

Direct Coupled, Non-Spring Return Actuators, 180 in-lb



GA-T180-024
Tri-state or On/Off

DESCRIPTION

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

APPLICATION

Actuators to be easily installed by direct shaft mounting on air dampers, shutters and butterfly valves 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*
- *Optional, aux. switches or feedback pot*
- *Tested for 60,000+ full operations*
- *Manual override*
- *Overload protected*
- *Maintenance-free*
- *Five-year warranty*



CE
ISO 9001



SPECIFICATIONS

Control

Input signal Tri-state (3-pt. floating) or On/Off, 24 VAC/DC

Electrical

Power supply 24 VAC/VDC \pm 20%, 50/60 Hz
Over voltage Up to 40 V, max. 5 sec.
Power consumption 3.0 W (5.5 VA)

Performance

Torque 180 in-lb (20 Nm)
Damper size Up to 45 sq. ft. (4 m²)
Angle of rotation 0-91°/91-0°, selectable
- CCW(L) and CW(R) L/R selector, built-in actuator cover
Rotation time 60 to 80 sec/0-90°
Power failure Stays in last position of operation
Position indicator 0-90° and adj. visual indicator
Synchronization \pm 1%
Overload protection Electronic throughout rotation
Manual override Built-in disengage button
Motor type DC motor
Noise level Max. 40 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

OPTIONS

- **S2** (2) Aux. switches built-in SPDT 24 VAC, 5 (2.5) A, position adj. between 0-10° and 80-90°, incl. 3 ft. (0.9 m) appliance cable, number coded, and 1/2" conduit connector
- **P1** (1) Feedback pot 1 k Ω pot, incl. 3 ft. (0.9 m) appliance cable, number coded, and 1/2" conduit connector

Physical

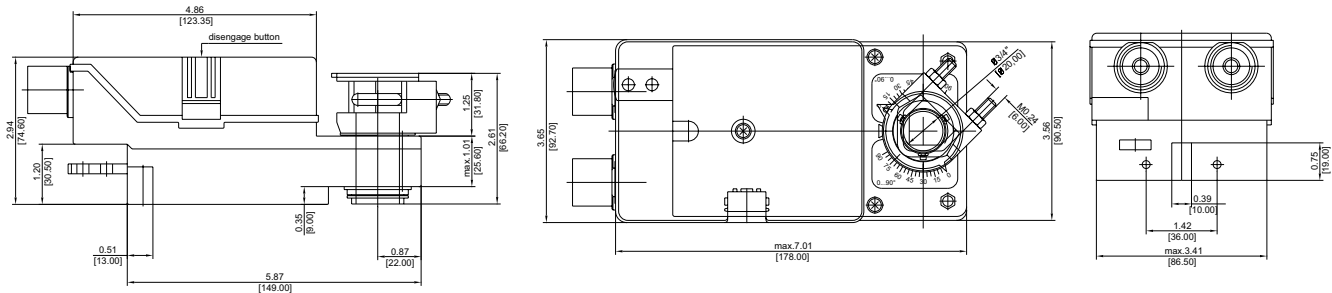
Enclosure
- cover ABS, UL 94-5V
- base PA 6.6
- color Grey and black
- protection NEMA 2
Mounting position Any position
Anti-rotation bracket Included w/actuator
Stacking/paralleling Refer to table
"Multiple Actuators"
Clamp connection to
- round shaft \varnothing 3/8" to 3/4" (9 to 20 mm)
- square shaft \square 3/8" to 5/8" (9 to 16 mm)
Wire connection 3 ft. (0.9 m) appliance cable, color coded
- option, on request Plenum rated cable
Wire size 18 AWG (0.75 mm²)
Conduit connector 1/2", built-in
Dimensions 7.01 x 3.65 x 2.95 in. (178 x 92.7 x 75 mm)
Weight 3.3 lbs. (1.5 kg)
Manufacturing
Listings/Approvals
ISO 9001 certified
CE
UL and CSA
Warranty
Five-year material and workmanship (Two-year standard, three-year conditional)

ORDERING INFORMATION

GA-T180-024 Standard
GA-T180-024-S2 w/(2) Aux. switches
GA-T180-024-P1 w/(1) 1 k Ω Pot

DIMENSIONS

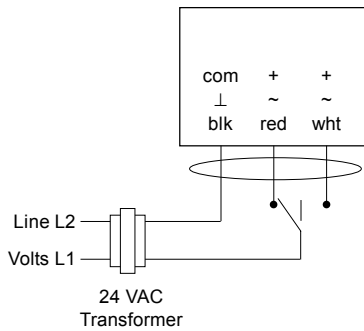
inches (mm)



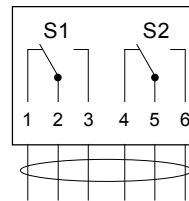
Note: Anti-rotation mounting bracket supplied w/actuator

WIRING CONFIGURATION

GA-T180-024 Tri-state (3-point floating) control

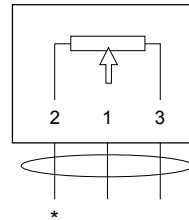


Option S2



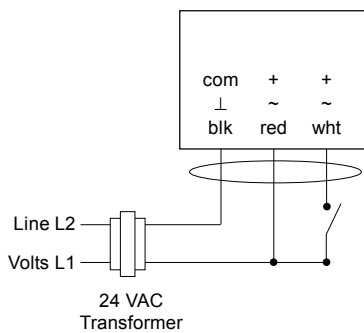
(2) Auxiliary switches, SPDT, 24 VAC, 5 (2.5) A, w/ adjustable cam for setting between 0-10° and 80-90°

Option P1



(1) Feedback pot, 1 kΩ, * = 0 Ω at 0° angle of rotation

GA-T180-024 On/Off control



L/R selector (built-in actuator cover)

Select	Angle of rotation
R	CW/0-90° w/red connect
R	CCW/90-0° w/white connect
L	CW/0-90° w/white connect
L	CCW/90-0° w/red connect

Multiple Actuators (maximum quantities)	GA-T180-024 Tri-state or On/Off
Stacking (torque is additive)	4*
Parallel connection	20

* 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%)

- Notes:
- Actuators are provided with color coded wires. Wires for optional switches and feedback pot are number coded.
 - Observe polarity on secondary transformers. Incorrect polarity can cause controller damage or operation error.
 - Provide overload protection for line voltage and disconnect as required.