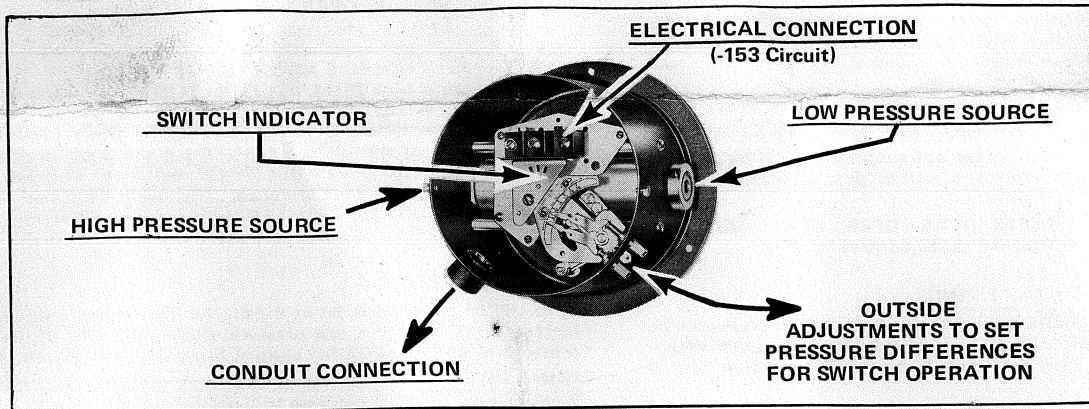


MERCONTROL SERIES DP-7000 DIFFERENTIAL PRESSURE CONTROLS
 Equipped With Enclosed Metal Snap-Action Contacts



Series DP-7000 differential pressure controls actuate one or two SP-DT snap-action switches on changes in the difference between two pressures. Two opposed bellows, each responsive to a different pressure condition operate a snap-action switch as the difference between the pressures increase or decrease. The operating points are adjustable from outside by means of two knurled knobs. Two pointers indicate the operating points or the differences in pressure between the two bellows at which switch operation occurs.

Typical applications involve making or breaking an electrical circuit on changes in pressure differences due to changes in flow through orifices, venturis, heat exchangers, condensers or filters.

————— VISIBLE SCALE—POINTERS SHOW ACTUAL VALUES IN P.S.I. OF —————
 ————— PRESSURE DIFFERENCE AT WHICH CONTROL HAS BEEN SET TO OPERATE —————

OPERATING RANGES – ADJUSTMENT – SENSITIVITY
 SINGLE POLE—DOUBLE THROW SUFFIX –153 ONLY

BRASS POWER ELEMENT			TYPE DPA-7033-153 ELEC. RATING SEE CODE D & F	TYPE DPS-7233-153 ELEC. RATING SEE CODE E
Range No.	Working Pressure Range PSIG.	Operating Pres. Diff. Adj. Between	Adjustable Sensitivity	Fixed Sensitivity
			MAX. SEN. FULL SCALE MINIMUM	FIXED
R-61	30" Hg. vac. 50	0-10	1.5 PSID.	0.5 PSID.
R-62	30" Hg. vac. 100	0-20	2.5 PSID.	1.0 PSID.
R-64	30" Hg. vac. 300	0-30	6.0 PSID.	1.5 PSID.
316 SS POWER ELEMENT			DPA-7043-153	DPS-7243-153
R-62E	30" Hg. vac. 100	0-20	3.0 PSID.	1.5 PSID.
R-64E	30" Hg. vac. 300	0-30	6.0 PSID.	2.0 PSID.

ELECTRICAL RATINGS

SINGLE POLE, DOUBLE THROW SUFFIX –153

CODE D	AC 15 amp. 120/240/480 volts DC ½ amp. 120V., ¼ amp. 240V. MOTOR RATING: AC 1/8 H.P. 120V., ¼ H.P. 240V.
CODE E	AC 15 amp. 120/240 volts MOTOR RATING: AC ¼ H.P. 120V., ½ H.P. 240V.

————— TWO SP-DT SWITCHES SUFFIX –804 —————

CODE F	AC 12 amp. 120V., 10 amp. 240V., 5 amp. 480V. DC ½ amp. 120V., ¼ amp. 240V. MOTOR RATING: AC 1/8 H.P. 120V., ¼ H.P. 240V.
--------	---

Minimum differentials for all ranges increase approx. 1 PSIG.

INSTALLATION INSTRUCTIONS

MERCORONL SERIES DP-7000 DIFFERENTIAL PRESSURE CONTROLS

Equipped With Enclosed Metal Snap-Action Contacts

LOCATION

Install control in location recommended by equipment manufacturer. Select a location that is reasonably free from vibration caused by reciprocating or rotating machinery.

MOUNTING

GENERAL PURPOSE TYPES DPA, DPS, DPR, and RAINLIGHT TYPES DPAW, DPSW, DPRW: Do not support control by its pressure connections—attach control to wall or post by means of the 3 holes in flange attached to control.

EXPLOSION PROOF TYPES DPAE, DPSE, DPRE: Mount by means of mounting lugs attached to the control housing.

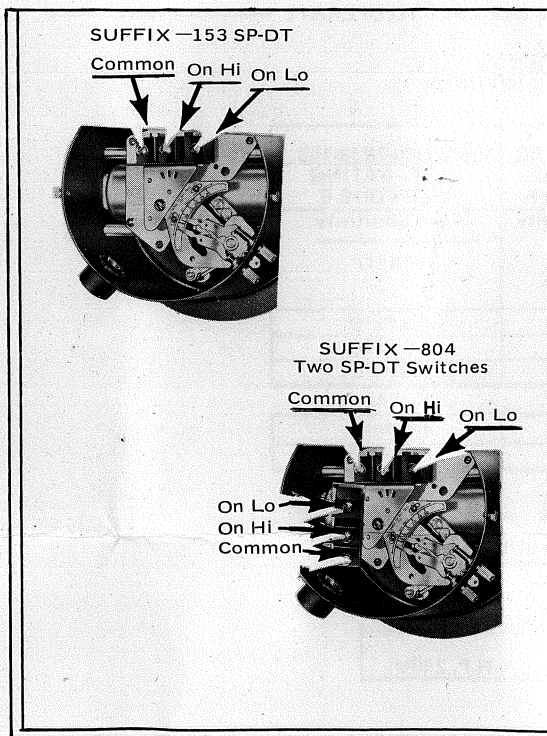
PIPING

Connect **HIGH PRESSURE** source to the 1/8" N.P.T. pressure connection located on left side of control case. Connect **LOW PRESSURE** source to the other 1/8" N.P.T. pressure connection located on right side of case.

WIRING

Wire in accordance with the National Electrical Code and local regulations. For general purpose controls use a short piece of BX between the rigid conduit and control so that the control will not be subjected to conduit expansion and contraction. Where control is directly connected into load circuit it should be connected into hot side of line.

Do not exceed electrical rating as stamped on control nameplate.



SWITCH OPERATING INDICATOR

All types equipped with switch indicator. Orange indicates switch is in the high pressure position on DPA-7000 series and arrow indicates position on DPS-7200 series.

ADJUSTMENTS — HOW TO SET OPERATING POINT

DOUBLE ADJUSTMENT TYPES— FULLY AUTOMATIC

Prefixed by the letters DPA, DPAW, DPAE: The value indicated by the position of the **UPPER POINTER** is the pressure difference (PSID) required to operate the SP-DT switch or switches on an **INCREASE** in pressure difference. The value indicated by the position of the **LOWER POINTER** is the pressure difference (PSID) required to **RESET** the switch on a decrease in pressure difference.

EXAMPLE SETTING —

With **UPPER POINTER** set at 8 psi., the high pressure source must increase to 8 psi. above low pressure source regardless of the actual pressure of either source for control to operate the switch contact.

With **LOWER POINTER** set at 5 psi., as pressure decreases from 8 psi. or more, it must decrease to 5 psi. before control will function to reclose switch circuits. Three psi difference (8 minus 5) is the **SENSITIVITY OR RESET VALUE**. Table shows maximum and minimum **SENSITIVITY (RESET VALUE)** for each range.

SINGLE ADJUSTMENT TYPES— (FULLY AUTOMATIC) FIXED SENSITIVITY

Prefixed by letters DPS, DPSE, DPSW: A single outside adjustment is used to set the pointer on the visible calibrated dial for switch operation. The sensitivity (**RESET VALUE**) is fixed and cannot be changed in the field.

Example setting: Range R-62, 30" vac. to 100 psig. (SP-DT suffix -153). If pointer is set at 10 psi., the control will operate switch when the difference between the high and low pressure sources increases to 10 psi., and will restore the circuit when the pressure difference decreases by the fixed sensitivity of 1.0 psid.

NOTE: This series available only with one SP-DT snap-action switch (-153). Table shows fixed reset value for each range.

SEMI-AUTOMATIC With MANUAL RESET

Prefixed by letters DPR, DPRW, DPRE with letters "L" or "U" after suffix number designating the direction of automatic operation. Example: DPR-7033-153U (SP-DT). A single-outside adjustment sets the operating point to actuate the circuit automatically on a *decrease* in differential pressure. Manual reset push button restores switch to normal position after pressure difference has increased. Suffix "L" denotes automatic operation on increase of pressure difference. Suffix "U" denotes automatic operation on decrease of pressure difference.

LOCKING DEVICE

After control has been set for the required operating range, the locking bar may be inserted between the adjustment screws with slot passing over the projecting lug. By placing a sealing wire between the locking bar and the hole in the lug protruding from adjustment assembly, adjustments cannot be tampered with.

CAUTIONS

Control movement must not be oiled. Do not overload electrically—check electrical rating on nameplate and be sure total current passing thru switch is within specified rating. Do not use for pressures higher than those listed in table.

THE MERCOID CORPORATION — 4201 BELMONT AVENUE — CHICAGO, ILLINOIS 60641