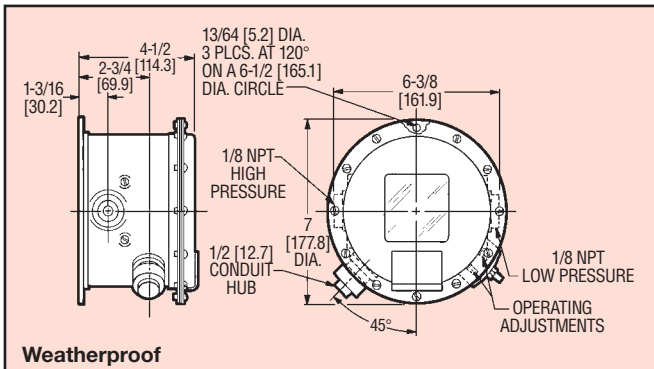
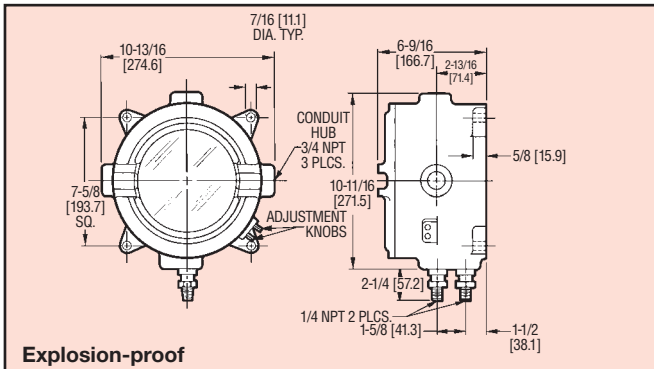


General purpose



Weatherproof



Explosion-proof

Two opposing bellows in the Model DP differential pressure switch result in maximum sensitivity, quick response to changes and good vibration resistance. Choice of brass or 316 stainless steel assures broad media compatibility. Setpoint adjustment is easy thanks to external knobs and large, clear scale reading directly in psid.

A wide variety of switches and circuit styles enables exactly the specific type of control function needed for any system. Mercury® switches are a good choice for humid areas while snap switches are better able to resist vibration. Various operations possible include single adjustment - fixed deadband, double adjustment - adjustable deadband, manual reset (increasing or decreasing pressure) and two stage with each SPST or SPDT switch independently adjustable. Standard enclosure is NEMA-1 style. Optional weatherproof construction is for outdoor use and explosion-proof enclosure meets requirements for Class I, Groups C & D; Class II, Groups E, F & G.

SPECIFICATIONS

Wetted Materials: Brass on ranges 61, 62, 63 or 316 SS on ranges 62E, 64E, 65E.

Temperature Limits: -10 to 180°F (-23 to 82°C).

Pressure Limit: Maximum pressure of the operating range.

Enclosure Rating: General purpose, weatherproof or explosion-proof.

Switch Type: Mercury or snap switch, see model chart.

Electrical Rating: See model chart.

Electrical Connection: Screw terminal.

Conduit Connection: General purpose: 1/2" hole for conduit hub. Weatherproof: 1/2" conduit hub. Explosion-proof: 3/4" female NPT.

Process Connection: General purpose and weatherproof: 1/8" female NPT, explosion-proof: 1/4" male NPT.

Mounting Orientation: Vertical.

Set Point Adjustment: Thumbscrew.

Weight: General purpose: 5 lb (2.3 kg), weatherproof: 7 lb (3 kg), explosion-proof: 25 lb (11 kg).

Deadband: See deadband charts.

Suggested Specification

Differential pressure switch shall be operated by opposing bellows of (brass) (316 stainless steel). Bellows shall actuate (one) (two) (SPST) (SPDT) (DPDT), (mercury) (snap) switches over range of 0- psid. Switch shall be Mercoïd® Differential Pressure Switch Model DP- () () () () () ().

SWITCH DEADBAND - SINGLE STAGE psid [kg/cm²]

RANGE NUMBER	RANGE psid	MAX. PRESS. psi	APPROX. DEADBAND WITH MERCURY SWITCH			APPROX. DEADBAND WITH SNAP SWITCH		
			ADJ. MIN. DPA33	FIXED DPA-533	DPS-233	ADJ. MIN. DPA-7033-153	FIXED DPS-7233-153	2 FIXED DPS-7233-804
61	0-10 [0-0.7]	50 [3.5]	1 [0.07]	.75 [0.053]	.38 [0.027]	1.5 [0.11]	.5 [0.035]	.6 [0.042]
62	0-20 [0-1.4]	100 [7.0]	1.5 [0.11]	1 [0.07]	.5 [0.035]	2.5 [0.18]	1 [0.07]	1 [0.07]
64	0-30 [0-2.1]	300 [21]	3 [0.21]	2 [0.14]	.75 [0.053]	6 [0.42]	1.5 [0.11]	1.5 [0.11]
			DPA43	DPA-543	DPS-243	DPA-7043-153	DPS-7243-153	DPS-7243-804
62E	0-20 [0-1.4]	100 [7.0]	2 [0.14]	1.5 [0.11]	1 [0.07]	3 [0.21]	1.5 [0.11]	1.5 [0.11]
64E	0-30 [0-2.1]	300 [21]	3.5 [0.25]	2.5 [0.18]	1.5 [0.11]	6 [0.42]	2 [0.14]	2.5 [0.18]
65E	0-80 [0-5.6]	600 [42]	16 [1.12]	4 [0.28]	3 [0.21]	20 [1.4]	6 [0.42]	8 [0.56]

SWITCH DEADBAND - TWO STAGE psid [kg/cm²]

RANGE NUMBER	RANGE psid	MAX. PRESS. psi	DPA 400 WITH MERCURY SWITCHES		DPA 7400 WITH SNAP SWITCHES	
			MINIMUM SPREAD BETWEEN SWITCHES DPA433	FIXED DEADBAND APPROX. DPA433	MINIMUM SPREAD BETWEEN SWITCHES DPA7433	FIXED DEADBAND APPROX. DPA7433
61	0-10 [0-0.7]	50 3.5	2 [0.14]	.5 [0.035]	1.5 [0.11]	.6 [0.042]
62	0-20 [0-1.4]	100 7.0	4 [0.28]	1 [0.07]	3 [0.21]	1 [0.07]
64	0-30 [0-2.1]	300 21	8 [0.56]	1.5 [0.11]	6 [0.42]	1.5 [0.11]
			DPA443	DPA443	DPA7443	DPA7443
62E	0-20 [0-1.4]	100 7.0	4 [0.28]	.75 [0.053]	3.5 [0.25]	1.5 [0.11]
64E	0-30 [0-2.1]	300 21	8 [0.56]	1 [0.07]	6.5 [0.46]	2.5 [0.18]
65E	0-80 [0-5.6]	600 42	16 [1.12]	4 [0.28]	20 [1.4]	8 [0.56]

MODEL CHART – SERIES DP

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Pressure

EXAMPLE								automatic reset, SPDT mercury switch, adjustable range 0-10 psid [0-0.7], operating range 30" Hg. VAC – 50 psig [75 cm Hg- VAC -3.5].	
CONSTRUCTION	DP_							General purpose enclosure, NEMA-1 (standard)	CSA
RESET OPTIONS	A R R S						U L	Automatic reset, adjustable deadband, double adjustment Manual reset, single adjustment – operates on decrease automatically Manual reset, single adjustment – operates on increase automatically Fixed deadband, single adjustment, automatic reset	CSA CSA
HOUSING OPTIONS		W E						Weatherproof enclosure, NEMA-3R, 4, 4X Explosion-proof enclosure, NEMA-7, 9 – Class I, Group C & D, Class II, Group E, F & G	CSA CSA
CIRCUIT (SWITCHING) OPTIONS								SPST mercury switch, Elect Code A – opens on differential pressure increase SPST mercury switch, Elect Code A – closes on differential pressure increase SPDT mercury switch, Elect Code B SPDT: 2 each SPST mercury switches – 1 each opens on differential pressure increase, 1 each closes on differential pressure increase. Elect Code A DPDT: 2 each SPDT mercury switches, Elect Code B Other circuits available, consult factory.	CSA CSA CSA CSA
FOR ELECTRICAL CODE SEE CHART BELOW.	S	2__						SPST magnetic mercury switch, Elect Code I – opens on differential pressure increase. Fixed deadband.	CSA
	S	2__	3					SPST magnetic mercury switch, Elect Code I – closes on differential pressure increase. Fixed deadband.	CSA
		4__	4122					2 stage: 2 each SPST magnetic mercury switches – 1 each opens on differential pressure increase, 1 each opens on further increase. Elect rating per note †† below.	CSA
		4__	4132					2 stage: 2 each SPST magnetic mercury switches – 1 each closes on differential pressure increase, 1 each closes on decrease. Both open mid range. Elect rating per note †† below.	CSA
		4__	4129					2 stage: 2 each SPST magnetic mercury switches – 1 each closes on differential pressure increase, 1 each closes on further increase. Elect rating per note †† below.	CSA
		4__	4123					2 stage: 2 each SPST magnetic mercury switches – 1 each opens on differential pressure increase, 1 each opens on decrease. Both closed mid range. Elect rating per note †† below.	CSA
		5__	2					SPST magnetic mercury switch, Elect Code H – opens on differential pressure increase. Narrow adjustable deadband.	CSA
		5__	3					SPST magnetic mercury switch, Elect Code H – closes on differential pressure increase. Narrow adjustable deadband.	CSA
		70__	153					SPDT snap acting switch. Elect Code D, adjustable deadband.	
		70__	804					DPDT: 2 each SPDT snap acting switches, consult factory.	
	S	72__	153					SPDT snap acting switch, Elect Code E, Fixed deadband, Note ‡‡	
	S	72__	804					DPDT: 2 SPDT snap acting switches. Fixed deadband, Elect Code G. Note ‡‡	
		74__						2 stage: 2 each SPDT snap acting switches. Elect Code G. Note ‡‡	
OPTION							B	Optional: Acetal Bushed Movement	
BELLOWS MATERIALS								Brass bellows. Ranges 61, 62, 64 only Type 316 Stainless Steel bellows – ranges 62E, 64E, 65E only	CSA CSA
ADJUSTABLE DIFFERENTIAL PRESSURE RANGES								61 Adjustable range 0-10 psid, operating range 30" Hg VAC -50 psig [75 cm Hg VAC -3.5]	CSA
OPERATING PRESSURE RANGES								62 Adjustable range 0-20 psid, operating range 30" Hg VAC -100 psig [75 cm Hg VAC -7.0]	CSA
								64 Adjustable range 0-30 psid, operating range 30" Hg VAC -300 psig [75 cm Hg VAC -21]	CSA
								62E Adjustable range 0-20 psid, operating range 30" Hg VAC -100 psig [75 cm Hg VAC -7.0]	CSA
								64E Adjustable range 0-30 psid, operating range 30" Hg VAC -300 psig [75 cm Hg VAC -21]	CSA
								65E Adjustable range 0-80 psid, operating range 30" Hg VAC -600 psig [75 cm Hg VAC -42]	CSA

[kg/cm²]

Electrical Ratings DP Control

CODE	SUFFIX	AC CAPACITY			DC CAPACITY HP		AC	DC
		120V	240V	440V	120V	240V		
A	-2, -3 -156	10A	5A	3A	10A	5A	3/4	1/3
B	-153 -804	4A	2A	**	4A	2A	1/8	NA
D	-153	15A	15A	15A	0.5A	0.25A	1/8	NA
E	-153	15A	15A	NA	‡	‡	†	NA
G	-804	5A	5A	NA	•	•	NA	NA
H	-2, -3	5A	2A	NA	2.5A	1A	1/8	1/10
I	*-2, -3	0.5A	0.25A	NA	0.25A	0.15A	NA	NA

- * Also rated 1.0A at 24 VAC
- † 1/4 HP at 120 VAC, 1/2 HP at 240 VAC
- ‡ DC controls up to 10A. Consult factory.
- 5A @ 30 VDC resistive.
- ** -153 Circuit available 1A @ 440V on special order.
- †† DP-433 & DP-443 rated 0.3A at 120 VAC, 0.15A at 240 VAC, 0.9A at 24 VAC, 0.15A at 120 VDC, 0.07A at 240 VDC.
- Manual reset not available.
- ‡‡ Manual reset not available.

Series DP with Fluoroelastomer Diaphragm Seals

Seals may be connected with remote capillary (max. length 10 ft.) or mounted integrally with controls. Fluoroelastomer seal suitable up to 300 psig and temperature from -10 to 400°F.

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