

# ACTUATORS & DAMPERS



## BELIMO DIRECT COUPLED ACTUATORS NON-SPRING RETURN LM, NM, AM, GM SERIES

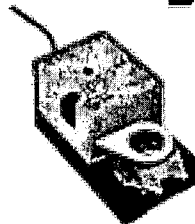
### DESCRIPTION

The Belimo LM, NM, AM, and GM Series direct coupled actuators provide control of dampers and valves for non-spring return applications. They come in two-position, tri-state, proportional, and new Multi-function Technology (MFT) models. All actuators include a manual release mechanism for manual override.

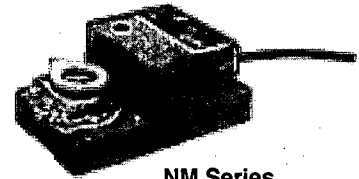
### FEATURES

- Non-spring return 35, 70, 160, 266 in-lb (4, 8, 18, 30 Nm)
- Manual override
- Reversing switch
- UL, CSA, and CE approved
- Two-year unconditional warranty
- ISO 9001
- Plenum rated housing and cable connections

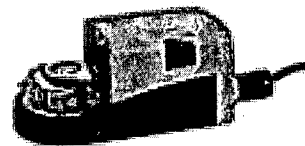
**BELIMO**



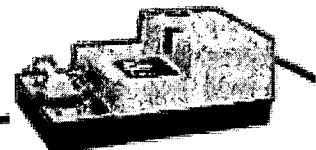
LM Series



NM Series



AM Series



GM Series



### COMMON SPECIFICATIONS

<b>Rotation</b>	95° switch reversible with switch	<b>Humidity</b>	5% to 95% RH noncondensing
<b>Position indication</b>	0° to 95° indicator	<b>Noise</b>	
<b>Manual override</b>	Disengage button	<b>LM, NM</b>	<35 db
<b>Stacking actuators</b>	AM and GM only	<b>AM, GM</b>	<45 db
<b>Wiring</b>	3' (0.91m) 18 AWG, plenum cable	<b>Approval</b>	UL, CSA, CE
<b>Ambient temp</b>		<b>Housing</b>	NEMA 2, UL94-5V
<b>LM, AM, GM</b>	-22° to 122°F (-30° to 50°C)		
<b>NM</b>	-4° to 122°F (-20° to 50°C)		

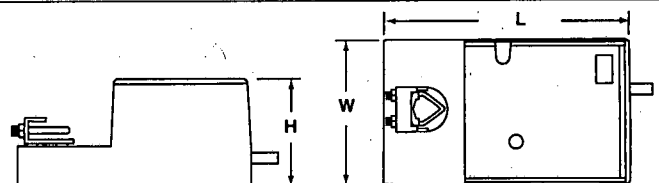
### INDIVIDUAL SPECIFICATIONS

	LM24	LM24SR	NM24	NM24SR	AM24	AM24SR	GM24	GM24SR
<b>Voltage</b>	24 VAC/DC ± 10%, 50/60 Hz							
<b>Power</b>	3 VA, 2W		3 VA, 2W		5 VA, 2.5W		7 VA, 3W	
<b>Torque in-lb (Nm)</b>	35 (4)		70 (8)		160 (18)		266 (30)	
<b>Signal *</b>	Two-Pos Tri-state	2-10 VDC 4-20 mA with 500Ω	Two-Pos Tri-state	2-10 VDC 4-20 mA with 500Ω	Two-Pos Tri-state	2-10 VDC 4-20 mA with 500Ω	Two-Pos Tri-state	2-10 VDC 4-20 mA with 500Ω
<b>Feedback</b>	N/A	2-10 VDC	N/A	2-10 VDC	N/A	2-10 VDC	N/A	2-10 VDC
<b>Run time (sec)</b>	80-110	80-110	75-150	150	100-150	150	135	135
<b>Shaft length in (cm)</b>	1.5 (3.8) min		1.5 (3.8) min		1.88 (4.7) min		2.5 (6.4) min	
<b>Shaft dia in (cm)</b>	5/8 (1.58) max		3/4 (1.91) max		3/4 (1.91), 1" opt		3/4 (1.91) max	
<b>Weight lb (kg)</b>	1.2 (0.6)		1.8 (0.8)		2.8 (1.3)		4.2 (2.0)	

\* MFT models come with 2-10 VDC default control input. If a different control input is required, the actuator must be configured. Contact Kele.

### DIMENSIONS

in (cm)		LM24	NM24	AM24	GM24
<b>L</b>		4.53 (11.51)	6.40 (16.26)	8.75 (22.22)	9.49 (24.10)
<b>W</b>		2.56 (6.50)	3.19 (8.10)	3.62 (9.19)	4.88 (12.40)
<b>H</b>		2.32 (5.89)	2.43 (6.17)	3.00 (7.62)	3.15 (8.00)



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### WIRING

**LM24SR-2.0, NM24SR**  
4-20 mA, 2-10 VDC

\* Resistor is 500Ω, 1/4 watt ZG-R01, leave out for 2-10 VDC

**AM24, GM24, LM24, NM24**  
Two-Position

**AM24, GM24, LM24, NM24**  
Tri-State

**AM24SR, GM24SR**  
Modulating (2-10 VDC) with slave actuator

Parallel connection of four motors is possible. Power consumption must be observed.

**AM24SR, GM24SR**  
Modulating (4-20 mA)

\* Resistor is 500Ω, 1/4 watt ZG-R01

### ORDERING INFORMATION

MODEL	DESCRIPTION
LM24	Non-Spring Return 35 in-lb (4 Nm), Tri-State/Two-Position
LM24SR-2.0	Non-Spring Return 35 in-lb (4 Nm), 2-10 VDC & 4-20 mA (with ZG-R01*) Proportional
NM24	Non-Spring Return 70 in-lb (8 Nm), Tri-State/Two-Position
NM24SR	Non-Spring Return 70 in-lb (8 Nm), 2-10 VDC & 4-20 mA (with ZG-R01*) Proportional
AM24	Non-Spring Return 160 in-lb (18 Nm), Tri-State/Two-Position
AM24SR	Non-Spring Return 160 in-lb (18 Nm), 2-10 VDC & 4-20 mA (with ZG-R01*) Proportional
GM24	Non-Spring Return 266 in-lb (30 Nm), Tri-State/Two-Position
GM24SR	Non-Spring Return 266 in-lb (30 Nm), 2-10 VDC & 4-20 mA (with ZG-R01*) Proportional

Multi-Function Technology (MFT) models are also available throughout the Belimo line. Add -MFT to the base model number and specify the control signal input or Belimo P-code.

*Example: LM24-MFT-P30001. Call Kele for special requirements.*

\*Order separately

#### Related Products

ZG-R01	4-20 mA resistor kit (500Ω)	ZG-GM2	Remote linkage kit, includes 1 actuator crank arm, 1 actuator mounting bracket, 2 ball joints
ZG-LMSA	1.75" shaft extension for 1/2" shafts	ZDB-GM	Angle rotation limiter
ZG-NM3	Remote linkage kit, includes 1 actuator crank arm and 2 ball joints (5/16" pushrod and damper crank arm not included)	ZG-AM	Remote mounting kit, includes 1 actuator crank arm, 1 actuator mounting bracket, 2 ball joints (damper crank arm not included)
ZG-NMSA-1	1/2" shaft adapter for shafts shorter than 1.5"	AM-125-48	5/16" pushrod 48" long
ZG-H2	Actuator operator handle	KH-8	Damper crank arm
ZG-105	Universal-mount bracket for NM actuator	K4-1	3/4" to 1" jackshaft clamp for AM24
MFT-H	Control signal calibration tool for AM24SR		

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