

CONTROL VALVES

DIRECT-MOUNT GLOBE VALVE ACTUATORS

ML SERIES



Honeywell

DESCRIPTION

The **Honeywell ML6420, ML6421, ML6984, ML7420, ML7421, and ML7984 Series** are direct-mount, electric, non-spring return actuators designed for use on Honeywell V5011N/13N and VGF Series globe valves.

The **ML6425** and **ML7425** are direct-mount, electric spring return. The actuators can be ordered pre-assembled with a valve, or they may be easily installed in the field; separate linkages are not required.



**ML7421,
ML6421**



**ML7425,
ML6425**



**ML7984,
ML6984**



**ML7420,
ML6420**



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DIRECT-MOUNT ACTUATOR SELECTION CHART / CLOSE-OFF RATINGS

Size	Non-spring return (NSR) actuator			Spring return (SR) actuator				
	Two-way valve	Three-way valve	Floating	Proportional	Closeoff psid	Floating	Proportional	Closeoff psid
1/2"	V5011N1008 - N1040	V5013N1030, N1048	ML6984, ML6420	ML7984, ML7420	273, 230	ML6425	ML7425	230
3/4"	V5011N1057	V5013N1055	ML6984, ML6420	ML7984, ML7420	273, 230	ML6425	ML7425	230
1"	V5011N1065	V5013N1063	ML6984, ML6420	ML7984, ML7420	193, 163	ML6425	ML7425	163
1-1/4"	V5011N1073	V5013N1071	ML6984, ML6420	ML7984, ML7420	123, 104	ML6425	ML7425	104
1-1/2"	V5011N1081	V5013N1089	ML6984, ML6420	ML7984, ML7420	79, 67	ML6425	ML7425	67
2"	V5011N1099	V5013N1097	ML6984, ML6420	ML7984, ML7420	44, 37	ML6425	ML7425	37
2-1/2"		VGF31EM25	ML6421A	ML7421A	87	ML6425	ML7425	29
3"		VGF31EM30	ML6421A	ML7421A	58	ML6425	ML7425	19
2-1/2"	VGF21ES25, LS25	VGF31LD25	ML6421A	ML7421A	69	ML6425	ML7425	23
3"	VGF21ES30, LS30	VGF31LD30	ML6421A	ML7421A	34	ML6425	ML7425	11
4"	VGF21ES40, LS40	VGF31LD40, EM40	ML6421B	ML7421B	34	N/A	N/A	N/A
5"	VGF21ES50, LS50	VGF31LD50, EM50	ML6421B	ML7421B	13	N/A	N/A	N/A
6"	VGF21ES60, LS60	VGF31LD60, EM60	ML6421B	ML7421B	13	N/A	N/A	N/A
2-1/2"	VGF21EP25		ML6421A	ML7421A	175	N/A	N/A	N/A
3"	VGF21EP30		ML6421A	ML7421A	175	N/A	N/A	N/A
4"	VGF21EP40		ML6421B	ML7421B	175	N/A	N/A	N/A
5"	VGF21EP50		ML6421B	ML7421B	175	N/A	N/A	N/A
6"	VGF21EP60		ML6421B	ML7421B	175	N/A	N/A	N/A

COMMON SPECIFICATIONS

Life Expectancy	50,000 full stroke cycles or 1,000,000 repetitions (ML6984, ML7984)	Operating Temperature	14° to 122°F (-10° to 50°C) for ML64xx, ML74xx; 32° to 132°F (0° to 55°C) for ML6984, ML7984
Input Impedance	100 kΩ for 2-10 VDC input, 500Ω for 4-20 mA input (ML74xx); 20 kΩ for 2-10 VDC input, 237Ω for 4-20 mA input (ML7984)	Operating Humidity	5% to 95% RH non-condensing for ML64xx, ML74xx; 15% to 95% RH non-condensing for ML6984, ML7984
Noise	55 dBA @ 3.3' (1m) for ML6984, ML7984 only, others not rated	Approvals	UL File #E4436 (except ML7984/ML6984 not UL), CE
Spring Return Time	12 seconds, for ML6425, ML7425 only	Warranty	1 year
Manual Override	Yes, on ML6420, ML7420, ML6421, ML7421 only		



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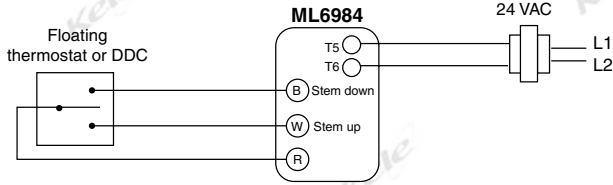
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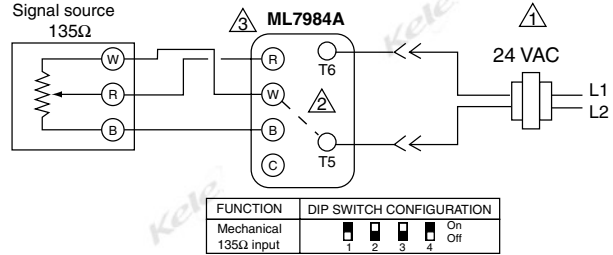
CONTROL VALVES

WIRING

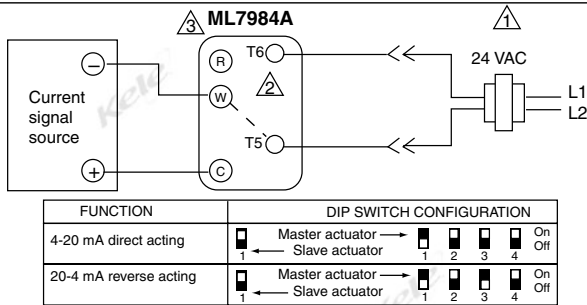
CAUTION: Install actuator on valve before energizing.



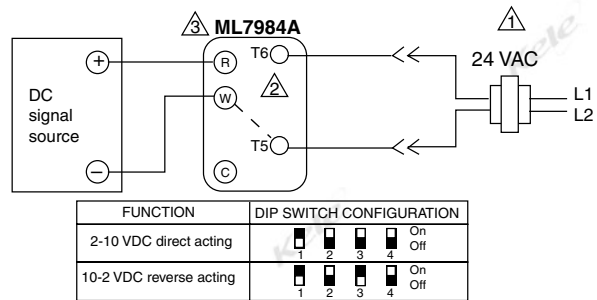
ML6984 Floating Control



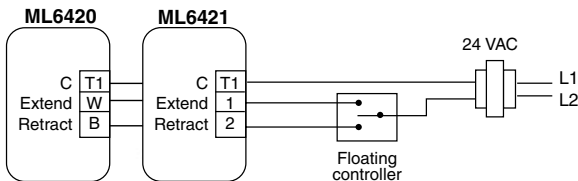
ML7984A Resistance Control



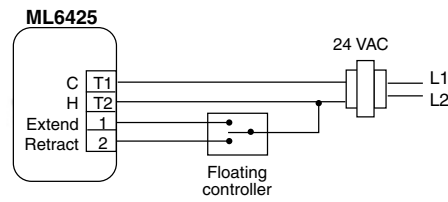
ML7984A mA Proportional Control



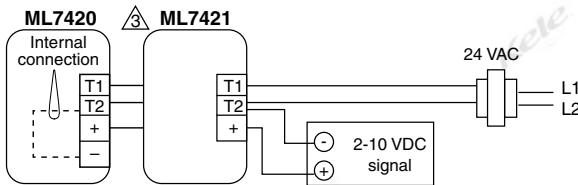
ML7984A VDC Proportional Control



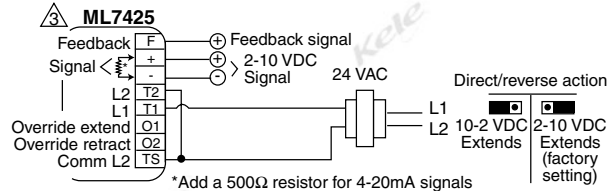
ML6420, ML6421 Floating Control



ML6425 Floating Control



ML7420, ML7421 mA Proportional Control



ML7425 VDC Proportional Control

- ⚠ Allow 0.5 amps maximum for each device. Actuators and controller can share the same transformer providing proper phasing is observed, except as noted.
- ⚠ "T5" and "W" terminal are connected internally. Device is compatible with the three-wire control system.
- ⚠ Use configuration DIP switches to select device functions. See installation instructions.

FUNCTION	DIP SWITCH CONFIGURATION			
Direct Acting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	1	2	3	4 On/Off
Reverse Acting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	1	2	3	4 On/Off

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INDIVIDUAL SPECIFICATIONS							
Model	Force	Supply Voltage	Supply VA	Control Signal	Action	Stroke	Stroke Time
ML6420A3049	135 lbf (600 N)	24 VAC 50/60 Hz	6 VA	Two-position/floating	NSR, DA/RA by wiring	3/4" (1.9 cm)	60 seconds
ML7420A3055	135 lbf (600 N)	24 VAC 50/60 Hz	7 VA	Prop. 2-10 VDC, 4-20 mA	NSR, DA/RA by jumpers	3/4" (1.9 cm)	60 seconds
ML6984A4000	160 lbf (710 N)	24 VAC 50/60 Hz, 24 VDC	12 VA	Two-position/floating	NSR, DA/RA by wiring	3/4" (1.9 cm)	63 seconds
ML7984A4009	160 lbf (710 N)	24 VAC 50/60 Hz, 24 VDC	12 VA	Prop. 2-10 VDC, 4-20 mA, 0-135Ω	NSR, DA/RA by DIP switches	3/4" (1.9 cm)	63 seconds
ML6421A1017	405 lbf (1800 N)	24 VAC 60 Hz	11 VA	Two-position/floating	NSR, DA/RA by wiring	3/4" (1.9 cm)	95 seconds
ML7421A1032	405 lbf (1800 N)	24 VAC 60 Hz	12 VA	Prop. 2-10 VDC, 4-20 mA	NSR, DA/RA by jumpers	3/4" (1.9 cm)	95 seconds
ML6421B1040	405 lbf (1800 N)	24 VAC 60 Hz	11 VA	Two-position/floating	NSR, DA/RA by wiring	1-1/2" (3.8 cm)	175 seconds
ML7421B1023	405 lbf (1800 N)	24 VAC 60 Hz	12 VA	Prop. 2-10 VDC, 4-20 mA	NSR, DA/RA by jumpers	1-1/2" (3.8 cm)	175 seconds
ML6425A3022	135 lbf (600 N)	24 VAC 50/60 Hz	11 VA	Two-position/floating	SR stem down, DA/RA by wiring	3/4" (1.9 cm)	90 seconds
ML6425B3013	135 lbf (600 N)	24 VAC 50/60 Hz	11 VA	Two-position/floating	SR stem up, DA/RA by wiring	3/4" (1.9 cm)	90 seconds
ML7425A3013	135 lbf (600 N)	24 VAC 50/60 Hz	12 VA	Prop. 2-10 VDC, 4-20 mA	SR stem down, DA/RA by jumpers	3/4" (1.9 cm)	90 seconds
ML7425B3012	135 lbf (600 N)	24 VAC 50/60 Hz	12 VA	Prop. 2-10 VDC, 4-20 mA	SR stem up, DA/RA by jumpers	3/4" (1.9 cm)	90 seconds

ORDERING INFORMATION

MODEL

ML6420A3049

ML7420A3055

ML6984A4000

ML7984A4009

ML6421A1017

ML6421B1040

ML7421A1032

ML7421B1023

ML6425A3022

ML6425B3013

ML7425A3013

ML7425B3012

DESCRIPTION

135 lbf, non-spring return, floating control for 1/2" to 2" valves

135 lbf, non-spring return, proportional control (2-10V, 4-20 mA) for 1/2" to 2" valves

160 lbf, non-spring return, floating control for 1/2" to 2" valves

160 lbf, non-spring return, proportional input (2-10V, 4-20 mA, 135Ω) for 1/2" to 2" valves

405 lbf, non-spring return, floating control for 2-1/2" to 3" valves

405 lbf, non-spring return, floating control for 4" to 6" valves

405 lbf, non-spring return, proportional control (2-10V, 4-20 mA) for 2-1/2" to 3" valves

405 lbf, non-spring return, proportional control (2-10V, 4-20 mA) for 4" to 6" valves

135 lbf, spring return stem down, 2 position/floating control for 1/2" to 3" valves

135 lbf, spring return stem up, 2 position/floating control for 1/2" to 3" valves

135 lbf, spring return stem down, proportional (2-10 VDC, 4-20 mA) for 1/2" to 3" valves

135 lbf, spring return stem up, proportional (2-10V, 4-20 mA) for 1/2" to 3" valves

SSTAG

KOV Series

RELATED PRODUCTS

Stainless steel tag on bead chain, 1" x 2" dogtag, custom engraved per order

Fabric Weatherproof cover for globe actuators