



Leaflet No. INS.1
Issue 3

INSTALLATION, MAINTENANCE AND OPERATING INSTRUCTIONS FOR ALL 2000 SERIES OF SWITCHES

When pressure, differential pressure or vacuum controls are fitted with Pneumatic Outputs, ATEX Approved Electrical Outputs or Series 2009 Temperature Switches, Please read in conjunction with the Instruction Leaflet that relates to the particular specification.

INSTRUCTION LEAFLETS AVAILABLE.

Pneumatic Output	No. INS.2
ATEX Enclosure H & H2	No. INS.3
ATEX Enclosure E(d)	No. INS.5
Temperature Switches	No. INS.4

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PLEASE READ THIS SECTION CAREFULLY.

SIRCO Pressure, Vacuum, Temperature and Differential Pressure switches are precision instruments. Like many other instruments, they are dependent on the mechanical actuation and flexing of a sensing element, such as a diaphragm or bellows. These switches have a safe life cycle which is dependent on such things as the frequency of operation, environmental conditions, shock and vibration etc. Switches that are correctly installed, have a regular maintenance schedule and are not subject to over-range or extreme conditions will usually give a long and trouble-free service.

Accelerated life tests conducted in our Environmental Chamber at normal actuating and overpressures, cannot fully duplicate actual conditions encountered with varied process fluids or gases, therefore, any projected life cycle will only be of an arbitrary nature.

Switches fitted for alarm purposes only, may never encounter an abnormal condition (for which purposes they were intended). It is therefore recommended that such switches are tested at regular periods.

Where instruments are used in hazardous area, or where life or limb are at risk by processes such as gases or highly volatile processes, very special care must be taken in all stages of the instruments use, fitting, calibrating, maintenance, refurbishment and even replacement.

Use only genuine Sirco replacement parts when servicing switches and in the case of diaphragms etc. always replace existing items with parts manufactured from the same materials.

Never make alterations to the switch such as adding additional holes for cable entry or earth connections. This is especially important if the switch is of the ATEX Approved type.

In general, an average of two years is recommended before removal and refurbishment of a Switch. It should then be returned to our factory for the work to be carried out or alternatively the work can be carried out by suitably qualified engineers. Depending on individual requirements the period between servicing may be shorter in the interest of safety, but NEVER extend or lengthen these periods in the hope that the Switch will last until the next time.

In the interests of the absolute safety of your installation, plant, drilling platform, power station or whatever and the people that work in or near them, please read the installation and maintenance sections of this instruction manual carefully before carrying out work associated with any switch. Failure to observe these instructions could render the guarantee void and, also result in the switch becoming unsafe.

Sirco Controls Limited - Warranty Statement

Sirco Product Duration of Limited Warranty

1) Pressure Temperature & Vacuum Switches	1 Year
2) Samplers	1 Year
3) Lead Acid Batteries	180 Days
4) Battery Chargers	180 Days

A. Extent of Limited Warranty:-

1. Sirco Controls Ltd warrants to the end-user customer, that Sirco Products will be free from defects in materials and workmanship for a specified time after the date of delivery to the customer. The duration of this limited warranty is stated above. There are certain additional conditions and limitations of Sirco's Warranty. Those condition and limitations include:-
 - a) For software products, the warranty applies only to the product on which it is loaded.
 - b) Sirco does not warrant the operation of any product to be uninterrupted or error free.
2. Sirco's Limited Warranty covers only those defects which arise, as a result of normal use of the product and do not apply to any
 - a) Improper or inadequate maintenance.
 - b) Software, interfacing, or other attached products not supplied by Sirco.
 - c) Unauthorised modification or misuse.
 - d) Operation outside the products environmental specification.
 - e) Improper site preparation or maintenance.
3. If any product proves defective during the application warranty and if the product is covered by Sirco's Warranty period, the customer shall return the product to the factory, with warranty seals intact (where applicable), for repair or replacement. The defective product must always be accompanied by a statutory certificate of usage in relation to Substances Hazardous to Health (C.O.S.H.H.).
4. If Sirco is unable to repair or replace, as applicable, a defective product which is covered by Sirco's Warranty. Sirco shall, within a reasonable time after being notified of the defect and having the product in question returned to the factory intact, refund the purchase price of the product.

5. This Limited Warranty gives the customer specific legal rights. The customer may also have other rights which vary from country to country elsewhere in the world.

B. Limitations of warranty

1. Neither Sirco or any of its agents makes any other warranty of any kind, whether express or implied, with respect to Sirco products. Sirco and its third-party agents specifically disclaim the implied warranties of merchantability and fitness for a particular purpose.
2. To the extent that this Limited Warranty Statement is inconsistent with the law of the locality where the customer uses the Sirco product, this Limited warranty Statement shall be deemed modified to be consistent with such local law. Under such local law, certain limitations of this Limited Warranty Statement may not apply to the customer. For example some Countries as well as some governments may:-
 - a) Preclude the disclaimers and limitations in this Warranty Statement from limiting the statutory rights of a customer e.g. Australia & U.K.
 - b) Otherwise restrict the ability of a manufacturer to make such disclaimers or impose such limitations.
3. To the extent allowed by local law, the remedies provided in this warranty are the customers sole and exclusive remedies.

C. Limitations of liability.

Except for the obligations specifically set forth in this Warranty Statement, in no event shall Sirco be liable for any direct, indirect, special, incidental, or consequential damage, whether based on contract, tort or any other legal theory and whether advised of the possibility of such damage.

SW396-mar96

INSTALLATION

Sirco switches are tested throughout their range before leaving the factory and unless a specific range and differential are requested by the customer, the range screw is usually left at a random setting. All switches are shipped with paint work intact – (scratch free), covers tightly in place, gaskets, and weather-proof caps (where applicable) fitted. Transport and handle switches, as you would any other precision instrument.

Install A back-up control for all critical applications where a control failure could endanger life, limb, or property. An additional switch to serve as a high or low limit control is especially recommended for applications where a temperature or pressure runaway condition could exist.

Before mounting switches, ensure the pipe is clean and the process orifice is free from dirt. Switches should normally be mounted as close to the pressure connection as possible, however, if the process temperature is above 55°C it may be necessary to mount the switch on a length of pipe or a pigtail siphon. Care should be taken to ensure that the pipe diameter is sufficient to transmit any pressure variations.

The switch mechanism should not exceed 55 °C under normal anticipated conditions. Switches are single pole double throw (unless otherwise stated) and can be connected to switch either 'on' or 'off' on rising pressure etc. (see wiring diagram for connections).

The purchaser should make the manufacturer aware of any external effects or aggressive substances that the equipment maybe exposed to.

Electrical ratings stated in the literature and on name plate should never be exceeded. Overload on a switch or control can cause instant failure. Always wire switches to national and/or local electrical codes using the correct size cable of the correct rating. Fit a suitable waterproof gland, conduit fitting or explosion proof gland where necessary.

Install units away from shock and vibration and position so that moisture is prevented from entering enclosure. Proper electrical fitting should also be used to prevent ingress of moisture. Avoid sighting the controls in locations where extremes of ambient temperature could be experienced. With temperature controls, long capillary lengths beyond three metres can increase chance for error and may require re-calibration of set-point with a change in ambient.

After installation ensure that any screws, gaskets etc. removed prior to installation are fitted and secure. A coating on exposed metal parts, of suitable corrosion inhibitor is recommended.

Factory set units should be tested on installations prior to start up.

SELECTION CURVE

Please study the Selection Curve for Pressure Switches carefully and note that the best place to set a Pressure or Vacuum Switch is in the middle third of the range. Zone A on the graph gives a two per cent accuracy class and a very good life expectancy.

Factory set switches will be set to your requirements and specifications and may, therefore, fall within any of the zones shown in the graph.

THE ACCURACY CLASS AND LIFE EXPECTANCY OF SWITCHES SO SET MUST, THEREFORE, BE ASCERTAINED FROM THE GRAPH.

Switch Differential (Hysteresis) Value

The difference in Pressure between the operating value (set point) and the resetting value may vary according to the position of the set point within the range of the switch. The Differential value given on the label usually indicates the maximum Differential at the top of the range, indicating that it could be better than that figure given if set at a point below the maximum range.

Replacement of Micro-switches

When it becomes necessary to replace the micro-switch(es), the following procedure must be adopted:-

1. Remove range screw, range spring and end cups.
2. Remove the cover from the terminal box and loosen the terminal screws holding the wires which go through the grommet in the housing. Ease the wires out of the terminal and straighten.
3. Undo the two screws on the micro-switch and extract the micro-switch, easing the wires gradually through the grommet.
NOTE: If the micro-switch is damaged, destroy to prevent re-use.
4. Ease the wires attached to the terminal of the new micro-switch carefully through the grommet in the housing and pull through, until the holes in the micro-switch line up with the fixing holes in the housing.
5. Strip wire ends and re-insert into terminal block as follows:-

RED	Normally open
BLACK	Normally closed
YELLOW	Common
6. Re-zero switch and replace screw, range spring and end cups (see Re-zeroing instructions).

9. If switches are subject to more than normal cycling (above 5 per min.) and they have metallic diaphragms, remove the pressure chambers and replace the diaphragms. Take care to use new diaphragms and dispose of the old ones immediately.
10. Re-assemble the switch (see leaflet BAS/1‘Building a Sirco Pressure Switch’), replace all components – in reverse order, re-zero and re-calibrate, following the ‘Calibration and Installation Instruction’ leaflet.

Refurbishment

In general, an average of two years is recommended before removal and refurbishment of a Switch. It should then be returned to our factory for the work to be carried out or alternatively the refurbishment can be carried out by suitably qualified engineers. Depending on individual requirements the period between servicing may be shorter in the interest of safety, but never extend or lengthen these periods.

Capsule Models 2003 and 203

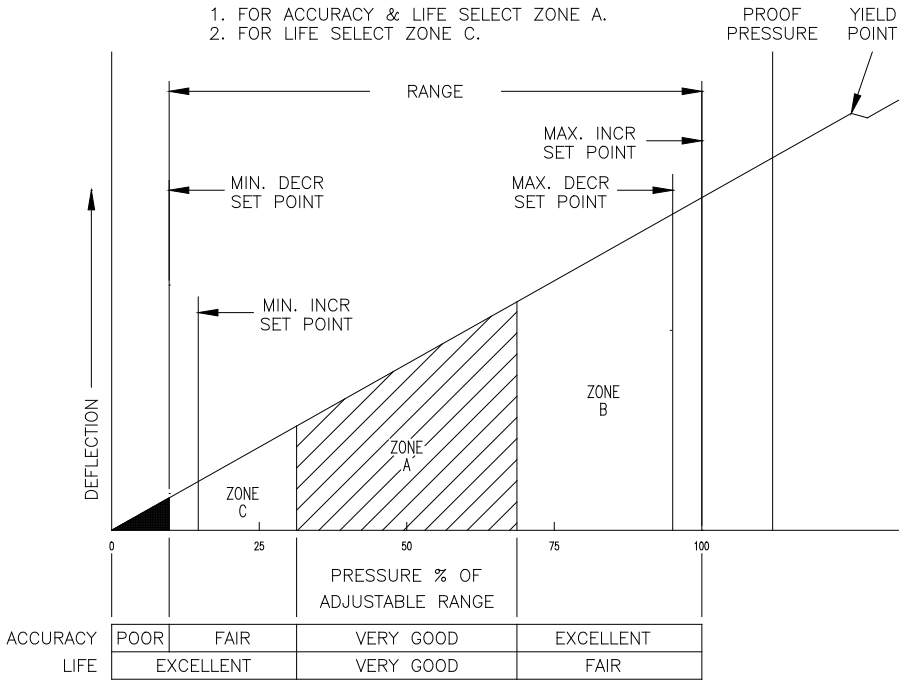
In the case of the capsule assemblies on Models 2003 and 203, where cycling has occurred in excess of 100 times, over a period of 24 hours, for longer than 3 calendar months; a close monitor should be carried out on the capsule unit with replacement of the capsule assembly after a period of 2 years.

Replacement of Diaphragms

1. Remove range screw, range spring and end cups.
2. Remove the screws around the outer edge of the pressure chamber from the rest of the switch.
3. Remove the diaphragm or diaphragms that are to be replaced and destroy to prevent their re-use. Replace with new diaphragm note where stainless steel diaphragms are used the upper and lower sealing surfaces that clamp the diaphragm are specially prepared with interlocking ‘V’s. Do not replace Stainless Steel diaphragms with BUNA ‘N’ P.T.F.E. or Viton diaphragms.
4. Replace Pressure Chamber and screws and tighten to form seal.
5. Re-zero switch and replace range screw, range spring and end cups.

SELECTION CURVE FOR PRESSURE SWITCHES

SELECTION CURVE FOR PRESSURE SWITCHES



ACCURACY CLASS PER CENT OF OPERATING RANGE

ACCURACY ZONE

Zone B	1%
Zone A	2%
Zone C	5%

LIFE

Zone C	Excellent
Zone A	Very Good
Zone B	Fair

On Differential Pressure Switches, these accuracies are for constant static pressures only.

RANGE NOTES

Although Sirco pressure switches are designed to operate on a wide range of pressures, set points at the extreme ends of a range are to be avoided. For accuracy and repeatability, Switches should be chosen to allow operation in the central part of their range (see the selection curve for pressure switches). It is therefore not possible to set a pressure switch to operate close to or at zero pressure.

Switches that are capable of being set at zero, or close to either side of this point, usually have a range which begins with a negative pressure (vacuum) and are capable of being set either side of zero. These compound Switches are designed to allow a vacuum to pull down the diaphragm against a balanced bias spring or a pressure to push the diaphragm upwards against a balanced range spring.

The set point is usually achieved by a finely balanced setting with the sensing element in a mid-way position between opposing pressures of the bias spring at the bottom and the range spring above.

Compound Switches with a positive set-point should not be subjected to excessive vacuum. Conversely compound Switches with a negative (vacuum) set-point should not be subjected to excessive pressure. Excess of pressure or vacuum on this type of switch could result in temporary drift of the set-point.

The only reason a compound Switch is manufactured is to enable the Switch to operate close to or on zero pressure. For applications requiring switching at higher levels, a pressure or vacuum switch must be used.

Customer specifications that request a range beginning with zero are given to them as such, but the set point must be stated and this must fall within the effective set point range. Quotations and specifications will state, if required:-

1. The nominal range zero to required maximum
2. The effective set point range (those given in the catalogue)

3. Open front cover and terminal box cover.
4. Check all internal components visually for corrosion or ingress of moisture.
5. Check that micro-switch terminals are intact.
6. To check the microswitch operation, use an DMM or other suitable indicator. Connected this to the microswitch common and normally open or normally closed terminals and manually operate the switch pip.
7. With the thumb and forefinger, check the actuator for free movement. Do not remove springs or any of the components.
8. Check all screws and fastenings for tightness.
9. Connect an independent pressure or vacuum source and check the set-point (five times), raising the pressure or dropping it from the normal working pressure of the process line (depending on whether the function is on a rising or falling Pressure). Note that the first operation from zero will always be slightly in advance of the set point.
10. Replace all covers and gaskets and apply a corrosion inhibitor.

Half Yearly or Shut-down Maintenance

1. Isolate the electrical supply.
2. Isolate process.
3. Remove all cover and gaskets from switch.
4. Loosen the range screw and remove the spring and associated cup and cap.
5. Check for ingress of dust or moisture, clean the inside of the switch making sure that the actuator is free and has no excessive wear.
6. Check the micro-switch or pneumatic valve for correct functioning.
7. Clean out process chamber cavity, and flush out if necessary, check threads and ensure all pressure retaining bolts are tight.
8. In the case of flameproof or explosion proof switches, check that the glands or fittings are in good condition and ensure that the mating surfaces of the cover and box are free from damage.

CARE AND MAINTENANCE

Maintenance Overview

Sirco takes every care to test the accuracy, repeatability and correct functioning of all Temperature, Pressure, Difference and Vacuum Switches before they leave the factory. Factory tests are carried out in ideal conditions and no amount of testing can accurately simulate the actual environment or the conditions, using the process fluids at the site of their ultimate installation.

Like all electro-mechanical devices, the correct functioning of a Switch depends on the accurate wear-free movements and positively repeated signals within the given parameters of a detailed specification. It is for this reason that regular care and maintenance must be carried out to ensure that they remain within their original specification.

It is necessary in the interests of Health and Safety to ensure that any maintenance etc. is carried out by suitably qualified Instrument Engineers. Failure to adopt a suitable maintenance regime could result in improper operation of the Switch, leading to loss of production and/or pose a safety hazard.

Periodic Function Checks

In most cases, when pressure, pressure difference or vacuum switches are fitted to process lines, where the actuation is frequent, it is possible to observe and record the accuracy and repeatability by reference to the process cycles and gauges.

When switches are fitted to detect an abnormal or alarm condition and may never operate, because of primary interlocking or back-up systems. It is therefore recommended that Switches used for this purpose have a two-way shut-off valve installed immediately below the process connection. This will enable the process fluid to be isolated and at the same time open a test point to enable a pressure to be introduced to check the switch.

Monthly Check

1. Visual checks should be carried out to ensure that no covers are out of place and that the corrosion inhibitor and paint is keeping out any moisture. At the slightest sign of rust or corrosion clean and re-apply an inhibitor.
2. Report any unusual appearance or signs of interference or tampering.

Quarterly Maintenance

1. Isolate electrical supply.
2. Isolate process.

A GUIDE TO PERFORMANCE AND TEST PROCEDURE

Please read this section carefully as it will help considerably when setting up of testing Switches.

It is normal for the lower limit of ranges or set pressures to be above zero, except where a model has been specifically called for that is responsive to both negative and positive pressure.

No switch can be set on a rising pressure and be expected to operate precisely the same point on a falling pressure, or visa versa. An example of this would be if the actuating point is reached by slowly raising the pressure from below the set point. On reaching the set point the micro-switch will change state. This is said to be set on a rising pressure. If the pressure is then slowly lowered, the actuator will drop off and the micro-switch again changes state. This pressure difference between the two switching points is known as the hysteresis or differential

Similarly, if a switch is required to operate on a falling pressure, the pressure must be raised above the actuating point. The pressure is then gradually decreased and on reaching the set point the micro-switch will change state. If the switch pressure is then raised again, the switch will actuate at a higher pressure than the set point. Again, this pressure difference between the two switching points is the hysteresis or differential.

Note that an excess of pressure well above the set point may result in a slight temporary change of the set point

CALIBRATION

All Sirco Switches are tested throughout their range before leaving the factory. Unless a specific range and differential is requested by the customer, the range screw is usually factory set to the bottom part of the range. The zero setting is always set before the switch leaves the factory and should need no further adjustment. If however it becomes necessary to replace or adjust any of the critical components such as the micro-switch etc., the zero setting may need adjusting to give a minimum hysteresis (differential). An incorrect zero setting may result in:-

- 1 Wide Hysteresis (Differential)
- 2 Erratic Repeatability
- 3 Shift in the Set Point

Essential Points Before Calibration

Please establish, beyond a doubt, the following specifications before attempting to set any switch.

1. Set Point/s or Actuating Point/s.
2. Is set point on falling or rising pressure? (Set point will not be the same on both).
3. Establish normal working pressure or mean average working pressure.
4. Ascertain normal overpressure that switch is liable to be subjected to.

Calibration overview

Test and calibration examples are given for pressure Switches only, but the fundamentals apply equally to all Switches. Any difference in the calibration techniques for a particular type of switch will be highlighted in the appropriate sections.

Always start calibrating from the normal or mean average working pressure to test the set point and not from zero.

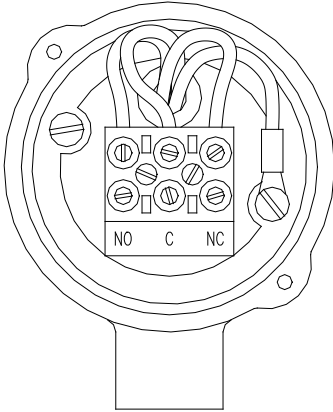
Example – to set a switch that actuates at 50 from an average mean working pressure of 20 to 25, start at between 20 and 25 – and not from 0 (zero pressure).

Repeat this test from 20 to 25 at least three times, remembering that the first actuation from zero will always be higher than the set point.

Raise the pressure to the normal overpressure that the Switch is liable to be subjected to. Reduce pressure down to normal working pressure (example, 20 to 25, as given in 3. above), pause, at this point and then raise pressure to set point to re-check. Repeat at least three times.

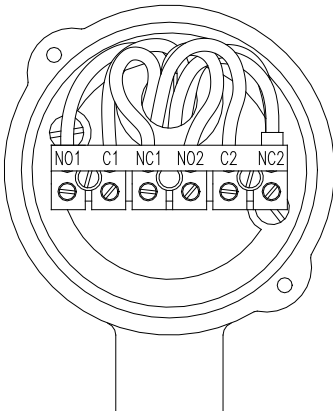
The above procedures apply to all Pressure, Differential Pressure and Vacuum, Vacuum Differential and Temperature Switches.

STANDARD AND WEATHERPROOF SWITCH
TERMINAL CONNECTIONS



Single Switch

Red	NO	Normally Open
Yellow	C	Common
Black	NC	Normally Closed



Twin and Two Switch

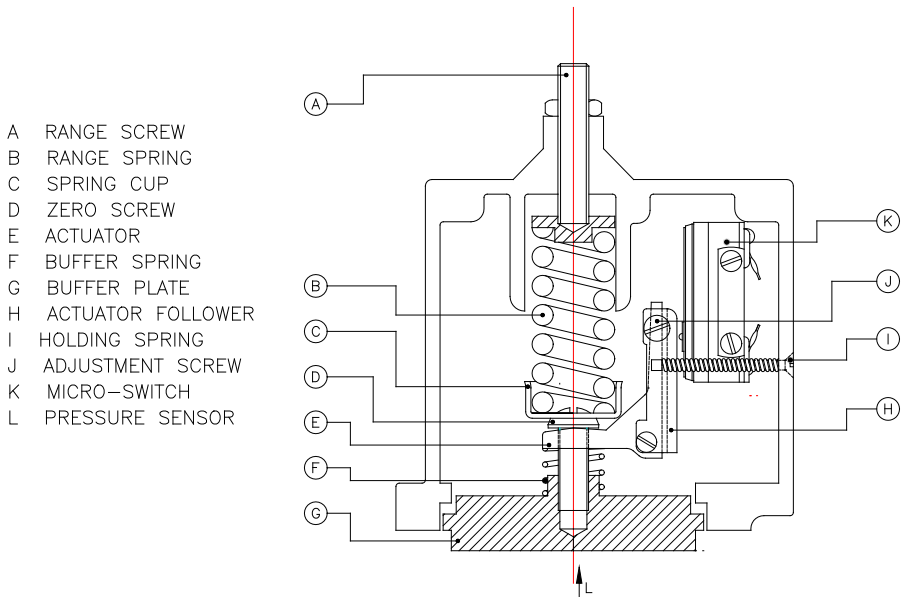
1st Switch

Red	NO1	Normally Open
Yellow	C1	Common
Black	NC1	Normally Closed

2nd Switch

White	NO2	Normally Open
Yellow	C2	Common
Blue	NC2	Normally Closed

OPERATION OF THE SIRCO SERIES 2000 SWITCH WITH ADJUSTABLE HYSTERESIS (DIFFERENTIAL)



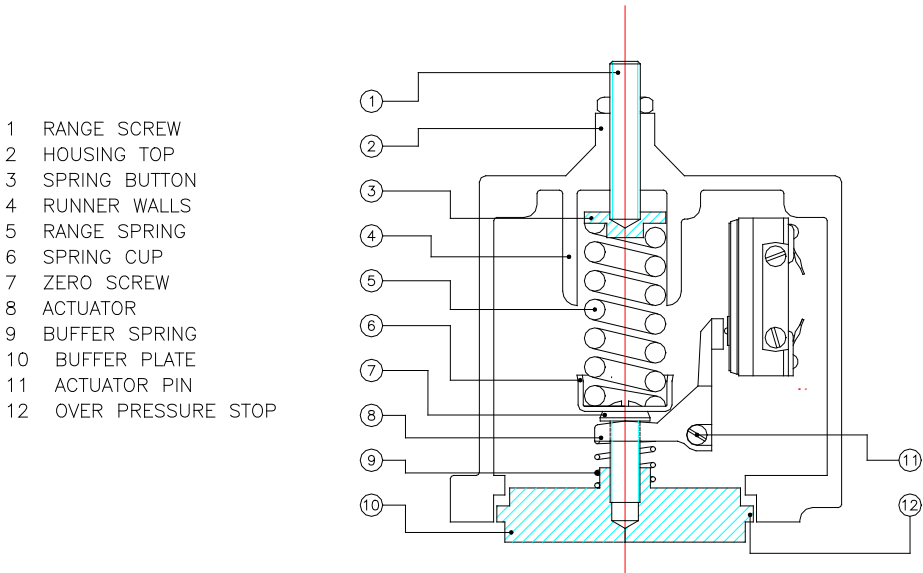
Sensor [L] moves upwards, compressing the range spring [B], located between range screw [A] and zero screw [D]. This moves the actuator [E] and actuator follower [H] towards the micro-switch [K], changing the state of the switch. After overcoming the initial resistance of the micro-switch plunger, the actuator follower is held in position by the holding spring, until the return movement of the actuator impinges on the holding position of the actuator follower and holding spring. The micro switch then changes state again, returning to its original position.

1. **REPEATABILITY:** Positive hysteresis (differential) trip points assure instrument accuracy and stability.
2. **SIMPLICITY OF OPERATION:** Change of differential is obtained by adjustment of screw [J]. The differential increases or decreases in one direction only.
3. **OVERPRESSURE AND SURGES:** After overpressure conditions, buffer spring [F] returns actuator [E] to the previous position without drift in the set point.

Note: Pressure control switches with fixed differential (series 2000) are identical in construction, except that part [I] is not used and a one piece actuator replaces [E] and [H].

KEY DIAGRAM

Refer to this diagram in relation to all setting instructions.



Zeroing Instructions For The Pressure Switch Series 2000

- 1 Undo the front cover screws and remove the cover.
- 2 Remove the range screw [1] from the switch housing [2].
- 3 The spring button [3], the range spring [5] and the spring cup [6] can now be extracted from the housing.
- 4 The slot on the top of the platformed dome headed zero screw [7], will now be exposed.
- 5 Insert a screwdriver (about 8mm wide maximum) carefully down the range screw hole in the top of the housing and into the slot on the zero screw. Hold the buffer plate to stop it from turning while adjusting the screw.
- 6 Connect an analogue meter or other suitable type of continuity tester between the common and normally open terminals of the Switch. If a pneumatic switch is fitted, connect an air supply to the normally closed port and pilot if fitted.
- 7 Place the Switch upright on a firm base, such as a block of wood or edge of a workbench to enable the mounting bracket to overhang the edge. An ideal position for adjustment of a Switch, is to fit it by its bracket to a vertical surface.

- 8 When zeroing pressure Switches is important to press the screwdriver firmly down on the platformed dome headed zero screw. This will hold the buffer plate in the correct position.
- 9 a. Press the screwdriver firmly downwards and turning the screw clockwise will move the actuator on its pivot pin, away from the micro-switch(es) or pneumatic switch.
- b. Press the screwdriver firmly downwards and turning the screw anti-clockwise will move the actuator nearer to the micro-switch or pneumatic switch.
- 10 Now that the action of pressing the screwdriver down while turning has been established, slowly turn the screwdriver anti-clockwise so that the micro-switch or pneumatic switch is just on. Stop turning here, do not over-travel the trip point. Now back-off the actuator, by slowly turning the screwdriver clockwise until the switch is turned off. Continue turning the screwdriver for another quarter of a turn (half turn for 2004 and 2006 switches). This will put the switch in the 'off' position as well as giving the required lead to the diaphragm movement. This enables it to start at the bottom of the range of the switch and under the correct tension.

Zeroing Differential Pressure Switches

- 1 When Zeroing Pressure Difference Switches, do not press the screwdriver downwards on to the zero screw, but let it rest lightly while zeroing.
- 2 Connect an air supply to the HP (High Pressure). and LP. (Low Pressure) connectors of the switch by teeing off a single supply source. The pressure of the equal static's put into the HP. and LP. Chambers must be sufficient to centralize or balance the diaphragms within the cells.

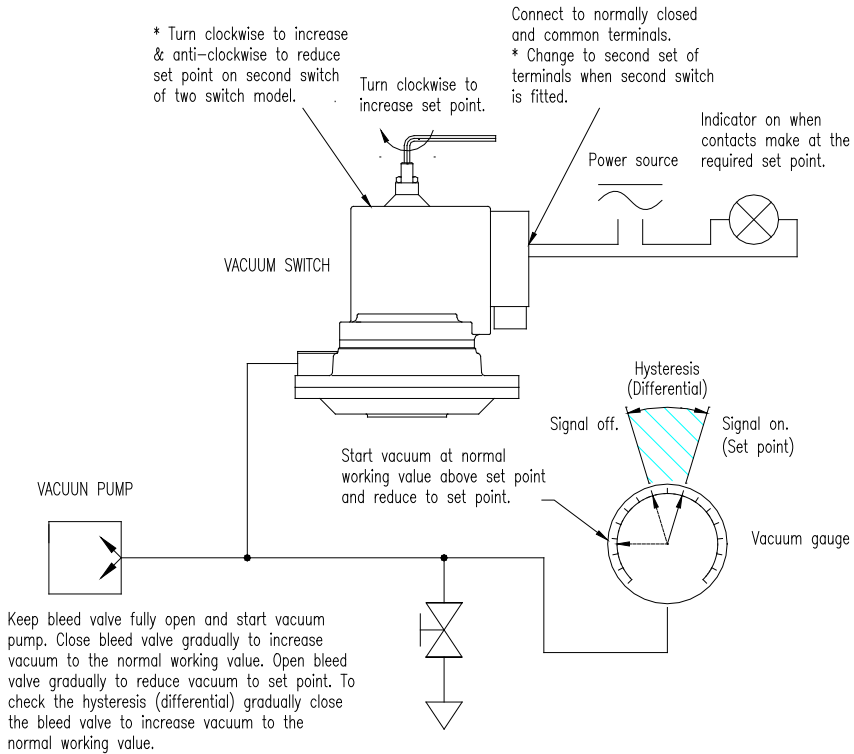
All other instructions are as per the previous section 'zeroing instructions for the pressure Switch Series 2000'.

Calibration of Differential Pressure Switches

Some Do's and Do not's:-

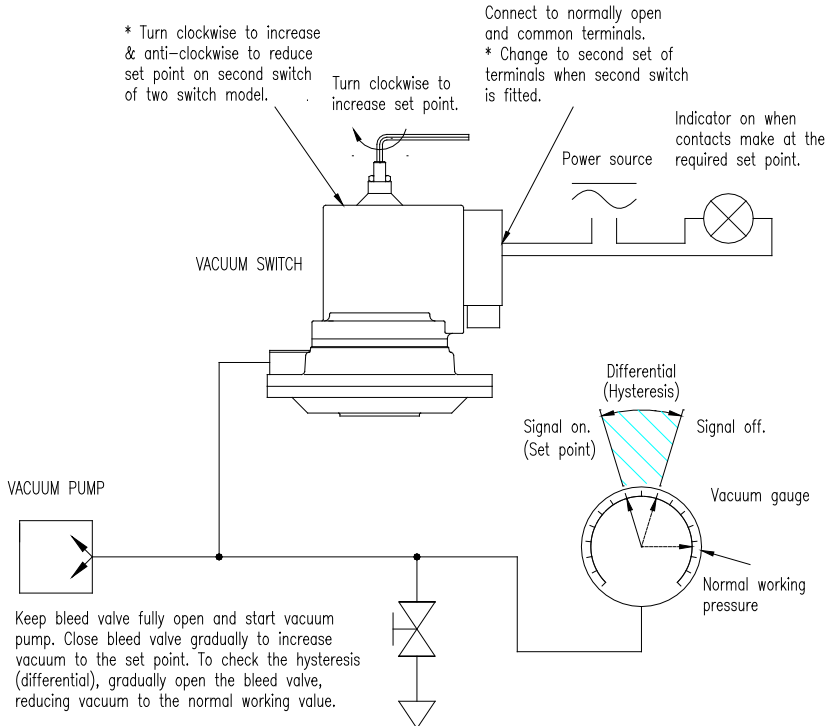
- 1 Do always use an equalising manifold between the HP. and LP. Chambers.
- 2 Do make sure of equal static's in each chamber or if there has to be any difference, that this difference does not exceed the pressure difference range of the Switch.
- 3 Do not pressurise one side at a time and raise or lower pressure on the other side to equalise or reach the pressure difference range required. The Switch will not function in this mode.

SETTING UP FOR A FALLING VACUUM SET POINT



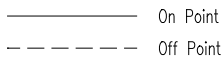
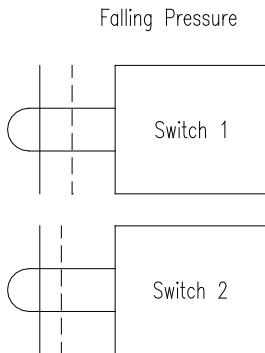
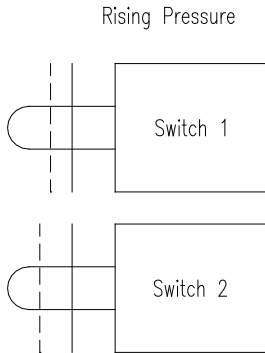
* When two switches (models 2002, 2005 etc.) are fitted, the switch on the right (normal travel), should be the first to be set at the higher of the settings. The second switch should be set in the same way but at the lower vacuum.

SETTING UP FOR A RISING VACUUM SET POINT



* When two switches (models 2002, 2005 etc.) are fitted, the switch on the right (normal travel), should be the first to be set at the higher of the settings. The second switch should be set in the same way but at the lower vacuum.

OPERATION AND SETTING OF TWIN SWITCH



Rising Pressure

The upper diagram shows a twin switch unit set for Rising Pressure. In this example the electrical connections to the switch are made between the common and normally open. The micro-switches are set to operate (switch on) simultaneously as the pressure increases and the plunger is depressed. As the pressure is decreased, switch 1 will switch off before switch 2. This is due to the manufacturing tolerances of the micro-switch and may vary with individual switches.

Falling Pressure

The lower diagram shows a twin switch unit set for Falling Pressure. In this example the electrical connections to the switch are made between the common and normally closed. The micro-switches are set to operate (switch on) simultaneously as the pressure decreases and the plunger is released. As the pressure is increased, switch 2 will switch off before switch 1. Again, this is due to the manufacturing tolerances of the micro-switch and may vary with individual switches.

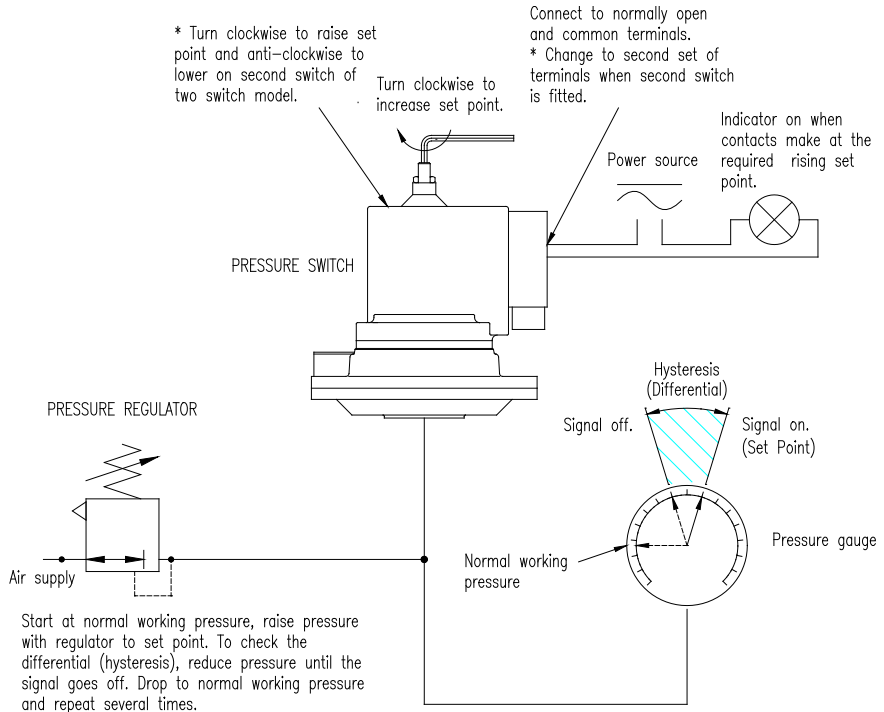
Zeroing twin switch units

Setting of the twin switch units is similar to that of the single switch units but is a slightly more complex procedure, requiring the two micro-switches to be set to operate simultaneously (see diagram and explanation above). In the switch housing, the rear switch is fixed and any

adjustments are made to the front switch in combination with the zero screw [7].

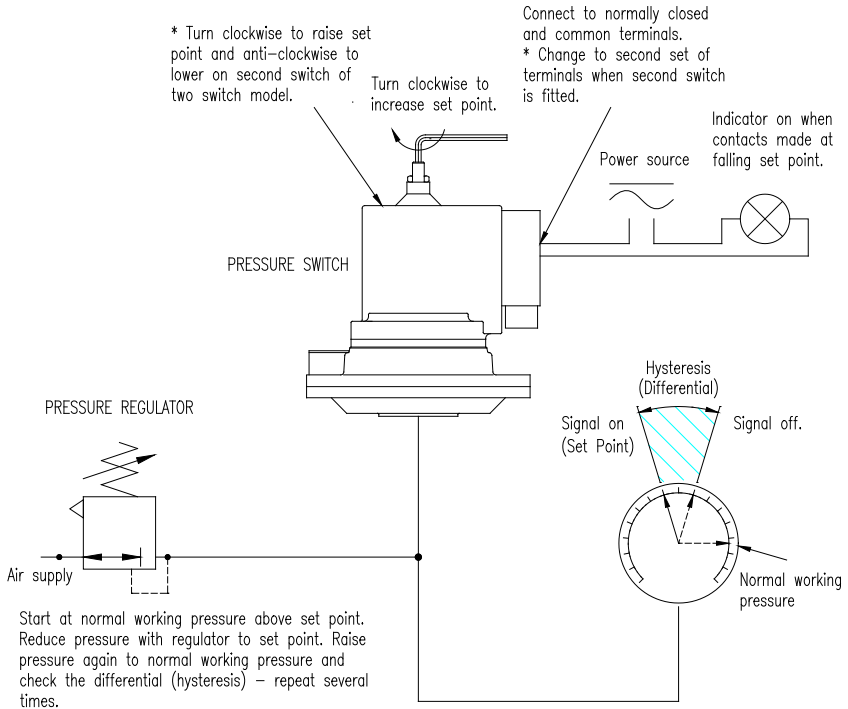
- 1 If necessary, back off the front micro-switch by turning the adjuster screw in a clockwise direction
- 2 Follow the instructions on the previous two pages, to set the zero screw in an approximate position.
- 3 Connect another analogue meter or other suitable type of continuity tester between the common and normally open terminals of the front switch.
- 4 By a combination of adjusting the front micro-switch adjuster screw and the zero screw, it will be possible to set both switches to switch on at the same setting of the zero screw.

SETTING UP FOR A RISING PRESSURE SET POINT



* When two switches (models 2002, 2005 etc.) are fitted, the switch on the right (normal travel), should be the first to be set at the lower of the settings. The second switch should be set in the same way but at the higher pressure.

SETTING UP FOR A FALLING PRESSURE SET POINT



* When two switches (models 2002, 2005 etc.) are fitted, the switch on the right (normal travel), should be the first to be set at the lower of the settings. The second switch should be set in the same way but at the higher pressure.