

Direct Coupled, Non-Spring Return Actuators, 70 in-lb



DESCRIPTION

Electronic, motor-driven, reversible, noiseless, direct coupled actuators.

GA-P70-024
2-10 VDC, or 4-20 mA*

APPLICATION

Actuators to be easily installed by direct shaft mounting on air dampers and shutters for standard or fast rotation in ventilation and air conditioning systems. Can be controlled by any compatible electric or electronic analog controller, DDC/PLC control or automation system.



FEATURES

- *Direct coupled, easy to install*
- *Ridged V-clamp connector for better shaft gripping*
- *Plenum rated cable or terminal block connections*
- *Tested for 60,000+ full operations*
- *Manual override*
- *Overload protected*
- *Maintenance-free*
- *Five-year warranty*



SPECIFICATIONS

Control

Input signal	Proportional 2-10 VDC, or 4-20 mA w/500 Ω resistor
Input impedance	50 kΩ
Feedback signal	2-10 VDC (Terminal version is w/o feedback signal)

Electrical

Power supply	24 VAC/VDC ± 20%, 50/60 Hz
Over voltage	Up to 40 V, max. 5 sec.
Power consumption	2.5 W (4.5 VA)

Performance

Torque	70 in-lb (8 Nm)
Damper size	Up to 18 sq. ft. (1.6 m ²)
Angle of rotation	0-95°/95-0°, selectable, adj. angle with integral stops
- CCW(L) and CW(R)	L/R selector, built-in actuator cover
- angle	Angle selector, built-in actuator cover, electronically adj. 20-100% (Terminal version is w/o angle selector)
Rotation time	60 to 120 sec/0-90°
Power failure	Stays in last position of operation
Position indicator	0-10 divisions, and adj. visual indicator (Terminal version is w/o visual indicator)
Synchronization	± 1%
Overload protection	Electronic throughout rotation
Manual override	Built-in disengage button
Motor type	DC motor
Noise level	Max. 35 dB(A)

Environmental

Permissible ambient	
- working temperature	-22°F to 122°F (-30°C to 50°C)
- storage temperature	-40°F to 176°F (-40°C to 80°C)
- humidity	5-95% RH, non-condensing

Physical

Enclosure	
- cover	ABS, UL 94-5V
- base	PA 6.6
- color	Gray and black
- protection	NEMA 2, NEMA 1 for Terminal version
Mounting position	Any position
Anti-rotation bracket	Included w/actuator
Stacking/paralleling	Refer to table "Multiple Actuators"
Clamp connection to	
- round shaft	Ø 5/16" to 5/8" (8 to 16 mm)
- square shaft	□ 5/16" to 15/32" (8 to 12 mm)
Wire connection	3 ft. (0.9 m) cable, color coded, plenum rated 18 AWG (0.75 mm ²)
Wire size	
Terminal version	
- wire connection	Terminal block, outside of cover, screw type for lead wire, min. 26 AWG (0.14 mm ²) max. 14 AWG (2.5 mm ²)
Dimensions	4.53 x 2.56 x 2.40 in. (115 x 65 x 61 mm)
Weight	1.2 lbs. (0.53 kg)
Manufacturing	ISO 9001 certified
Listings/Approvals	CE UL and CSA
Warranty	Five-year material and workmanship (Two-year standard, three-year conditional)

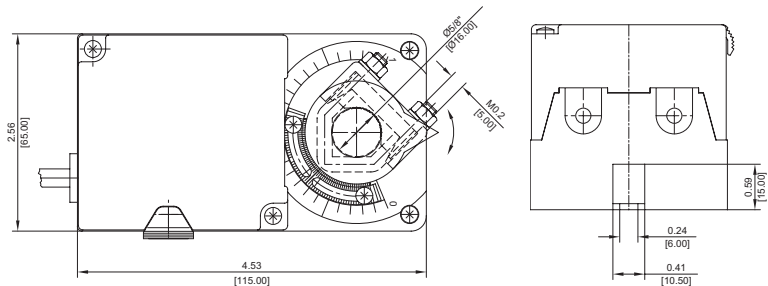
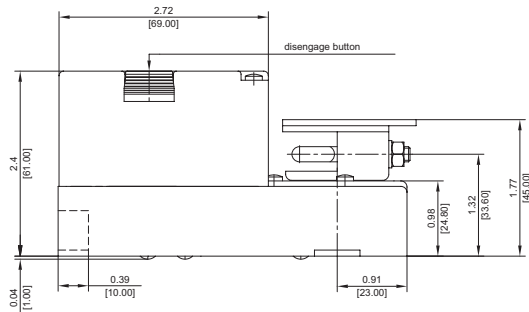
ORDERING INFORMATION

GA-P70-024 w/ Plenum rated cable
 GA-P70-024T w/ Terminal block

Note: Terminal version actuator comes without a feedback signal, adj. visual position indicator and angle selector.

DIMENSIONS

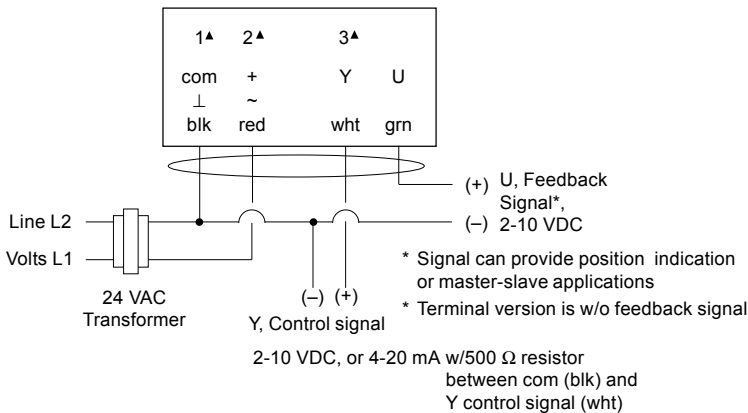
inches (mm)



Note: Anti-rotation mounting bracket supplied w/actuator

WIRING CONFIGURATION

GA-P70-024 Proportional control



- Notes:
- Actuators are provided with color coded wires.
 - Observe polarity on secondary of transformers. All common and signal (-) must be connected in line. Incorrect polarity can cause controller damage or operation error.
 - Long wire runs requires a 4-wire configuration (connect common for power and control signal at the actuator or close by). Greater than a 0.2 V drop must be avoided for any common wire.
 - Always use a separate transformer when controller power is full-wave rectified.
 - Controller and actuators must have separate transformers for paralleled multi-actuator application.
 - Provide overload protection for line voltage and disconnect as required.

▲ Terminal version, wiring connection:
 1= com 2= + (24 V) 3= control signal

L/R selector (built-in actuator cover)	
Select	Angle of rotation
R	CW/0-90°
L	CCW/90-0°

Multiple Actuators (maximum quantities)	GA-P70-024 Proportional
Stacking (torque is additive)	4*
Parallel connection, 2-10 VDC	20
Parallel connection, 4-20 mA, w/500 Ω resistor	10
Master-slave, via U, feedback signal	10

* Stacking options for continuous control

Sum of total torque:

- 2 actuators = (2 x 100%)
- 3 actuators = (2 x 100%) + (1 x 80%)
- 4 actuators = (2 x 100%) + (1 x 80%) + (1 x 50%)