

# P1000 Series Pressure Independent Valves

## Technical Bulletin

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# P1000 Series Pressure Independent Valves

## Technical Bulletin

### Document Introduction

Available in sizes 1/2 through 2 in. (DN15 through DN50), P1000 Series Pressure Independent Valves are designed specifically for automated commercial Heating, Ventilating, and Air Conditioning (HVAC) service. These valves feature a forged brass body with a chrome-plated brass ball for water or glycol solutions to 212°F (100°C). Pressure independent valves combine the function of the traditional control valve and balancing valve using a differential pressure regulator.

### Input Voltage, Flow, and Feedback Voltage

P1000 Series Valves that use a VA2104-HGA-2, VA2120-HGA-2, or M2215-HGA-2 0 to 10 VDC proportional control actuator are factory calibrated 0 to 10 VDC input over the specified flow range. Because the output flow is independent of input pressure, the input voltage is directly related to the output flow.

For P1000 Series Valves that use VA2104-HGA-2 or VA2120-HGA-2 non-spring return actuators, feedback voltage equals input voltage. For P1000 Series Valves that use M2204-HGA-2 and M2215-HGA-2 spring return actuators, feedback voltage does not equal input voltage.

The following tables and graphs illustrate the relationship between input voltage, flow, and feedback voltage.

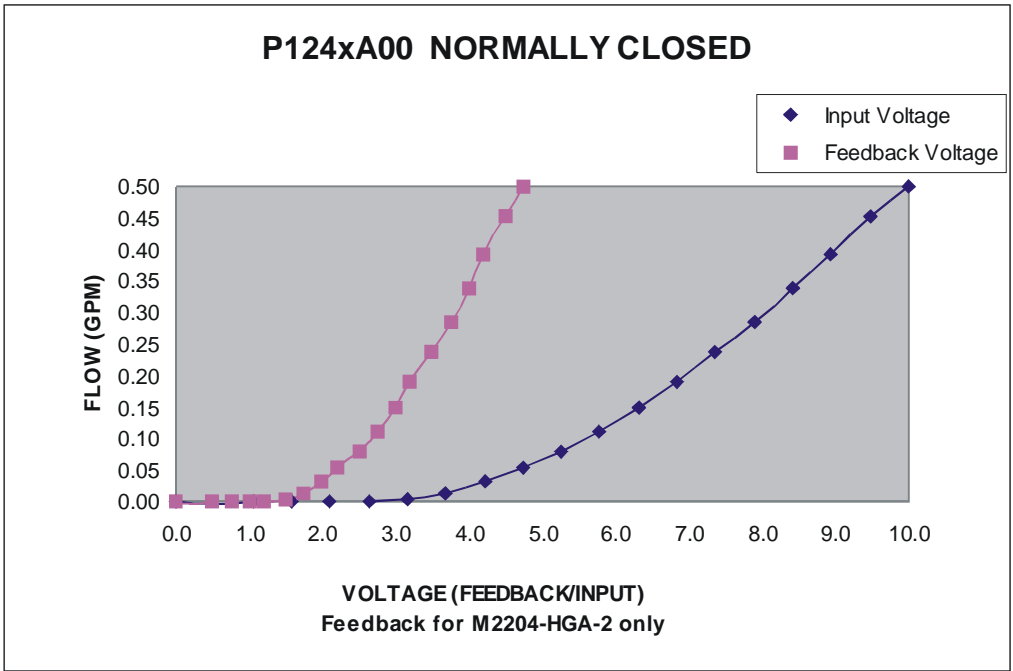
**IMPORTANT:** P1000 valves must always be applied as an electrically normally closed valve. Zero volt control signal must always indicate valve closed. The P1000 valve loses its ability to properly control the maximum flow if it is applied as an electrically normally open valve or zero volts indicates valve open.

## P124xA00 Valve Flow and Input/Feedback Voltage

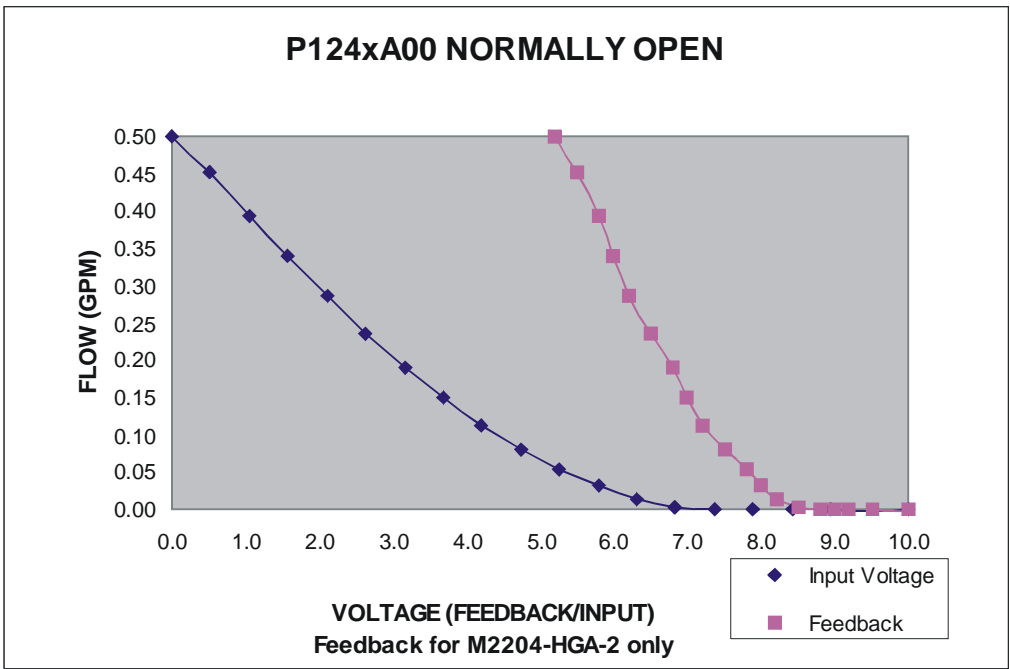
Table 1: P124xA00, 1/2 in. NPT (0.5 Gallons Per Minute [GPM] Maximum Flow) with 0 to 10 VDC Proportional Actuators <sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
45	0.50	10.0	0.0	4.8	5.2
43	0.45	9.5	0.5	4.5	5.5
40	0.39	8.9	1.1	4.2	5.8
38	0.34	8.4	1.6	4.0	6.0
36	0.29	7.9	2.1	3.8	6.2
33	0.24	7.4	2.6	3.5	6.5
31	0.19	6.8	3.2	3.2	6.8
29	0.15	6.3	3.7	3.0	7.0
26	0.11	5.8	4.2	2.8	7.2
24	0.08	5.3	4.7	2.5	7.5
21	0.05	4.7	5.3	2.2	7.8
19	0.03	4.2	5.8	2.0	8.0
17	0.01	3.7	6.3	1.8	8.2
14	0.00	3.2	6.8	1.5	8.5
12	0.00	2.6	7.4	1.2	8.8
10	0.00	2.1	7.9	1.0	9.0
7	0.00	1.6	8.4	0.8	9.2
5	0.00	1.1	8.9	0.5	9.5
2	0.00	0.5	9.5	0.2	9.8
0	0.00	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.



**Figure 1: P124xA00 Valve, Normally Closed Flow Chart**



**Figure 2: P124xA00 Valve, Normally Open Flow Chart**

## P124xA01 Valve Flow and Input/Feedback Voltage

Table 2: P124xA01, 1/2 in. NPT (1.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators <sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open	Normally Closed	Normally Open
67	1.00	10.0	0.0	7.0	3.0
64	0.96	9.6	0.4	6.8	3.2
62	0.91	9.3	0.7	6.5	3.5
59	0.86	8.9	1.1	6.2	3.8
57	0.80	8.6	1.4	6.0	4.0
55	0.75	8.2	1.8	5.8	4.2
52	0.69	7.9	2.1	5.5	4.5
50	0.63	7.5	2.5	5.2	4.8
48	0.57	7.1	2.9	5.0	5.0
45	0.51	6.8	3.2	4.8	5.2
43	0.45	6.4	3.6	4.5	5.5
40	0.39	6.1	3.9	4.2	5.8
38	0.34	5.7	4.3	4.0	6.0
36	0.29	5.4	4.6	3.8	6.2
33	0.24	5.0	5.0	3.5	6.5
31	0.19	4.6	5.4	3.2	6.8
29	0.15	4.3	5.7	3.0	7.0
26	0.11	3.9	6.1	2.8	7.2
24	0.08	3.6	6.4	2.5	7.5
21	0.05	3.2	6.8	2.2	7.8
19	0.03	2.9	7.1	2.0	8.0
17	0.01	2.5	7.5	1.8	8.2
14	0.00	2.1	7.9	1.5	8.5
12	0.00	1.8	8.2	1.2	8.8
10	0.00	1.4	8.6	1.0	9.0
7	0.00	1.1	8.9	0.8	9.2
5	0.00	0.7	9.3	0.5	9.5
2	0.00	0.4	9.6	0.2	9.8
0	0.00	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.

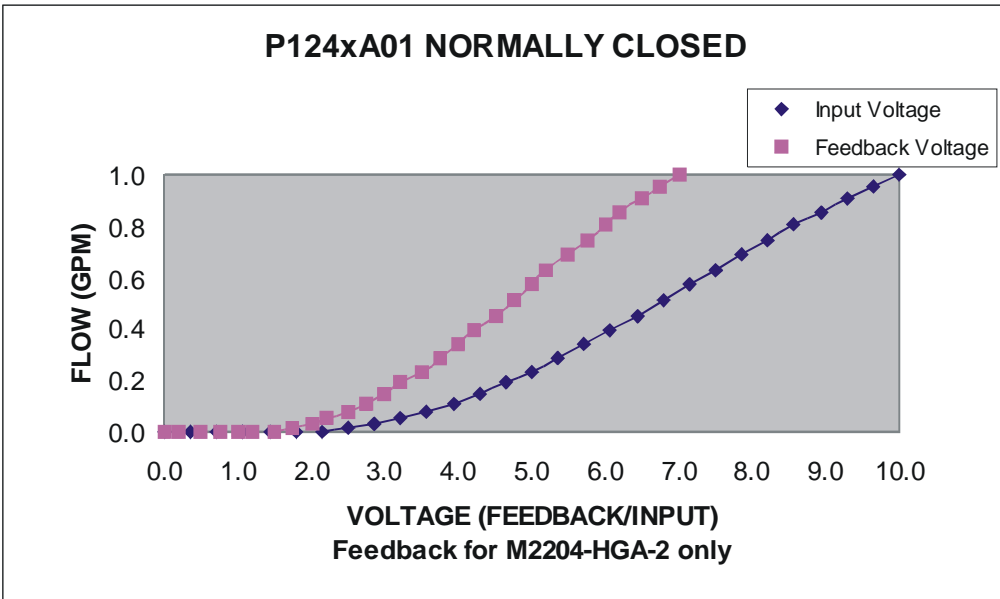


Figure 3: P124xA01 Valve, Normally Closed Flow Chart

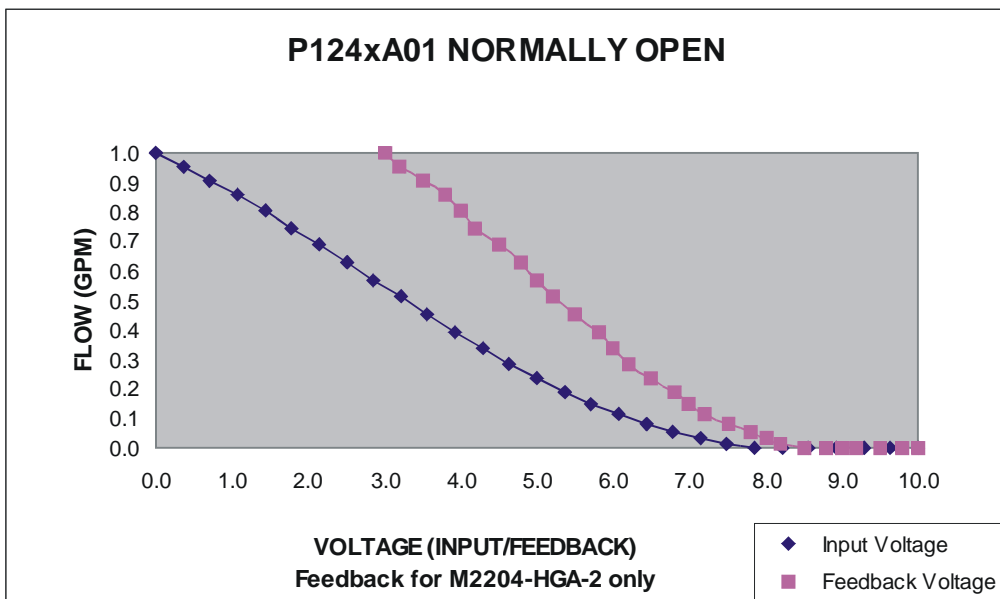


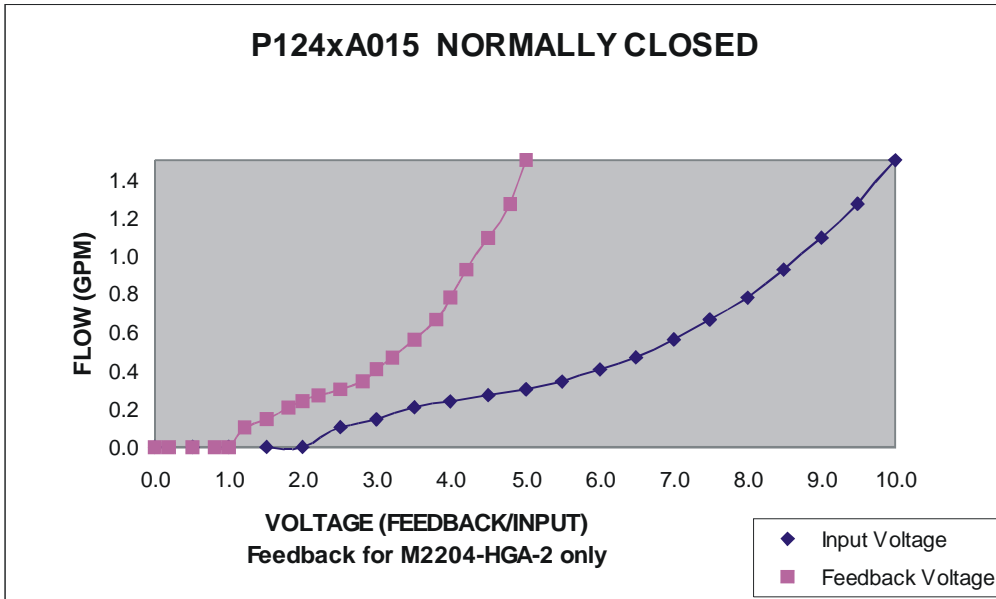
Figure 4: P124xA01 Valve, Normally Open Flow Chart

## P124xA015 Valve Flow and Input/Feedback Voltage

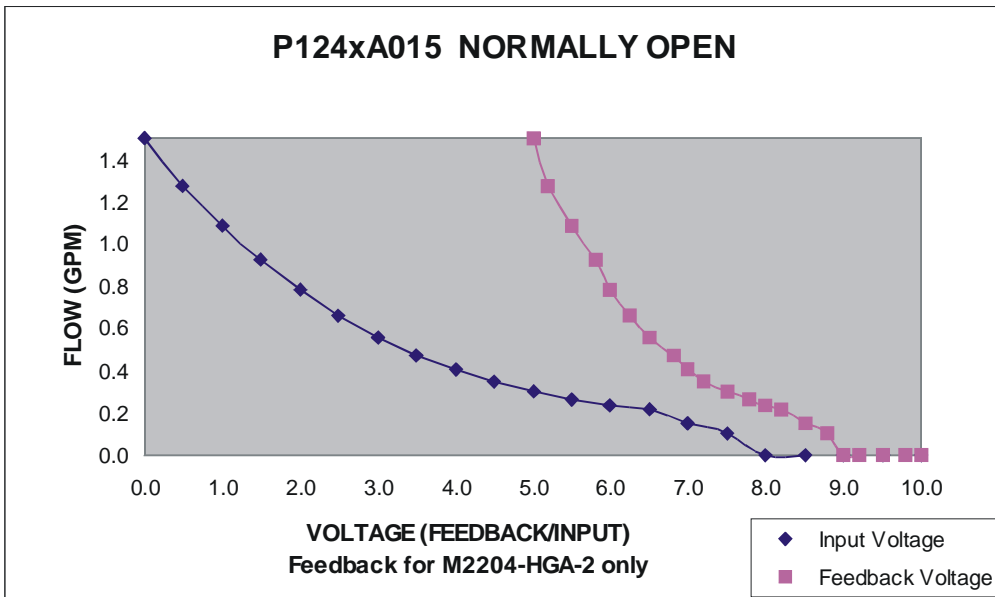
Table 3: P124xA015, 1/2 in. NPT (1.5 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators <sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
48	1.50	10.0	0.0	5.0	5.0
45	1.28	9.5	0.5	4.8	5.2
43	1.09	9.0	1.0	4.5	5.5
40	0.93	8.5	1.5	4.2	5.8
38	0.78	8.0	2.0	4.0	6.0
36	0.66	7.5	2.5	3.8	6.3
33	0.56	7.0	3.0	3.5	6.5
31	0.47	6.5	3.5	3.2	6.8
29	0.40	6.0	4.0	3.0	7.0
26	0.35	5.5	4.5	2.8	7.2
24	0.30	5.0	5.0	2.5	7.5
21	0.27	4.5	5.5	2.2	7.8
19	0.24	4.0	6.0	2.0	8.0
17	0.21	3.5	6.5	1.8	8.2
14	0.15	3.0	7.0	1.5	8.5
12	0.10	2.5	7.5	1.2	8.8
10	0.00	2.0	8.0	1.0	9.0
7	0.00	1.5	8.5	0.8	9.2
5	0.00	1.0	9.0	0.5	9.5
2	0.00	0.5	9.5	0.2	9.8
0	0.00	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.



**Figure 5: P124xA015 Valve, Normally Closed Flow Chart**



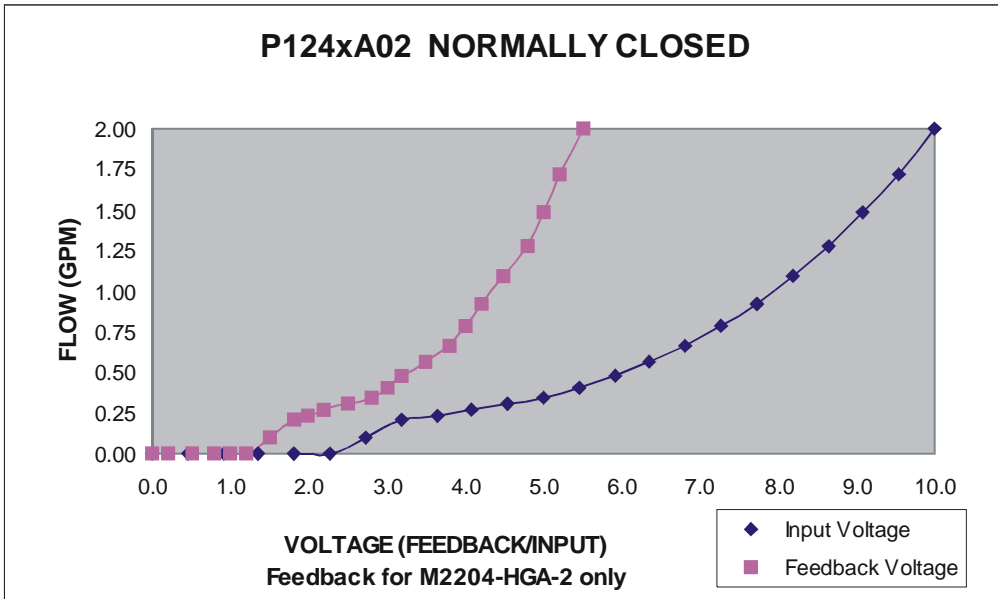
**Figure 6: P124xA015 Valve, Normally Open Flow Chart**

## P124xA02 Valve Flow and Input/Feedback Voltage

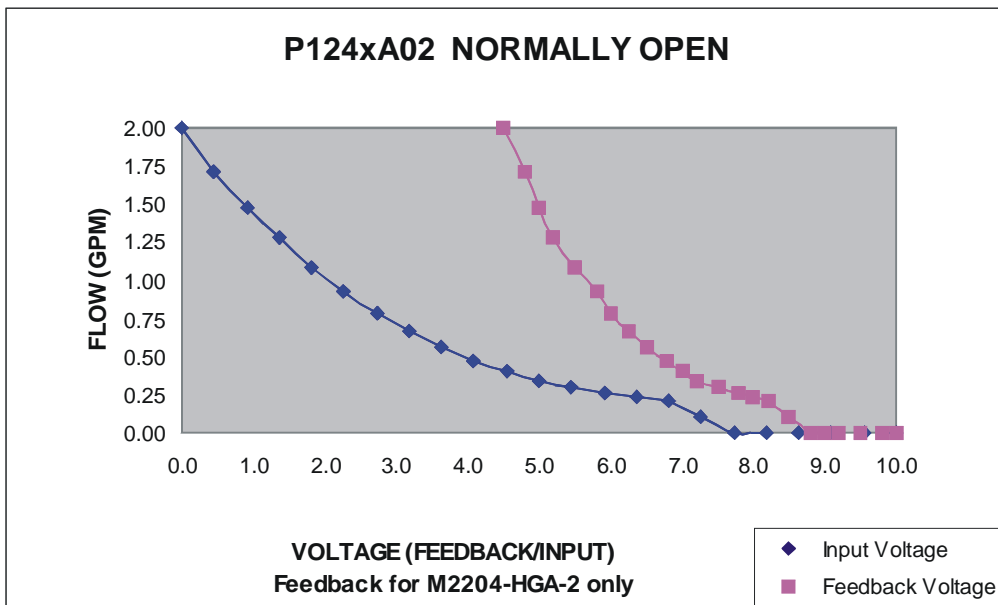
Table 4: P124xA02, 1/2 in. NPT (2.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators <sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
52	2.00	10.0	0.0	5.5	4.5
50	1.71	9.5	0.5	5.2	4.8
48	1.48	9.1	0.9	5.0	5.0
45	1.28	8.6	1.4	4.8	5.2
43	1.09	8.2	1.8	4.5	5.5
40	0.93	7.7	2.3	4.2	5.8
38	0.78	7.3	2.7	4.0	6.0
36	0.66	6.8	3.2	3.8	6.3
33	0.56	6.4	3.6	3.5	6.5
31	0.47	5.9	4.1	3.2	6.8
29	0.40	5.5	4.5	3.0	7.0
26	0.35	5.0	5.0	2.8	7.2
24	0.30	4.5	5.5	2.5	7.5
21	0.27	4.1	5.9	2.2	7.8
19	0.24	3.6	6.4	2.0	8.0
17	0.21	3.2	6.8	1.8	8.2
14	0.10	2.7	7.3	1.5	8.5
12	0.00	2.3	7.7	1.2	8.8
10	0.00	1.8	8.2	1.0	9.0
7	0.00	1.4	8.6	0.8	9.2
5	0.00	0.9	9.1	0.5	9.5
2	0.00	0.5	9.5	0.2	9.8
0	0.00	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.



**Figure 7: P124xA02 Valve, Normally Closed Flow Chart**



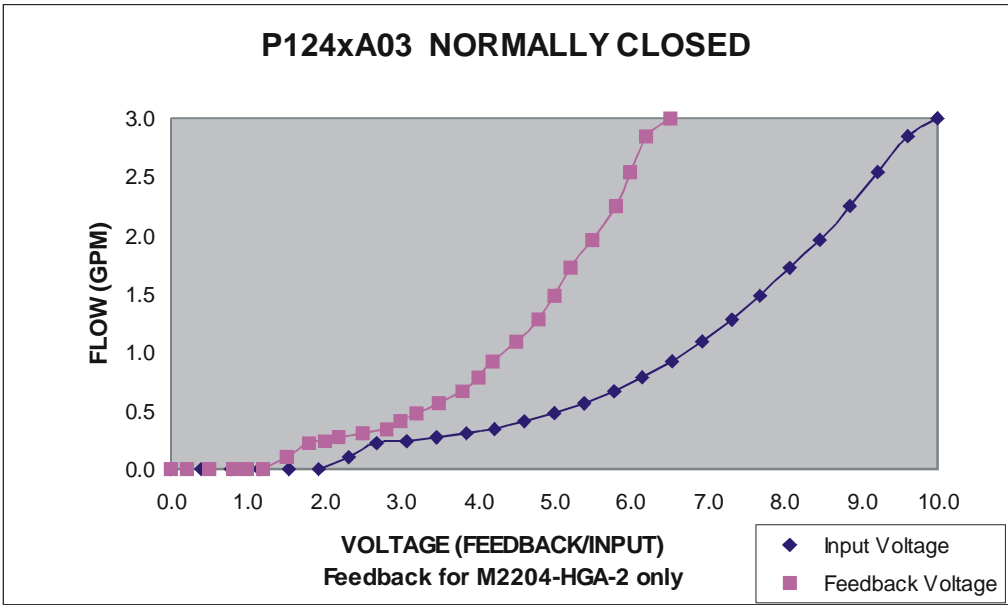
**Figure 8: P124xA02 Valve, Normally Open Flow Chart**

## P124xA03 Valve Flow and Input/Feedback Voltage

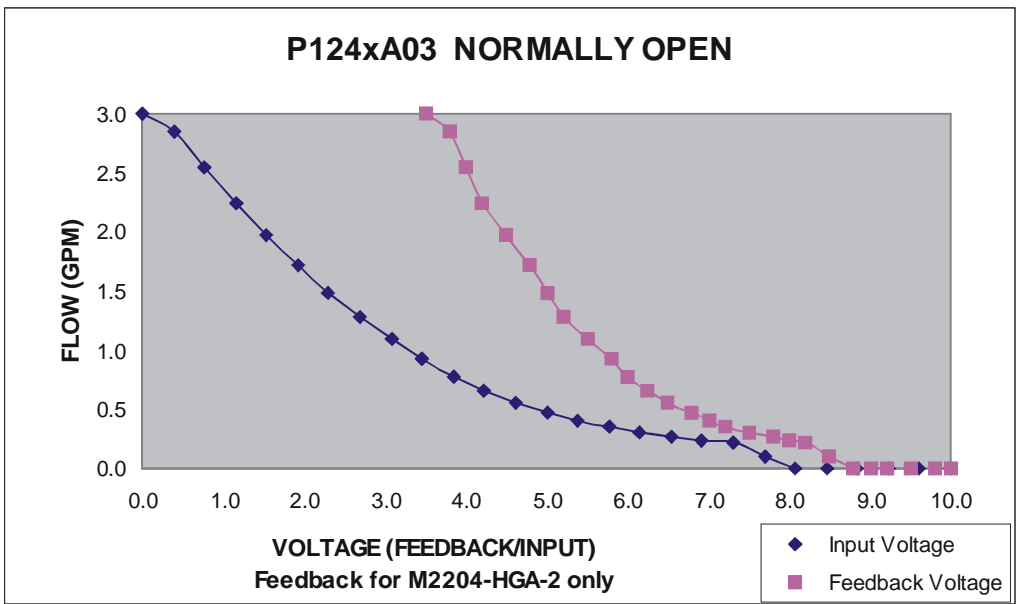
Table 5: P124xA03, 1/2 in. NPT (3.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators <sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
62	3.00	10.0	0.0	6.5	3.5
59	2.85	9.6	0.4	6.2	3.8
57	2.54	9.2	0.8	6.0	4.0
55	2.24	8.8	1.2	5.8	4.2
52	1.97	8.5	1.5	5.5	4.5
50	1.71	8.1	1.9	5.2	4.8
48	1.48	7.7	2.3	5.0	5.0
45	1.28	7.3	2.7	4.8	5.2
43	1.09	6.9	3.1	4.5	5.5
40	0.93	6.5	3.5	4.2	5.8
38	0.78	6.2	3.8	4.0	6.0
36	0.66	5.8	4.2	3.8	6.3
33	0.56	5.4	4.6	3.5	6.5
31	0.47	5.0	5.0	3.2	6.8
29	0.40	4.6	5.4	3.0	7.0
26	0.35	4.2	5.8	2.8	7.2
24	0.30	3.8	6.2	2.5	7.5
21	0.27	3.5	6.5	2.2	7.8
19	0.24	3.1	6.9	2.0	8.0
17	0.21	2.7	7.3	1.8	8.2
14	0.10	2.3	7.7	1.5	8.5
12	0.00	1.9	8.1	1.2	8.8
10	0.00	1.5	8.5	1.0	9.0
7	0.00	1.2	8.8	0.8	9.2
5	0.00	0.8	9.2	0.5	9.5
2	0.00	0.4	9.6	0.2	9.8
0	0.00	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.



**Figure 9: P124xA03 Valve, Normally Closed Flow Chart**



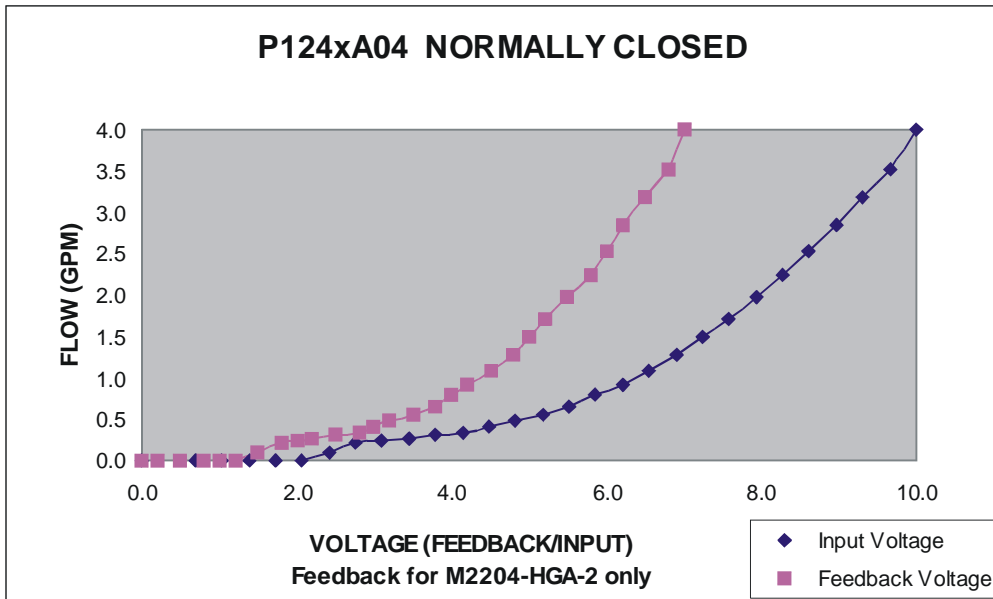
**Figure 10: P124xA03 Valve, Normally Open Flow Chart**

## P124xA04 Valve Flow and Input/Feedback Voltage

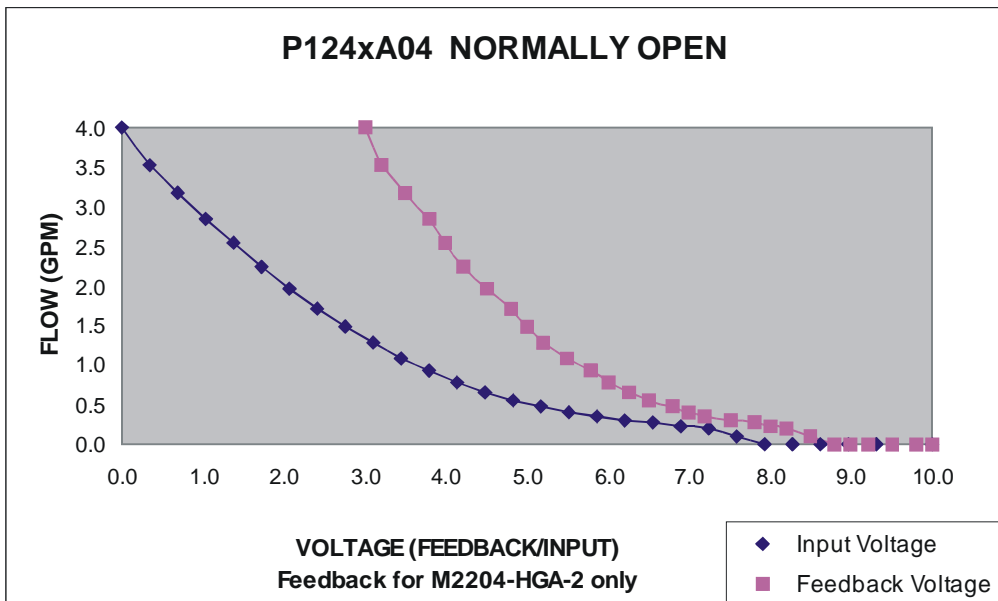
Table 6: P124xA04, 1/2 in. NPT (4.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators <sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
67	4.00	10.0	0.0	7.0	3.0
64	3.52	9.7	0.3	6.8	3.2
62	3.18	9.3	0.7	6.5	3.5
59	2.85	9.0	1.0	6.2	3.8
57	2.54	8.6	1.4	6.0	4.0
55	2.24	8.3	1.7	5.8	4.2
52	1.97	7.9	2.1	5.5	4.5
50	1.71	7.6	2.4	5.2	4.8
48	1.48	7.2	2.8	5.0	5.0
45	1.28	6.9	3.1	4.8	5.2
43	1.09	6.6	3.4	4.5	5.5
40	0.93	6.2	3.8	4.2	5.8
38	0.78	5.9	4.1	4.0	6.0
36	0.66	5.5	4.5	3.8	6.3
33	0.56	5.2	4.8	3.5	6.5
31	0.47	4.8	5.2	3.2	6.8
29	0.40	4.5	5.5	3.0	7.0
26	0.35	4.1	5.9	2.8	7.2
24	0.30	3.8	6.2	2.5	7.5
21	0.27	3.4	6.6	2.2	7.8
19	0.24	3.1	6.9	2.0	8.0
17	0.21	2.8	7.2	1.8	8.2
14	0.10	2.4	7.6	1.5	8.5
12	0.00	2.1	7.9	1.2	8.8
10	0.00	1.7	8.3	1.0	9.0
7	0.00	1.4	8.6	0.8	9.2
5	0.00	1.0	9.0	0.5	9.5
2	0.00	0.7	9.3	0.2	9.8
0	0.00	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.



**Figure 11: P124xA04 Valve, Normally Closed Flow Chart**



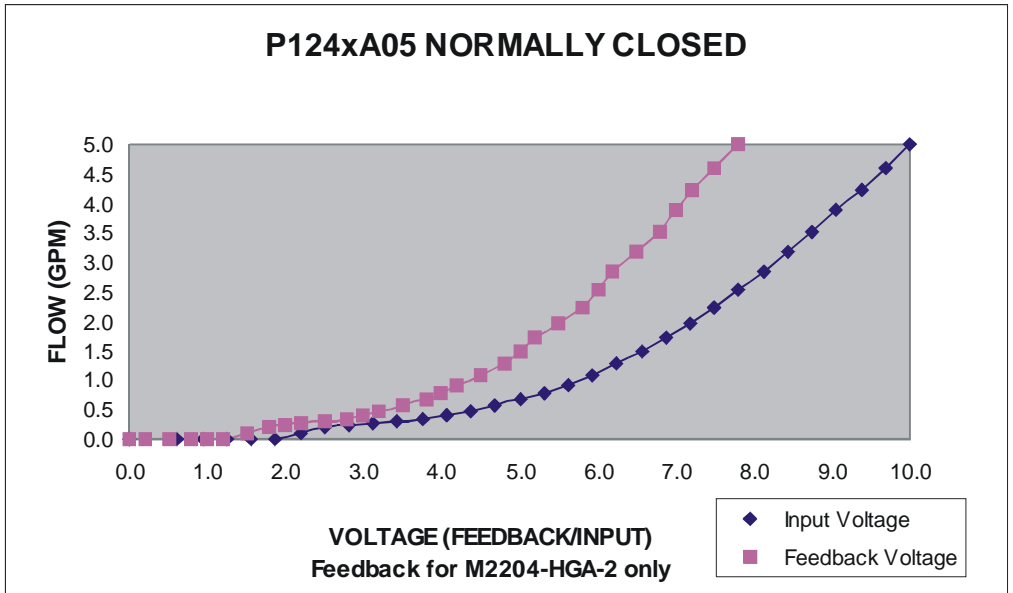
**Figure 12: P124xA04 Valve, Normally Open Flow Chart**

## P124xA05 Valve Flow and Input/Feedback Voltage

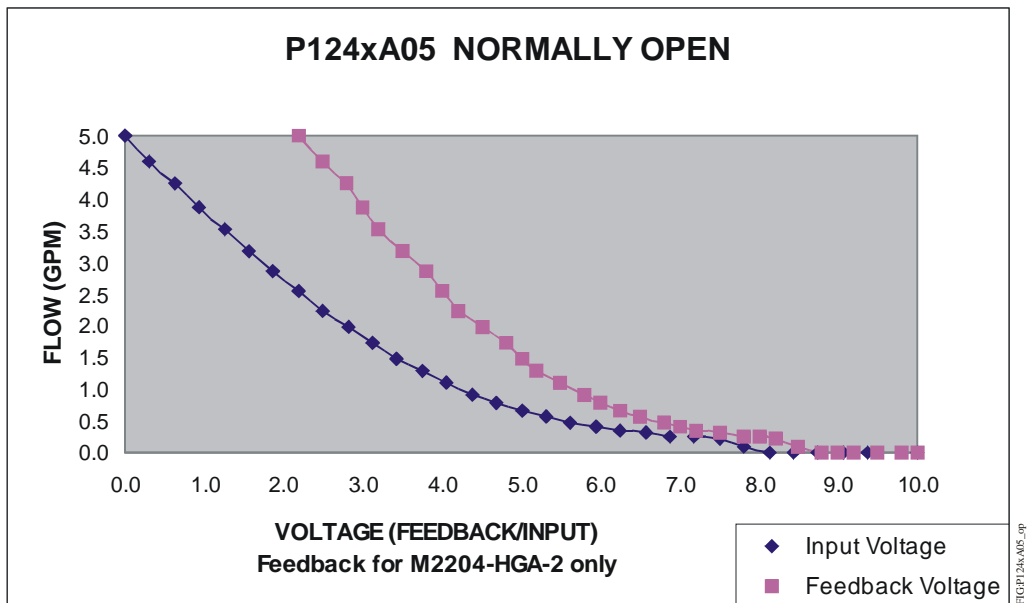
Table 7: P124xA05, 1/2 in. NPT (4.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators <sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
74	5.00	10.0	0.0	7.8	2.2
71	4.59	9.7	0.3	7.5	2.5
69	4.23	9.4	0.6	7.2	2.8
67	3.87	9.1	0.9	7.0	3.0
64	3.52	8.8	1.3	6.8	3.2
62	3.18	8.4	1.6	6.5	3.5
59	2.85	8.1	1.9	6.2	3.8
57	2.54	7.8	2.2	6.0	4.0
55	2.24	7.5	2.5	5.8	4.2
52	1.97	7.2	2.8	5.5	4.5
50	1.71	6.9	3.1	5.2	4.8
48	1.48	6.6	3.4	5.0	5.0
45	1.28	6.3	3.8	4.8	5.2
43	1.09	5.9	4.1	4.5	5.5
40	0.93	5.6	4.4	4.2	5.8
38	0.78	5.3	4.7	4.0	6.0
36	0.66	5.0	5.0	3.8	6.3
33	0.56	4.7	5.3	3.5	6.5
31	0.47	4.4	5.6	3.2	6.8
29	0.40	4.1	5.9	3.0	7.0
26	0.35	3.8	6.3	2.8	7.2
24	0.30	3.4	6.6	2.5	7.5
21	0.27	3.1	6.9	2.2	7.8
19	0.24	2.8	7.2	2.0	8.0
17	0.21	2.5	7.5	1.8	8.2
14	0.10	2.2	7.8	1.5	8.5
12	0.00	1.9	8.1	1.2	8.8
10	0.00	1.6	8.4	1.0	9.0
7	0.00	1.3	8.8	0.8	9.2
5	0.00	0.9	9.1	0.5	9.5
2	0.00	0.6	9.4	0.2	9.8
0	0.00	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.



**Figure 13: P124xA05 Valve, Normally Closed Flow Chart**



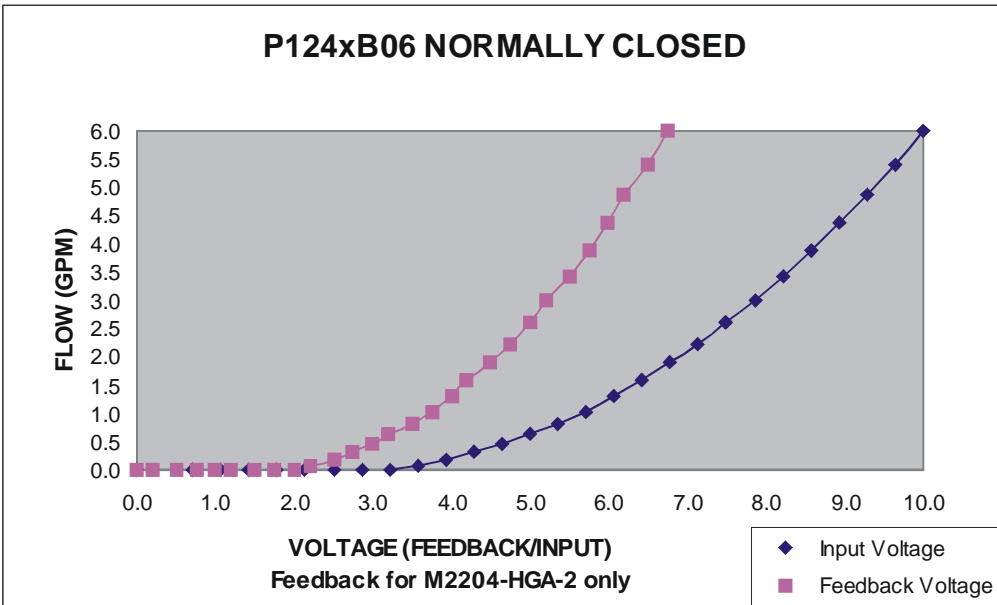
**Figure 14: P124xA05 Valve, Normally Open Flow Chart**

## P124xB06 Valve Flow and Input/Feedback Voltage

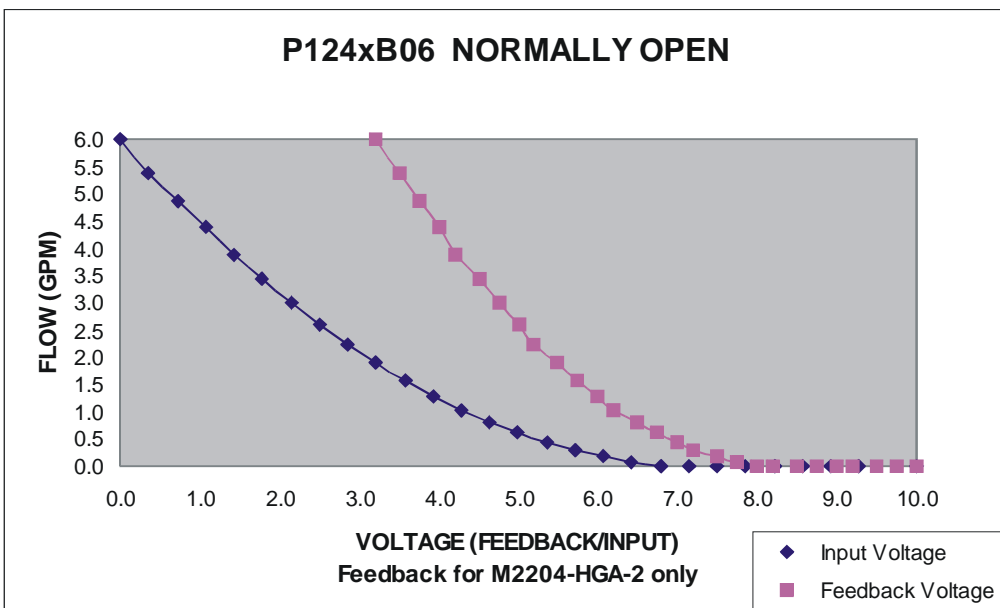
Table 8: P124xB06, 3/4 in. NPT (6.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators <sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
64	6.00	10.0	0.0	6.8	3.2
62	5.40	9.6	0.4	6.5	3.5
59	4.88	9.3	0.7	6.2	3.8
57	4.37	8.9	1.1	6.0	4.0
55	3.89	8.6	1.4	5.8	4.2
52	3.44	8.2	1.8	5.5	4.5
50	3.01	7.9	2.1	5.2	4.8
48	2.60	7.5	2.5	5.0	5.0
45	2.23	7.1	2.9	4.8	5.2
43	1.89	6.8	3.2	4.5	5.5
40	1.58	6.4	3.6	4.2	5.8
38	1.29	6.1	3.9	4.0	6.0
36	1.04	5.7	4.3	3.8	6.2
33	0.82	5.4	4.6	3.5	6.5
31	0.62	5.0	5.0	3.2	6.8
29	0.45	4.6	5.4	3.0	7.0
26	0.31	4.3	5.7	2.8	7.2
24	0.19	3.9	6.1	2.5	7.5
21	0.09	3.6	6.4	2.2	7.8
19	0.01	3.2	6.8	2.0	8.0
17	0.00	2.9	7.1	1.8	8.2
14	0.00	2.5	7.5	1.5	8.5
12	0.00	2.1	7.9	1.2	8.8
10	0.00	1.8	8.2	1.0	9.0
7	0.00	1.4	8.6	0.8	9.2
5	0.00	1.1	8.9	0.5	9.5
2	0.00	0.7	9.3	0.2	9.8
0	0.00	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.



**Figure 15: P124xB06 Valve, Normally Closed Flow Chart**



**Figure 16: P124xB06 Valve, Normally Open Flow Chart**

## P124xB07 Valve Flow and Input/Feedback Voltage

Table 9: P124xB07, 3/4 in. NPT (7.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators <sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
69	7.00	10.0	0.0	7.2	2.8
67	6.47	9.7	0.3	7.0	3.0
64	5.93	9.3	0.7	6.8	3.2
62	5.40	9.0	1.0	6.5	3.5
59	4.88	8.7	1.3	6.2	3.8
57	4.37	8.3	1.7	6.0	4.0
55	3.89	8.0	2.0	5.8	4.2
52	3.44	7.7	2.3	5.5	4.5
50	3.01	7.3	2.7	5.2	4.8
48	2.60	7.0	3.0	5.0	5.0
45	2.23	6.7	3.3	4.8	5.2
43	1.89	6.3	3.7	4.5	5.5
40	1.58	6.0	4.0	4.2	5.8
38	1.29	5.7	4.3	4.0	6.0
36	1.04	5.3	4.7	3.8	6.2
33	0.82	5.0	5.0	3.5	6.5
31	0.62	4.7	5.3	3.2	6.8
29	0.45	4.3	5.7	3.0	7.0
26	0.31	4.0	6.0	2.8	7.2
24	0.19	3.7	6.3	2.5	7.5
21	0.09	3.3	6.7	2.2	7.8
19	0.01	3.0	7.0	2.0	8.0
17	0.00	2.7	7.3	1.8	8.2
14	0.00	2.3	7.7	1.5	8.5
12	0.00	2.0	8.0	1.2	8.8
10	0.00	1.7	8.3	1.0	9.0
7	0.00	1.3	8.7	0.8	9.2
5	0.00	1.0	9.0	0.5	9.5
2	0.00	0.7	9.3	0.2	9.8
0	0.00	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.

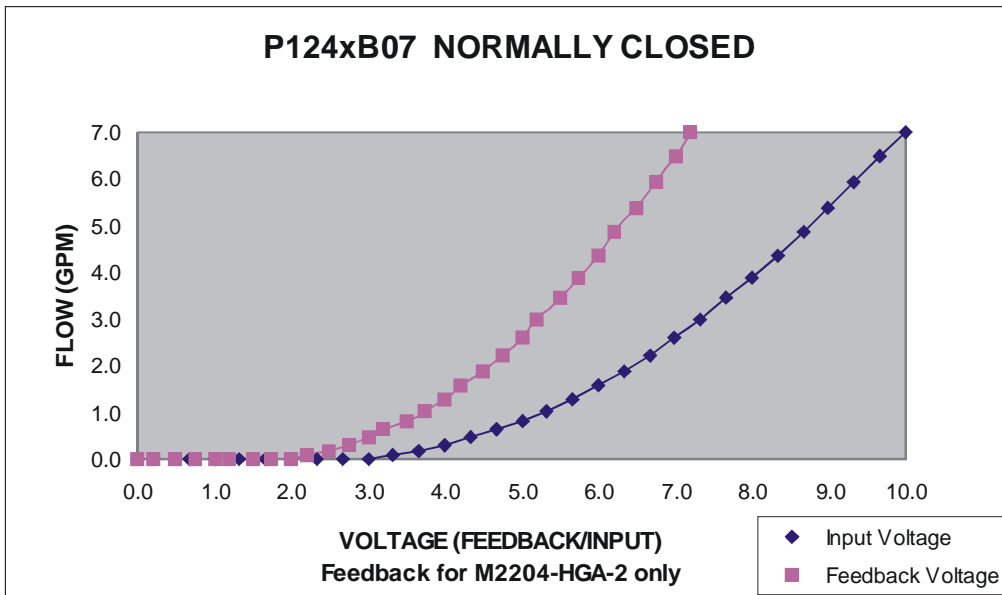


Figure 17: P124xB07 Valve, Normally Closed Flow Chart

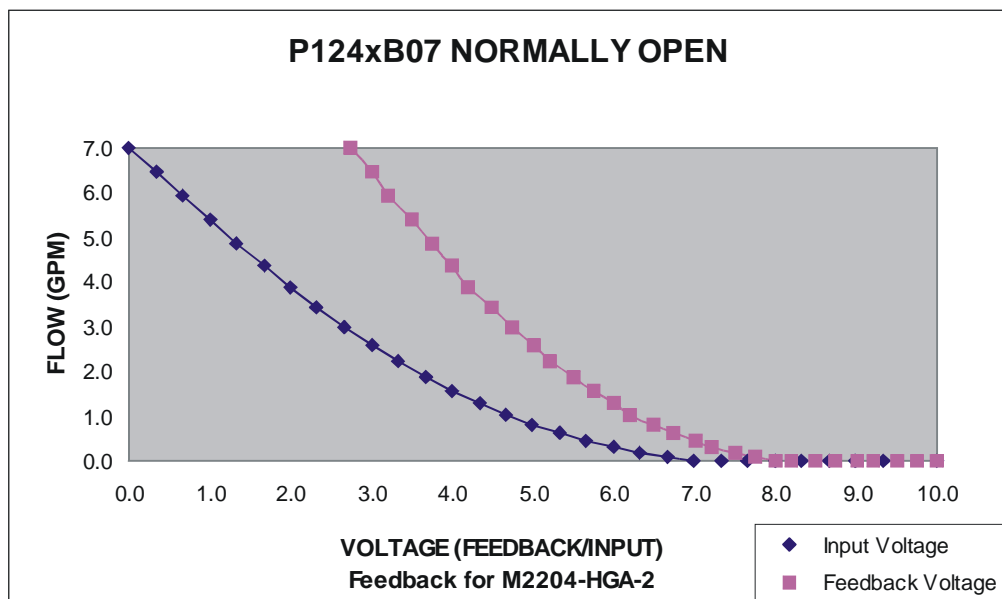


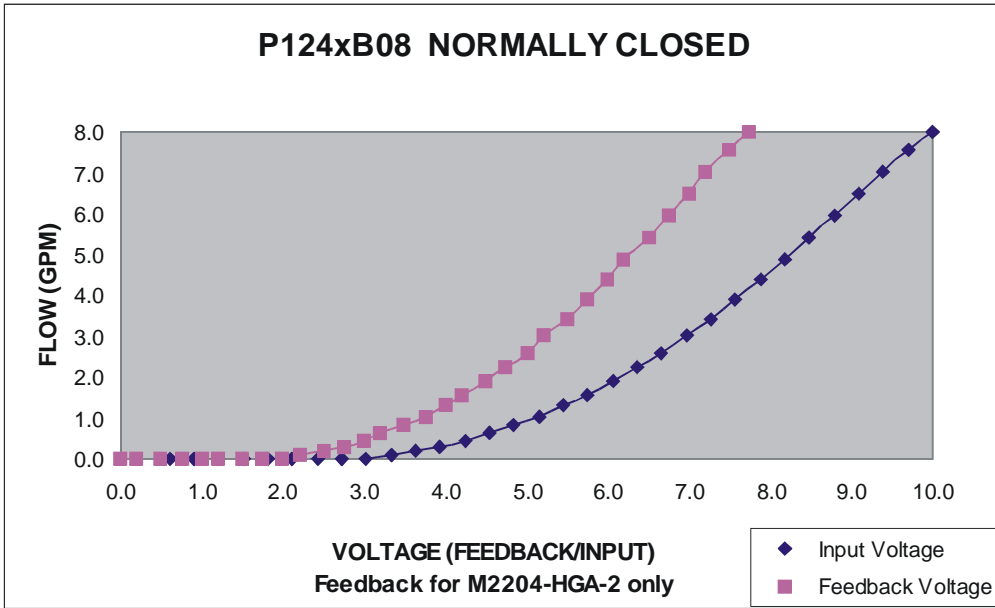
Figure 18: P124xB07 Valve, Normally Open Flow Chart

## P124xB08 Valve Flow and Input/Feedback Voltage

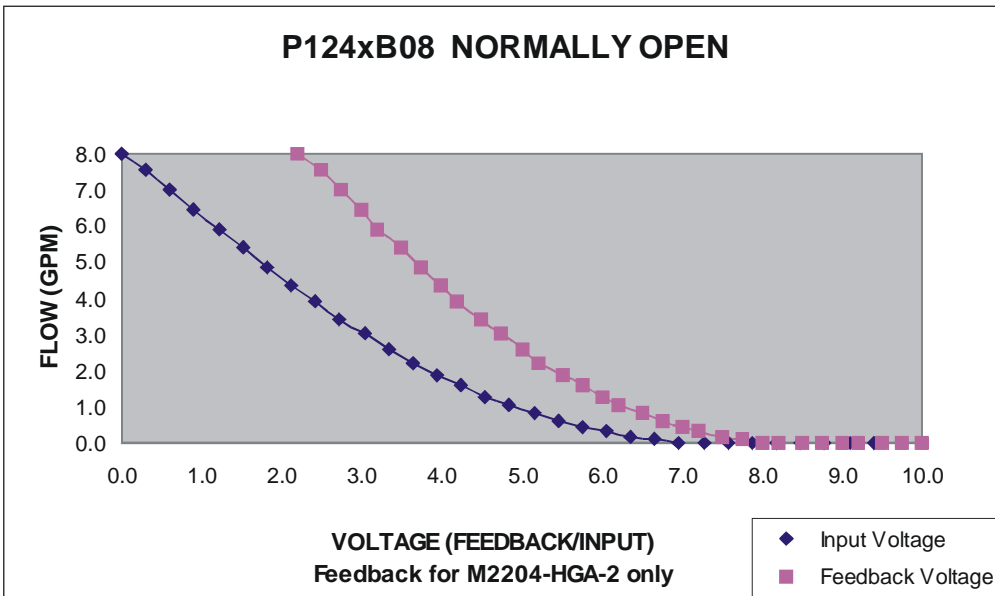
Table 10: P124xB08, 3/4 in. NPT (8.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators <sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
74	8.00	10.0	0.0	7.8	2.2
71	7.55	9.7	0.3	7.5	2.5
69	7.01	9.4	0.6	7.2	2.8
67	6.47	9.1	0.9	7.0	3.0
64	5.93	8.8	1.2	6.8	3.2
62	5.40	8.5	1.5	6.5	3.5
59	4.88	8.2	1.8	6.2	3.8
57	4.37	7.9	2.1	6.0	4.0
55	3.89	7.6	2.4	5.8	4.2
52	3.44	7.3	2.7	5.5	4.5
50	3.01	7.0	3.0	5.2	4.8
48	2.60	6.7	3.3	5.0	5.0
45	2.23	6.4	3.6	4.8	5.2
43	1.89	6.1	3.9	4.5	5.5
40	1.58	5.8	4.2	4.2	5.8
38	1.29	5.5	4.5	4.0	6.0
36	1.04	5.2	4.8	3.8	6.2
33	0.82	4.8	5.2	3.5	6.5
31	0.62	4.5	5.5	3.2	6.8
29	0.45	4.2	5.8	3.0	7.0
26	0.31	3.9	6.1	2.8	7.2
24	0.19	3.6	6.4	2.5	7.5
21	0.09	3.3	6.7	2.2	7.8
19	0.01	3.0	7.0	2.0	8.0
17	0.00	2.7	7.3	1.8	8.2
14	0.00	2.4	7.6	1.5	8.5
12	0.00	2.1	7.9	1.2	8.8
10	0.00	1.8	8.2	1.0	9.0
7	0.00	1.5	8.5	0.8	9.2
5	0.00	1.2	8.8	0.5	9.5
2	0.00	0.9	9.1	0.2	9.8
0	0.00	0.6	9.4	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.



**Figure 19: P124xB08 Valve, Normally Closed Flow Chart**



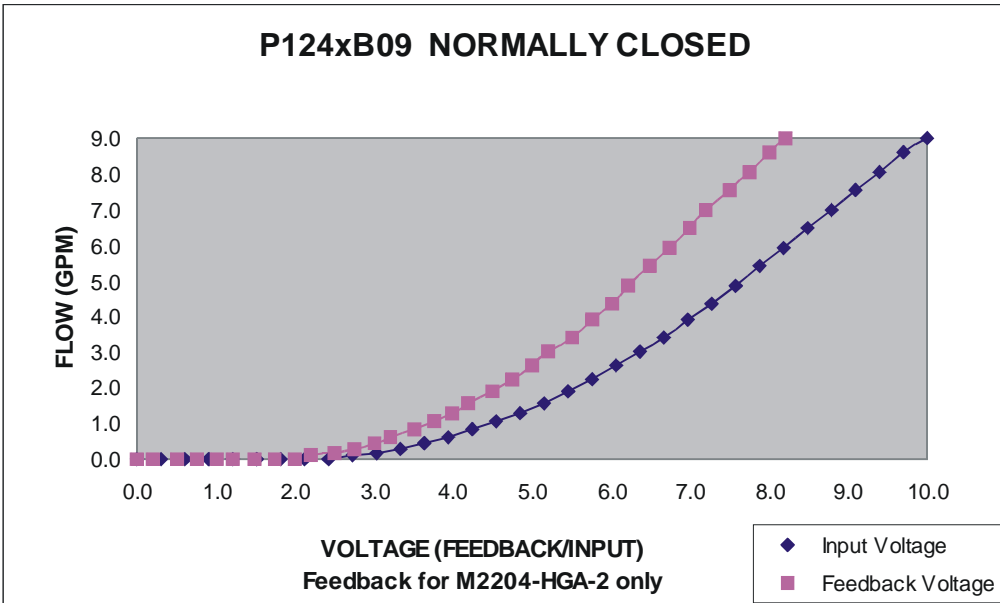
**Figure 20: P124xB08 Valve, Normally Open Flow Chart**

## P124xB09 Valve Flow and Input/Feedback Voltage

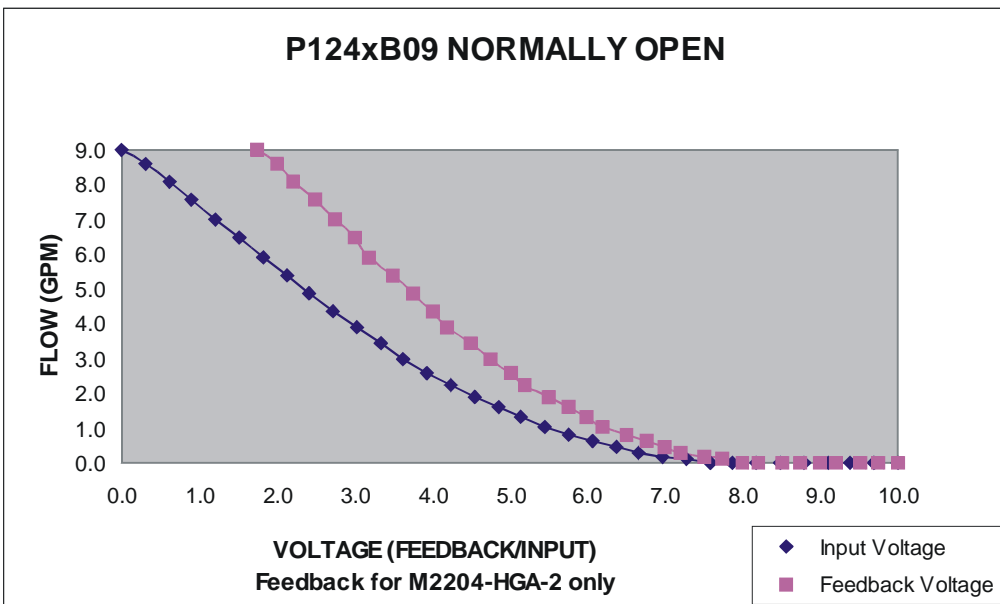
Table 11: P124xB09, 3/4 in. NPT (9.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators <sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
78	9.00	10.0	0.0	8.2	1.8
76	8.58	9.7	0.3	8.0	2.0
74	8.08	9.4	0.6	7.8	2.2
71	7.55	9.1	0.9	7.5	2.5
69	7.01	8.8	1.2	7.2	2.8
67	6.47	8.5	1.5	7.0	3.0
64	5.93	8.2	1.8	6.8	3.2
62	5.40	7.9	2.1	6.5	3.5
59	4.88	7.6	2.4	6.2	3.8
57	4.37	7.3	2.7	6.0	4.0
55	3.89	7.0	3.0	5.8	4.2
52	3.44	6.7	3.3	5.5	4.5
50	3.01	6.4	3.6	5.2	4.8
48	2.60	6.1	3.9	5.0	5.0
45	2.23	5.8	4.2	4.8	5.2
43	1.89	5.5	4.5	4.5	5.5
40	1.58	5.2	4.8	4.2	5.8
38	1.29	4.8	5.2	4.0	6.0
36	1.04	4.5	5.5	3.8	6.2
33	0.82	4.2	5.8	3.5	6.5
31	0.62	3.9	6.1	3.2	6.8
29	0.45	3.6	6.4	3.0	7.0
26	0.31	3.3	6.7	2.8	7.2
24	0.19	3.0	7.0	2.5	7.5
21	0.09	2.7	7.3	2.2	7.8
19	0.01	2.4	7.6	2.0	8.0
17	0.00	2.1	7.9	1.8	8.2
14	0.00	1.8	8.2	1.5	8.5
12	0.00	1.5	8.5	1.2	8.8
10	0.00	1.2	8.8	1.0	9.0
7	0.00	0.9	9.1	0.8	9.2
5	0.00	0.6	9.4	0.5	9.5
2	0.00	0.3	9.7	0.2	9.8
0	0.00	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.



**Figure 21: P124xB09 Valve, Normally Closed Flow Chart**



**Figure 22: P124xB09 Valve, Normally Open Flow Chart**

## P124xB10 Valve Flow and Input/Feedback Voltage

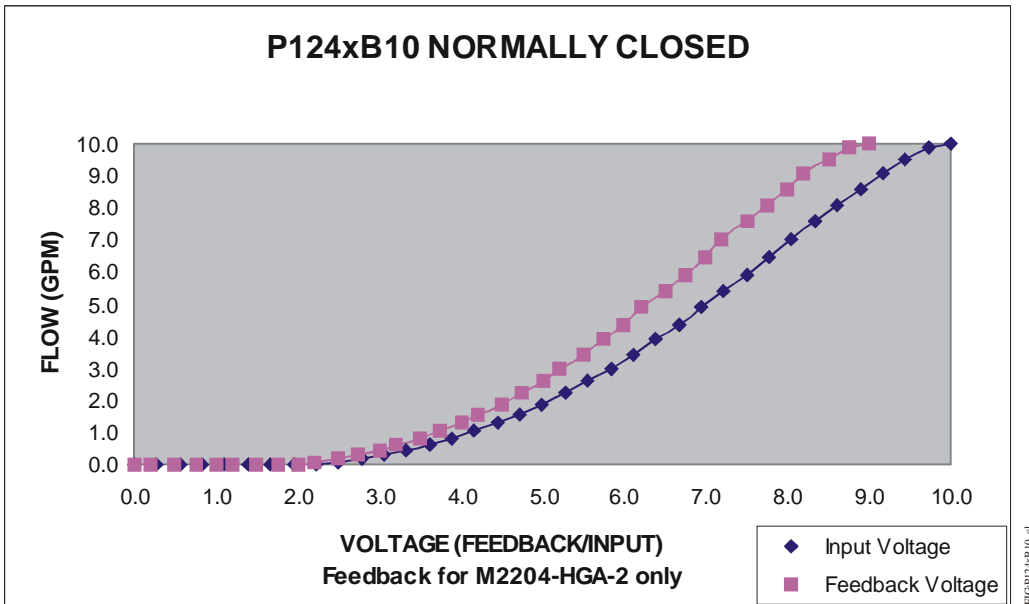
Table 12: P124xB10, 3/4 in. NPT (10.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators (Part 1 of 2)<sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
86	10.00	10.0	0.0	9.0	1.0
83	9.87	9.7	0.3	8.8	1.2
81	9.49	9.4	0.6	8.5	1.5
78	9.05	9.2	0.8	8.2	1.8
76	8.58	8.9	1.1	8.0	2.0
74	8.08	8.6	1.4	7.8	2.2
71	7.55	8.3	1.7	7.5	2.5
69	7.01	8.1	1.9	7.2	2.8
67	6.47	7.8	2.2	7.0	3.0
64	5.93	7.5	2.5	6.8	3.2
62	5.40	7.2	2.8	6.5	3.5
59	4.88	6.9	3.1	6.2	3.8
57	4.37	6.7	3.3	6.0	4.0
55	3.89	6.4	3.6	5.8	4.2
52	3.44	6.1	3.9	5.5	4.5
50	3.01	5.8	4.2	5.2	4.8
48	2.60	5.6	4.4	5.0	5.0
45	2.23	5.3	4.7	4.8	5.2
43	1.89	5.0	5.0	4.5	5.5
40	1.58	4.7	5.3	4.2	5.8
38	1.29	4.4	5.6	4.0	6.0
36	1.04	4.2	5.8	3.8	6.2
33	0.82	3.9	6.1	3.5	6.5
31	0.62	3.6	6.4	3.2	6.8
29	0.45	3.3	6.7	3.0	7.0
26	0.31	3.1	6.9	2.8	7.2
24	0.19	2.8	7.2	2.5	7.5
21	0.09	2.5	7.5	2.2	7.8
19	0.01	2.2	7.8	2.0	8.0
17	0.00	1.9	8.1	1.8	8.2
14	0.00	1.7	8.3	1.5	8.5
12	0.00	1.4	8.6	1.2	8.8

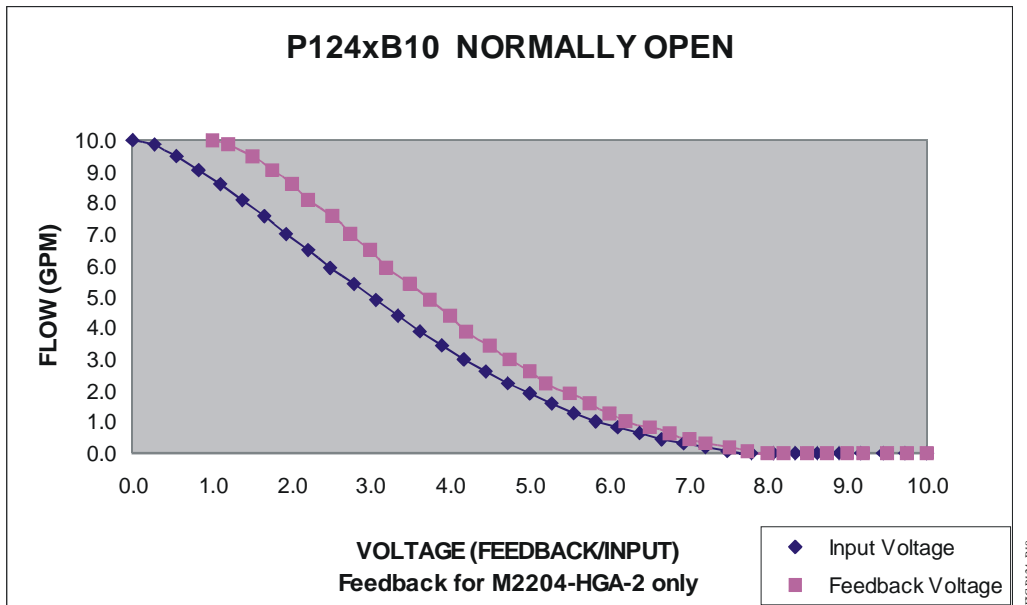
**Table 12: P124xB10, 3/4 in. NPT (10.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators (Part 2 of 2)<sup>1</sup>**

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
10	0.00	1.1	8.9	1.0	9.0
7	0.00	0.8	9.2	0.8	9.2
5	0.00	0.6	9.4	0.5	9.5
2	0.00	0.9	9.7	0.2	9.8
0	0.00	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.



**Figure 23: P124xB10 Valve, Normally Closed Flow Chart**



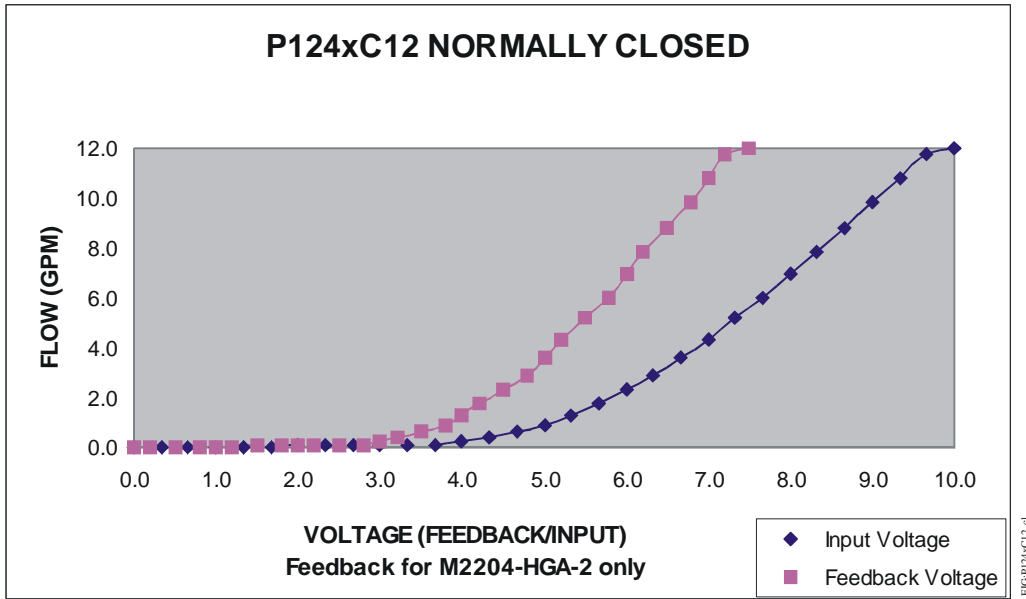
**Figure 24: P124xB10 Valve, Normally Open Flow Chart**

## P124xC12 Valve Flow and Input/Feedback Voltage

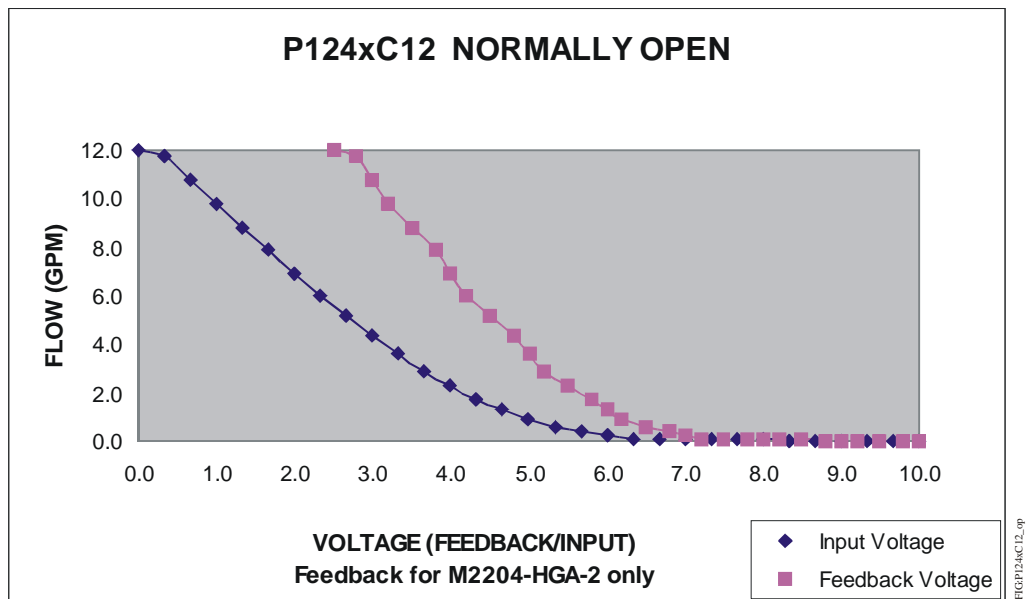
Table 13: P124xC12, 1 in. NPT (12.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators <sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
71	12.0	10.0	0.0	7.5	2.5
69	11.7	9.7	0.3	7.2	2.8
67	10.8	9.3	0.7	7.0	3.0
64	9.8	9.0	1.0	6.8	3.2
62	8.8	8.7	1.3	6.5	3.5
59	7.9	8.3	1.7	6.2	3.8
57	6.9	8.0	2.0	6.0	4.0
55	6.0	7.7	2.3	5.8	4.2
52	5.2	7.3	2.7	5.5	4.5
50	4.3	7.0	3.0	5.2	4.8
48	3.6	6.7	3.3	5.0	5.0
45	2.9	6.3	3.7	4.8	5.2
43	2.3	6.0	4.0	4.5	5.5
40	1.8	5.7	4.3	4.2	5.8
38	1.3	5.3	4.7	4.0	6.0
36	0.9	5.0	5.0	3.8	6.2
33	0.6	4.7	5.3	3.5	6.5
31	0.4	4.3	5.7	3.2	6.8
29	0.2	4.0	6.0	3.0	7.0
26	0.1	3.7	6.3	2.8	7.2
24	0.1	3.3	6.7	2.5	7.5
21	0.1	3.0	7.0	2.2	7.8
19	0.1	2.7	7.3	2.0	8.0
17	0.1	2.3	7.7	1.8	8.2
14	0.1	2.0	8.0	1.5	8.5
12	0.0	1.7	8.3	1.2	8.8
10	0.0	1.3	8.7	1.0	9.0
7	0.0	1.0	9.0	0.8	9.2
5	0.0	0.7	9.3	0.5	9.5
2	0.0	0.3	9.7	0.2	9.8
0	0.0	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.



**Figure 25: P124xC12 Valve, Normally Closed Flow Chart**



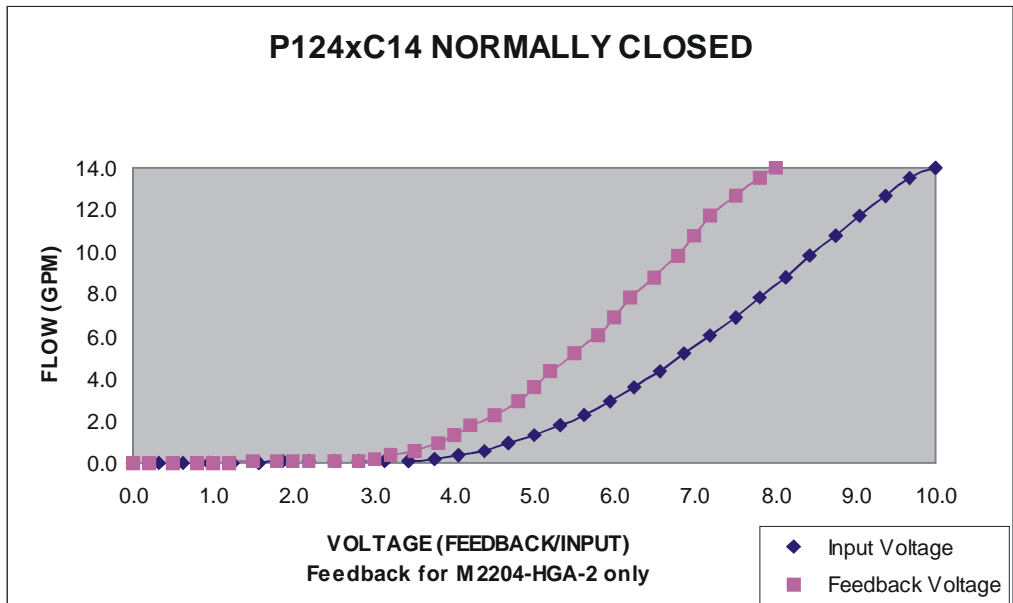
**Figure 26: P124xC12 Valve, Normally Open Flow Chart**

## P124xC14 Valve Flow and Input/Feedback Voltage

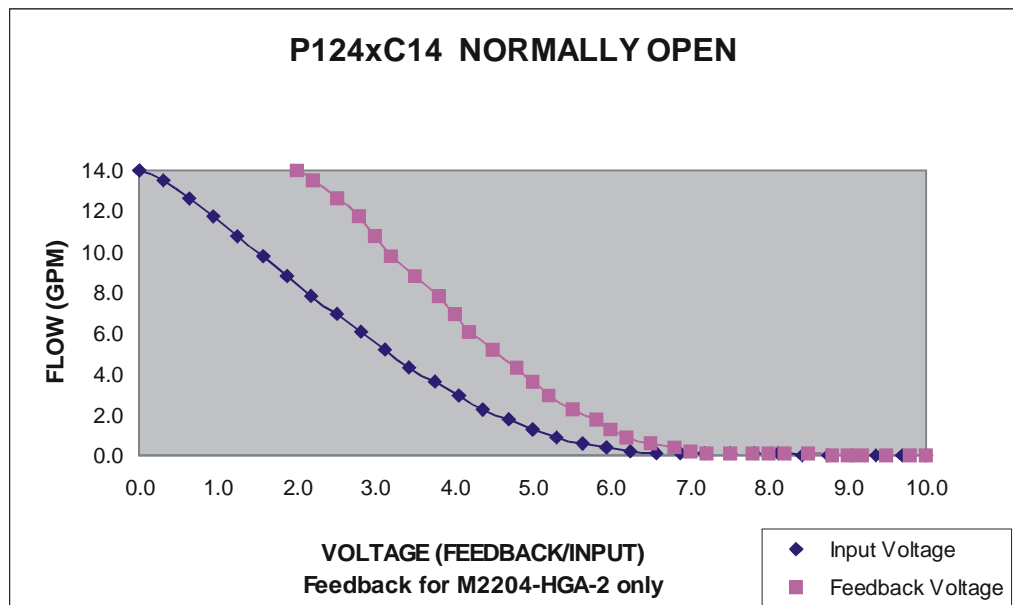
Table 14: P124xC14, 1 in. NPT (14.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators <sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
76	14.0	10.0	0.0	8.0	2.0
74	13.5	9.7	0.3	7.8	2.2
71	12.6	9.4	0.6	7.5	2.5
69	11.7	9.1	0.9	7.2	2.8
67	10.8	8.8	1.3	7.0	3.0
64	9.8	8.4	1.6	6.8	3.2
62	8.8	8.1	1.9	6.5	3.5
59	7.9	7.8	2.2	6.2	3.8
57	6.9	7.5	2.5	6.0	4.0
55	6.0	7.2	2.8	5.8	4.2
52	5.2	6.9	3.1	5.5	4.5
50	4.3	6.6	3.4	5.2	4.8
48	3.6	6.3	3.8	5.0	5.0
45	2.9	5.9	4.1	4.8	5.2
43	2.3	5.6	4.4	4.5	5.5
40	1.8	5.3	4.7	4.2	5.8
38	1.3	5.0	5.0	4.0	6.0
36	0.9	4.7	5.3	3.8	6.2
33	0.6	4.4	5.6	3.5	6.5
31	0.4	4.1	5.9	3.2	6.8
29	0.2	3.8	6.3	3.0	7.0
26	0.1	3.4	6.6	2.8	7.2
24	0.1	3.1	6.9	2.5	7.5
21	0.1	2.8	7.2	2.2	7.8
19	0.1	2.5	7.5	2.0	8.0
17	0.1	2.2	7.8	1.8	8.2
14	0.1	1.9	8.1	1.5	8.5
12	0.0	1.6	8.4	1.2	8.8
10	0.0	1.3	8.8	1.0	9.0
7	0.0	0.9	9.1	0.8	9.2
5	0.0	0.6	9.4	0.5	9.5
2	0.0	0.9	9.7	0.2	9.8
0	0.0	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.



**Figure 27: P124xC14 Valve, Normally Closed Flow Chart**



**Figure 28: P124xC14 Valve, Normally Open Flow Chart**

## P124xC16 Valve Flow and Input/Feedback Voltage

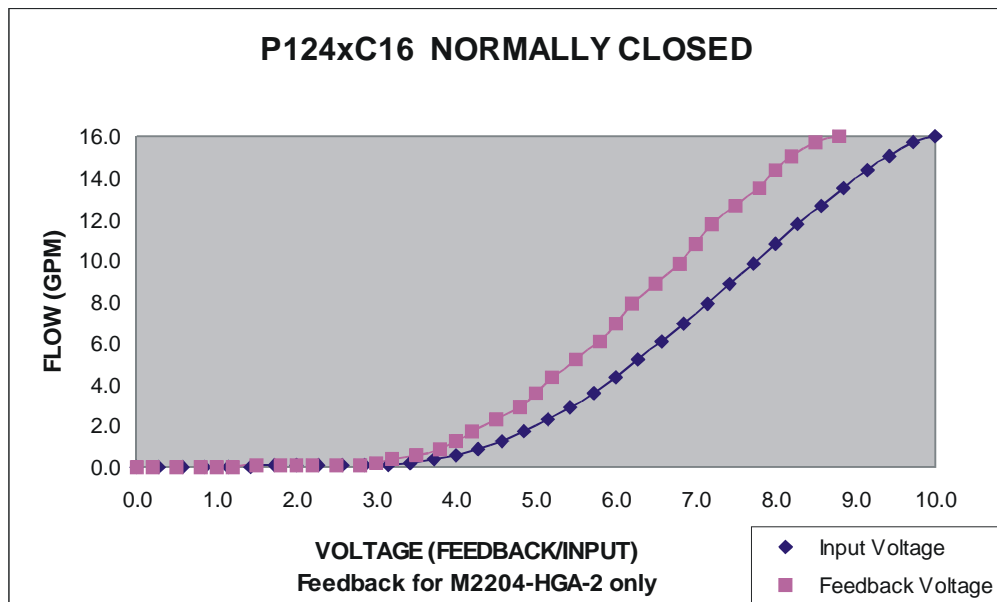
Table 15: P124xC16, 1 in. NPT (16.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators (Part 1 of 2)<sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
83	16.0	10.0	0.0	8.8	1.2
81	15.7	9.7	0.3	8.5	1.5
78	15.0	9.4	0.6	8.2	1.8
76	14.3	9.1	0.9	8.0	2.0
74	13.5	8.9	1.1	7.8	2.2
71	12.6	8.6	1.4	7.5	2.5
69	11.7	8.3	1.7	7.2	2.8
67	10.8	8.0	2.0	7.0	3.0
64	9.8	7.7	2.3	6.8	3.2
62	8.8	7.4	2.6	6.5	3.5
59	7.9	7.1	2.9	6.2	3.8
57	6.9	6.9	3.1	6.0	4.0
55	6.0	6.6	3.4	5.8	4.2
52	5.2	6.3	3.7	5.5	4.5
50	4.3	6.0	4.0	5.2	4.8
48	3.6	5.7	4.3	5.0	5.0
45	2.9	5.4	4.6	4.8	5.2
43	2.3	5.1	4.9	4.5	5.5
40	1.8	4.9	5.1	4.2	5.8
38	1.3	4.6	5.4	4.0	6.0
36	0.9	4.3	5.7	3.8	6.2
33	0.6	4.0	6.0	3.5	6.5
31	0.4	3.7	6.3	3.2	6.8
29	0.2	3.4	6.6	3.0	7.0
26	0.1	3.1	6.9	2.8	7.2
24	0.1	2.9	7.1	2.5	7.5
21	0.1	2.6	7.4	2.2	7.8
19	0.1	2.3	7.7	2.0	8.0
17	0.1	2.0	8.0	1.8	8.2
14	0.1	1.7	8.3	1.5	8.5
12	0.0	1.4	8.6	1.2	8.8

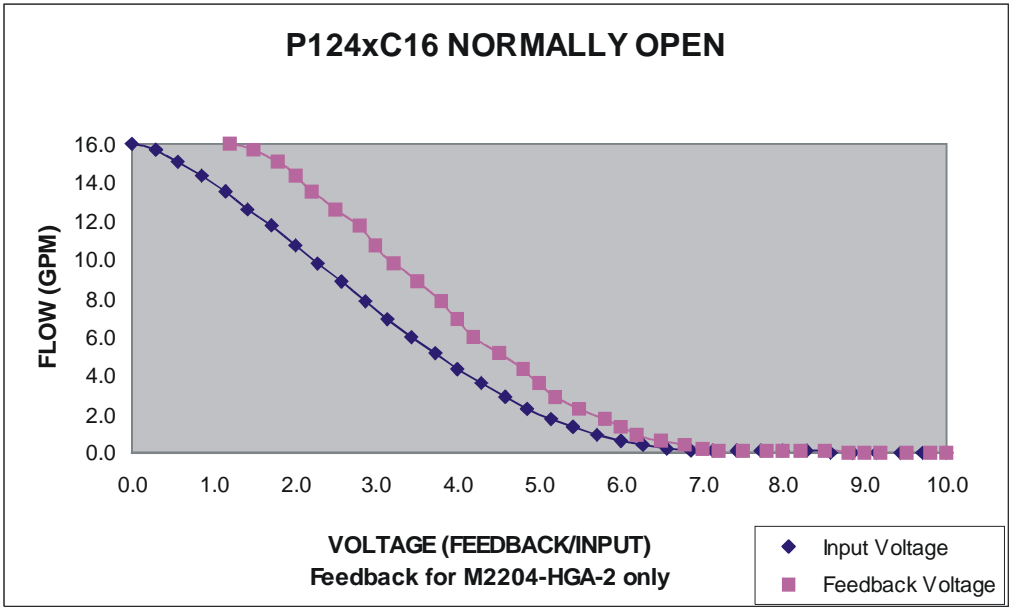
**Table 15: P124xC16, 1 in. NPT (16.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators (Part 2 of 2)<sup>1</sup>**

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
10	0.0	1.1	8.9	1.0	9.0
7	0.0	0.9	9.1	0.8	9.2
5	0.0	0.6	9.4	0.5	9.5
2	0.0	0.3	9.7	0.2	9.8
0	0.0	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.



**Figure 29: P124xC16 Valve, Normally Closed Flow Chart**



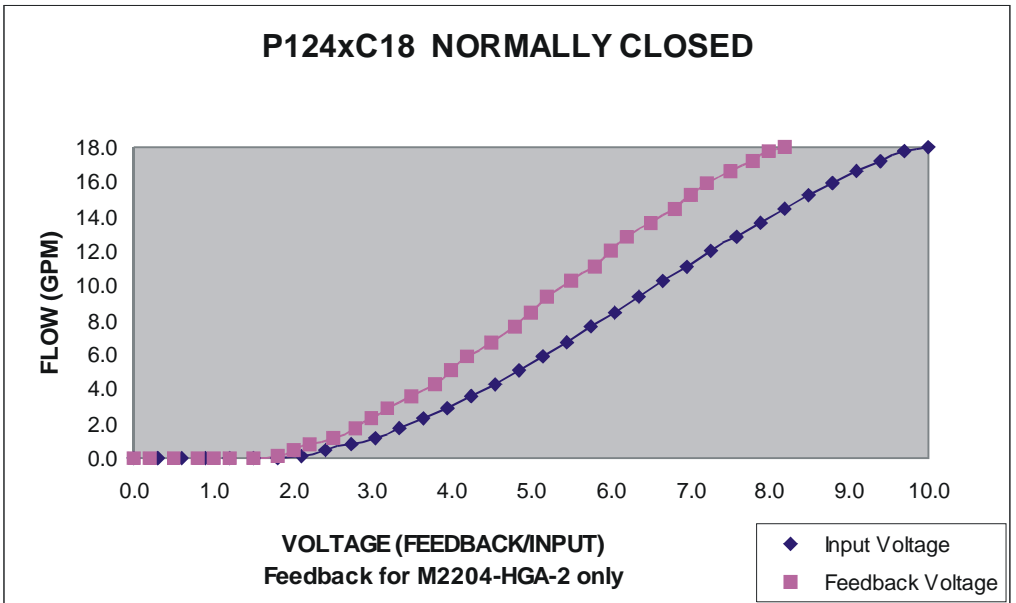
**Figure 30: P124xC16 Valve, Normally Open Flow Chart**

## P124xC18 Valve Flow and Input/Feedback Voltage

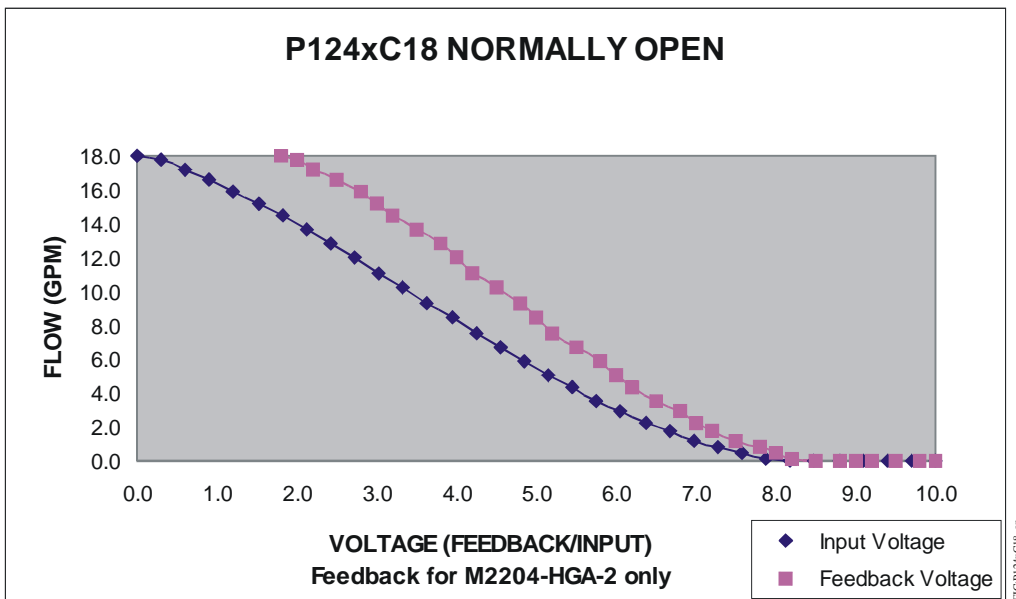
Table 16: P124xC18, 1 in. NPT (18.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators <sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
78	18.00	10.0	0.0	8.2	1.8
76	17.71	9.7	0.3	8.0	2.0
74	17.18	9.4	0.6	7.8	2.2
71	16.58	9.1	0.9	7.5	2.5
69	15.92	8.8	1.2	7.2	2.8
67	15.21	8.5	1.5	7.0	3.0
64	14.46	8.2	1.8	6.8	3.2
62	13.66	7.9	2.1	6.5	3.5
59	12.84	7.6	2.4	6.2	3.8
57	11.98	7.3	2.7	6.0	4.0
55	11.11	7.0	3.0	5.8	4.2
52	10.23	6.7	3.3	5.5	4.5
50	9.34	6.4	3.6	5.2	4.8
48	8.45	6.1	3.9	5.0	5.0
45	7.57	5.8	4.2	4.8	5.2
43	6.71	5.5	4.5	4.5	5.5
40	5.87	5.2	4.8	4.2	5.8
38	5.06	4.8	5.2	4.0	6.0
36	4.29	4.5	5.5	3.8	6.2
33	3.57	4.2	5.8	3.5	6.5
31	2.89	3.9	6.1	3.2	6.8
29	2.27	3.6	6.4	3.0	7.0
26	1.71	3.3	6.7	2.8	7.2
24	1.21	3.0	7.0	2.5	7.5
21	0.78	2.7	7.3	2.2	7.8
19	0.41	2.4	7.6	2.0	8.0
17	0.12	2.1	7.9	1.8	8.2
14	0.00	1.8	8.2	1.5	8.5
12	0.00	1.5	8.5	1.2	8.8
10	0.00	1.2	8.8	1.0	9.0
7	0.00	0.9	9.1	0.8	9.2
5	0.00	0.6	9.4	0.5	9.5
2	0.00	0.3	9.7	0.2	9.8
0	0.00	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.



**Figure 31: P124xC18 Valve, Normally Closed Flow Chart**



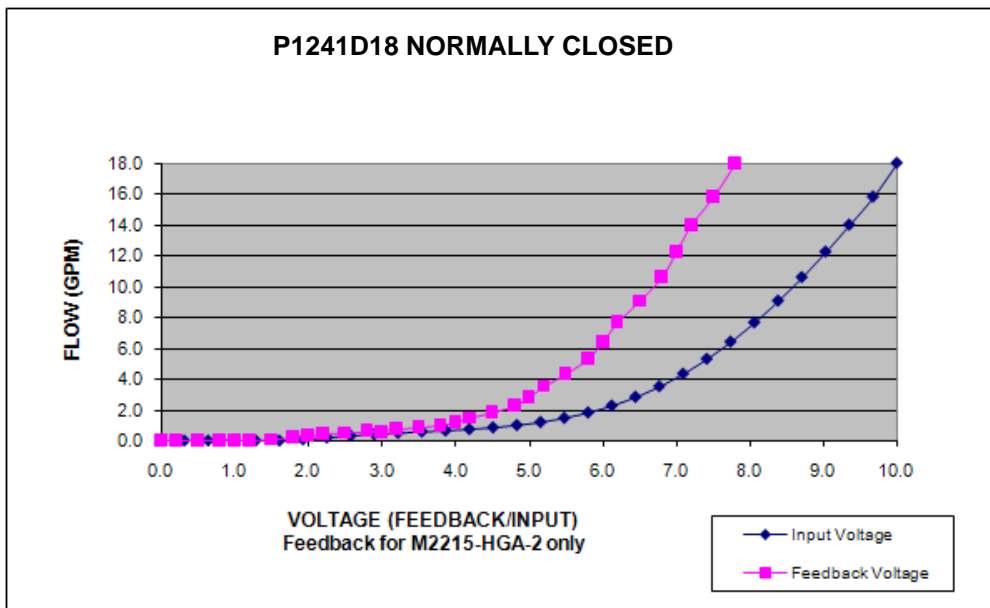
**Figure 32: P124xC18 Valve, Normally Open Flow Chart**

## P1241D18 Valve Flow and Input/Feedback Voltage

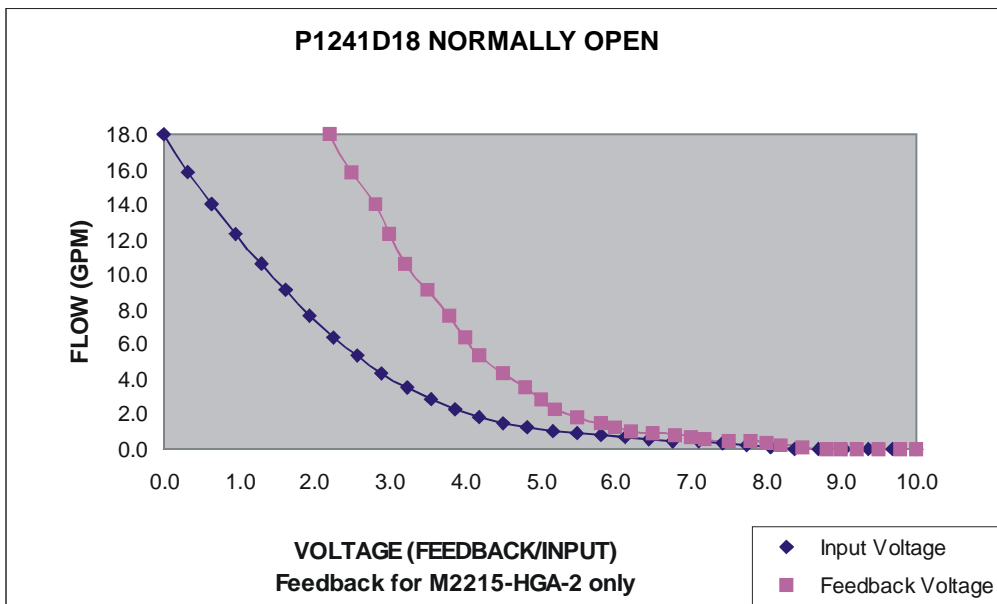
Table 17: P1241D18, 1-1/4 in. NPT (18.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators <sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
74	18.00	10.0	0.0	7.8	2.2
71	15.82	9.7	0.3	7.5	2.5
69	14.00	9.4	0.6	7.2	2.8
67	12.25	9.0	1.0	7.0	3.0
64	10.60	8.7	1.3	6.8	3.2
62	9.07	8.4	1.6	6.5	3.5
59	7.67	8.1	1.9	6.2	3.8
57	6.41	7.7	2.3	6.0	4.0
55	5.30	7.4	2.6	5.8	4.2
52	4.34	7.1	2.9	5.5	4.5
50	3.52	6.8	3.2	5.2	4.8
48	2.83	6.5	3.5	5.0	5.0
45	2.27	6.1	3.9	4.8	5.2
43	1.82	5.8	4.2	4.5	5.5
40	1.47	5.5	4.5	4.2	5.8
38	1.20	5.2	4.8	4.0	6.0
36	1.01	4.8	5.2	3.8	6.2
33	0.86	4.5	5.5	3.5	6.5
31	0.75	4.2	5.8	3.2	6.8
29	0.66	3.9	6.1	2.8	7.0
26	0.58	3.5	6.5	3.0	7.2
24	0.50	3.2	6.8	2.5	7.5
21	0.42	2.9	7.1	2.2	7.8
19	0.32	2.6	7.4	2.0	8.0
17	0.20	2.3	7.7	1.8	8.2
14	0.08	1.9	8.1	1.5	8.5
12	0.00	1.6	8.4	1.2	8.8
10	0.00	1.3	8.7	1.0	9.0
7	0.00	1.0	9.0	0.8	9.2
5	0.00	0.6	9.4	0.5	9.5
2	0.00	0.3	9.7	0.2	9.8
0	0.00	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.



**Figure 33: P1241D18 Valve, Normally Closed Flow Chart**



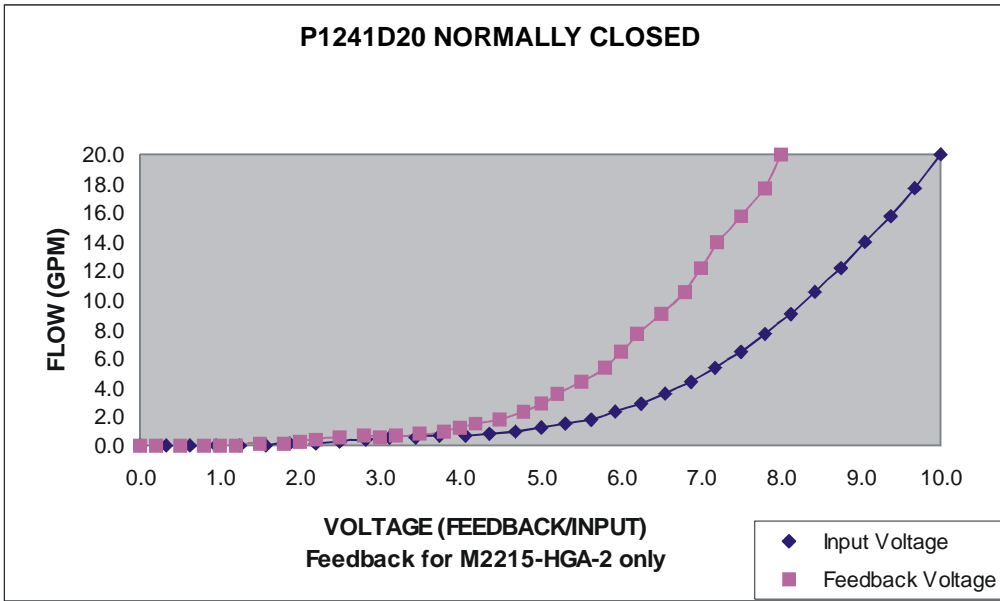
**Figure 34: P1241D18 Valve, Normally Open Flow Chart**

## P1241D20 Valve Flow and Input/Feedback Voltage

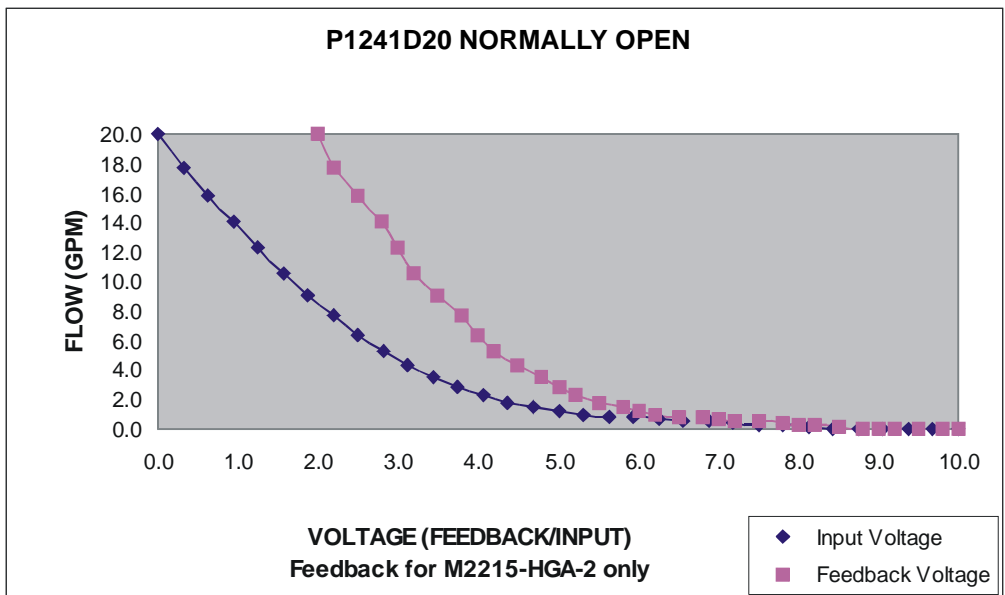
Table 18: P1241D20, 1-1/4 in. NPT (20.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators <sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
76	20.00	10.0	0.0	8.0	2.0
74	17.67	9.7	0.3	7.8	2.2
71	15.82	9.4	0.6	7.5	2.5
69	14.00	9.1	0.9	7.2	2.8
67	12.25	8.8	1.3	7.0	3.0
64	10.60	8.4	1.6	6.8	3.2
62	9.07	8.1	1.9	6.5	3.5
59	7.67	7.8	2.2	6.2	3.8
57	6.41	7.5	2.5	6.0	4.0
55	5.30	7.2	2.8	5.8	4.2
52	4.34	6.9	3.1	5.5	4.5
50	3.52	6.6	3.4	5.2	4.8
48	2.83	6.3	3.8	5.0	5.0
45	2.27	5.9	4.1	4.8	5.2
43	1.82	5.6	4.4	4.5	5.5
40	1.47	5.3	4.7	4.2	5.8
38	1.20	5.0	5.0	4.0	6.0
36	1.01	4.7	5.3	3.8	6.2
33	0.86	4.4	5.6	3.5	6.5
31	0.75	4.1	5.9	3.2	6.8
29	0.66	3.8	6.3	2.8	7.0
26	0.58	3.4	6.6	3.0	7.2
24	0.50	3.1	6.9	2.5	7.5
21	0.42	2.8	7.2	2.2	7.8
19	0.32	2.5	7.5	2.0	8.0
17	0.20	2.2	7.8	1.8	8.2
14	0.08	1.9	8.1	1.5	8.5
12	0.00	1.6	8.4	1.2	8.8
10	0.00	1.3	8.8	1.0	9.0
7	0.00	0.9	9.1	0.8	9.2
5	0.00	0.6	9.4	0.5	9.5
2	0.00	0.3	9.7	0.2	9.8
0	0.00	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.



**Figure 35: P1241D20 Valve, Normally Closed Flow Chart**



**Figure 36: P1241D20 Valve, Normally Open Flow Chart**

## P1241D22 Valve Flow and Input/Feedback Voltage

Table 19: P1241D22, 1-1/4 in. NPT (22.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators <sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
78	22.00	10.0	0.0	8.2	1.8
76	19.52	9.7	0.3	8.0	2.0
74	17.67	9.4	0.6	7.8	2.2
71	15.82	9.1	0.9	7.5	2.5
69	14.00	8.8	1.2	7.2	2.8
67	12.25	8.5	1.5	7.0	3.0
64	10.60	8.2	1.8	6.8	3.2
62	9.07	7.9	2.1	6.5	3.5
59	7.67	7.6	2.4	6.2	3.8
57	6.41	7.3	2.7	6.0	4.0
55	5.30	7.0	3.0	5.8	4.2
52	4.34	6.7	3.3	5.5	4.5
50	3.52	6.4	3.6	5.2	4.8
48	2.83	6.1	3.9	5.0	5.0
45	2.27	5.8	4.2	4.8	5.2
43	1.82	5.5	4.5	4.5	5.5
40	1.47	5.2	4.8	4.2	5.8
38	1.20	4.8	5.2	4.0	6.0
36	1.01	4.5	5.5	3.8	6.2
33	0.86	4.2	5.8	3.5	6.5
31	0.75	3.9	6.1	3.2	6.8
29	0.66	3.6	6.4	2.8	7.0
26	0.58	3.3	6.7	3.0	7.2
24	0.50	3.0	7.0	2.5	7.5
21	0.42	2.7	7.3	2.2	7.8
19	0.32	2.4	7.6	2.0	8.0
17	0.20	2.1	7.9	1.8	8.2
14	0.08	1.8	8.2	1.5	8.5
12	0.00	1.5	8.5	1.2	8.8
10	0.00	1.2	8.8	1.0	9.0
7	0.00	0.9	9.1	0.8	9.2
5	0.00	0.6	9.4	0.5	9.5
2	0.00	0.3	9.7	0.2	9.8
0	0.00	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.

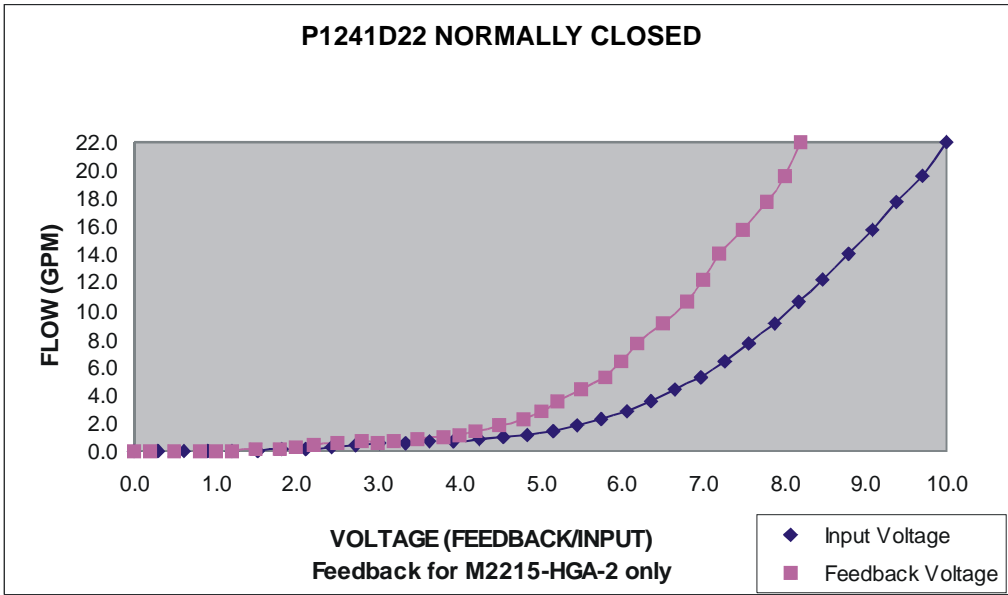


Figure 37: P1241D22 Valve, Normally Closed Flow Chart

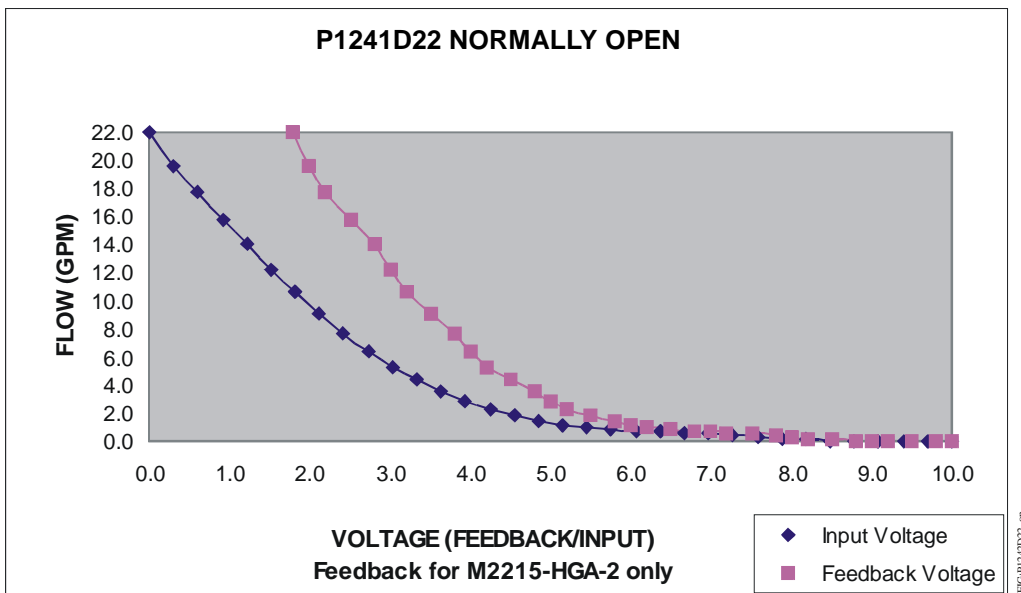


Figure 38: P1241D22 Valve, Normally Open Flow Chart

## P1241D24 Valve Flow and Input/Feedback Voltage

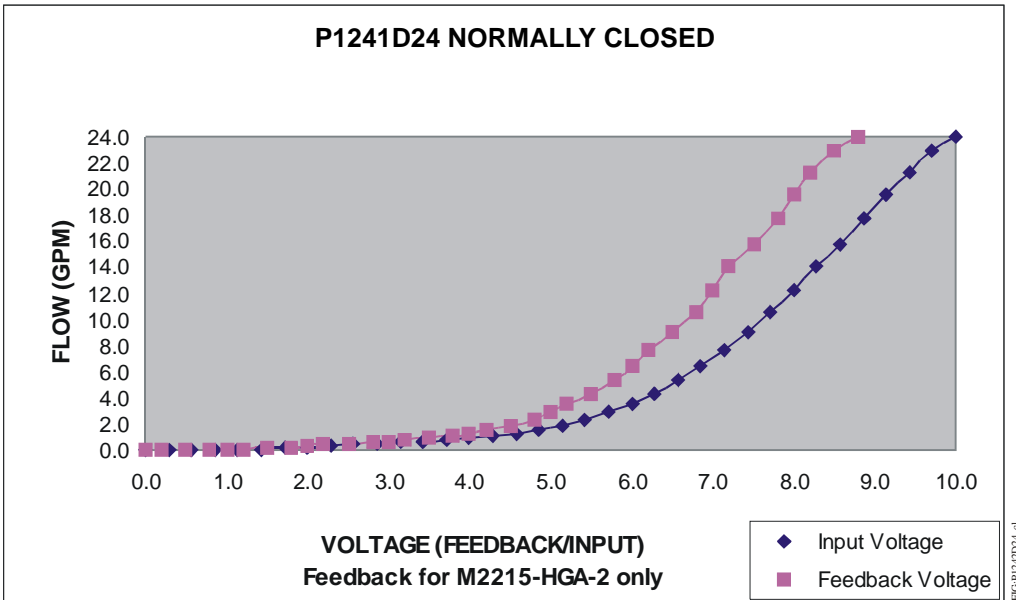
Table 20: P1241D24, 1-1/4 in. NPT (24.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators (Part 1 of 2)<sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
83	24.00	10.0	0.0	8.8	1.2
81	23.00	9.7	0.3	8.5	1.5
78	21.32	9.4	0.6	8.2	1.8
76	19.52	9.1	0.9	8.0	2.0
74	17.67	8.9	1.1	7.8	2.2
71	15.82	8.6	1.4	7.5	2.5
69	14.00	8.3	1.7	7.2	2.8
67	12.25	8.0	2.0	7.0	3.0
64	10.60	7.7	2.3	6.8	3.2
62	9.07	7.4	2.6	6.5	3.5
59	7.67	7.1	2.9	6.2	3.8
57	6.41	6.9	3.1	6.0	4.0
55	5.30	6.6	3.4	5.8	4.2
52	4.34	6.3	3.7	5.5	4.5
50	3.52	6.0	4.0	5.2	4.8
48	2.83	5.7	4.3	5.0	5.0
45	2.27	5.4	4.6	4.8	5.2
43	1.82	5.1	4.9	4.5	5.5
40	1.47	4.9	5.1	4.2	5.8
38	1.20	4.6	5.4	4.0	6.0
36	1.01	4.3	5.7	3.8	6.2
33	0.86	4.0	6.0	3.5	6.5
31	0.75	3.7	6.3	3.2	6.8
29	0.66	3.4	6.6	2.8	7.0
26	0.58	3.1	6.9	3.0	7.2
24	0.50	2.9	7.1	2.5	7.5
21	0.42	2.6	7.4	2.2	7.8
19	0.32	2.3	7.7	2.0	8.0
17	0.20	2.0	8.0	1.8	8.2
14	0.08	1.7	8.3	1.5	8.5
12	0.00	1.4	8.6	1.2	8.8

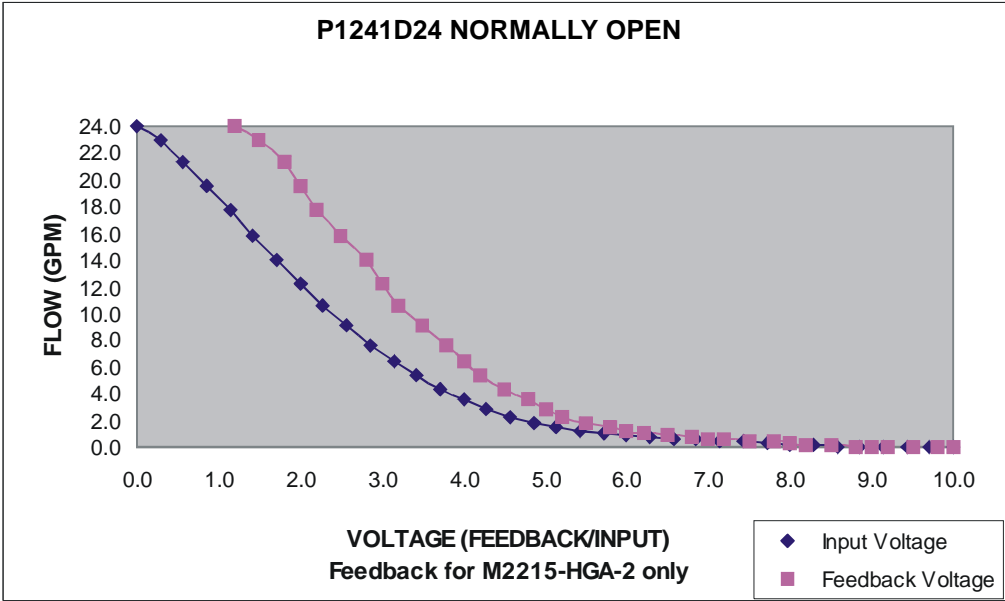
**Table 20: P1241D24, 1-1/4 in. NPT (24.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators (Part 2 of 2)<sup>1</sup>**

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
10	0.00	1.1	8.9	1.0	9.0
7	0.00	0.9	9.1	0.8	9.2
5	0.00	0.6	9.4	0.5	9.5
2	0.00	0.3	9.7	0.2	9.8
0	0.00	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.



**Figure 39: P1241D24 Valve, Normally Closed Flow Chart**



**Figure 40: P1241D24 Valve, Normally Open Flow Chart**

## P1241D26 Valve Flow and Input/Feedback Voltage

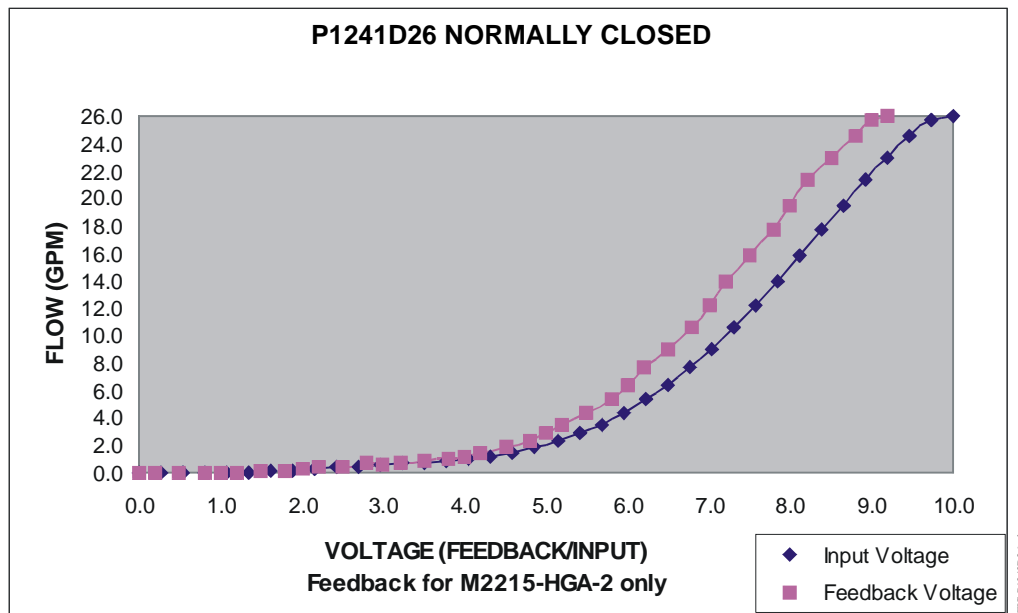
Table 21: P1241D26, 1-1/4 in. NPT (26.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators (Part 1 of 2)<sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
88	26.00	10.0	0.0	9.2	0.8
86	25.73	9.7	0.3	9.0	1.0
83	24.50	9.5	0.5	8.8	1.2
81	23.00	9.2	0.8	8.5	1.5
78	21.32	8.9	1.1	8.2	1.8
76	19.52	8.6	1.4	8.0	2.0
74	17.67	8.4	1.6	7.8	2.2
71	15.82	8.1	1.9	7.5	2.5
69	14.00	7.8	2.2	7.2	2.8
67	12.25	7.6	2.4	7.0	3.0
64	10.60	7.3	2.7	6.8	3.2
62	9.07	7.0	3.0	6.5	3.5
59	7.67	6.8	3.2	6.2	3.8
57	6.41	6.5	3.5	6.0	4.0
55	5.30	6.2	3.8	5.8	4.2
52	4.34	5.9	4.1	5.5	4.5
50	3.52	5.7	4.3	5.2	4.8
48	2.83	5.4	4.6	5.0	5.0
45	2.27	5.1	4.9	4.8	5.2
43	1.82	4.9	5.1	4.5	5.5
40	1.47	4.6	5.4	4.2	5.8
38	1.20	4.3	5.7	4.0	6.0
36	1.01	4.1	5.9	3.8	6.2
33	0.86	3.8	6.2	3.5	6.5
31	0.75	3.5	6.5	3.2	6.8
29	0.66	3.2	6.8	2.8	7.0
26	0.58	3.0	7.0	3.0	7.2
24	0.50	2.7	7.3	2.5	7.5
21	0.42	2.4	7.6	2.2	7.8
19	0.32	2.2	7.8	2.0	8.0
17	0.20	1.9	8.1	1.8	8.2
14	0.08	1.6	8.4	1.5	8.5
12	0.00	1.4	8.6	1.2	8.8

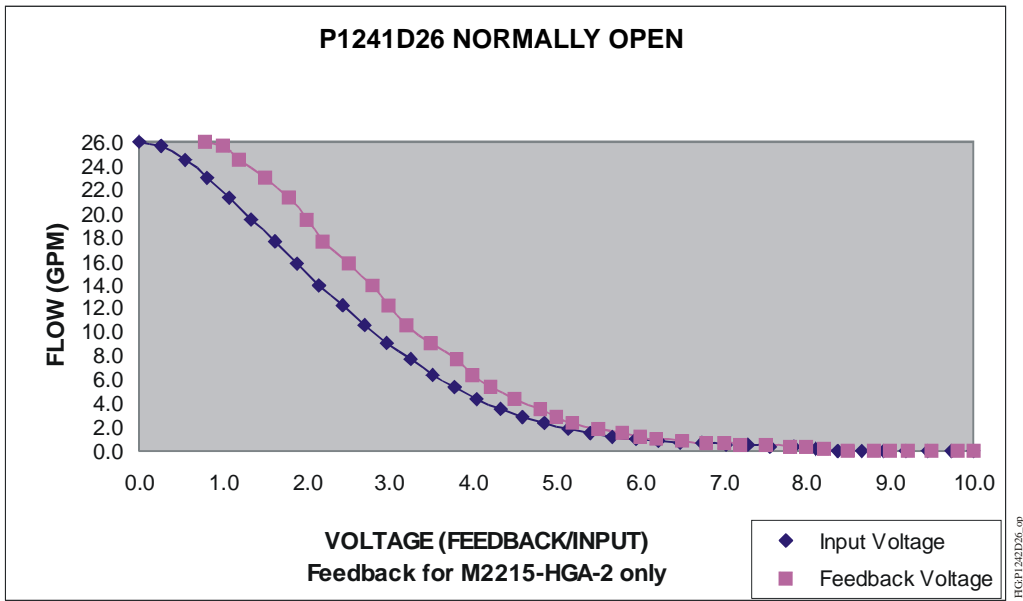
**Table 21: P1241D26, 1-1/4 in. NPT (26.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators (Part 2 of 2)<sup>1</sup>**

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
10	0.00	1.1	8.9	1.0	9.0
7	0.00	0.8	9.2	0.8	9.2
5	0.00	0.5	9.5	0.5	9.5
2	0.00	0.3	9.7	0.2	9.8
0	0.00	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.



**Figure 41: P1241D26 Valve, Normally Closed Flow Chart**



**Figure 42: P1241D26 Valve, Normally Open Flow Chart**

## P1241E26 Valve Flow and Input/Feedback Voltage

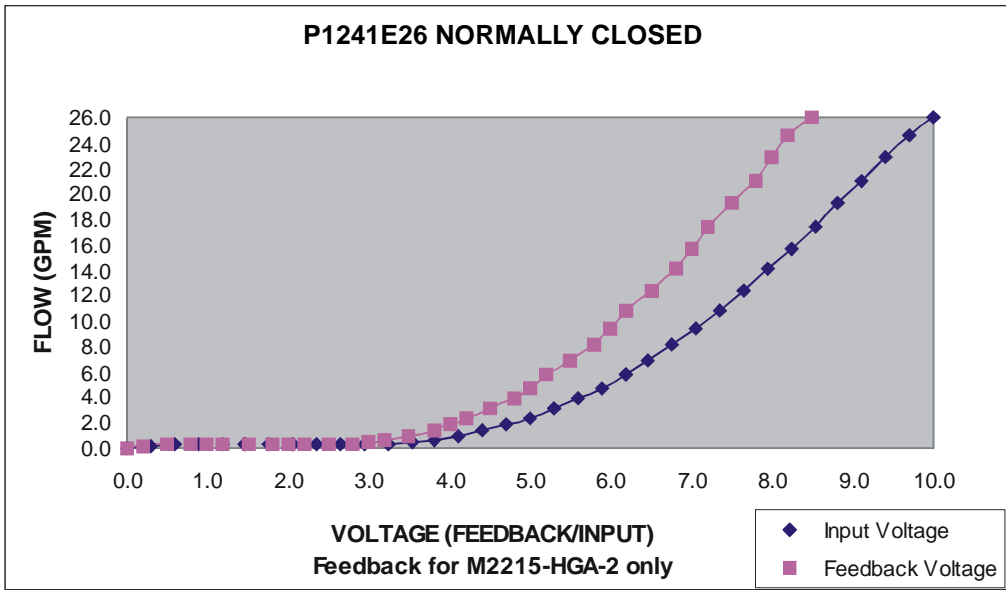
Table 22: P1241E26, 1-1/2 in. NPT (26.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators (Part 1 of 2)<sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
81	26.00	10.0	0.0	8.5	1.5
78	24.59	9.7	0.3	8.2	1.8
76	22.81	9.4	0.6	8.0	2.0
74	21.02	9.1	0.9	7.8	2.2
71	19.22	8.8	1.2	7.5	2.5
69	17.44	8.5	1.5	7.2	2.8
67	15.70	8.2	1.8	7.0	3.0
64	14.02	7.9	2.1	6.8	3.2
62	12.41	7.6	2.4	6.5	3.5
59	10.88	7.4	2.6	6.2	3.8
57	9.44	7.1	2.9	6.0	4.0
55	8.11	6.8	3.2	5.8	4.2
52	6.87	6.5	3.5	5.5	4.5
50	5.75	6.2	3.8	5.2	4.8
48	4.74	5.9	4.1	5.0	5.0
45	3.85	5.6	4.4	4.8	5.2
43	3.06	5.3	4.7	4.5	5.5
40	2.39	5.0	5.0	4.2	5.8
38	1.82	4.7	5.3	4.0	6.0
36	1.36	4.4	5.6	3.8	6.2
33	0.98	4.1	5.9	3.5	6.5
31	0.70	3.8	6.2	3.2	6.8
29	0.50	3.5	6.5	3.0	7.0
26	0.36	3.2	6.8	2.8	7.2
24	0.29	2.9	7.1	2.5	7.5
21	0.26	2.6	7.4	2.2	7.8
19	0.26	2.4	7.6	2.0	8.0
17	0.29	2.1	7.9	1.8	8.2
14	0.33	1.8	8.2	1.5	8.5
12	0.37	1.5	8.5	1.2	8.8

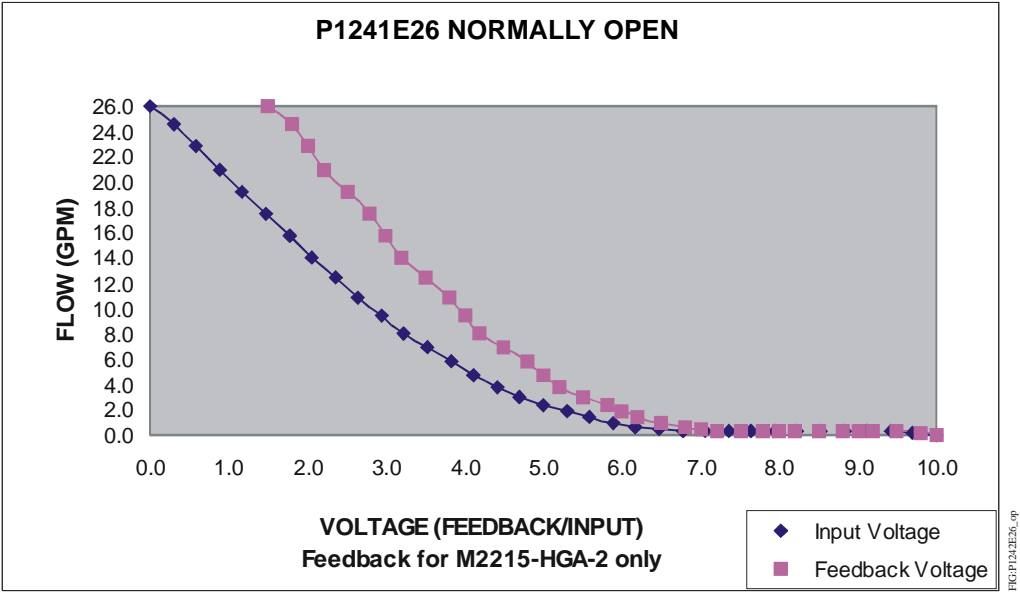
**Table 22: P1241E26, 1-1/2 in. NPT (26.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators (Part 2 of 2)<sup>1</sup>**

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
10	0.38	1.2	8.8	1.0	9.0
7	0.36	0.9	9.1	0.8	9.2
5	0.30	0.6	9.4	0.5	9.5
2	0.16	0.3	9.7	0.2	9.8
0	0.00	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.



**Figure 43: P1241E26 Valve, Normally Closed Flow Chart**



**Figure 44: P1241E26 Valve, Normally Open Flow Chart**

## P1241E28 Valve Flow and Input/Feedback Voltage

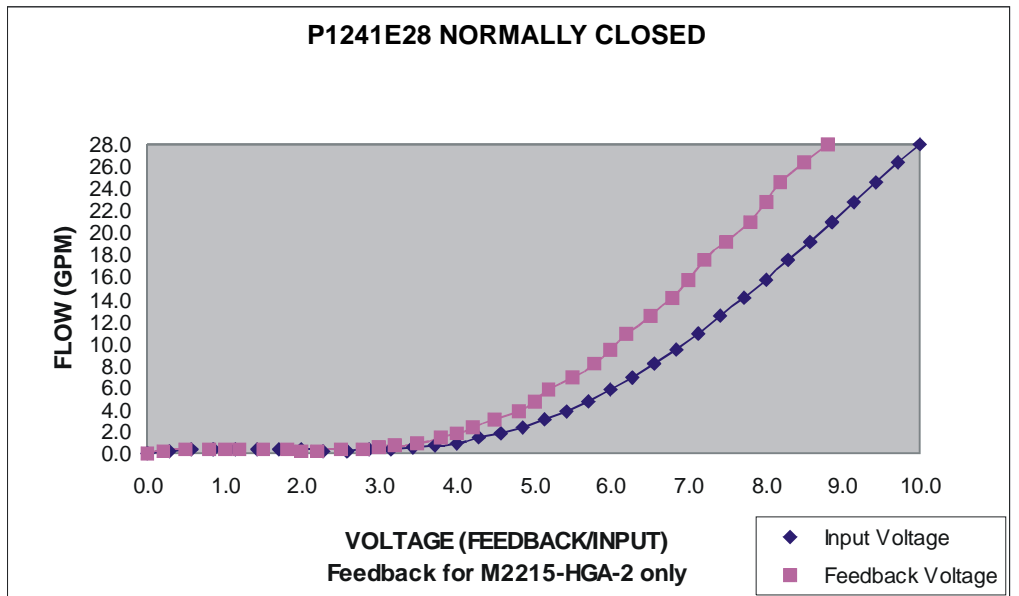
Table 23: P1241E28, 1-1/2 in. NPT (28.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators (Part 1 of 2)<sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
83	27.97	10.0	0.0	8.8	1.2
81	26.32	9.7	0.3	8.5	1.5
78	24.59	9.4	0.6	8.2	1.8
76	22.81	9.1	0.9	8.0	2.0
74	21.02	8.9	1.1	7.8	2.2
71	19.22	8.6	1.4	7.5	2.5
69	17.44	8.3	1.7	7.2	2.8
67	15.70	8.0	2.0	7.0	3.0
64	14.02	7.7	2.3	6.8	3.2
62	12.41	7.4	2.6	6.5	3.5
59	10.88	7.1	2.9	6.2	3.8
57	9.44	6.9	3.1	6.0	4.0
55	8.11	6.6	3.4	5.8	4.2
52	6.87	6.3	3.7	5.5	4.5
50	5.75	6.0	4.0	5.2	4.8
48	4.74	5.7	4.3	5.0	5.0
45	3.85	5.4	4.6	4.8	5.2
43	3.06	5.1	4.9	4.5	5.5
40	2.39	4.9	5.1	4.2	5.8
38	1.82	4.6	5.4	4.0	6.0
36	1.36	4.3	5.7	3.8	6.2
33	0.98	4.0	6.0	3.5	6.5
31	0.70	3.7	6.3	3.2	6.8
29	0.50	3.4	6.6	3.0	7.0
26	0.36	3.1	6.9	2.8	7.2
24	0.29	2.9	7.1	2.5	7.5
21	0.26	2.6	7.4	2.2	7.8
19	0.26	2.3	7.7	2.0	8.0
17	0.29	2.0	8.0	1.8	8.2
14	0.33	1.7	8.3	1.5	8.5
12	0.37	1.4	8.6	1.2	8.8

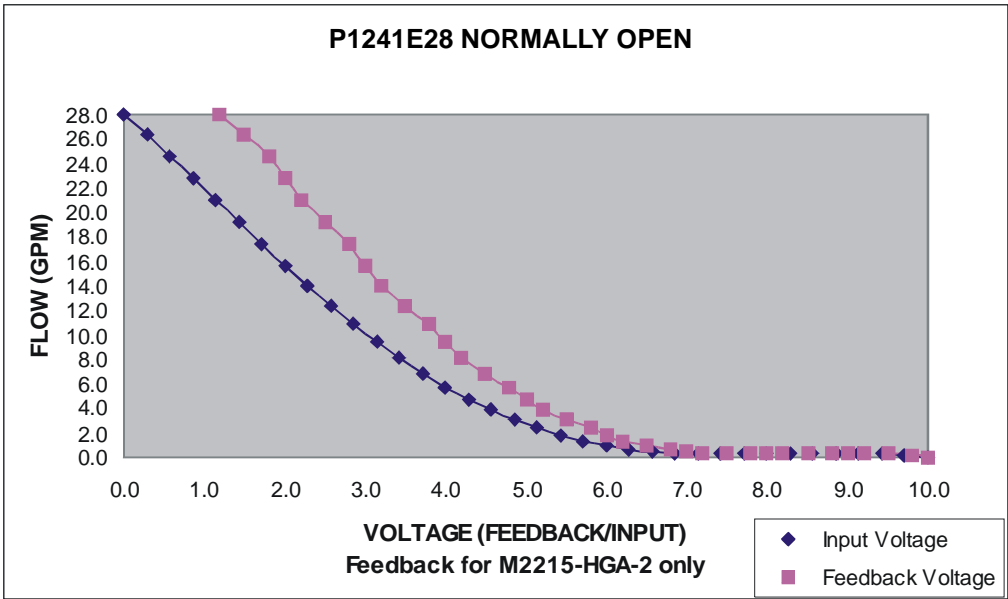
**Table 23: P1241E28, 1-1/2 in. NPT (28.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators (Part 2 of 2)<sup>1</sup>**

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
10	0.38	1.1	8.9	1.0	9.0
7	0.36	0.9	9.1	0.8	9.2
5	0.30	0.6	9.4	0.5	9.5
2	0.16	0.3	9.7	0.2	9.8
0	0.00	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.



**Figure 45: P1241E28 Valve, Normally Closed Flow Chart**



**Figure 46: P1241E28 Valve, Normally Open Flow Chart**

## P1241E30 Valve Flow and Input/Feedback Voltage

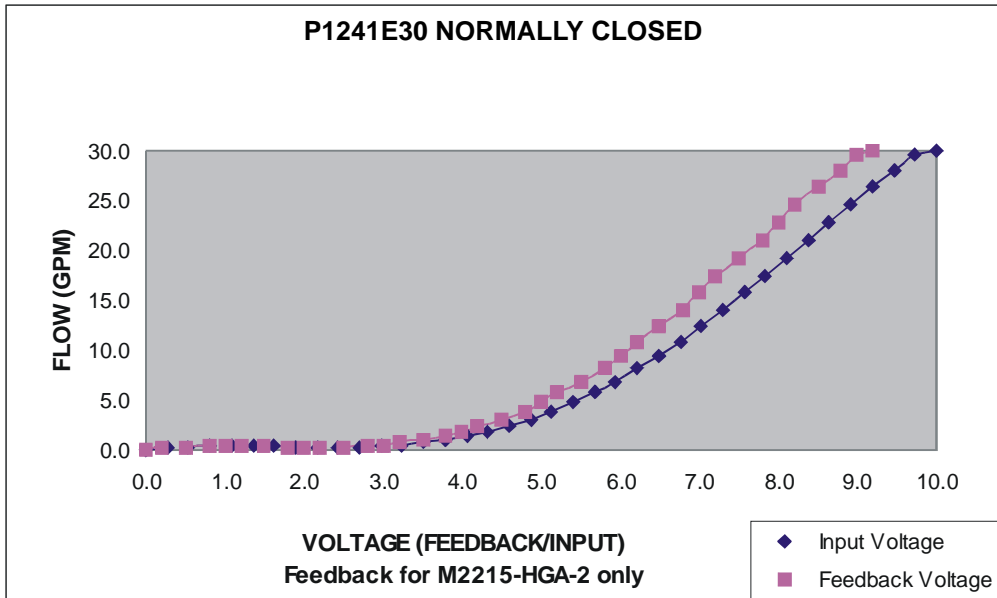
Table 24: P1241E30, 1-1/2 in. NPT (30.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators (Part 1 of 2)<sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
88	30.00	10.0	0.0	9.2	0.8
86	29.52	9.7	0.3	9.0	1.0
83	27.97	9.5	0.5	8.8	1.2
81	26.32	9.2	0.8	8.5	1.5
78	24.59	8.9	1.1	8.2	1.8
76	22.81	8.6	1.4	8.0	2.0
74	21.02	8.4	1.6	7.8	2.2
71	19.22	8.1	1.9	7.5	2.5
69	17.44	7.8	2.2	7.2	2.8
67	15.70	7.6	2.4	7.0	3.0
64	14.02	7.3	2.7	6.8	3.2
62	12.41	7.0	3.0	6.5	3.5
59	10.88	6.8	3.2	6.2	3.8
57	9.44	6.5	3.5	6.0	4.0
55	8.11	6.2	3.8	5.8	4.2
52	6.87	5.9	4.1	5.5	4.5
50	5.75	5.7	4.3	5.2	4.8
48	4.74	5.4	4.6	5.0	5.0
45	3.85	5.1	4.9	4.8	5.2
43	3.06	4.9	5.1	4.5	5.5
40	2.39	4.6	5.4	4.2	5.8
38	1.82	4.3	5.7	4.0	6.0
36	1.36	4.1	5.9	3.8	6.2
33	0.98	3.8	6.2	3.5	6.5
31	0.70	3.5	6.5	3.2	6.8
29	0.50	3.2	6.8	3.0	7.0
26	0.36	3.0	7.0	2.8	7.2
24	0.29	2.7	7.3	2.5	7.5
21	0.26	2.4	7.6	2.2	7.8
19	0.26	2.2	7.8	2.0	8.0
17	0.29	1.9	8.1	1.8	8.2
14	0.33	1.6	8.4	1.5	8.5
12	0.37	1.4	8.6	1.2	8.8

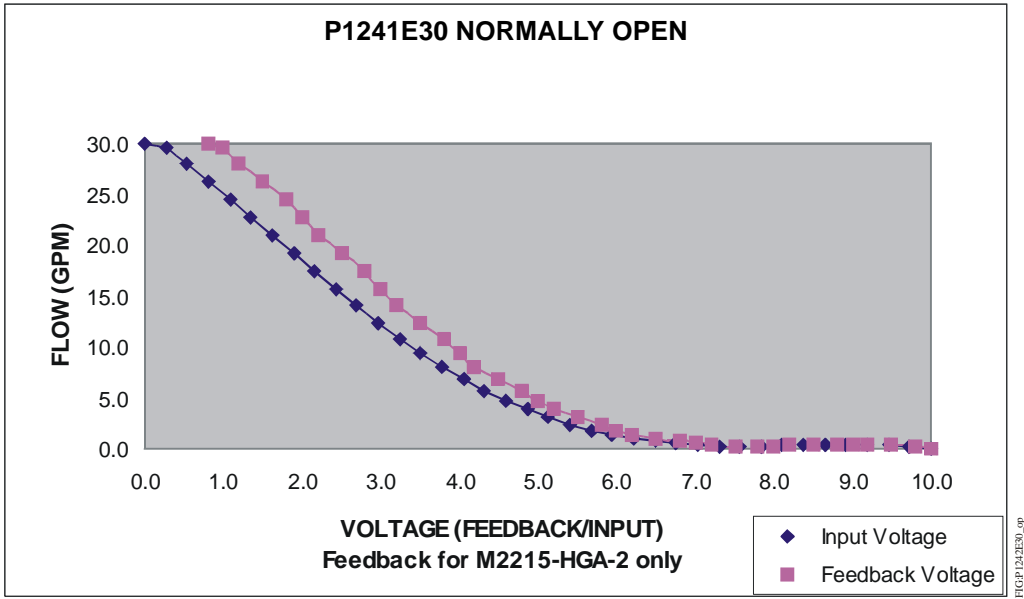
**Table 24: P1241E30, 1-1/2 in. NPT (30.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators (Part 2 of 2)<sup>1</sup>**

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
10	0.38	1.1	8.9	1.0	9.0
7	0.36	0.8	9.2	0.8	9.2
5	0.30	0.5	9.5	0.5	9.5
2	0.16	0.3	9.7	0.2	9.8
0	0.00	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.



**Figure 47: P1241E30 Valve, Normally Closed Flow Chart**



**Figure 48: P1241E30 Valve, Normally Open Flow Chart**

## P1241E33 Valve Flow and Input/Feedback Voltage

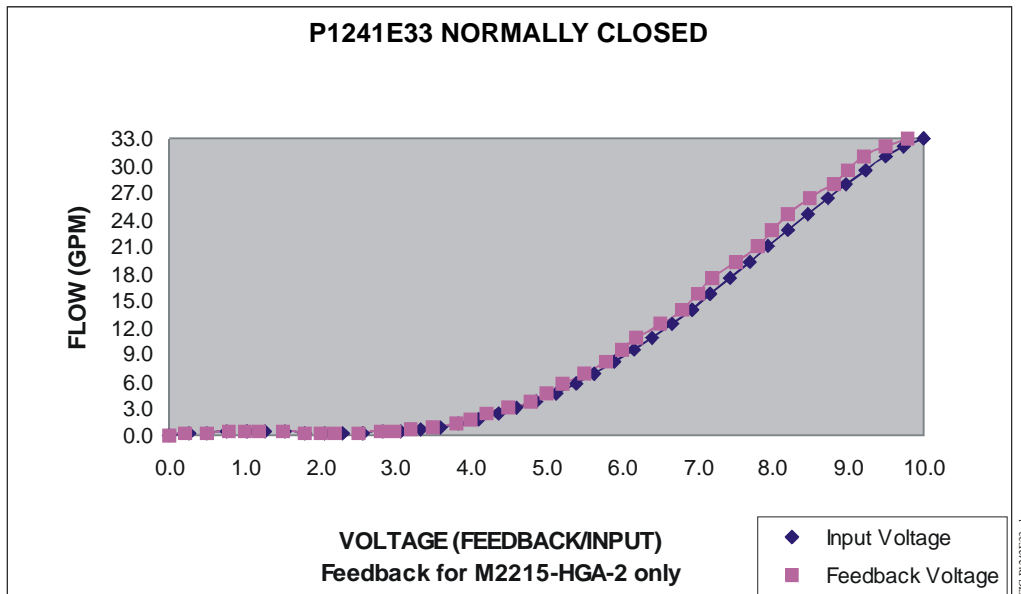
Table 25: P1241E33, 1-1/2 in. NPT (33.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators (Part 1 of 2)<sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
93	33.00	10.0	0.0	9.8	0.2
90	32.14	9.7	0.3	9.5	0.5
88	30.92	9.5	0.5	9.2	0.8
86	29.52	9.2	0.8	9.0	1.0
83	27.97	9.0	1.0	8.8	1.2
81	26.32	8.7	1.3	8.5	1.5
78	24.59	8.5	1.5	8.2	1.8
76	22.81	8.2	1.8	8.0	2.0
74	21.02	7.9	2.1	7.8	2.2
71	19.22	7.7	2.3	7.5	2.5
69	17.44	7.4	2.6	7.2	2.8
67	15.70	7.2	2.8	7.0	3.0
64	14.02	6.9	3.1	6.8	3.2
62	12.41	6.7	3.3	6.5	3.5
59	10.88	6.4	3.6	6.2	3.8
57	9.44	6.2	3.8	6.0	4.0
55	8.11	5.9	4.1	5.8	4.2
52	6.87	5.6	4.4	5.5	4.5
50	5.75	5.4	4.6	5.2	4.8
48	4.74	5.1	4.9	5.0	5.0
45	3.85	4.9	5.1	4.8	5.2
43	3.06	4.6	5.4	4.5	5.5
40	2.39	4.4	5.6	4.2	5.8
38	1.82	4.1	5.9	4.0	6.0
36	1.36	3.8	6.2	3.8	6.2
33	0.98	3.6	6.4	3.5	6.5
31	0.70	3.3	6.7	3.2	6.8
29	0.50	3.1	6.9	3.0	7.0
26	0.36	2.8	7.2	2.8	7.2
24	0.29	2.6	7.4	2.5	7.5
21	0.26	2.3	7.7	2.2	7.8
19	0.26	2.1	7.9	2.0	8.0
17	0.29	1.8	8.2	1.8	8.2
14	0.33	1.5	8.5	1.5	8.5
12	0.37	1.3	8.7	1.2	8.8

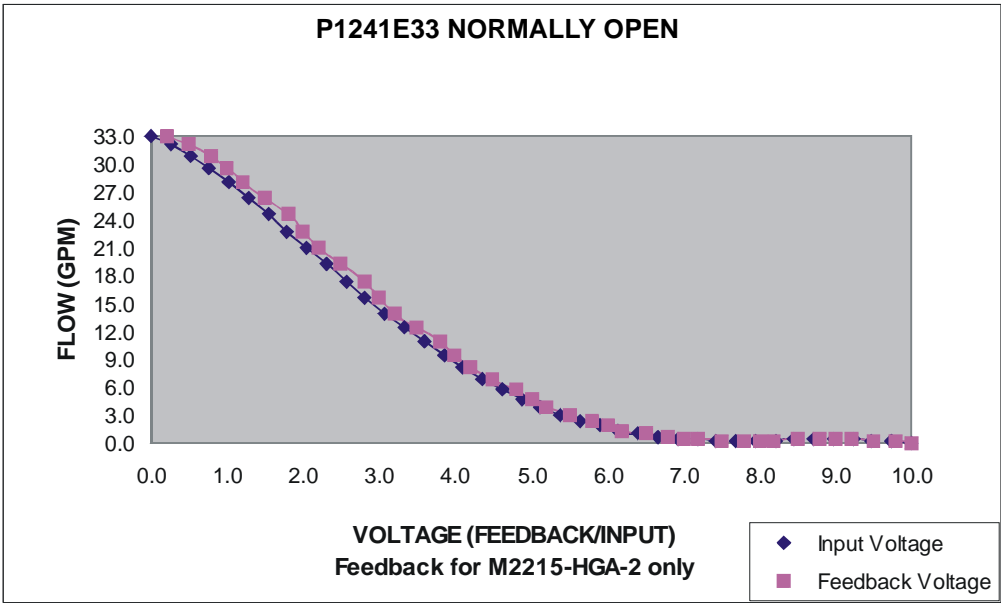
**Table 25: P1241E33, 1-1/2 in. NPT (33.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators (Part 2 of 2)<sup>1</sup>**

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
10	0.38	1.0	9.0	1.0	9.0
7	0.36	0.8	9.2	0.8	9.2
5	0.30	0.5	9.5	0.5	9.5
2	0.16	0.3	9.7	0.2	9.8
0	0.00	0.0	10.0	0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.



**Figure 49: P1241E33 Valve, Normally Closed Flow Chart**



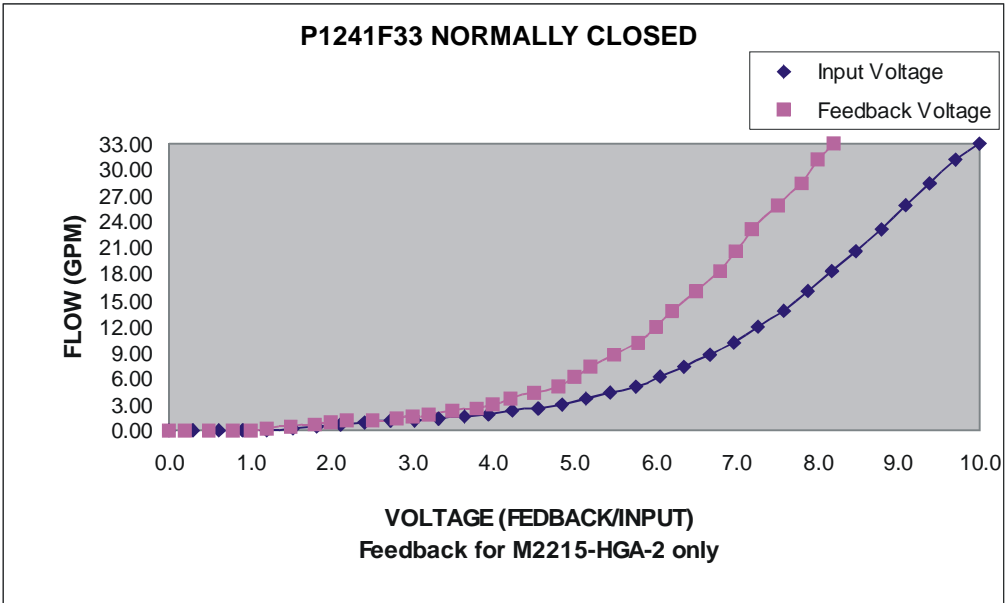
**Figure 50: P1241E33 Valve, Normally Open Flow Chart**

## P1241F33 Valve Flow and Input/Feedback Voltage

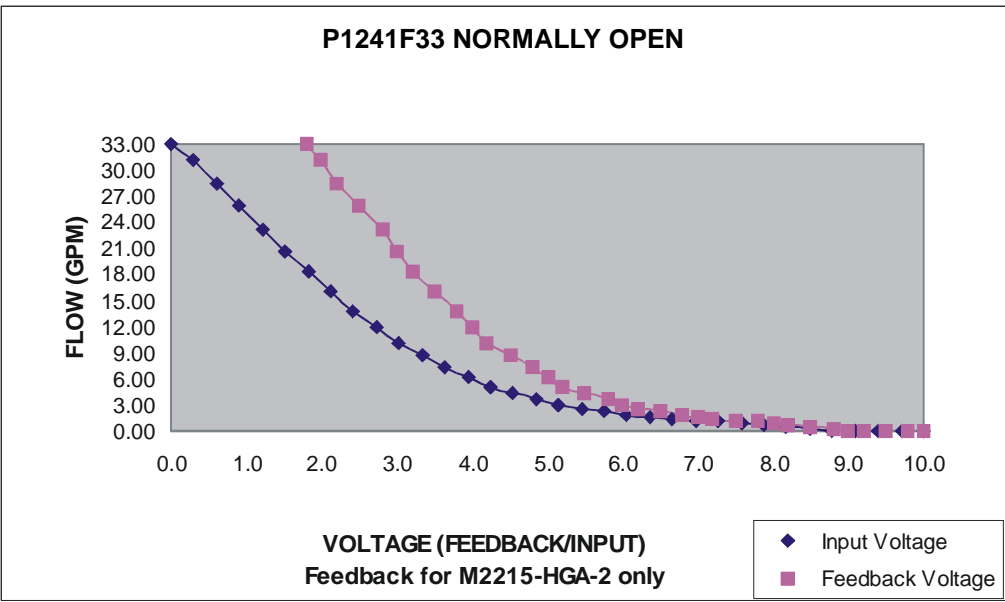
Table 26: P1241F33, 2 in. NPT (33.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators <sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
78	33.00	10.0	0.0	8.2	1.8
76	31.06	9.7	0.3	8.0	2.0
74	28.45	9.4	0.6	7.8	2.2
71	25.81	9.1	0.9	7.5	2.5
69	23.19	8.8	1.2	7.2	2.8
67	20.65	8.5	1.5	7.0	3.0
64	18.23	8.2	1.8	6.8	3.2
62	15.94	7.9	2.1	6.5	3.5
59	13.83	7.6	2.4	6.2	3.8
57	11.90	7.3	2.7	6.0	4.0
55	10.15	7.0	3.0	5.8	4.2
52	8.61	6.7	3.3	5.5	4.5
50	7.25	6.4	3.6	5.2	4.8
48	6.08	6.1	3.9	5.0	5.0
45	5.09	5.8	4.2	4.8	5.2
43	4.26	5.5	4.5	4.5	5.5
40	3.57	5.2	4.8	4.2	5.8
38	3.01	4.8	5.2	4.0	6.0
36	2.56	4.5	5.5	3.8	6.2
33	2.19	4.2	5.8	3.5	6.5
31	1.89	3.9	6.1	3.2	6.8
29	1.65	3.6	6.4	3.0	7.0
26	1.43	3.3	6.7	2.8	7.2
24	1.23	3.0	7.0	2.5	7.5
21	1.04	2.7	7.3	2.2	7.8
19	0.85	2.4	7.6	2.0	8.0
17	0.65	2.1	7.9	1.8	8.2
14	0.44	1.8	8.2	1.5	8.5
12	0.23	1.5	8.5	1.2	8.8
10	0.04	1.2	8.8	1.0	9.0
7	0.00	0.9	9.1	0.8	9.2
5	0.00	0.6	9.4	0.5	9.5
2	0.00	0.3	9.7	0.2	9.8
0	0.00	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.



**Figure 51: P1241F33 Valve, Normally Closed Flow Chart**



**Figure 52: P1241F33 Valve, Normally Open Flow Chart**

## P1241F36 Valve Flow and Input/Feedback Voltage

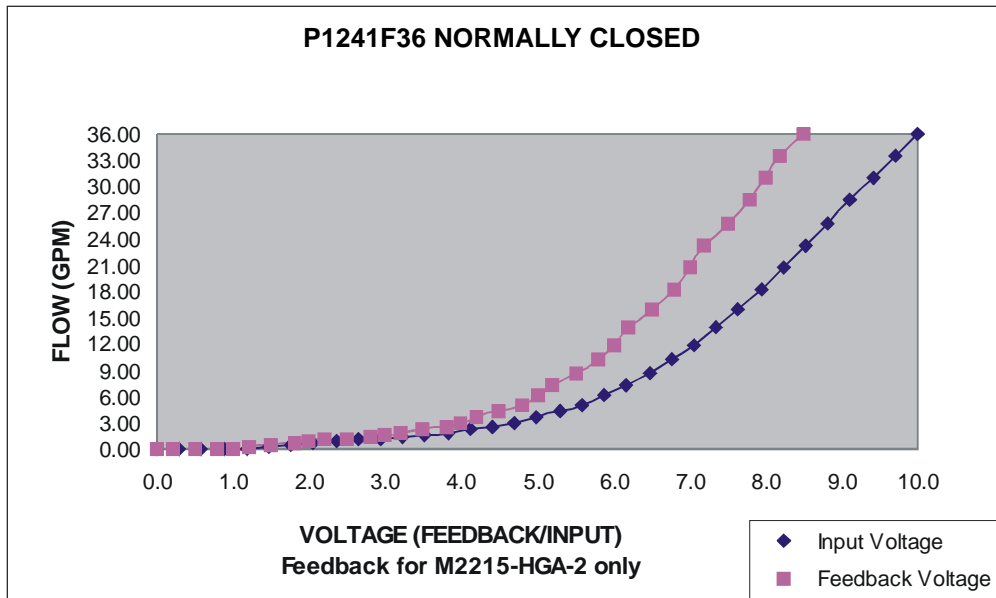
Table 27: P1241F36, 2 in. NPT (36.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators (Part 1 of 2)<sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
81	36.00	10.0	0.0	8.5	1.5
78	33.56	9.7	0.3	8.2	1.8
76	31.06	9.4	0.6	8.0	2.0
74	28.45	9.1	0.9	7.8	2.2
71	25.81	8.8	1.2	7.5	2.5
69	23.19	8.5	1.5	7.2	2.8
67	20.65	8.2	1.8	7.0	3.0
64	18.23	7.9	2.1	6.8	3.2
62	15.94	7.6	2.4	6.5	3.5
59	13.83	7.4	2.6	6.2	3.8
57	11.90	7.1	2.9	6.0	4.0
55	10.15	6.8	3.2	5.8	4.2
52	8.61	6.5	3.5	5.5	4.5
50	7.25	6.2	3.8	5.2	4.8
48	6.08	5.9	4.1	5.0	5.0
45	5.09	5.6	4.4	4.8	5.2
43	4.26	5.3	4.7	4.5	5.5
40	3.57	5.0	5.0	4.2	5.8
38	3.01	4.7	5.3	4.0	6.0
36	2.56	4.4	5.6	3.8	6.2
33	2.19	4.1	5.9	3.5	6.5
31	1.89	3.8	6.2	3.2	6.8
29	1.65	3.5	6.5	3.0	7.0
26	1.43	3.2	6.8	2.8	7.2
24	1.23	2.9	7.1	2.5	7.5
21	1.04	2.6	7.4	2.2	7.8
19	0.85	2.4	7.6	2.0	8.0
17	0.65	2.1	7.9	1.8	8.2
14	0.44	1.8	8.2	1.5	8.5
12	0.23	1.5	8.5	1.2	8.8

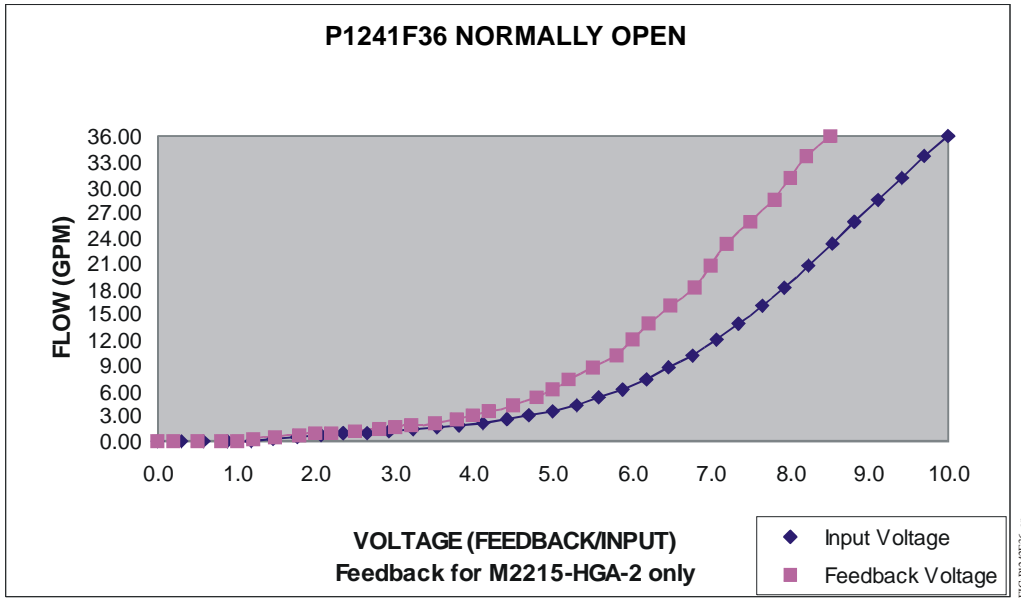
**Table 27: P1241F36, 2 in. NPT (36.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators (Part 2 of 2)<sup>1</sup>**

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
10	0.04	1.2	8.8	1.0	9.0
7	0.00	0.9	9.1	0.8	9.2
5	0.00	0.6	9.4	0.5	9.5
2	0.00	0.3	9.7	0.2	9.8
0	0.00	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.



**Figure 53: P1241F36 Valve, Normally Closed Flow Chart**



**Figure 54: P1241F36 Valve, Normally Open Flow Chart**

## P1241F40 Valve Flow and Input/Feedback Voltage

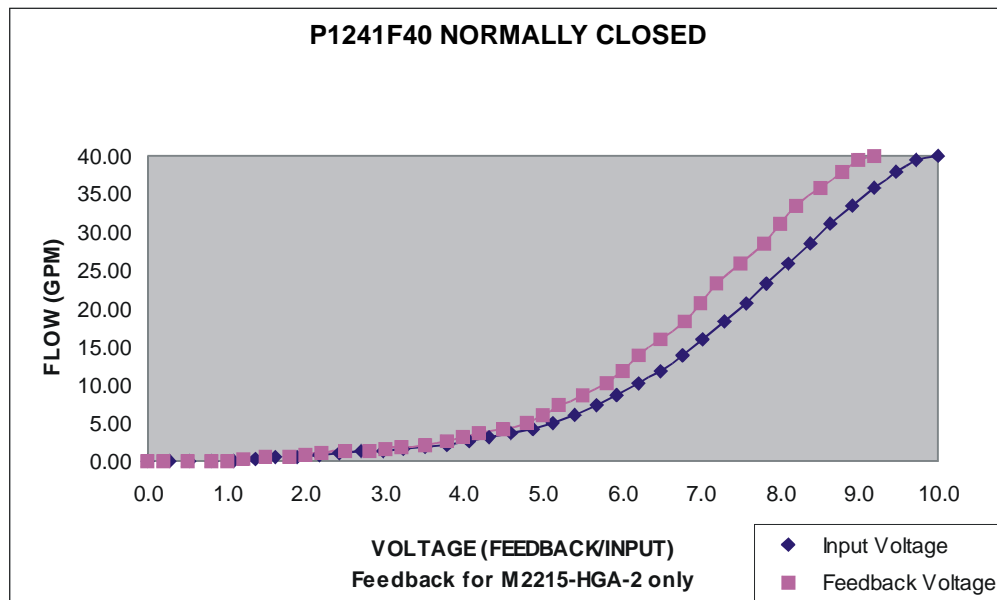
Table 28: P1241F40, 2 in. NPT (40.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators (Part 1 of 2)<sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
88	40.00	10.0	0.0	9.2	0.8
86	39.60	9.7	0.3	9.0	1.0
83	37.93	9.5	0.5	8.8	1.2
81	35.89	9.2	0.8	8.5	1.5
78	33.56	8.9	1.1	8.2	1.8
76	31.06	8.6	1.4	8.0	2.0
74	28.45	8.4	1.6	7.8	2.2
71	25.81	8.1	1.9	7.5	2.5
69	23.19	7.8	2.2	7.2	2.8
67	20.65	7.6	2.4	7.0	3.0
64	18.23	7.3	2.7	6.8	3.2
62	15.94	7.0	3.0	6.5	3.5
59	13.83	6.8	3.2	6.2	3.8
57	11.90	6.5	3.5	6.0	4.0
55	10.15	6.2	3.8	5.8	4.2
52	8.61	5.9	4.1	5.5	4.5
50	7.25	5.7	4.3	5.2	4.8
48	6.08	5.4	4.6	5.0	5.0
45	5.09	5.1	4.9	4.8	5.2
43	4.26	4.9	5.1	4.5	5.5
40	3.57	4.6	5.4	4.2	5.8
38	3.01	4.3	5.7	4.0	6.0
36	2.56	4.1	5.9	3.8	6.2
33	2.19	3.8	6.2	3.5	6.5
31	1.89	3.5	6.5	3.2	6.8
29	1.65	3.2	6.8	3.0	7.0
26	1.43	3.0	7.0	2.8	7.2
24	1.23	2.7	7.3	2.5	7.5
21	1.04	2.4	7.6	2.2	7.8
19	0.85	2.2	7.8	2.0	8.0
17	0.65	1.9	8.1	1.8	8.2
14	0.44	1.6	8.4	1.5	8.5
12	0.23	1.4	8.6	1.2	8.8

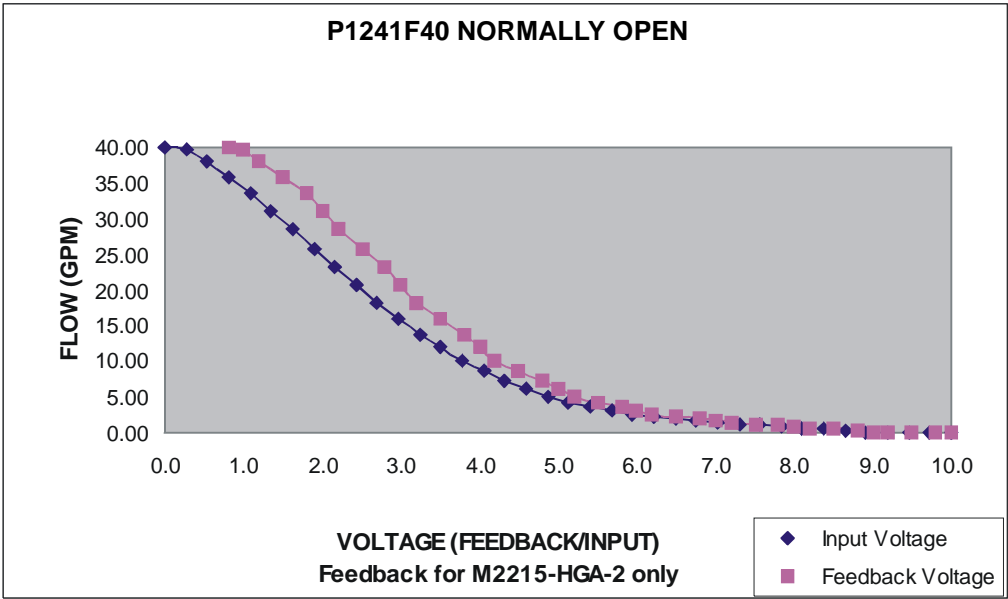
**Table 28: P1241F40, 2 in. NPT (40.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators (Part 2 of 2)<sup>1</sup>**

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
10	0.04	1.1	8.9	1.0	9.0
7	0.00	0.8	9.2	0.8	9.2
5	0.00	0.5	9.5	0.5	9.5
2	0.00	0.3	9.7	0.2	9.8
0	0.00	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.



**Figure 55: P1241F40 Valve, Normally Closed Flow Chart**



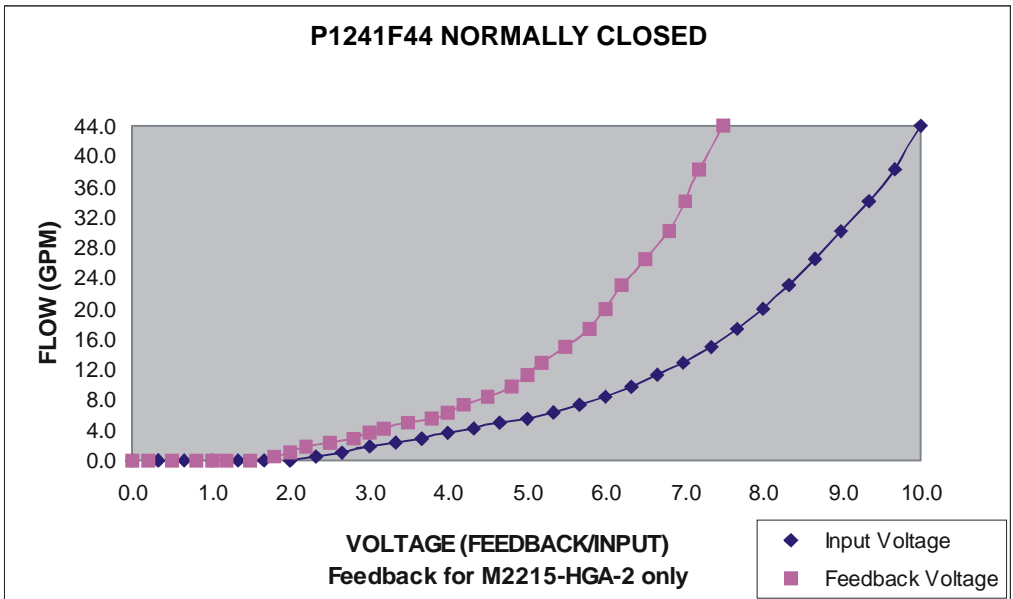
**Figure 56: P1241F40 Valve, Normally Open Flow Chart**

## P1241F44 Valve Flow and Input/Feedback Voltage

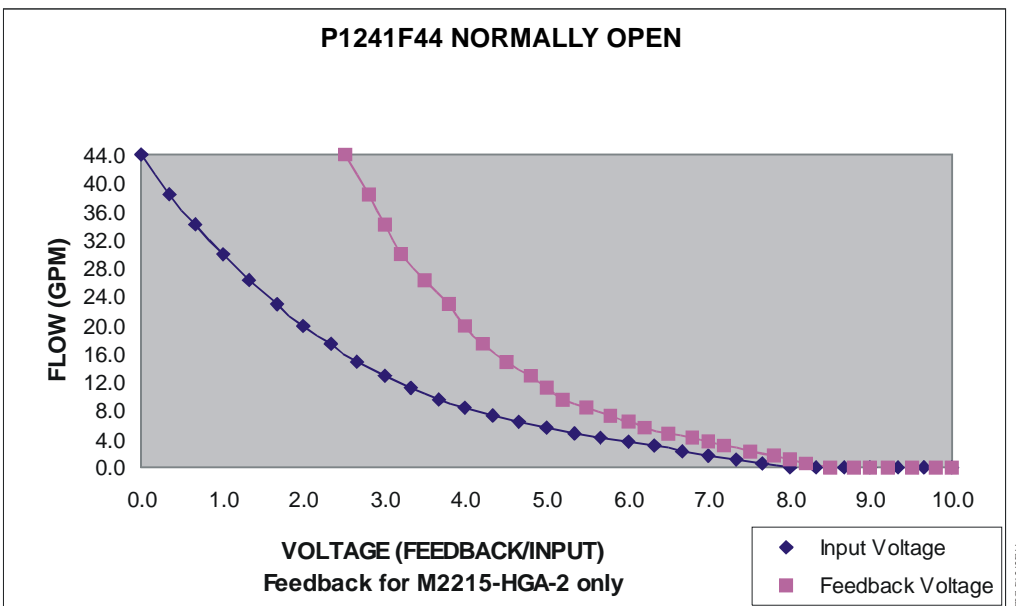
Table 29: P1241F44, 2 in. NPT (44.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators <sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
71	44.00	10.0	0.0	10.0	0.0
69	38.35	9.7	0.3	7.2	2.8
67	34.06	9.3	0.7	7.0	3.0
64	30.05	9.0	1.0	6.8	3.2
62	26.36	8.7	1.3	6.5	3.5
59	23.01	8.3	1.7	6.2	3.8
57	20.00	8.0	2.0	6.0	4.0
55	17.32	7.7	2.3	5.8	4.2
52	14.97	7.3	2.7	5.5	4.5
50	12.93	7.0	3.0	5.2	4.8
48	11.17	6.7	3.3	5.0	5.0
45	9.67	6.3	3.7	4.8	5.2
43	8.39	6.0	4.0	4.5	5.5
40	7.30	5.7	4.3	4.2	5.8
38	6.37	5.3	4.7	4.0	6.0
36	5.56	5.0	5.0	3.8	6.2
33	4.85	4.7	5.3	3.5	6.5
31	4.19	4.3	5.7	3.2	6.8
29	3.57	4.0	6.0	3.0	7.0
26	2.97	3.7	6.3	2.8	7.2
24	2.36	3.3	6.7	2.5	7.5
21	1.75	3.0	7.0	2.2	7.8
19	1.14	2.7	7.3	2.0	8.0
17	0.53	2.3	7.7	1.8	8.2
14	0.00	2.0	8.0	1.5	8.5
12	0.00	1.7	8.3	1.2	8.8
10	0.00	1.3	8.7	1.0	9.0
7	0.00	1.0	9.0	0.8	9.2
5	0.00	0.7	9.3	0.5	9.5
2	0.00	0.3	9.7	0.2	9.8
0	0.00	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.



**Figure 57: P1241F44 Valve, Normally Closed Flow Chart**



**Figure 58: P1241F44 Valve, Normally Open Flow Chart**

## P1241F48 Valve Flow and Input/Feedback Voltage

Table 30: P1241F48, 2 in. NPT (48.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators <sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
74	48.0	10.0	0.0	7.8	2.2
71	42.9	9.7	0.3	7.5	2.5
69	38.4	9.4	0.6	7.2	2.8
67	34.1	9.0	1.0	7.0	3.0
64	30.1	8.7	1.3	6.8	3.2
62	26.4	8.4	1.6	6.5	3.5
59	23.0	8.1	1.9	6.2	3.8
57	20.0	7.7	2.3	6.0	4.0
55	17.3	7.4	2.6	5.8	4.2
52	15.0	7.1	2.9	5.5	4.5
50	12.9	6.8	3.2	5.2	4.8
48	11.2	6.5	3.5	5.0	5.0
45	9.7	6.1	3.9	4.8	5.2
43	8.4	5.8	4.2	4.5	5.5
40	7.3	5.5	4.5	4.2	5.8
38	6.4	5.2	4.8	4.0	6.0
36	5.6	4.8	5.2	3.8	6.2
33	4.8	4.5	5.5	3.5	6.5
31	4.2	4.2	5.8	3.2	6.8
29	3.6	3.9	6.1	3.0	7.0
26	3.0	3.5	6.5	2.8	7.2
24	2.4	3.2	6.8	2.5	7.5
21	1.8	2.9	7.1	2.2	7.8
19	1.1	2.6	7.4	2.0	8.0
17	0.5	2.3	7.7	1.8	8.2
14	0.0	1.9	8.1	1.5	8.5
12	0.0	1.6	8.4	1.2	8.8
10	0.0	1.3	8.7	1.0	9.0
7	0.0	1.0	9.0	0.8	9.2
5	0.0	0.6	9.4	0.5	9.5
2	0.0	0.3	9.7	0.2	9.8
0	0.0	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.

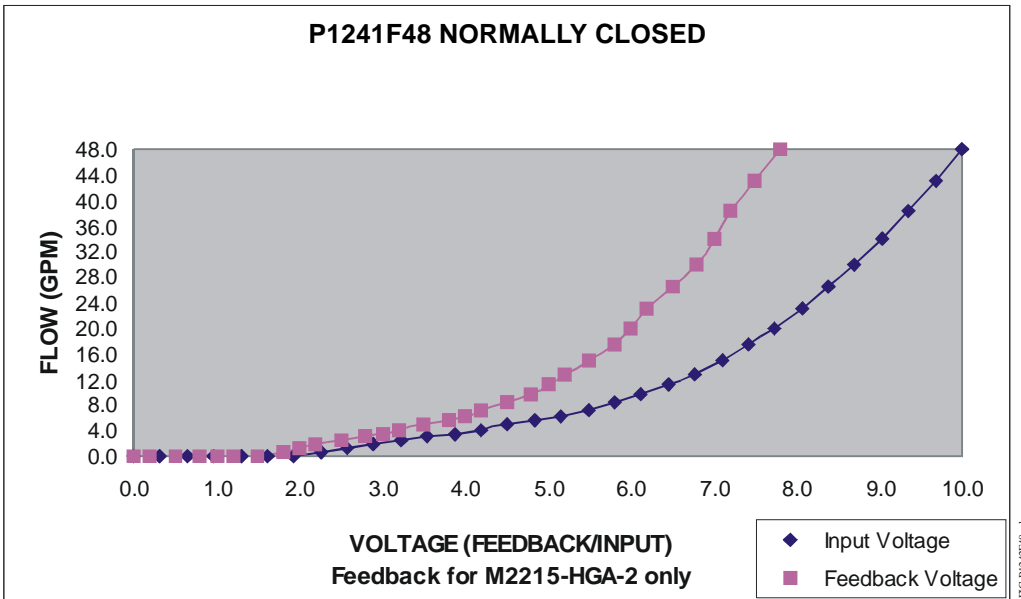


Figure 59: P1241F48 Valve, Normally Closed Flow Chart

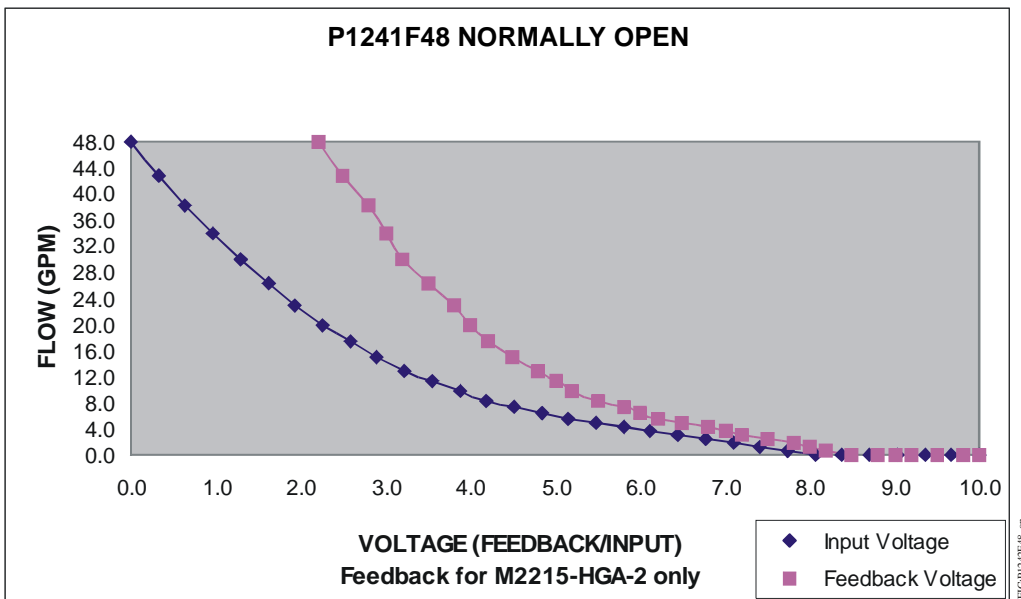


Figure 60: P1241F48 Valve, Normally Open Flow Chart

## P1241F52 Valve Flow and Input/Feedback Voltage

Table 31: P1241F52, 2 in. NPT (52.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators <sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open	Normally Closed	Normally Open
76	52.0	10.0	0.0	8.0	2.0
74	47.7	9.7	0.3	7.8	2.2
71	42.9	9.4	0.6	7.5	2.5
69	38.4	9.1	0.9	7.2	2.8
67	34.1	8.8	1.3	7.0	3.0
64	30.1	8.4	1.6	6.8	3.2
62	26.4	8.1	1.9	6.5	3.5
59	23.0	7.8	2.2	6.2	3.8
57	20.0	7.5	2.5	6.0	4.0
55	17.3	7.2	2.8	5.8	4.2
52	15.0	6.9	3.1	5.5	4.5
50	12.9	6.6	3.4	5.2	4.8
48	11.2	6.3	3.8	5.0	5.0
45	9.7	5.9	4.1	4.8	5.2
43	8.4	5.6	4.4	4.5	5.5
40	7.3	5.3	4.7	4.2	5.8
38	6.4	5.0	5.0	4.0	6.0
36	5.6	4.7	5.3	3.8	6.2
33	4.8	4.4	5.6	3.5	6.5
31	4.2	4.1	5.9	3.2	6.8
29	3.6	3.8	6.3	3.0	7.0
26	3.0	3.4	6.6	2.8	7.2
24	2.4	3.1	6.9	2.5	7.5
21	1.8	2.8	7.2	2.2	7.8
19	1.1	2.5	7.5	2.0	8.0
17	0.5	2.2	7.8	1.8	8.2
14	0.0	1.9	8.1	1.5	8.5
12	0.0	1.6	8.4	1.2	8.8
10	0.0	1.3	8.8	1.0	9.0
7	0.0	0.9	9.1	0.8	9.2
5	0.0	0.6	9.4	0.5	9.5
2	0.0	0.3	9.7	0.2	9.8
0	0.0	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.

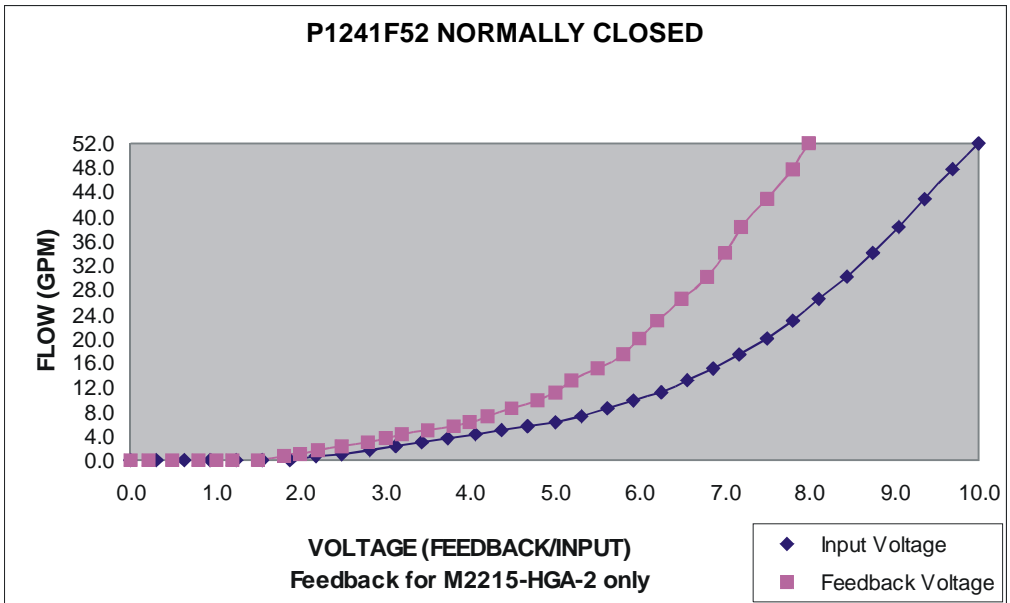


Figure 61: P1241F52 Valve, Normally Closed Flow Chart

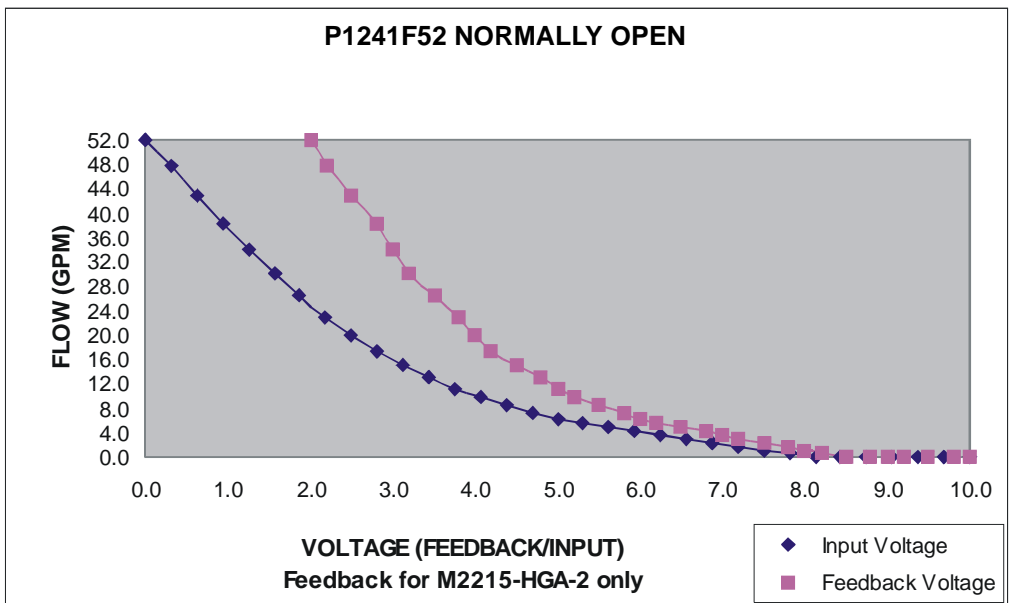


Figure 62: P1241F52 Valve, Normally Open Flow Chart

## P1241F56 Valve Flow and Input/Feedback Voltage

Table 32: P1241F56, 2 in. NPT (56.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators <sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
78	56.0	10.0	0.0	8.2	1.8
76	52.5	9.7	0.3	8.0	2.0
74	47.7	9.4	0.6	7.8	2.2
71	42.9	9.1	0.9	7.5	2.5
69	38.4	8.8	1.2	7.2	2.8
67	34.1	8.5	1.5	7.0	3.0
64	30.1	8.2	1.8	6.8	3.2
62	26.4	7.9	2.1	6.5	3.5
59	23.0	7.6	2.4	6.2	3.8
57	20.0	7.3	2.7	6.0	4.0
55	17.3	7.0	3.0	5.8	4.2
52	15.0	6.7	3.3	5.5	4.5
50	12.9	6.4	3.6	5.2	4.8
48	11.2	6.1	3.9	5.0	5.0
45	9.7	5.8	4.2	4.8	5.2
43	8.4	5.5	4.5	4.5	5.5
40	7.3	5.2	4.8	4.2	5.8
38	6.4	4.8	5.2	4.0	6.0
36	5.6	4.5	5.5	3.8	6.2
33	4.8	4.2	5.8	3.5	6.5
31	4.2	3.9	6.1	3.2	6.8
29	3.6	3.6	6.4	3.0	7.0
26	3.0	3.3	6.7	2.8	7.2
24	2.4	3.0	7.0	2.5	7.5
21	1.8	2.7	7.3	2.2	7.8
19	1.1	2.4	7.6	2.0	8.0
17	0.5	2.1	7.9	1.8	8.2
14	0.0	1.8	8.2	1.5	8.5
12	0.0	1.5	8.5	1.2	8.8
10	0.0	1.2	8.8	1.0	9.0
7	0.0	0.9	9.1	0.8	9.2
5	0.0	0.6	9.4	0.5	9.5
2	0.0	0.3	9.7	0.2	9.8
0	0.0	0.0	10.0	0.0	10.0

- For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.

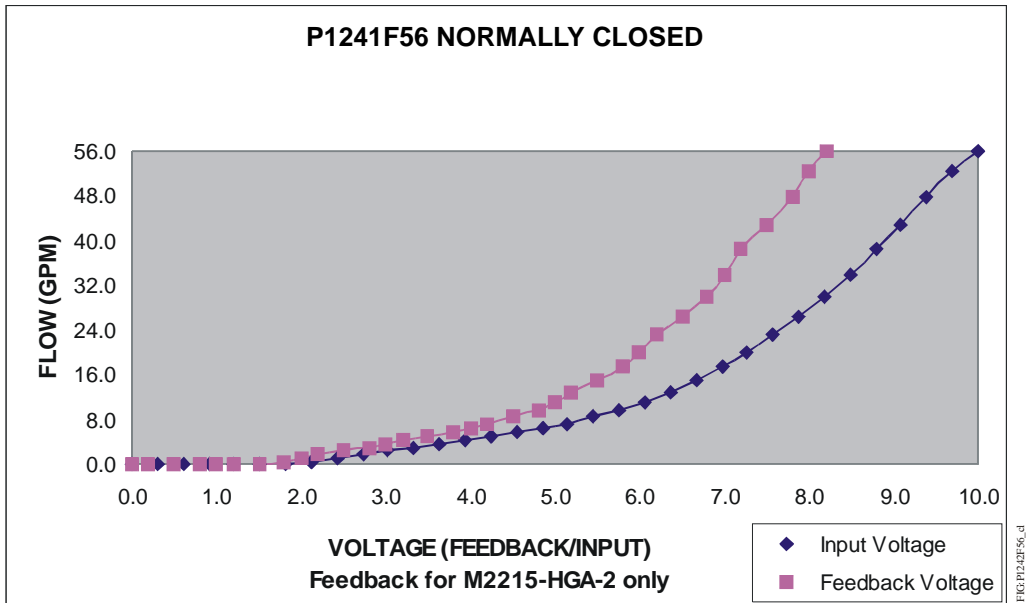


Figure 63: P1241F56 Valve, Normally Closed Flow Chart

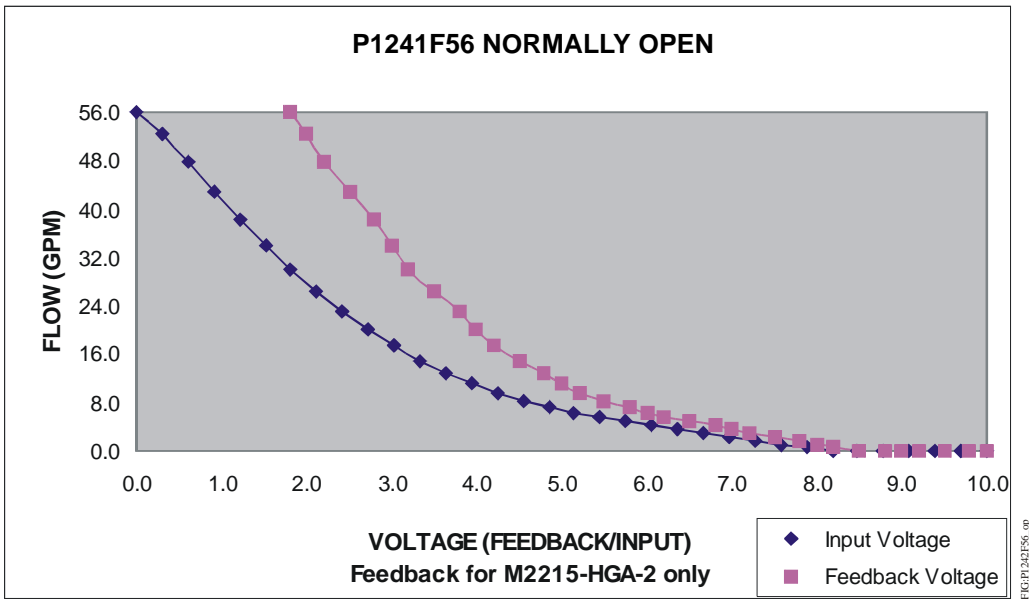


Figure 64: P1241F56 Valve, Normally Open Flow Chart

## P1241F60 Valve Flow and Input/Feedback Voltage

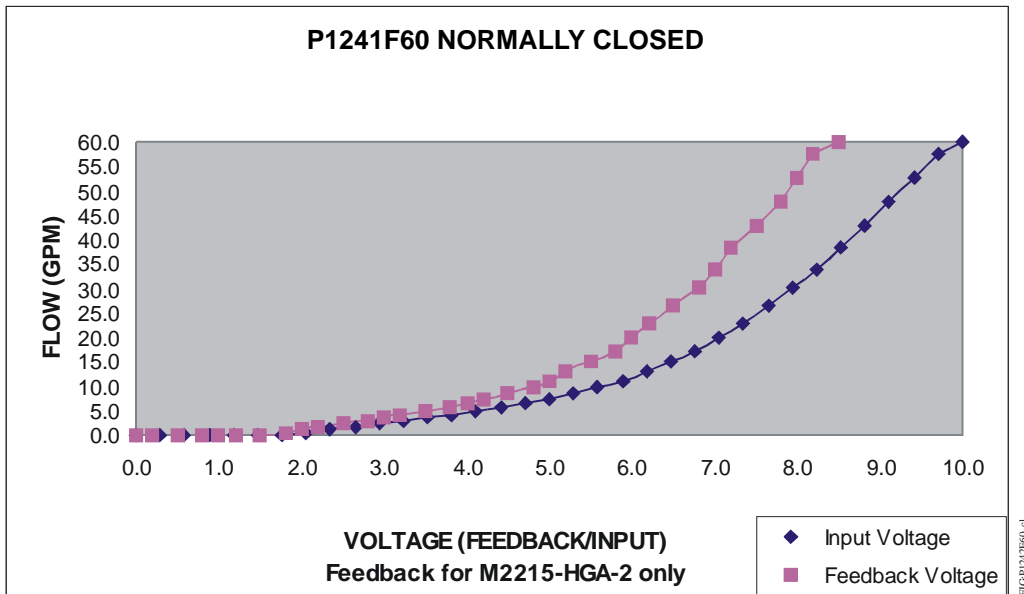
Table 33: P1241F60, 2 in. NPT (60.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators (Part 1 of 2)<sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open	Normally Closed	Normally Open
81	60.0	10.0	0.0	8.5	1.5
78	57.4	9.7	0.3	8.2	1.8
76	52.5	9.4	0.6	8.0	2.0
74	47.7	9.1	0.9	7.8	2.2
71	42.9	8.8	1.2	7.5	2.5
69	38.4	8.5	1.5	7.2	2.8
67	34.1	8.2	1.8	7.0	3.0
64	30.1	7.9	2.1	6.8	3.2
62	26.4	7.6	2.4	6.5	3.5
59	23.0	7.4	2.6	6.2	3.8
57	20.0	7.1	2.9	6.0	4.0
55	17.3	6.8	3.2	5.8	4.2
52	15.0	6.5	3.5	5.5	4.5
50	12.9	6.2	3.8	5.2	4.8
48	11.2	5.9	4.1	5.0	5.0
45	9.7	5.6	4.4	4.8	5.2
43	8.4	5.3	4.7	4.5	5.5
40	7.3	5.0	5.0	4.2	5.8
38	6.4	4.7	5.3	4.0	6.0
36	5.6	4.4	5.6	3.8	6.2
33	4.8	4.1	5.9	3.5	6.5
31	4.2	3.8	6.2	3.2	6.8
29	3.6	3.5	6.5	3.0	7.0
26	3.0	3.2	6.8	2.8	7.2
24	2.4	2.9	7.1	2.5	7.5
21	1.8	2.6	7.4	2.2	7.8
19	1.1	2.4	7.6	2.0	8.0
17	0.5	2.1	7.9	1.8	8.2
14	0.0	1.8	8.2	1.5	8.5
12	0.0	1.5	8.5	1.2	8.8

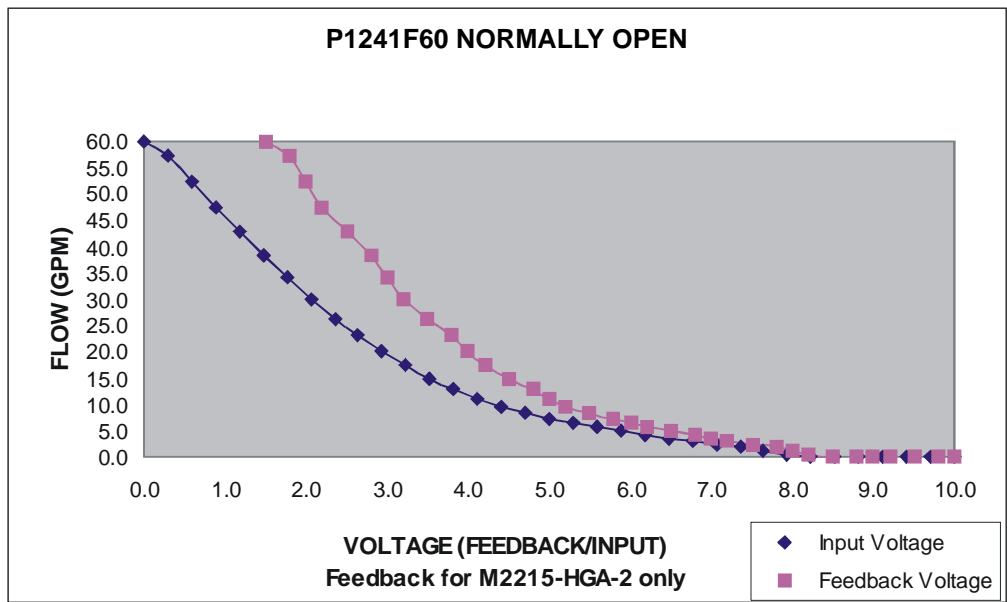
**Table 33: P1241F60, 2 in. NPT (60.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators (Part 2 of 2)<sup>1</sup>**

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
10	0.0	1.2	8.8	1.0	9.0
7	0.0	0.9	9.1	0.8	9.2
5	0.0	0.6	9.4	0.5	9.5
2	0.0	0.3	9.7	0.2	9.8
0	0.0	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.



**Figure 65: P1241F60 Valve, Normally Closed Flow Chart**



**Figure 66: P1241F60 Valve, Normally Open Flow Chart**

## P1241F65 Valve Flow and Input/Feedback Voltage

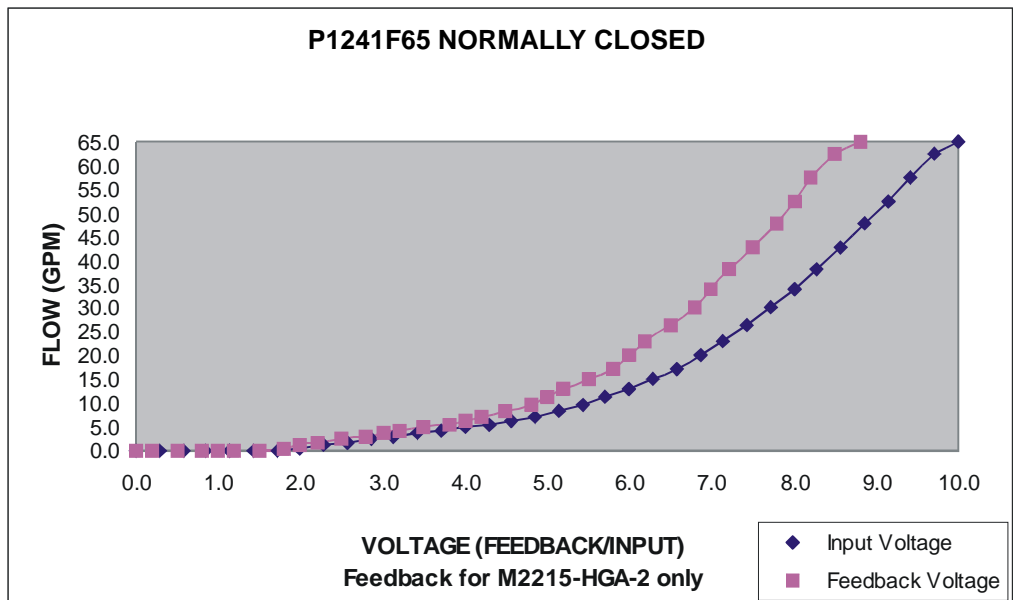
Table 34: P1241F65, 2 in. NPT (65.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators (Part 1 of 2)<sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open	Normally Closed	Normally Open
83	65.0	10.0	0.0	10.0	0.0
81	62.3	9.7	0.3	8.5	1.5
78	57.4	9.4	0.6	8.2	1.8
76	52.5	9.1	0.9	8.0	2.0
74	47.7	8.9	1.1	7.8	2.2
71	42.9	8.6	1.4	7.5	2.5
69	38.4	8.3	1.7	7.2	2.8
67	34.1	8.0	2.0	7.0	3.0
64	30.1	7.7	2.3	6.8	3.2
62	26.4	7.4	2.6	6.5	3.5
59	23.0	7.1	2.9	6.2	3.8
57	20.0	6.9	3.1	6.0	4.0
55	17.3	6.6	3.4	5.8	4.2
52	15.0	6.3	3.7	5.5	4.5
50	12.9	6.0	4.0	5.2	4.8
48	11.2	5.7	4.3	5.0	5.0
45	9.7	5.4	4.6	4.8	5.2
43	8.4	5.1	4.9	4.5	5.5
40	7.3	4.9	5.1	4.2	5.8
38	6.4	4.6	5.4	4.0	6.0
36	5.6	4.3	5.7	3.8	6.2
33	4.8	4.0	6.0	3.5	6.5
31	4.2	3.7	6.3	3.2	6.8
29	3.6	3.4	6.6	3.0	7.0
26	3.0	3.1	6.9	2.8	7.2
24	2.4	2.9	7.1	2.5	7.5
21	1.8	2.6	7.4	2.2	7.8
19	1.1	2.3	7.7	2.0	8.0
17	0.5	2.0	8.0	1.8	8.2
14	0.0	1.7	8.3	1.5	8.5
12	0.0	1.4	8.6	1.2	8.8

**Table 34: P1241F65, 2 in. NPT (65.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators (Part 2 of 2)<sup>1</sup>**

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
10	0.0	1.1	8.9	1.0	9.0
7	0.0	0.9	9.1	0.8	9.2
5	0.0	0.6	9.4	0.5	9.5
2	0.0	0.3	9.7	0.2	9.8
0	0.0	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.



**Figure 67: P1241F65 Valve, Normally Closed Flow Chart**

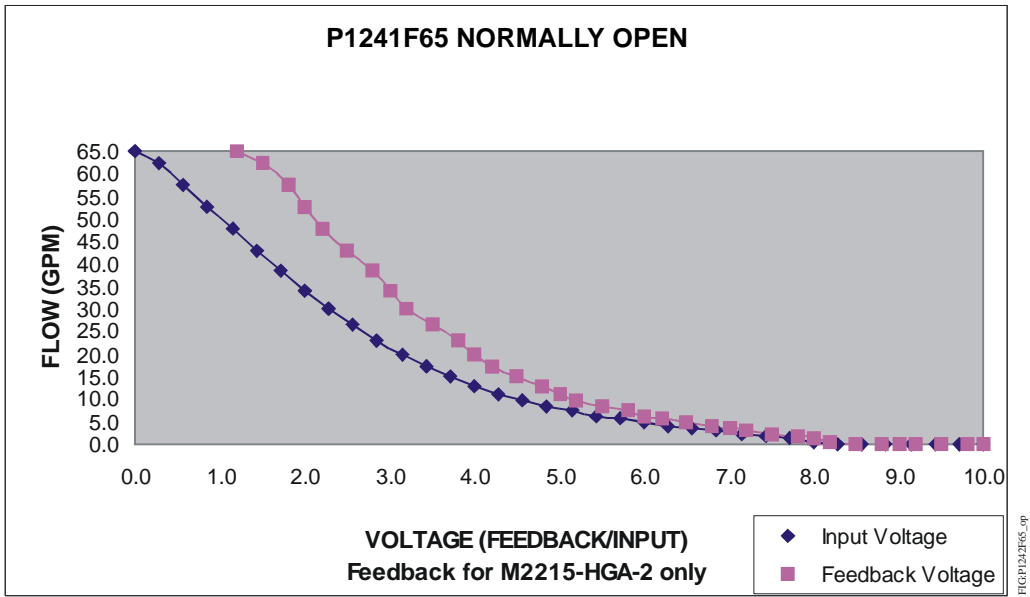


Figure 68: P1241F65 Valve, Normally Open Flow Chart

## P1241F70 Valve Flow and Input/Feedback Voltage

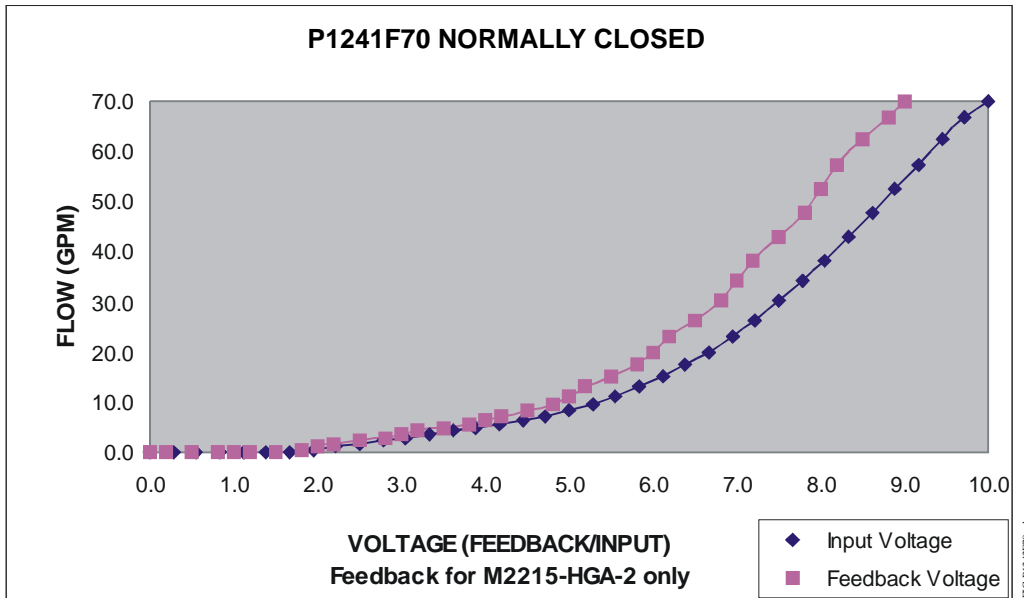
Table 35: P1241F70, 2 in. NPT (70.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators (Part 1 of 2)<sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
86	70.0	10.0	0.0	9.0	1.0
83	67.0	9.7	0.3	8.8	1.2
81	62.3	9.4	0.6	8.5	1.5
78	57.4	9.2	0.8	8.2	1.8
76	52.5	8.9	1.1	8.0	2.0
74	47.7	8.6	1.4	7.8	2.2
71	42.9	8.3	1.7	7.5	2.5
69	38.4	8.1	1.9	7.2	2.8
67	34.1	7.8	2.2	7.0	3.0
64	30.1	7.5	2.5	6.8	3.2
62	26.4	7.2	2.8	6.5	3.5
59	23.0	6.9	3.1	6.2	3.8
57	20.0	6.7	3.3	6.0	4.0
55	17.3	6.4	3.6	5.8	4.2
52	15.0	6.1	3.9	5.5	4.5
50	12.9	5.8	4.2	5.2	4.8
48	11.2	5.6	4.4	5.0	5.0
45	9.7	5.3	4.7	4.8	5.2
43	8.4	5.0	5.0	4.5	5.5
40	7.3	4.7	5.3	4.2	5.8
38	6.4	4.4	5.6	4.0	6.0
36	5.6	4.2	5.8	3.8	6.2
33	4.8	3.9	6.1	3.5	6.5
31	4.2	3.6	6.4	3.2	6.8
29	3.6	3.3	6.7	3.0	7.0
26	3.0	3.1	6.9	2.8	7.2
24	2.4	2.8	7.2	2.5	7.5
21	1.8	2.5	7.5	2.2	7.8
19	1.1	2.2	7.8	2.0	8.0
17	0.5	1.9	8.1	1.8	8.2
14	0.0	1.7	8.3	1.5	8.5
12	0.0	1.4	8.6	1.2	8.8

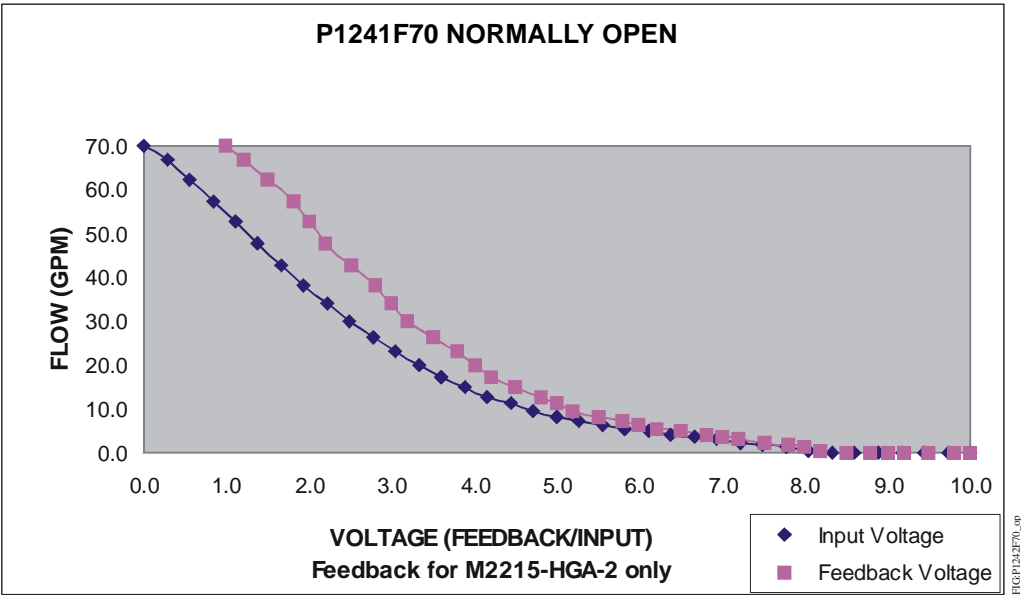
**Table 35: P1241F70, 2 in. NPT (70.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators (Part 2 of 2)<sup>1</sup>**

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
10	0.0	1.1	8.9	1.0	9.0
7	0.0	0.8	9.2	0.8	9.2
5	0.0	0.6	9.4	0.5	9.5
2	0.0	0.3	9.7	0.2	9.8
0	0.0	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.



**Figure 69: P1241F70 Valve, Normally Closed Flow Chart**



**Figure 70: P1241F70 Valve, Normally Open Flow Chart**

## P1241F75 Valve Flow and Input/Feedback Voltage

Table 36: P1241F75, 2 in. NPT (75.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators (Part 1 of 2)<sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
88	75.0	10.0	0.0	9.2	0.8
86	71.4	9.7	0.3	9.0	1.0
83	67.0	9.5	0.5	8.8	1.2
81	62.3	9.2	0.8	8.5	1.5
78	57.4	8.9	1.1	8.2	1.8
76	52.5	8.6	1.4	8.0	2.0
74	47.7	8.4	1.6	7.8	2.2
71	42.9	8.1	1.9	7.5	2.5
69	38.4	7.8	2.2	7.2	2.8
67	34.1	7.6	2.4	7.0	3.0
64	30.1	7.3	2.7	6.8	3.2
62	26.4	7.0	3.0	6.5	3.5
59	23.0	6.8	3.2	6.2	3.8
57	20.0	6.5	3.5	6.0	4.0
55	17.3	6.2	3.8	5.8	4.2
52	15.0	5.9	4.1	5.5	4.5
50	12.9	5.7	4.3	5.2	4.8
48	11.2	5.4	4.6	5.0	5.0
45	9.7	5.1	4.9	4.8	5.2
43	8.4	4.9	5.1	4.5	5.5
40	7.3	4.6	5.4	4.2	5.8
38	6.4	4.3	5.7	4.0	6.0
36	5.6	4.1	5.9	3.8	6.2
33	4.8	3.8	6.2	3.5	6.5
31	4.2	3.5	6.5	3.2	6.8
29	3.6	3.2	6.8	3.0	7.0
26	3.0	3.0	7.0	2.8	7.2
24	2.4	2.7	7.3	2.5	7.5
21	1.8	2.4	7.6	2.2	7.8
19	1.1	2.2	7.8	2.0	8.0
17	0.5	1.9	8.1	1.8	8.2
14	0.0	1.6	8.4	1.5	8.5
12	0.0	1.4	8.6	1.2	8.8

**Table 36: P1241F75, 2 in. NPT (75.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators (Part 2 of 2)<sup>1</sup>**

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
<b>10</b>	0.0	1.1	8.9	1.0	9.0
<b>7</b>	0.0	0.8	9.2	0.8	9.2
<b>5</b>	0.0	0.5	9.5	0.5	9.5
<b>2</b>	0.0	0.3	9.7	0.2	9.8
<b>0</b>	0.0	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.

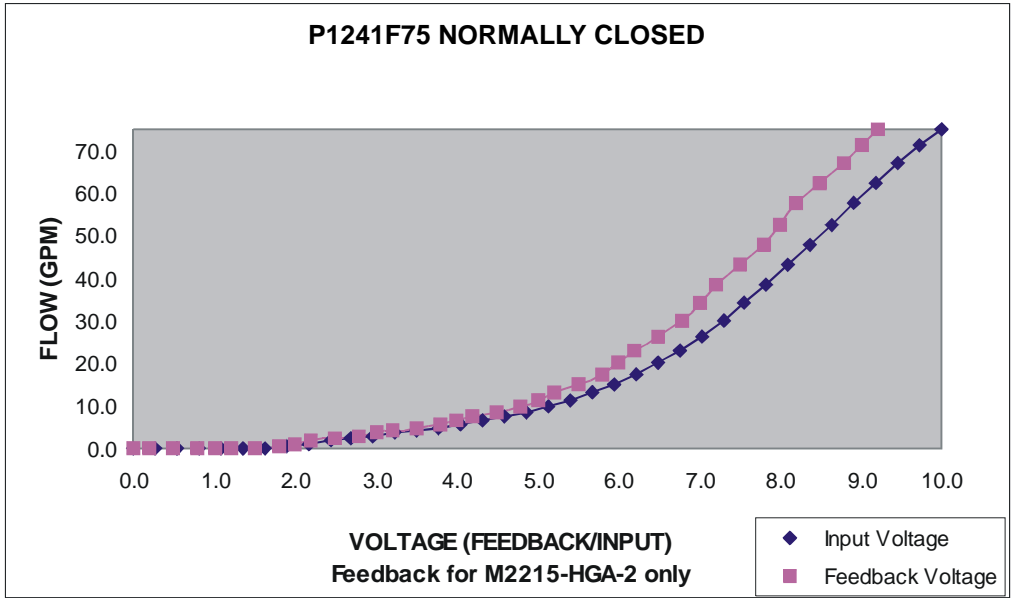


Figure 71: P1241F75 Valve, Normally Closed Flow Chart

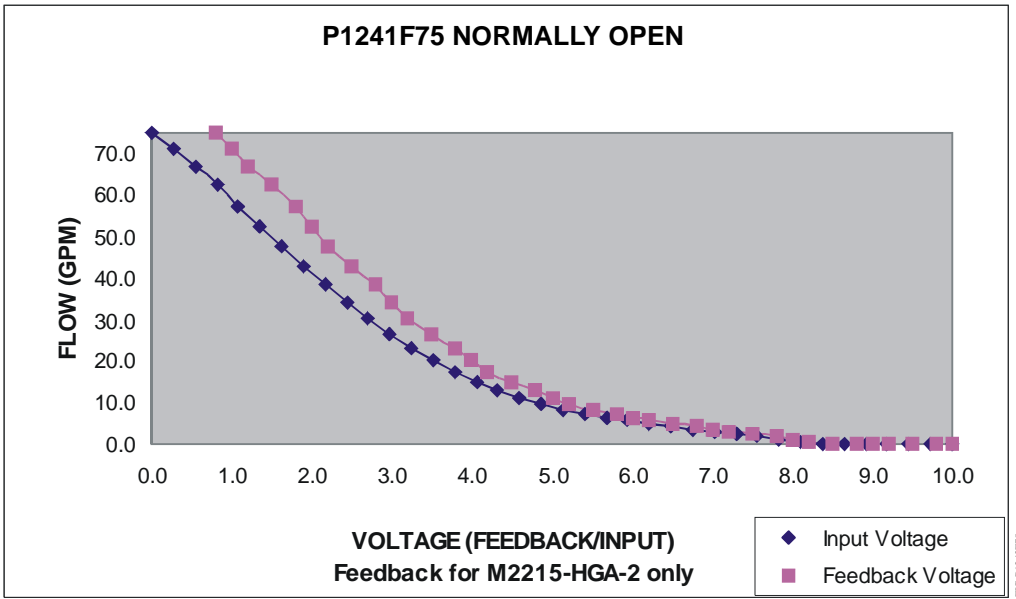


Figure 72: P1241F75 Valve, Normally Open Flow Chart

## P1241F80 Valve Flow and Input/Feedback Voltage

Table 37: P1241F80, 2 in. NPT (80.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators (Part 1 of 2)<sup>1</sup>

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open	Normally Closed	Normally Open
93	80.0	10.0	0.0	9.8	0.2
90	78.5	9.7	0.3	9.5	0.5
88	75.2	9.5	0.5	9.2	0.8
86	71.4	9.2	0.8	9.0	1.0
83	67.0	9.0	1.0	8.8	1.2
81	62.3	8.7	1.3	8.5	1.5
78	57.4	8.5	1.5	8.2	1.8
76	52.5	8.2	1.8	8.0	2.0
74	47.7	7.9	2.1	7.8	2.2
71	42.9	7.7	2.3	7.5	2.5
69	38.4	7.4	2.6	7.2	2.8
67	34.1	7.2	2.8	7.0	3.0
64	30.1	6.9	3.1	6.8	3.2
62	26.4	6.7	3.3	6.5	3.5
59	23.0	6.4	3.6	6.2	3.8
57	20.0	6.2	3.8	6.0	4.0
55	17.3	5.9	4.1	5.8	4.2
52	15.0	5.6	4.4	5.5	4.5
50	12.9	5.4	4.6	5.2	4.8
48	11.2	5.1	4.9	5.0	5.0
45	9.7	4.9	5.1	4.8	5.2
43	8.4	4.6	5.4	4.5	5.5
40	7.3	4.4	5.6	4.2	5.8
38	6.4	4.1	5.9	4.0	6.0
36	5.6	3.8	6.2	3.8	6.2
33	4.8	3.6	6.4	3.5	6.5
31	4.2	3.3	6.7	3.2	6.8
29	3.6	3.1	6.9	3.0	7.0
26	3.0	2.8	7.2	2.8	7.2
24	2.4	2.6	7.4	2.5	7.5
21	1.8	2.3	7.7	2.2	7.8
19	1.1	2.1	7.9	2.0	8.0
17	0.5	1.8	8.2	1.8	8.2
14	0.0	1.5	8.5	1.5	8.5
12	0.0	1.3	8.7	1.2	8.8

**Table 37: P1241F80, 2 in. NPT (80.0 GPM Maximum Flow) with 0 to 10 VDC Proportional Actuators (Part 2 of 2)<sup>1</sup>**

Degrees Open	Flow (GPM)	Input Voltage for All Actuators		Feedback Voltage for Spring Return Actuators (VDC)	
		Feedback Voltage for Non-Spring Actuators (VDC)		Normally Closed	Normally Open
		Normally Closed	Normally Open		
<b>10</b>	0.0	1.0	9.0	1.0	9.0
<b>7</b>	0.0	0.8	9.2	0.8	9.2
<b>5</b>	0.0	0.5	9.5	0.5	9.5
<b>2</b>	0.0	0.3	9.7	0.2	9.8
<b>0</b>	0.0	0.0	10.0	0.0	10.0

1. For proper operation, it is highly recommended that all P1000 valves are configured with the valve closed with 0 VDC input.

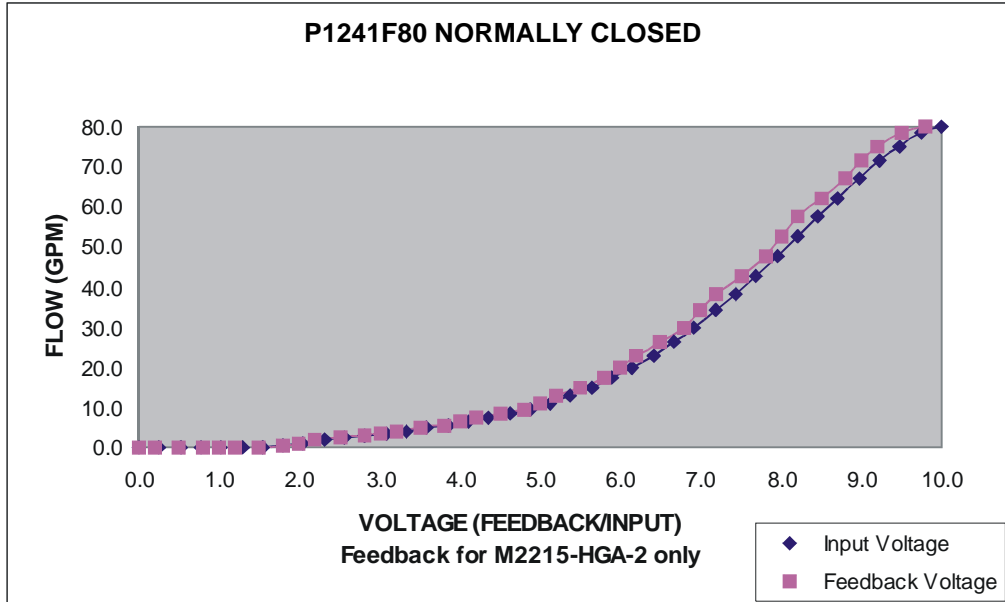


Figure 73: P1241F80 Valve, Normally Closed Flow Chart

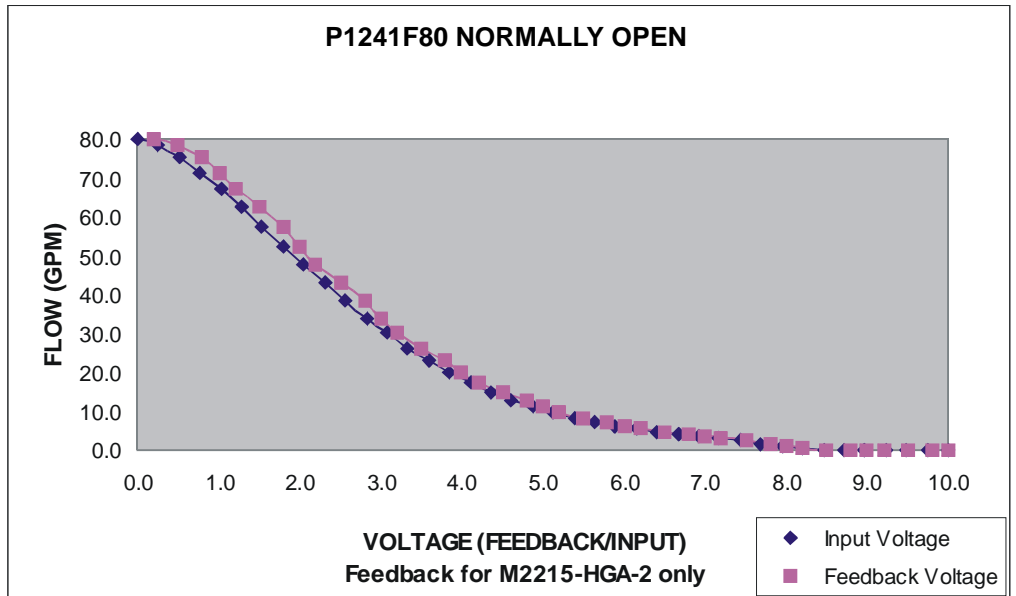


Figure 74: P1241F80 Valve, Normally Open Flow Chart



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