

NM24 US

On-off, reversible, non-spring return, direct coupled, floating point, 24 V



Torque min. 70 in-lb, for control of air dampers surfaces up to 18 sq. ft.

Application

For modulating or on-off control of dampers in HVAC systems. Actual 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 universal mounting bracket supplied with the actuator will prevent lateral movement of the actuator. The damper actuator is not provided with and does not require any limit switches, but is protected against overloading. 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 a visual pointer.

Auxiliary switches are easily fastened directly onto the actuator body for signalling and switching functions.

Accessories

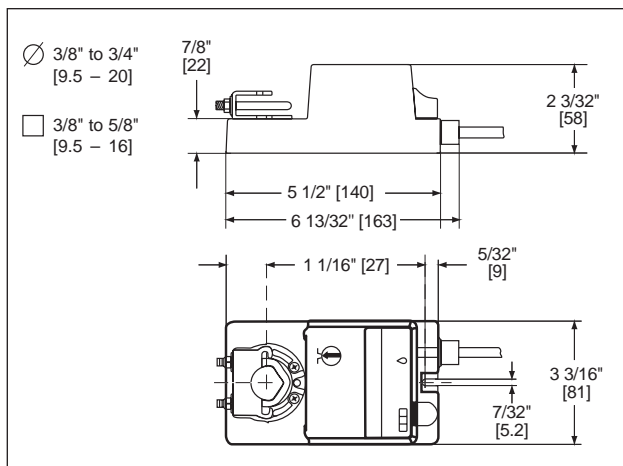
- AV 10-18 Damper shaft Extension
- SN1,SN2 Auxiliary switches
- ZG-H2 Actuator operator handle
- ZG-NMSA-1 Short shaft adaptor

Note: When using NM24 US actuators, only use accessories listed on this page.

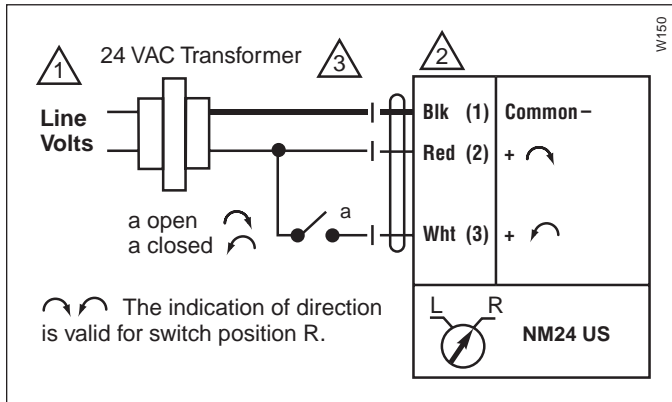
Technical Data	NM24 US
Power supply	24 VAC ± 20% 50/60 Hz 24 VDC ± 10%
Power consumption	running: 2 W; holding: 1W
Transformer sizing	3.5 VA (Class 2 power source)
Electrical connection	3 FT, 18 GA plenum rated (UL CL2P) 1/2 in. conduit connector
Overload protection	electronic throughout 0 to 95° rotation
Angle of rotation	0 to 95°, adjust with mechanical stops
Torque	min 70 in-lb [8 Nm]
Damper area (Note 1)	18 Sq Ft
Direction of rotation	reversible with switch L/R
Position indication	clip-on indicator
Manual override	button on actuator
Running time	75 to 150 sec for 0 to 75 in-lb [0 to 8Nm] (0 to 90°)
Humidity	5 to 95% RH, non-condensing
Ambient temperature	-4°F to +122°F [-20°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +80°C]
Housing	NEMA type 2
Housing material	UL 94-5V (flammability rating)
Agency listings	UL 873 listed, CSA C22.2 No.24 certified, CE
Noise level	less than 35 db (A)
Servicing	maintenance free
Quality Standard	ISO 9001
Weight	1.8 lbs [0.8 kg]

Note 1 Damper area is calculated using approximately 4 in-lb/sq ft of damper area. This is an average torque requirement for good quality dampers operating under a 1" WC pressure drop. Check damper specifications for exact torque requirements.

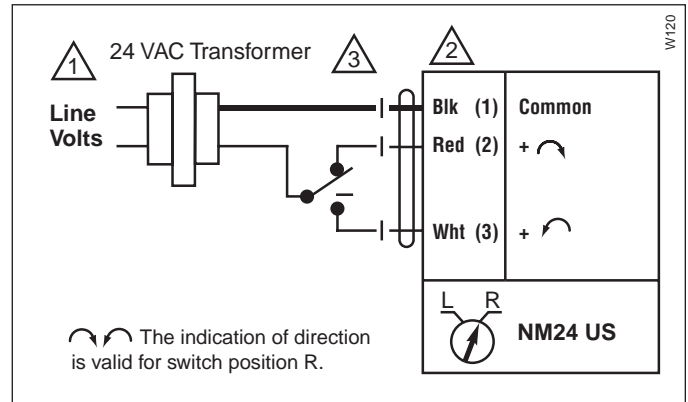
Dimensions [All numbers in brackets are in millimeters.]



Wiring Diagrams



On-Off control of NM24 US



Tri-State control of NM24 US

Notes:

- ① Provide overload protection and disconnect as required.
- ② Actuators are provided with color coded wires. Wire numbers are provided for reference.
- ③ May also be powered by 24 VDC.

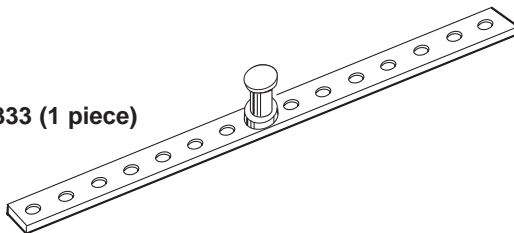
Bulk packaging - NM24.1 US

The bulk packaging option for the NM... series has been discontinued as of October 2003

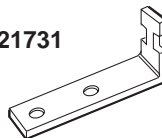
T-Type bracket

These are included in the single-actuator packages.

Part # 11333 (1 piece)



L-Type bracket 21731



Part #: 12503-00001 (24 pieces)
(includes 21731) shipped separately upon request.

NM24 US - Typical Specification:

Control damper actuators shall be electronic direct coupled type which require no crank arm and linkage. Actuators shall be UL and CSA listed, have a 5 year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall have reversing switch and manual override on the cover, and be protected from overload at all angles of rotation. Actuators shall be as manufactured by Belimo.