

GM24 US

On-off, reversible, non-spring return, direct coupled, tri-state, 24 V



Torque min. 320 in-lb, for control of air dampers

Application

For modulating or on-off control of dampers in HVAC systems. Actuator sizing should be done in accordance with the damper manufacturer's specifications. Control is on-off from an auxiliary contact of a fan motor contactor, or a manual switch. The direction of rotation is reversible, for use with a floating point type control. The actuator mounts directly to the damper operating shaft with a universal V-bolt clamp assembly.

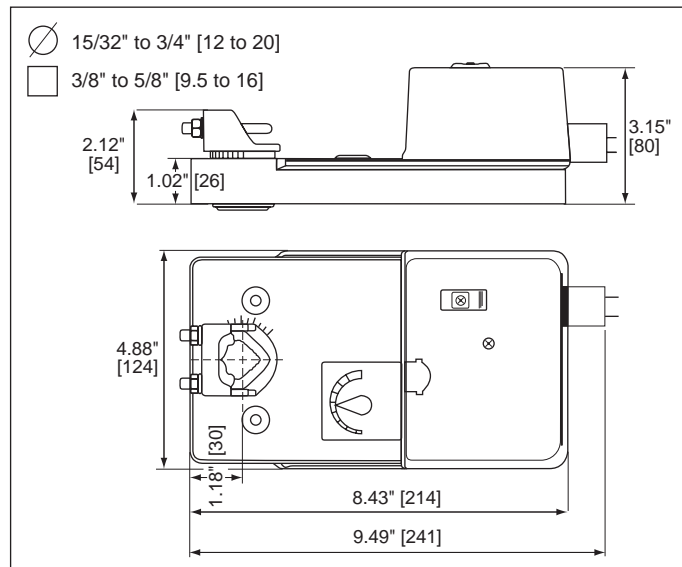
Operation

The anti-rotation strap supplied with the actuator will prevent lateral movement of the actuator. The angle of rotation is mechanically limited to 95°. When reaching the damper or actuator end position, the motor stops automatically. The gears can be manually disengaged by simply pressing down the spring loaded button on the actuator cover. When this button is pressed down, the damper blades can be adjusted by hand. The position of the actuator is indicated by means of a scale reading 0 to 1.

The GM uses a brushless DC motor which is controlled by an Application Specific Integrated Circuit (ASIC). The ASIC monitors and controls the actuator's rotation and provides a digital rotation sensing function to prevent damage to the actuator in a stall condition. The actuator may be stalled anywhere in its normal rotation without the need of mechanical end switches.

Technical Data	GM24 US
Power supply	24 VAC ± 20% 50/60 Hz 24 VDC ± 10%
Power consumption	running: 3 W; holding: 1W
Transformer sizing	6 VA (class 2 power source)
Electrical connection	3 ft, 18 GA appliance cable 1/2" conduit connector
Overload protection	Electronic throughout 0 to 95° rotation
Angle of rotation	mechanically limited to 95°
Torque	320 in-lb [36 Nm] starting in June 2002
Direction of rotation	reversible with switch A/B
Position indication	0 to 1 and reversible indicator
Running time	135 sec. independent of load
Humidity	5 to 95% RH non-condensing
Ambient temperature	-22°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +80°C]
Housing	NEMA type 2
Housing rating	UL94V-0 (flammability rating)
Agency listings	UL 873 listed, CSA C22.2 No.24 certified, CE
Noise level	max. 45 dB (A)
Servicing	maintenance free
Quality standard	ISO 9001
Weight	4.0 lbs (1.8 kg.)

Dimensions [All numbers in brackets are in millimeters.]



G20492-IG-Subject to change. © Belimo Aircontrols (USA), Inc.

Accessories

KH8	Universal crankarm
KG10	Ball joint
NSV24	Battery back-up module
P...	Feedback potentiometer
SZS	Mid-position switch
S1,S2	Auxiliary switch
Tool-06	8mm and 10 mm wrench
ZDB-GM	Angle of rotation limiter (Series 2)
ZG-H2	Actuator operator handle
ZG-GM2	Crankarm adaptor kit
ZG-100	Universal mounting bracket
ZG-101	Universal mounting bracket
ZG-102	Multiple actuator mounting bracket
ZG-103	Universal mounting bracket
ZG-104	Universal mounting bracket
ZS-100	Weather shield (metal)
ZS-150	Weather shield (polycarbonate)
ZS-260	Explosion-proof housing
ZS-300	NEMA 4X housing

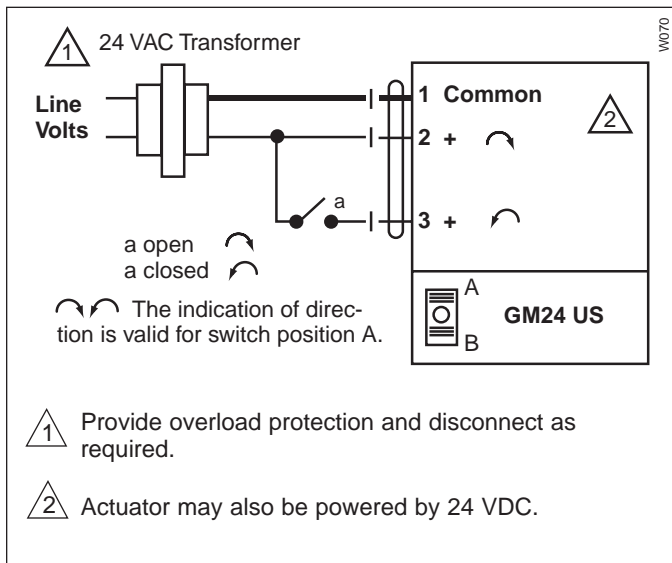
NOTE: When using GM24 US actuators, use only the accessories listed on this page.

GM24 US - Typical Specification:

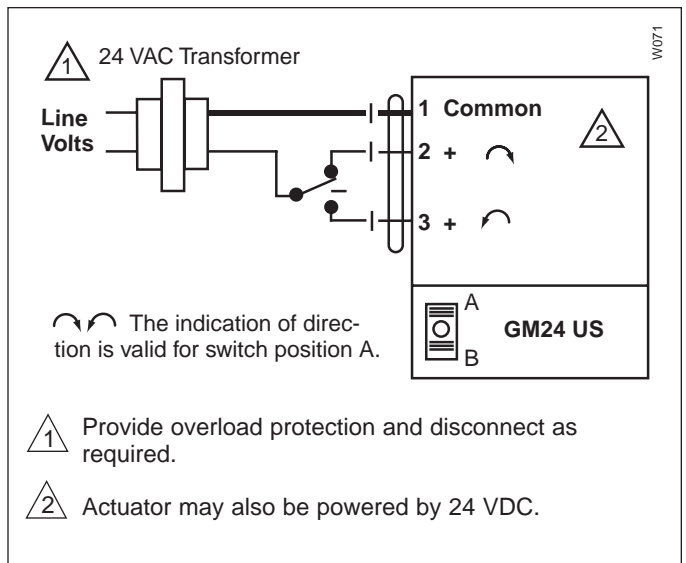
Control damper actuators shall be electronic direct coupled type which require no crankarm and linkage. Actuators shall be UL listed and CSA certified, have a 2 year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall have reversing switch and manual override on the cover. Actuators shall use a brushless DC motor and be protected from overload at all angles of rotation. Run time shall be constant and independent of torque. Actuators shall be as manufactured by Belimo.

Multiple actuators mounted to shaft	
Model	Maximum quantity per shaft
GM24 US	2
GM24-SR US	2

Wiring diagrams



On-Off control of GM24 US



Tri-State control of GM24 US