



# CONTROL VALVES

## SCHNEIDER GLOBE VALVE ACTUATORS DURADRIVE SERIES



### DESCRIPTION

The **Schneider Electric DuraDrive Series linear globe valve actuators** are designed to mount directly onto two- and three-way VB-7000 and VB-8000 Series globe valves. They have integral linkage to provide linear travel and are available in a wide selection of spring and non-spring return models.



**MA51-7103-000**  
(Spring Return)

### FEATURES

- *Direct-mount, integral linkage (SR models)*
- *Wide selection of control signal inputs*
- *Rugged design, reliable performance*
- *Spring or non-spring return models*

### COMMON SPECIFICATIONS

<b>Supply Voltage</b>		<b>Operating Temperature</b>	
<b>Mx(41, 51, 61)</b>	24V (AC/DC)	<b>MF-22303</b>	40° to 281°F (4° to 138°C)
<b>MF-22303</b>	24 VAC, 1.5 VA	<b>Mx51-7103, Mx41</b>	-22° to 140°F (-30° to 60°C)
<b>Input Impedance</b>		<b>Mx51-7203, Mx61-7203</b>	0° to 140°F (-18° to 60°C)
<b>MS41-7153/AV-609-1</b>	80 kΩ @ 0/2-10 VDC	<b>Operating Humidity</b>	5% to 95% RH non-condensing
	500Ω @ 4-20 mA	<b>Weight</b>	
<b>Conduit Connection</b>	1/2" FNPT	<b>MF-22303</b>	1.5 lb (.68 Kg)
<b>Wiring</b>		<b>Mxxx-7102, -7203</b>	4.3 lb (1.9 Kg)
<b>MF-22303</b>	48" (122 cm) 18 AWG plenum cable rated for UL	<b>Mx41-7153/AV-609</b>	7.5 lb (3.4 Kg)
<b>Mx51-7103</b>	36" (91 cm) plenum cable	<b>Approvals</b>	
<b>Mxxx-7203</b>	36" (91 cm) appliance cable	<b>MF-22303</b>	UL 873, File E9429; cUL, C22.2 No. 24-93; CE EMC Directive 89/336/EEC
<b>Mx41-7153</b>	36" (91 cm) cable, 18 AWG	<b>Mx51, Mx61</b>	UL 873, File E9429; cUL, C22.2 No. 24-93; CE EMC Directive 89/336/EEC; C-tick
<b>Enclosure Rating</b>	NEMA 1 (IP31)	<b>Mx41-7153</b>	UL, CE, cUL, C-tick
<b>Feedback</b>		<b>Warranty</b>	
<b>MF51, MS51, MS41</b>	2-10 VDC	<b>MF-22303</b>	2 years
<b>Manual Override</b>	Crank	<b>All others</b>	5 years

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INDIVIDUAL SPECIFICATIONS									
Model	VB-7000 Valve Size NPT	Supply VA	Force/Torque	Actuator Code	Action	Control Signal	Stroke	Drive Time	Spring Return Time
MF-22303	0.5" to 1-1/4"	1.5 VA	45 lbf (200 N)	255	NSR, DA/RA by wiring terminations	Floating	9/16" (1.4 cm)	126 seconds nominal	16 seconds
MA51-7103-100	0.5" to 2"	5.3 VA	105 lbf (467 N)	804	SR valve stem up	Two-position	1/2" (1.3 cm)	44 seconds	19 seconds
MF51-7103-100	0.5" to 2"	6.9 VA	105 lbf (467 N)	804	SR valve stem up, DA/RA by wiring	Floating	1/2" (1.3 cm)	60 seconds	16 seconds
MS51-7103-100	0.5" to 2"	6.6 VA	105 lbf (467 N)	814	SR, DA/RA by jumpers	Prop. 2-10 VDC	1/2" (1.3 cm)	60 seconds	16 seconds
MS51-7103-160	0.5" to 2"	6.6 VA	105 lbf (467 N)	814	SR, DA/RA by jumpers	Prop. 4-20 mA	1/2" (1.3 cm)	60 seconds	16 seconds
MA51-7203	1-1/4 to 2"	9.7 VA	220 lbf (979 N)	593	SR valve stem up	Two-position	1/2" (1.3 cm)	190 seconds maximum	35 seconds
MA61-7203	2.5" to 5"	9.7 VA	220 lbf (979 N)	596	SR valve stem up	Two-position	1" (2.5 cm)	190 seconds maximum	40 seconds
MF51-7203	1-1/4 to 2"	9.7 VA	220 lbf (979 N)	593	SR valve stem up, DA/RA by wiring	Floating	1/2" (1.3 cm)	190 seconds maximum	35 seconds
MF61-7203	2.5" to 5"	9.7 VA	220 lbf (979 N)	596	SR valve stem up, DA/RA by wiring	Floating	1" (2.5 cm)	190 seconds maximum	40 seconds
MS51-7203	1-1/4 to 2"	9.7 VA	220 lbf (979 N)	593	SR, DA/RA by jumpers	Prop. 2-10 VDC or 4-20 mA	1/2" (1.3 cm)	190 seconds maximum	35 seconds
MS61-7203	2.5" to 5"	9.7 VA	220 lbf (979 N)	596	SR, DA/RA by jumpers	Prop. 2-10 VDC or 4-20 mA	1" (2.5 cm)	190 seconds maximum	40 seconds
MA41-7153/AV-609-1	6"	9.7 VA	133 in-lb (15 Nm)	556	SR, Mounting orientation DA/RA	Two-position	1" w/AV-609 linkage	190 seconds	30 seconds
MF41-7153/AV-609-1	6"	9.7 VA	133 in-lb (15 Nm)	556	SR, Mounting orientation DA/RA	Floating	1" w/AV-609 linkage	190 seconds	30 seconds
MS41-7153/AV-609-1	6"	9.7 VA	133 in-lb (15 Nm)	556	SR, Mounting orientation DA/RA	Prop. 2-10 VDC or 4-20 mA	1" w/AV-609 linkage	190 seconds	30 seconds

ACTUATOR DIMENSIONS				
*Mx41/Mx51/Mx61		Mx-223x3		
Model Number	H	W	D	
Mx51-7103	6-5/16 (16.0)	6-3/4 (17.2)	3-1/2 (8.9)	
Mx51-7203	7 (17.8)	10-5/8 (27.0)	2-9/16 (6.5)	
Mx61-7203	9-9/16 (24.2)	10-5/8 (27.0)	2-9/16 (6.5)	
Mx223x3	3-5/16 (8.4)	5-9/16 (14.1)	3 (7.6)	
Mx41-7153/AV-609	11-5/8 (29.5)	4 (10.2)	6-1/8 (15.6)	
* Mx41 assemblies include separate AV-60x linkages. Dimension diagrams are generic and for illustration purposes only.				



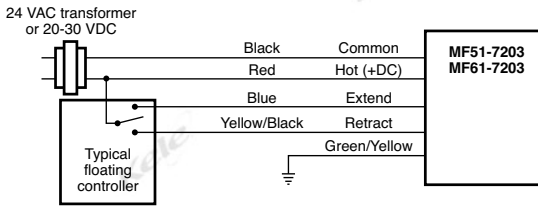
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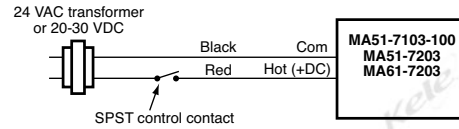
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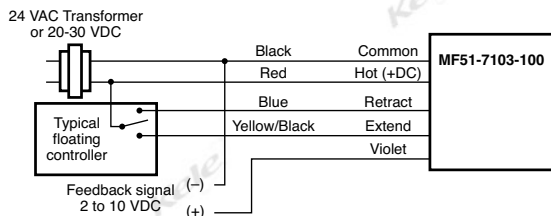
### WIRING



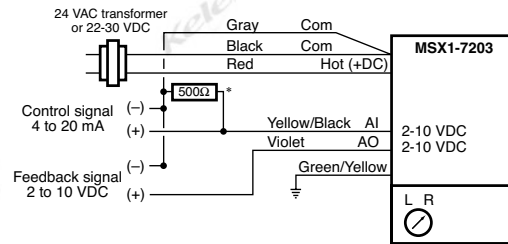
**MF41-7153, MF51/MF61-7203 Wiring  
(Floating or Tri-State)**



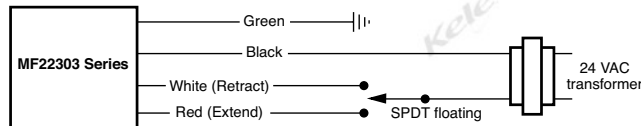
**MA51-7203, MA51-7103-100, MA61-7203 Wiring  
(On/Off or Open/Closed)**



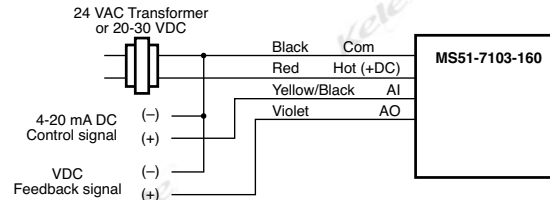
**MF51-7103-100 Wiring  
(Floating or Tri-State)**



**MS41/MS51/MS61-7203 Wiring  
(Proportional or Analog)** \*Required for 4-20mA Operation



**MF22303 Wiring  
(Floating or Tri-State)**



**MS51-7103-160 Wiring  
(Proportional or Analog)**

### ORDERING INFORMATION

MODEL	DESCRIPTION
<b>MF-22303</b>	Non-spring return, 45 lbf, floating control, for 1/2" to 1-1/4" VB-7xxx valves
<b>MA51-7103-100</b>	Spring return stem up, 105 lbf, two-position, plenum cable, for 1/2" to 2" VB-7xxx
<b>MF51-7103-100</b>	Spring return stem up, 105 lbf, floating, plenum cable, for 1/2" to 2" VB-7xxx
<b>MS51-7103-100</b>	Spring return stem up, 105 lbf, proportional 2-10 VDC, plenum cable, for 1/2" to 2" VB-7xxx
<b>MS51-7103-160</b>	Spring return stem up, 105 lbf, proportional 4-20 mA, plenum cable, for 1/2" to 2" VB-7xxx
<b>MA51-7203</b>	Spring return stem up, 220 lbf, two-position, plenum cable, for 1-1/4" to 2" VB-7xxx
<b>MA61-7203</b>	Spring return stem up, 220 lbf, two-position, plenum cable, for 2-1/2" to 4" VB-7xxx
<b>MF51-7203</b>	Spring return stem up, 220 lbf, floating, plenum cable, for 1-1/4" to 2" VB-7xxx
<b>MF61-7203</b>	Spring return stem up, 220 lbf, floating, plenum cable, for 2-1/2" to 4" VB-7xxx
<b>MS51-7203</b>	Spring return stem up, 220 lbf, proportional, plenum cable, for 1-1/4" to 2" VB-7xxx
<b>MS61-7203</b>	Spring return stem up, 220 lbf, proportional, plenum cable, for 2-1/2" to 4" VB-7xxx
<b>MA41-7153</b>	Spring return stem up, 133 in-lb (15 Nm), two-position, 24 VAC, two-wire control for 6", VB-7XXX
<b>MF41-7153</b>	Spring return stem up, 133 in-lb (15 Nm), tri-state control, 24 VAC for 6", VB-7XXX
<b>MS41-7153</b>	Spring return stem up, 133 in-lb (15 Nm), proportional control, 24 VAC for 6", VB-7XXX