

MF Series Direct Coupled Non-Spring Return Linear Actuators



Floating Proportional Actuator

The direct coupled Model MF-63103 and Model MF-63123 floating proportional actuators connect directly to our VB-7000 Series valves and can be connected to our Series VB-9000 valves as well as other commercially available valves either directly (1/2" to 2" valves) or through the use of available linkage kits (2-1/2" to 4" valves). This non-spring return actuator can be controlled by the SPDT contact or triac output of a controller capable of providing drive open, hold, and drive close outputs. It is available with an SPDT optional auxiliary switch, adjustable over the actuator stroke of one inch and factory set for the NC contact to make at 3/8" from fully extended position. Actuator features include 1/2" Stainless Steel jack screw, roller thrust bearings and an all-metal gear train. It accepts a 24Vac power input. The MF Series is compatible with the VB-7000 and VB-9000 valves in this catalog.

Proportional Analog Control Cards

The Model MF-63123 actuator can be optionally equipped with an analog module card allowing it to accept either a mAdc or Vdc signal from a controller. These cards plug directly into the main board of the actuator and accept proportional Vdc (MFC-8000) or mAdc (MFC-420) signals. The Vdc card is factory set at 6 to 9 Vdc and can be expanded to 0 to 10 Vdc. The mAdc card is factory set at 4 to 20 mAdc and can be adjusted to 2 to 25 mAdc. Both cards can be jumpered to select direct or reverse acting. The control card must be purchased separately from the actuator.

Features

- floating proportional actuator, 24Vac
- opt. analog proportional control
- opt. adjustable SPDT aux. switch
- 210 lbs. min output force with automatic load limit
- self-adjusting travel and position feedback potentiometer
- manual override operation with automatic releases
- compatible with VB series valves

Specifications

Control signal:

SPDT floating control contacts or 2 SPDT contacts, rating 1A @ 24Vac inductive load

Power input:

24Vac +10%, -15%, 50/60Hz 0.25A, 6 watts

Connections:

closed screw terminals

Auxiliary switch:

SPDT, adjustable over actuator stroke

Force:

210 lbs. min, 270 lbs max with auto load limit

Stroke:

up to maximum 1", self adjusting

Timing:

2.00 minutes per inch at 60Hz

2.24 minutes per inch at 50Hz

Ambient temperature:

0 to 140°F (-18 to 60°C)

Humidity:

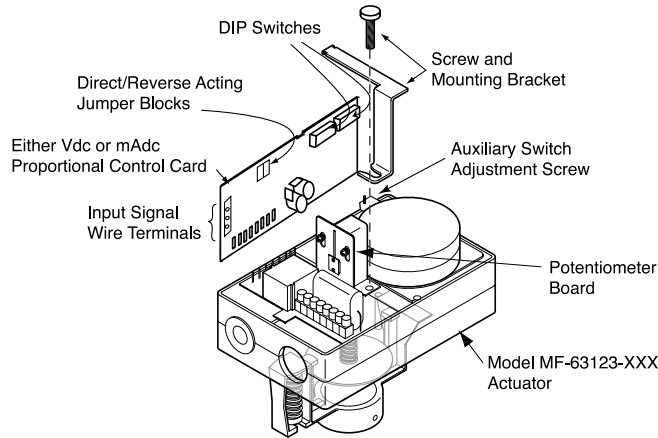
5 to 95% rh, non-condensing

Locations:

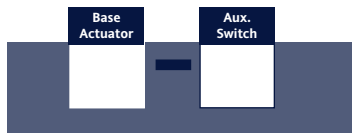
NEMA Type 1

Feedback potentiometer:

15K Ohm (MF-63123-XXX only)



Ordering codes:



Base Actuator	
MF-63103	Actuator only
MF-63123	Actuator with feedback potentiometer

Auxiliary Switch	
000	No auxiliary switch
500	Auxiliary switch



Proportional Control Card*	
MFC-420	mAdc card
MFC-8000	Vdc card

*for MF-63123-XXX only - purchase separately

Linkage kits (ordered separately):

Valve	Linkage Part Number
VB-7XXXX	None required
VB-9XXX 1/2" to 2"	AV-671
VB-9XXX, 2" to 4" (except VB-9323)	AV-672
Johnson Controls VB-3754, VB-3924, VB-4324, 1/2 to 3"	AV-673
Honeywell V5011F, V5011G, V5013F, 1/2" to 3"	AV-674
Open end wrench, 1-5/8"	TOOL-37

Control Module Specifications

Control Signal-Model MFC-420

Factory set:

4-20 mAdc, 25mAdc max

Operating span:

4 to 16 mAdc, DIP Switches

Start point:

2 to 16 mAdc, DIP Switches

Hysteresis:

factory set 2.1% of 16 mAdc span,
DIP Switch adjustable

Input impedance:

100 to 250 Ohm field selectable

Power consumption:

0.085A, 1.2 watts

Control Signal-Model MFC-8000

Factory set:

6 to 9 Vdc, 22 Vdc max

Operating span:

2 to 10 Vdc, DIP Switches

Start point:

0 to 12 Vdc, DIP Switches

Hysteresis:

factory set 2.3% of 3 Vdc span,
DIP Switch adjustable

Input impedance:

Minimum 10K Ohm

Power consumption:

0.085A, 1.2 watts

Connections:

plugs into pin connections on actuator circuit board

Screw terminals:

accepts 14 to 20 AWG

Dimensions:

1-7/8" H x 4-9/16" W x 4-13/16" D
(47.6 x 115.9 x 20.6 mm)