for temperature ranges of -20°C to +70°C.

## ANTI-VIBRATION

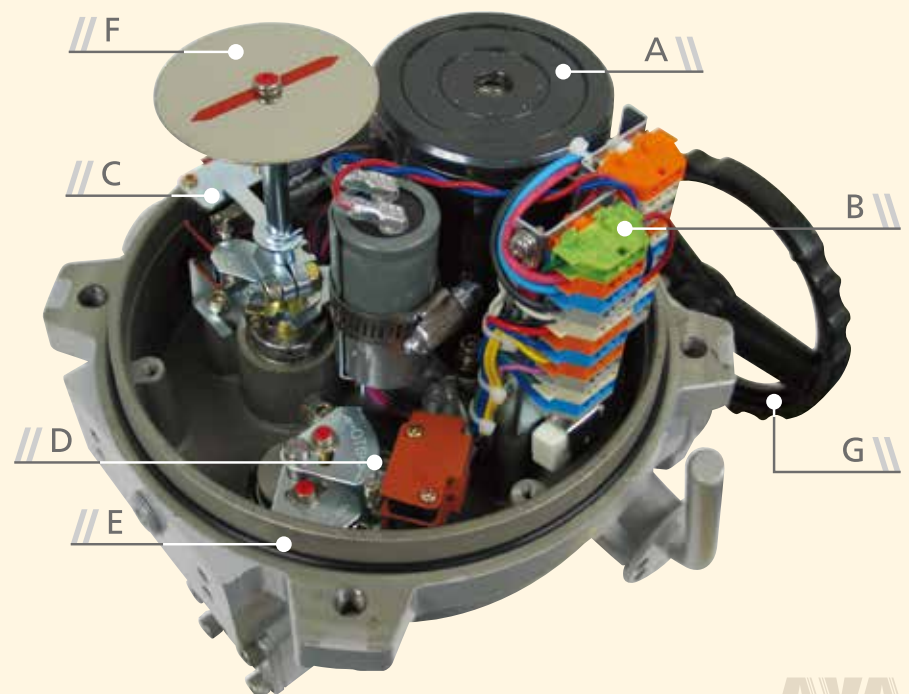
A80 can resist the vibration at XYZ 10g, 02-34Hz, 30 minutes

## HEATER

A80 has a pre-wired heater with thermostat control to prevent condensation buildup. Rated output is 5W at 110 or 220VAC.

## SERVO

A servo provides precise modulating control of valve position. A solid state circuit board compares the input signal with the feedback potentiometer signal and drives the actuator until a balance is reached. Input and output signals: 4-20mA, 0-10 VDC and 2-10VDC.

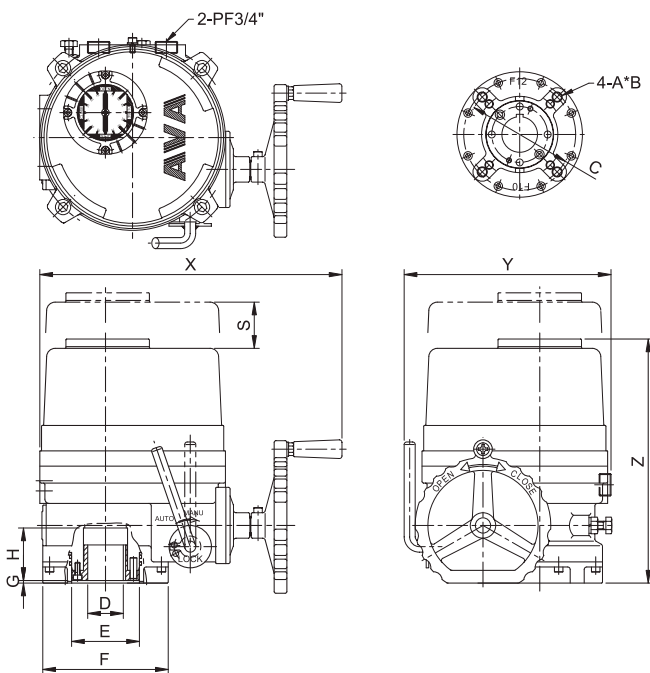


# DIMENSIONS

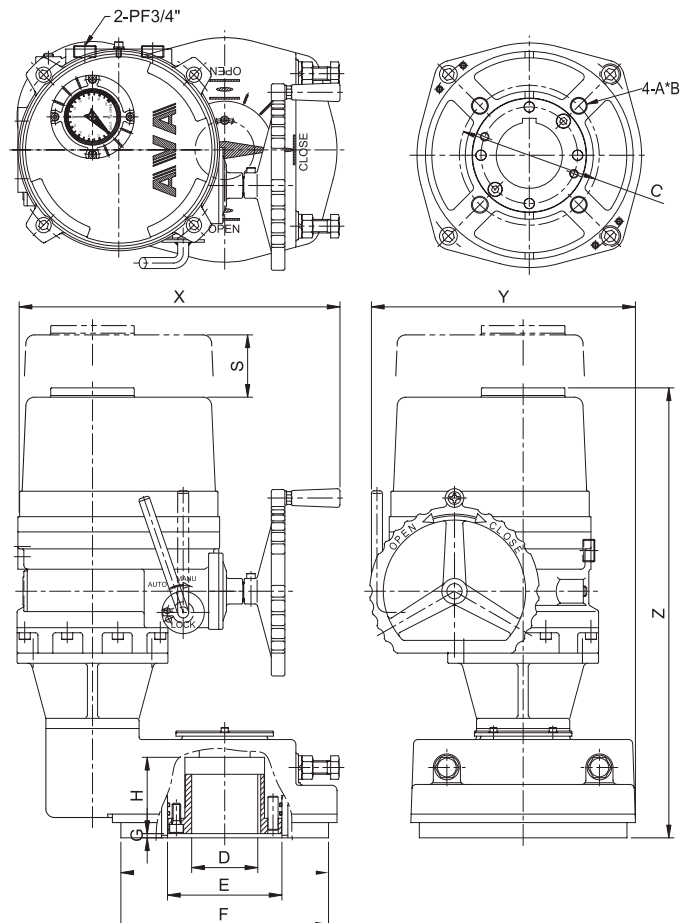
Models	Base ISO 5211	A	ø D (MAX)	ø E	ø F	G	H	S	X	Y	Z
	ø C	B									
A80-010	F07 ø 70	M8 14	22	50	88	3	37	100	258	172	220
A80-016 A80-024	F07 / F10 ø 70 / ø 102	M8 / M10 14 / 17	25	58.5	125	3	57	115	338	229	259
A80-035 A80-050	F10 / F12 ø 102 / ø 125	M10 / M12 17 / 21	40	80	148	3	62	145	357	244	288
A80-080 A80-110	F12 / F14 ø 125 / ø 140	M12 / M16 20 / 25	48	95	178	3	67	170	380	287	313
A80-200 A80-300	F16 ø 165	M20 32	75	135	226	5	90	225	440	375	385
A80-600 A80-900	F25 / F30 ø 254 / ø 298	M16 / M20 30 / 35	120	216	350	5	114	225	516	417	668

Dimensions are in millimeters

## A80-010 to A80-300



## A80-600 to A80-900

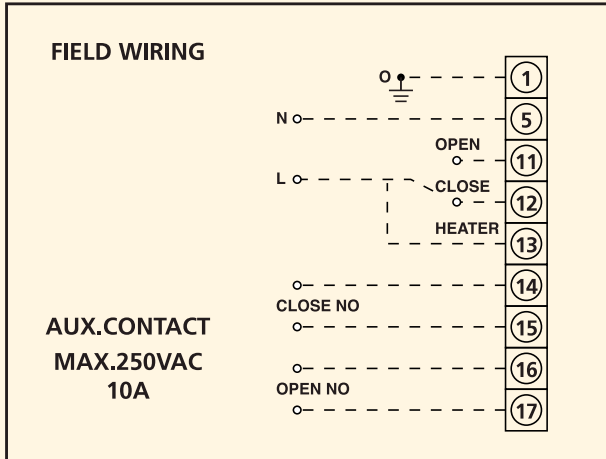


# TECHNICAL DATA

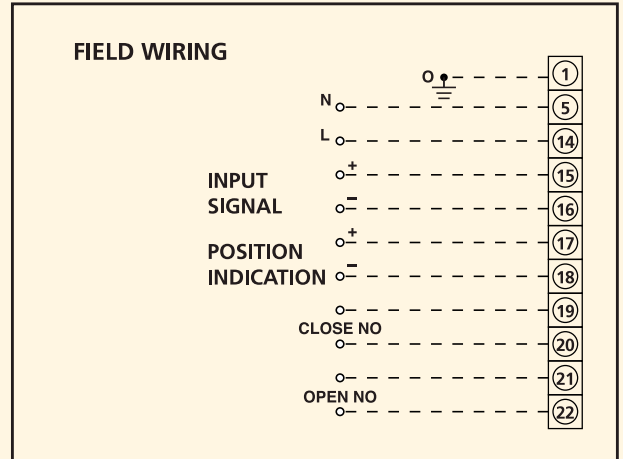
Models	Torque output Nm	Speed for 90° operation On-Off(seconds)		Current (A) 50/60 Hz				AVA valve sizes for direct mounting	Weight kgs
		50Hz	60Hz	Single phase motors		Three phase motors			
				110V	220V	380V	440V		
A80-010	100	21	18	0.98/1.10	0.52/0.58	0.43/0.33	0.59/0.42	2" to 6"	7
A80-016	160	26	22	1.60/1.70	0.85/0.90	0.30/0.30	0.30/0.32	2" to 6"	15
A80-024	240	26	22	1.62/1.72	0.87/0.90	0.32/0.32	0.32/0.35	2" to 8"	15
A80-035	350	31	26	1.72/1.80	0.92/0.95	0.32/0.32	0.32/0.35	8" to 10"	20
A80-050	500	31	26	3.60/3.90	1.50/1.60	0.52/0.56	0.55/0.58	8" to 12"	20
A80-080	800	39	32	3.90/4.20	2.05/2.20	0.82/0.88	0.82/0.88	8" to 14"	25
A80-110	1100	39	32	3.90/4.30	2.15/2.30	0.84/0.90	0.84/0.88	8" to 16"	25
A80-200	2000	59	50	N/A	2.95/3.15	1.5/1.8	2.3/2.2	18" to 20"	42
A80-300	3000	59	50	N/A	3.75/3.85	1.6/2.0	2.5/2.4	18" to 20"	42
A80-600	6000	178	149	N/A	2.95/3.15	1.5/1.8	2.3/2.2	24" to 30"	152
A80-900	9000	178	148	N/A	3.75/3.85	1.6/2.0	2.5/2.4	28" to 36"	152

24VDC available as an option (A80-050 or below), please consult the factory.

## On-Off Models A80-016 to A80-900



## Modulating Models A80-016 to A80-900



The data presented in this bulletin is for general use only.

Consult AVA Controls representatives or factory for the specific performance data and material selection for your particular applications.



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