



DESCRIPTION

The Belimo **NVF** and **NV Series** Direct-mount Globe Valve Actuators offer spring return (NVF) and non-spring return (NV) control for many two- and three-way, 1/2" through 2" threaded globe valves. Both are available with Belimo MFT technology and on/off, floating, and proportional control signal types. They are powered with 24 VAC or 24 VDC.

Using the UNV-001 linkage, the **NVF** and **NV Series** actuators mount directly to Schneider Electric VB7000 Series threaded globe valves. Other UNV Series linkages allow the **NVF** and **NV Series** actuators to control valves from Siemens, Johnson Controls, Honeywell, and other manufacturers.

FEATURES

- **Self-adjusting stroke**
- **Automatic adjusting position indicators**
- **Self-locking valve coupling**
- **Manual override**
- **Fully-configurable MFT models**
- **Universal linkage kits**

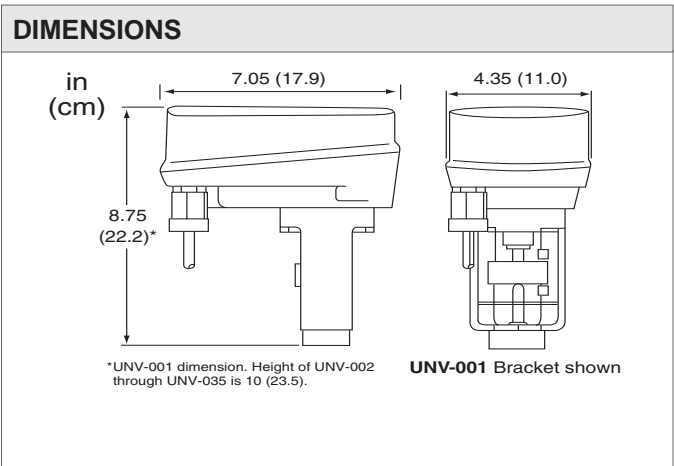
APPLICATION

The **NVF24 Series** spring return actuator has a force rating of 180 lbf and close off ratings for two- and three-way mixing valves are 250 psid for 1/2" and 3/4" valves, 207 psid for 1" valves, 130 psid for 1-1/4" valves, 88 psid for 1-1/2" valves, and 47 psid for 2". Closeoff is 250 psid for all sizes of three-way diverting valves. These ratings are for Belimo G2 and G3 Series and Schneider Electric VB7000 and VB9000 series valves.

The **NV24 Series** non-spring return actuator has a force rating of 225 lbf. and close off ratings for two- and three-way mixing valves are 250 psid for 1/2" through 1" valves, 162 psid for 1-1/4" valves, 110 psid for 1-1/2" valves, and 58 psid for 2". Closeoff is 250 psid for all sizes of three-way diverting valves. These ratings are for Belimo G2 and G3 Series and Schneider Electric VB7000 and VB9000 series valves.



BELIMO



SPECIFICATIONS	
Supply Voltage	24 VAC \pm 20%, 50/60 Hz; 24 VDC \pm 10%
Supply VA	5 VA (NV24-3), 7 VA (NV24-MFT), 10 VA (NVF24-MFT)
Control Signal	Two-position/floating, Proportional 2-10 VDC, 4-20 mA, PWM (MFT)
Input Impedance	100 k Ω for 2-10 VDC; 500 Ω for 4-20 mA, 750 Ω for PWM
Noise	<35 dBa
Wiring	36" (91 cm) 18 AWG Appliance cable
Conduit Connection	1/2" NPT
Feedback	2-10 VDC (MFT models)
Valve Mounting Action	UNV linkage required
NV24-3	Non-spring return, direct/reverse acting wiring method
NV24-MFT	Non-spring return, switchable direct/reverse acting
NVF24-MFT	Spring return stem up, switchable direct/reverse acting
NVF24-MFT-E	Spring return stem down, switchable direct/reverse acting
Force	180 lbf (800 N)
Spring Return Time	30 seconds
Stroke Time	150 seconds
Manual Override	3/16" (5 mm) hex crank
Operating Temperature	-22° to 122°F (-30° to 50°C)
Operating Humidity	5% to 95% RH non-condensing
Stroke	3/4" (20 mm) maximum
Weight	3.3 lb (1.5 kg) (NV24-3); 4.0 lb (1.8 kg) (MFT models)
Enclosure Rating	NEMA 2 (IP54) mounted vertical, UL 94-5V flammability
Approvals	UL 873 listed; CE; CSA 22.2 No. 24 certified
Warranty	5 years



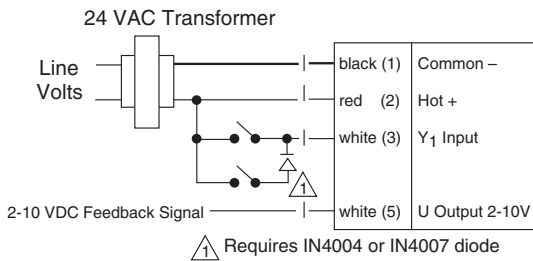
CONTROL VALVES

GLOBE VALVE ACTUATORS NV, NVF SERIES

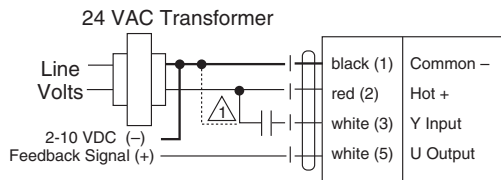
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CONTROL VALVES

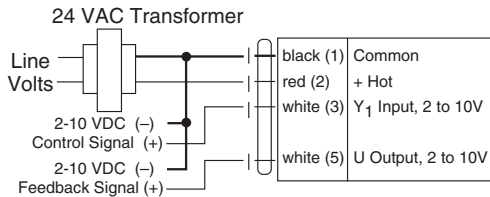
WIRING



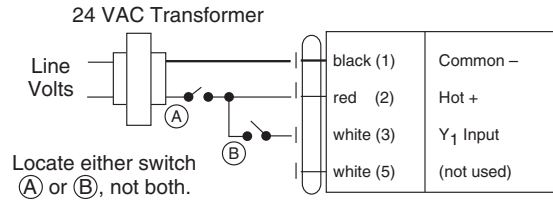
NVF24-MFT, NVF24-MFT-E, Floating Control



NVF24-MFT, NVF24-MFT-E, Pulse-width Modulation Control (Configurable)



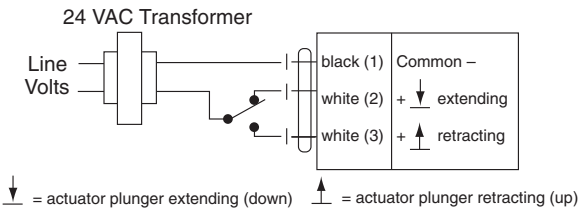
NVF24-MFT, NVF24-MFT-E, 2-10 VDC Control, 4-20mA w/500Ω Resistor



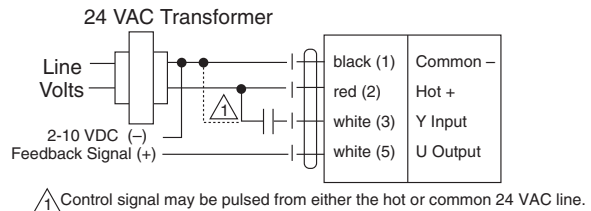
	Actuator		Control Switch Location	Correct LED Indication
	Open (Switch Selectable)	Closed (Switch Selectable)		
OFF/ON Drive "open" Spring "closed"	150 sec (MFT selectable)	30 sec Spring Return	(A)	Flashing Red
OFF/ON Drive "open" Drive "closed"	150 sec (MFT selectable)	150 sec (MFT selectable)	(B)	Steady Green

* For on/off control of NVF...MFT actuators. The control function must be set for VDC.

NVF24-MFT, NVF24-MFT-E*, On/Off Control



NV24-3, On/Off/Floating Control



Range Available: 20 ms to 50 sec
Typical: 0.59 to 2.93, 0.02 to 5.00, 0.10 to 25.5; custom configurations available

NV24-MFT, Pulse-width Modulation Control

ORDERING INFORMATION

ACTUATORS	
MODEL	DESCRIPTION
NV24-3	225 lbf, on/off/floating, non-spring return
NV24-MFT	225 lbf, proportional, non-spring return

LINKAGES	
MODEL	DESCRIPTION
UNV-001	Linkage for Schneider VB-9000 (1/2" to 1-1/4"), VB-7000 (1/2" to 2")
UNV-003	Linkage for Siemens VF-599 valves 1/2" to 2"
UNV-004	Linkage for Siemens VP-658 valves 1/2" to 1-1/4"
UNV-005	Linkage for Siemens VP-591 valves 1/2" to 1" (2-way), 1/2" to 2" (3-way)
UNV-006	Linkage for Honeywell V5011/V5013 valves 1/2" to 2", V33/V34 2-1/2" to 3"
UNV-007	Linkage for Robertshaw V6600/6700 valves 1/2" to 2"
UNV-008	Linkage for JCI V-3754, 3974, 4324, 5844 valves 3/4" to 2"
UNV-009	Linkage for JCI VG-7000 valves 1/2" to 3/4"
UNV-040	Linkage for JCI VG-7000, 1" to 2"
UNV-035	Hi-temp linkage for Schneider VB-7000/9000 (Belimo G2/G3)

ACTUATORS	
MODEL	DESCRIPTION
NVF24-MFT	180 lbf, on/off/floating/proportional, spring return up
NVF24-MFT-E	180 lbf, on/off/floating/proportional, spring return down

TWO-WAY NORMAL POSITION

MFT Spring Return Stem-Up	VB7213	N.O.
	VB7223	N.C.
	VG7241	N.O.
	VG7441	N.C.
	V5011	N.C.
MFT-E Spring Return Stem-Down	VB7213	N.C.
	VB7223	N.O.
	VG7241	N.C.
	VG7441	N.O.
V5011	N.C.	

Note: Actuators and linkages may be ordered separately or assembled with a valve.

Fully-assembled Schneider valves with NV actuators may be ordered using the following methodology:

Example: VB-7213-0-4-03/NVF24-MFT.

The UNV-001 linkage will be automatically used in the assembly.

Contact Kele to discuss your specific needs.

KOV-2

RELATED PRODUCTS

NEMA 3R fabric weather shield, 8" dia. x 10"H, fits Honeywell ML6420/7420/6425/7425 and Belimo NV/NVF