

# Direct Coupled, Non-Spring Return Actuators, 44 in-lb



**GA-(S)T44-024T**  
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 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.



CE  
ISO 9001

UL US  
LISTED  
"Pending"

## FEATURES

- *Direct coupled, easy to install*
- *Ridged V-clamp connector for better shaft gripping*
- *Direction of rotation selector*
- *Angle of rotation selectable*
- *Removable terminal strip connector for easy wiring*
- *Manual override*
- *Optional, 1/2" conduit connector*
- *Optional, aux. switches adj. from the outside, or feedback pot*
- *Tested for 60,000+ full operations*
- *Tested for electromagnetic compatibility*
- *Overload protected*
- *Maintenance-free*
- *Five-year warranty*

## SPECIFICATIONS

### Control

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

### Electrical

Power supply                      24 VAC/VDC ± 20%, 50/60 Hz  
Over voltage                      Up to 40 V, max. 5 sec.  
Power consumption              1.0 W (2.0 VA)  
- ST speedy version              2.0 W (2.9 VA)

### Performance

Torque                              44 in-lb (5 Nm)  
- start-up                            54 in-lb (6 Nm)  
- nominal                            36 in-lb (4 Nm)  
Damper size                      Up to 11 sq. ft. (1 m<sup>2</sup>)  
Angle of rotation                0-95°/95-0°, selectable, adj. angle with integral stops  
- CW and CCW                    Direction of rotation selector, built-in below actuator cover  
Rotation time                      60 to 120 sec/0-90°  
- ST speedy version              20 to 35 sec/0-90°  
Power failure                      Stays in last position of operation  
Position indicator                0-10 divisions  
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                              PP-H, UL 94-5V  
- base                                PA 6.6  
- color                                Black and white  
- protection                        NEMA 2 (IP 42)  
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)  
Cable entry                        1 slotted hole,  
Ø 3/8 in. (Ø 10 mm)  
Wire connection                Below actuator cover, pluggable/removable connector(s), terminal block, number coded, screw type for lead wire; min. 20 AWG (0.5 mm<sup>2</sup>), max. 16 AWG (1.5 mm<sup>2</sup>)  
- for power/signal                (1) connector  
- for optional **S2**,                    (2) connectors  
  (2) aux. switches  
- for optional **P1**,                    (1) connector  
  (1) feedback pot  
Conduit connector, option on request            1/2" NPT female, for flexible field connector  
Dimensions                        5.71 x 2.56 x 2.40 in. (145 x 65 x 61 mm)  
Weight                              1.1 lbs. (0.5 kg)

# GA-(S)T44-024T



## SPECIFICATIONS

<b>Manufacturing</b>	ISO 9001 certified
<b>Listings/Approvals</b>	CE, 73/23/EWG, 89/336/EWG UL and CSA (pending)
<b>Warranty</b>	Five-year material and workmanship (Two-year standard, three-year conditional)

## OPTIONS

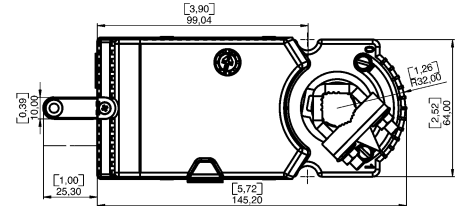
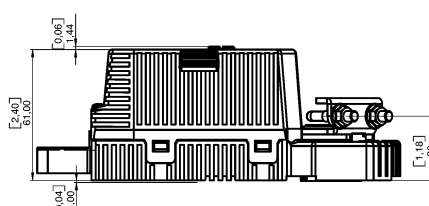
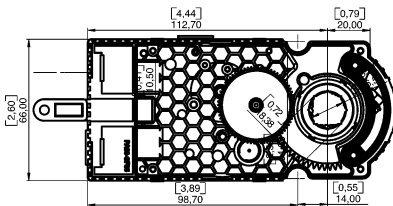
- <b>S2</b> (2) Aux. switches built-in w/selector outside of cover	SPDT, 24 VAC, 5 (2.5) A adjustable at any position
- <b>P1</b> (1) Feedback pot	1k $\Omega$ Pot
- <b>A-GA-CA05</b> (1) Conduit connector	1/2" NPT female, field connectable

## ORDERING INFORMATION

<b>GA-T44-024T</b>	Standard
<b>GA-T44-024T-S2</b>	w/(2) Aux. switches
<b>GA-T44-024T-P1</b>	w/(1) 1k $\Omega$ pot
<b>GA-ST44-024T</b>	Speedy, 20-35 sec./0-90°
<b>GA-ST44-024T-S2</b>	Speedy, 20-35 sec./0-90°, w/(2) Aux. switches
<b>GA-ST44-024T-P1</b>	Speedy, 20-35 sec./0-90°, w/(1) 1k $\Omega$ pot
<b>A-GA-CA05</b>	Conduit connector

## DIMENSIONS

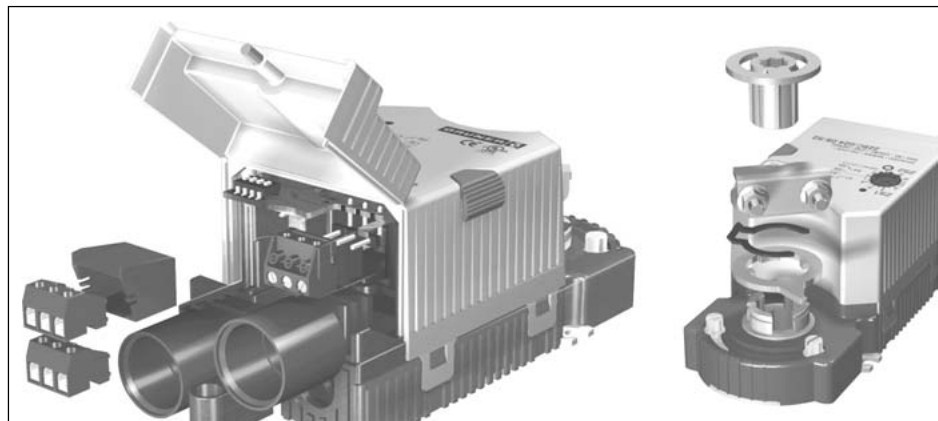
mm (inches)



*Note: - Actuator base provides integrated flanges w/mounting holes  
- Anti-rotation mounting bracket supplied w/actuator*

*Modular wiring connection solutions*

*Various damper shaft coupling capabilities*

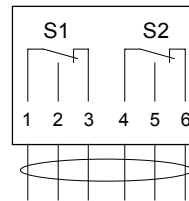


## WIRING CONFIGURATION

**GA-(S)T44-024T**  
Tri-state  
(3-point floating) control

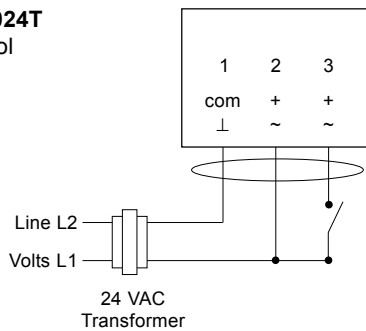


**Option S2**

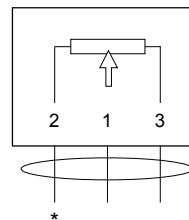


(2) Auxiliary switches, SPDT, 24 VAC, 5 (2.5) A, w/ adjustable cam for setting between 0-90°

**GA-(S)T44-024T**  
On/Off control



**Option P1**



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

Multiple Actuators (maximum quantities)	GA-(S)T44-024T 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%)

### Direction of Rotation Selector

located below actuator cover

Switch position	24 V supply to terminal 2 and/or 3	
	Tri-state control	On/Off control
	2 = CW (0-90°) 3 = CCW (90-0°)	2 only = CW (0-90°) 2 & 3 = CCW (90-0°)
	2 = CCW (90-0°) 3 = CW (0-90°)	2 only = CCW (90-0°) 2 & 3 = CW (0-90°)

- Notes:
- Observe polarity on secondary transformers. Incorrect polarity can cause controller damage or operation error.
  - Provide overload protection for line voltage and disconnect as required.