

The **INVALCO Model CDM** is a diaphragm-operated Pressure Switch for pneumatic or hydraulic control. The unit is equipped with one or two snap-acting three-way Micro Valves[®] to provide on/off output to one or more controlled circuits. Since the Micro Valves[®] are completely isolated from the diaphragm, and also isolated from each other, various control output pressures and media may be used in the same CDM pilot.

Operation

Process pressure is applied to the upper diaphragm chamber, causing the stem to lower against the spring. When the upper drive collar has been dropped sufficiently, the Micro Valve[®] will snap, thereby reversing the control circuit. As process pressure decreases, the lower drive collar will raise, contacting the toggle arm which causes the Micro Valve to snap to its "normal" position.

Adjustment

Operating adjustments are very simple on the CDM Pressure Switch. The range spring fixed and requires no adjustment. The process pressure required to trip and release the Micro Valve will depend on the spacing of the drive collars. The adjustable drive collars provide a convenient means of adjusting the span of output valve action within the operating range. Tripping pressure can be adjusted from approximately 6 to 20 psig, with release pressure varying from approximately 2 to 8 psig.

Special Applications

Where manual reset is required, simply remove one of the adjustable drive collars. The CDM pilot lends itself to lock up or alarm service since either application, or loss of process pressure, can cause the Micro Valve to trip with manual reset required by removing either the lower or upper drive collar. The clear plastic cover permits visual indication of the Micro Valve position as well as the approximate process pressure.

Differential pressure control is another process variable which can cause actuation of the Micro Valve. In this application, the lower process pressure is applied below the diaphragm with the higher pressure above the diaphragm. The Micro Valve will now be tripped by a change in the differential between two process pressures. In this application, the maximum static pressure applied to either side of the diaphragm must be limited to 100 psig.



CDM-3801-B Pressure Switch

Materials of Construction

Diaphragm Case and Case

Aluminum

Micro Valve[®]

Aluminum body, stainless trim, Buna-N inserts and seals. Other materials available on special order.

Stem and Bushing

Stainless and brass

Micro Valve[®] Flow Characteristics

Type 38F1, 1/8" Orifice: 26 cfm @ 100 psi.

Maximum Working Pressure

Micro Valve: 100 psig

Actuator: 30 psig - limited by spring range.

Ordering Information

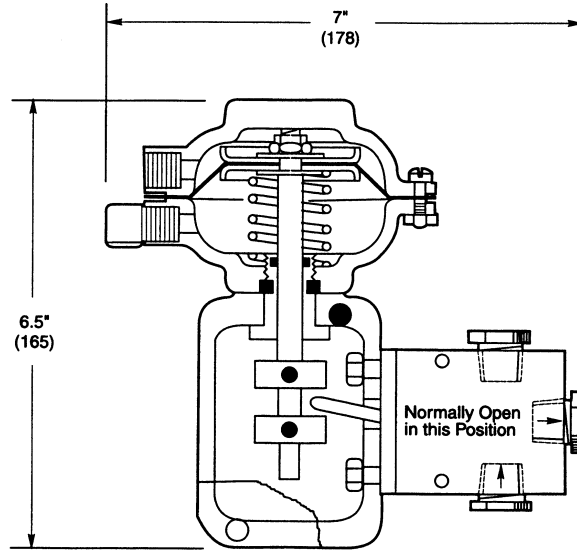
Catalog Model Number	Type Micro Valve	Number Micro Valves	Part Number
CDM-3801-B1	Type 38 F1	1	80001208
CDM-3801-B2	3-Way, 3/8" FPT	2	80001209

To Order Specify: Part Number and Catalog Model Number

[®]Micro Valve is a registered trademark of Barworth Corporation

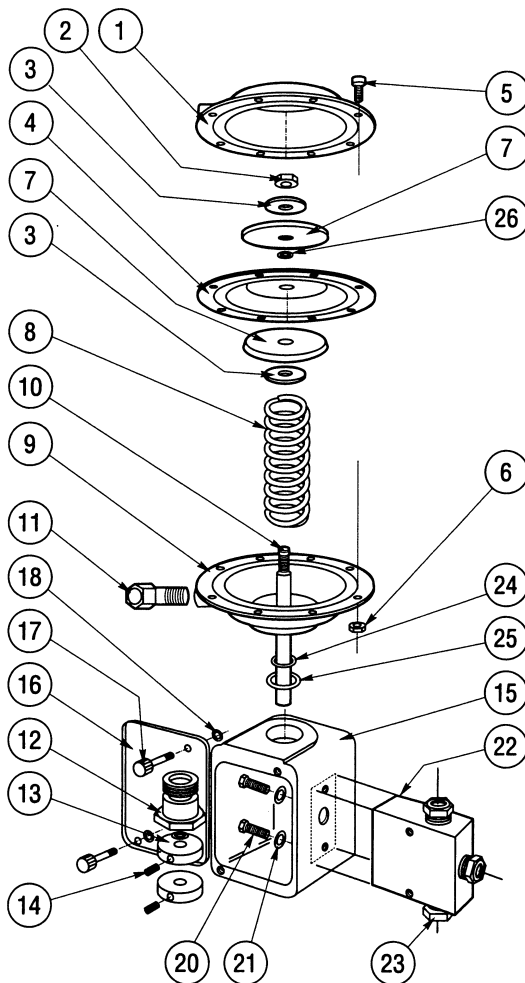
Dimensions

Inches (mm)



Note: Dimensions -- Inches to the nearest tenth (millimeters to the nearest whole mm), each independently dimensioned from respective engineering drawings.

Parts



Item	Notes	Description	Qty.	Part No.
1		Screw 3/8-16 x 2-1/2 SQHSS	1	65003335
2		Nut 3/8-16 Hex Jam	1	65011037
3		Upper Diaphragm Case	1	45002455
4		Screw 10-32 x 5/8 FHMS	8	65011039
5		1/4" Bleeder Filter	1	45002612
6		Spring Rest	1	45003181
7	*	Spring (5-12 psi)	1	45003246
		Spring (10-27 psi)	1	45004446
		Spring (25-45 psi)	1	45005435
		Spring (40-60 psi)	1	45005436
8		Nut 1/4-28 Flexloc	1	65003530
9		Washer 1/4 Flat	4	45003186
10		Diaphragm Plates	2	45003159
11	*	O-Ring BUN-008-90	1	67102310
12	*	Diaphragm	1	45003158
13		Lower Diaphragm Case	1	45002157
14		Nut 10-32 Hex	8	65011075
15	*	O-Ring BUN-112-90	1	67102312
16		Case (1-1/4" Micro Valve)	1	45009842
		Case (2-1/4" Micro Valve)	1	45009845
		Case (1-3/8" Micro Valve)	1	45009843
		Case (2-3/8" Micro Valve)	1	45009846
17	*	Micro Valve 38F1	1-2-3	87000019
		Micro Valve 316F1	1-2-3	87000212
18		Pipe Bushing 3/8 x 1/4 NPT (3/8" Micro Valve)	3/MV	45002450
19		Stem	1	45002183
20	*	O-Ring BUN-113-90	1	67101636
21		O-Ring BUN-007-90	2	67102309
22		Bushing	1	45005597
24		Cover	1	45004876
25		Cover Screw	2	45002307
26		Screw 1/4-20 x 1/2 HHCS (3/8" Micro Valve)	2	65002147
27		Collar	2	45016263
28		Screw 1/4-20 x 1/2 HHCS (3/8" Micro Valve)	2/MV	65006602
		Screw 10-32 x 1/2 HHCS (1/4" Micro Valve)	2/MV	65011172
29		Washer 1/4 Lock (3/8" Micro Valve)	2/MV	65006386
		Washer #10 Lock (1/4" Micro Valve)	2/MV	65007700



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The specifications contained herein are subject to change without notice and any user of said specifications should verify from the manufacturer that the specifications are currently in effect. Otherwise, the manufacturer assumes no responsibility for the use of specifications which may have been changed and are no longer in effect.

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