

A-Series Industrial Electric Actuators AUMA (21,300 and 40,680 lb-in)



Description A-Series Industrial Electric AUMA actuators provide precise, durable control of quarter turn Siemens resilient seat butterfly valves. The compact industrial housing is rated to NEMA 6P (IP 68) standards for outdoor use. All models include integrated controls and a manual override handwheel.

The standard AUMA models are 120V single phase. All AUMA actuators include six auxiliary switches, torque switches, a position indicator and a heater. Modulating units provide position feedback as standard.

- Features**
- Compact, lightweight design and direct mounting
 - Manual, declutchable override handwheel
 - Position and motion indicator lights
 - Push button controls
 - CE Certified
 - On/off or modulating control
 - Output torque 21,300 lb-in (2,407 Nm) to 40,680 lb-in (4,596 Nm)
 - ISO 5210 for direct mounting
 - All actuators include a heater to prevent condensation build-up
 - All modulating units include a feedback potentiometer

Ordering Actuators can be ordered separately or together with a valve as an assembly.

Product Numbers Table 1. A-Series AUMA Industrial Electric Actuators, 120V.

Product Number	Operating Mode	Voltage 50/60 Hz	Torque		90° Stroke Time*	Current Draw (Amps)	
			(lb-in)	(Nm)		Full Load	Locked Rotor
A226.21K	On/Off	120 Vac	21,300	2,407	60 sec.	6.5	14
A226.41K			40,680	4,596			
A266.21K	Modulating		21,300	2,407			
A266.41K			40,680	4,596			

* Operating times shown are with 60 Hz power supply. Actuators with 50 Hz power supply will be 20% slower

Warning/Caution Notations

WARNING:		Personal injury or loss of life may occur if you do not perform a procedure as specified.
CAUTION:		Equipment damage may occur if you do not perform a procedure as specified.



CAUTION:

Do not install or use the A-Series Industrial Electric Actuator in or near environments where corrosive substances or vapors could be present. Exposure of the electric actuator to corrosive environments may damage the internal components of the device and will void the warranty.

Application

These actuators are ideal for use on valves for chillers, cooling towers, boilers, heat exchangers and other outdoor applications. The actuators' advanced electronics assure reliable compatibility with virtually any analog control signal used in today's building automation and temperature control systems. The NEMA 6P rated housing prevents any water ingress in outdoor applications. The built-in heater prevents any condensation build-up inside the housing.

NOTE: Use a "liquid tight" conduit connector to maintain NEMA 6P rating.

Specifications

Operating Conditions	Ambient Temperature	-22°F to 158°F (-30°C to 70°C)
	Fail Position	Loss of supply power - fail-in-place
	Duty Cycle	On/Off – 15 min. continuous, max. six starts/minute Modulating – 25% intermittent duty
Physical Description	Motor	120 Vac, Single-Phase, Reversible, Permanent Split Capacitor Induction Motor
	Motor Protection	1 Ph-1 thermal switch 284°F (140°C) Class F insulation, tropicalized winding
	Control Voltage	A226.21K and A226.41K: 120 Vac A266.21K and A266.41K: Input 4 to 20 mA Modular Power Supply 24 Vdc
	Output Aux. Voltage	A226.21K and A226.41K: 115 Vac – 30 mA A266.21K and A266.41K: 24 Vdc – 100 mA
	Feedback Signal	4 to 20 mA
	Output Contacts	6 Output contacts: 6 NO/NC without common 5A
	Output Signals	Default setting: Fault, End pos. CLOSED End pos. OPEN, Selector sw. REMOTE, Torque fault CLOSE, Torque fault OPEN
	Terminal Strip	
	Power Terminals	8 to 10 AWG (6 to 10 mm ²)
	Controls Contacts	14 AWG (2.5 mm ²)
	Heater	24V Internal Supply (5 Watt)
	Dimensions	See Figure 3 and Figure 4.
	Weight	A2x6.21K – 165 lbs. (75 kg) A2x6.41K – 195 lbs. (88 kg)
	Enclosure	NEMA types 6P (IP68) Corrosion Protection: KS
Conduit entries	Plug/socket 100 mm, 2 × 3/4" NPT; 1 × 1-1/4" NPT	
Manual operation	To close the valve, turn handwheel clockwise. Drive shaft (valve) turns clockwise in close direction. 52:1 drive ratio	
Angle of Rotation	92° maximum	
Certifications	CE Certified CSA - Classes C322102 and C3221812 (available upon request)	

Product Numbers

Table 2. Product Numbers.

Use the product numbers in the following table to order a valve or a valve and actuator assembly. The valve product number consists of the type, action, valve size, disc type, and valve configuration. To order an assembly, add a (-) after the valve product number and then choose the application, actuator, voltage, control signal, end switches followed by a separator (.) and the actuator torque.

Sample:	B	2	02	F	C	-	S	A	1	2	6	.	600
Valve Type: Butterfly													
Action: 2 = 2-Way 3 = 3-Way													
Valve Size: 02=2", 25=2.5", 03=3", 04=4", 05=5", 06=6", 08=8" 10=10", 12=12", 14=14", 16=16", 18=18", 20=20", 24=24"													
Disc Type: F = Full Cut U = Under Cut													
Valve Configuration: 3-Way - A, B, C, D 2-Way O = Normally Open C = Normally Closed M = Valve assembly with manual operator													
Denotes Assembly													
Application: S = Standard Temp – Intermittent 250°F Operation H = High Temperature – Continuous 250°F Operation Blank = Siemens Commercial Actuator													
Actuator: A = Industrial Actuator GCA = Siemens SR Commercial Actuator GIB = Siemens NSR Commercial Actuator													
Voltage: 1 = 24V 2 = 120V													
Control Signal: 2 = 2-Position 3 = Floating (Commercial Actuators only) 6 = Modulating (0-10V)													
End Switches: 1 = No switches 6 = Switches													
Separator													
Actuator Torque (lb-in): 600=600, 1K=1200, 2K=2000, 3K=3000, 5K=5000, 6K=6500, 13K=13000, 18K=18000, 21K=21300, 41K=40680, 3U = Shaft adapter with 3-foot cable (Commercial Actuators only)													

Mounting and Installation

All A-Series industrial electric actuators are suitable for direct mounting on Siemens resilient seat butterfly valves.

NOTE:

The standard mounting position for the actuator is to orient the base of the actuator parallel to the pipeline.

- To mount an actuator on a vertical pipe, position the unit with the conduit entries on the bottom to prevent condensation from entering the actuator through its conduits.
- Use a “liquid tight” conduit connector to maintain NEMA 6P rating.

Service

The resilient seat butterfly valve and actuator are maintenance-free.

Wiring

CAUTION:



- When wiring an A-Series Industrial Electric Actuator for two-position (on/off) control and the power to the actuator is commanded to be off, you must ensure that there is no extraneous or leakage voltage between hot and common. Leakage voltage greater than 3 Vac can cause actuator failure.
- When wiring an A-Series Industrial Electric Actuator for two-position control, the controller should use at minimum a one-second time delay for command signal reversal. Instantaneous command reversals may cause actuator failure.

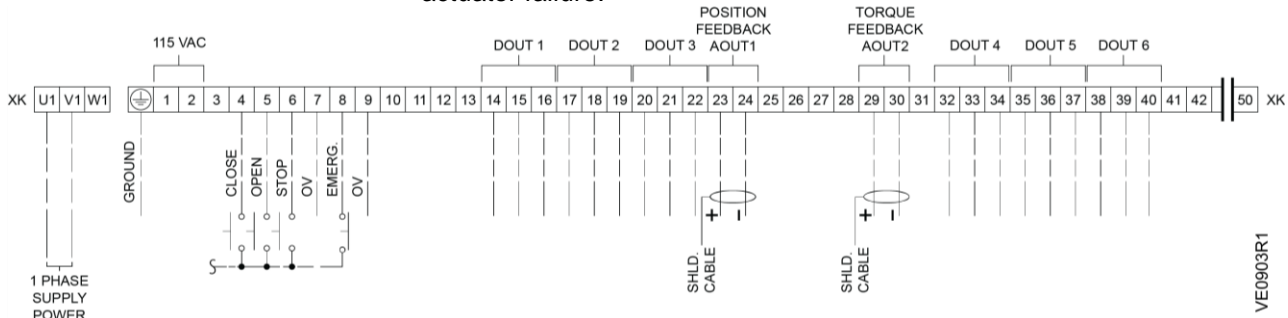


Figure 1.. On/Off.

NOTE:

Use this A-Series Industrial Electric Actuator only to control equipment under normal operating conditions. Where failure or malfunction of the electric actuator could lead to personal injury or property damage to the controlled equipment or other property, additional precautions must be designed into the control system. Incorporate and maintain other devices such as supervisory or alarm systems or safety or limit controls intended to warn of, or protect against, failure or malfunction of the electric actuator.

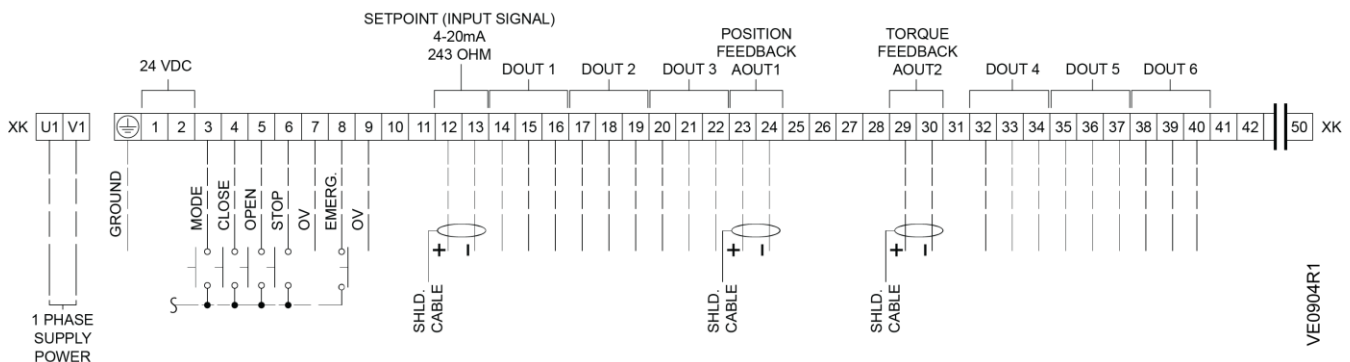


Figure 2. Modulating.

Dimensions

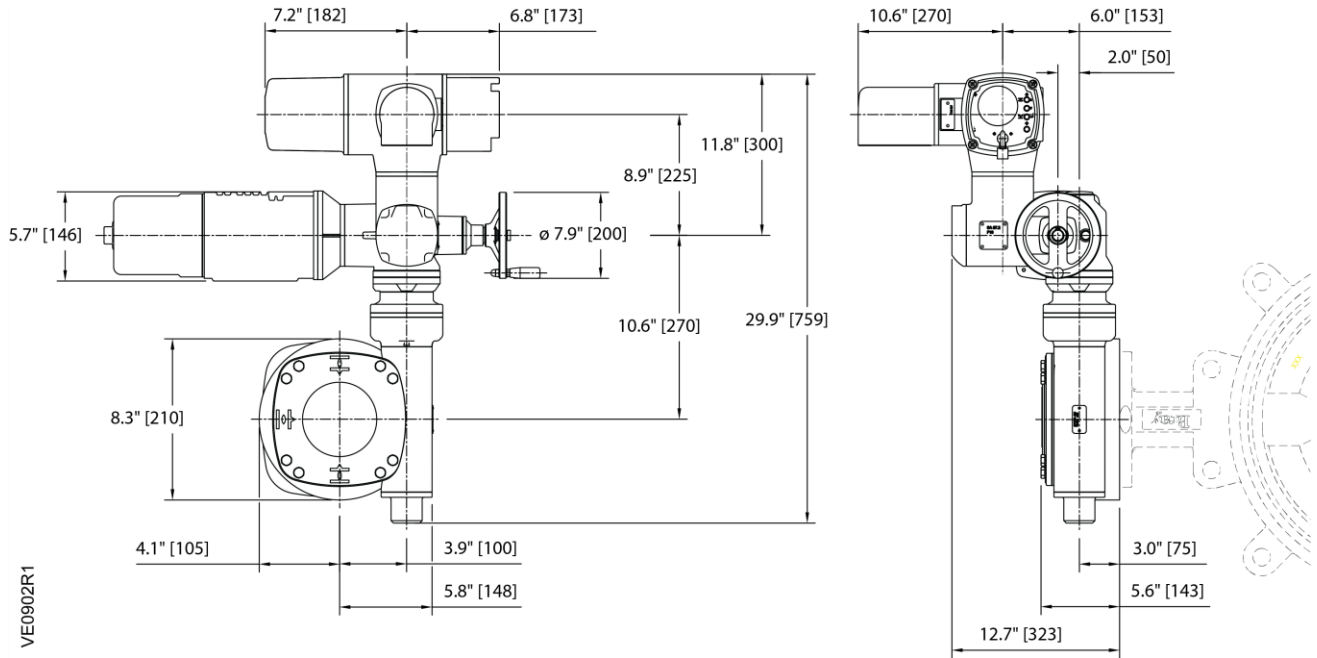


Figure 3. Model A2x6.21K Actuators.

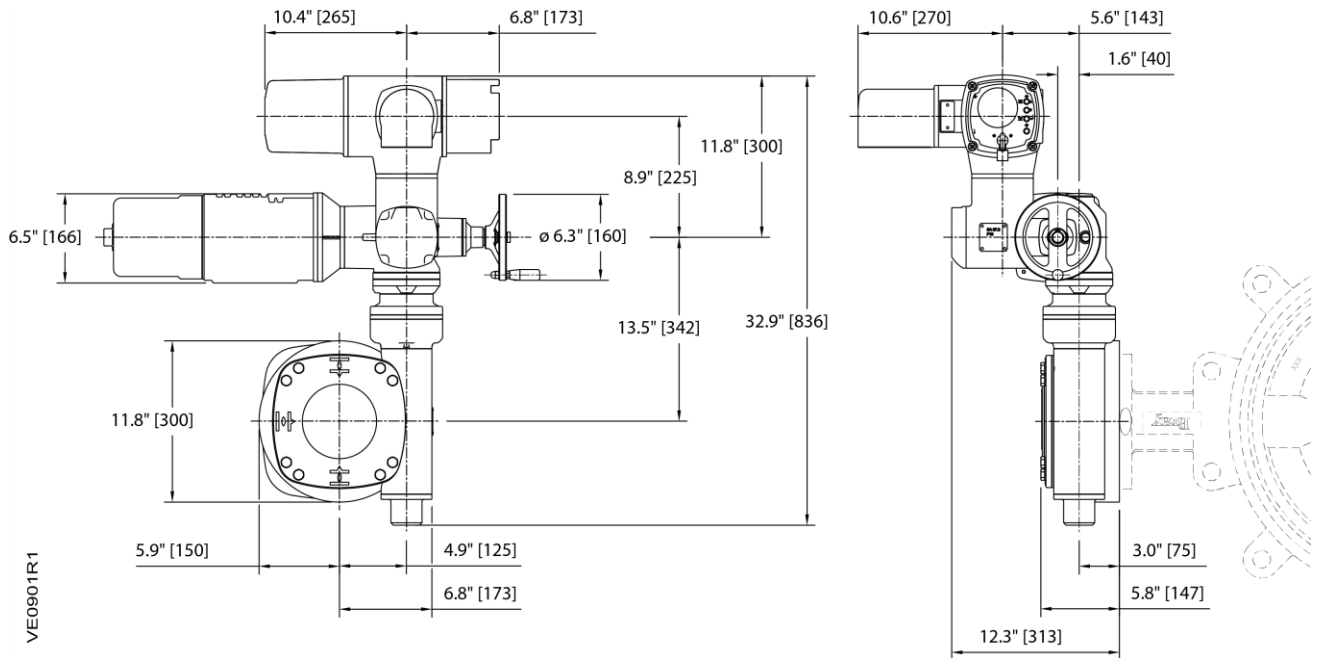


Figure 4. Model A2x6.41K Actuators.

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