

Types 1381 & 1581

Type 1481

### Alternative Wetted Parts

(see page 9 for abbreviated chemical compatibility chart)

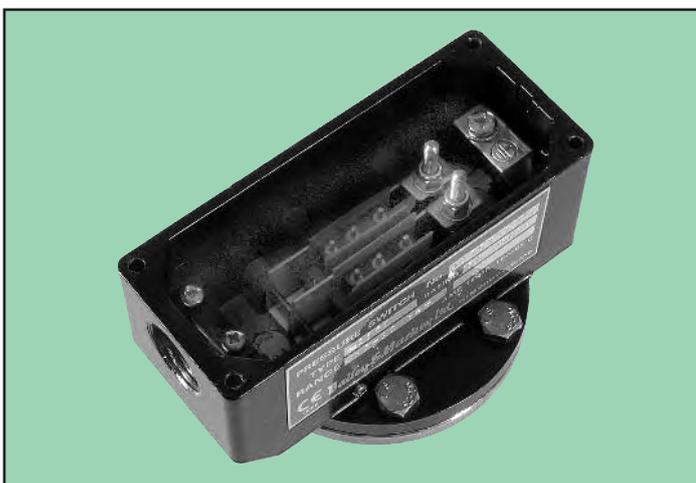
Switches with standard wetted parts above are suitable for applications using air, nitrogen, inert gasses, oils, water & steam.

Alternatives for use with fluids other than these are shown opposite.

Please contact our Technical Department for further information.

MATERIAL	BASE	DIAPHRAGM	PROTECTION DISC
316 Stainless Steel	Yes	No	Yes
17/7 Stainless Steel	No	Yes	No
Carbon Steel	Yes	No	No
UPVC	Yes	No	No
PTFE	Yes	No	Yes
PVDF	Yes	No	No
Silver Plate	No	No	Yes
Pure Silver	No	Yes	Yes
Halar Lined	Yes	No	No
Dykor coated	No	Yes	No
Rubber Lined	Yes	No	No
Chrome Plated	Yes	Yes	No

## Variants To Series 1000 Pressure Switches Type 2381, 2481 & 2581 Twin Circuit Pressure Switches



- Two independently operating Micro-switches.
- External Dimensions are the same as the Standard Switches.
- Reset Differentials are approx. twice those given for standard switches.
- Electrical Rating 5 amp at 250V 50Hz
- For Pressure ranges see page 2

### Applications

Both micro-switches are SPDT and can be used to give two independent opening or closing contacts at different switch points. The two micro-switches cannot be set to give a switch at the same pressure. A DPDT micro-switch must be used for this function see page 10. These switches can be set to give High/High, Low/Low or High/Low set points.

## Type 1391, 1491 & 1591 Single Visual Setting Pressure Switches

## Type 2391, 2491 & 2591 Twin Visual Setting Pressure Switches



- Accurate Visual Setting Scale
- One or Two independently operating Micro-switches depending on type
- External adjustment
- Scale calibrated to  $\pm 2\%$  of range

### Applications

Visual setting pressure switches are particularly suitable for application where frequent alteration of the pressure setting is required.

### Pressure Ranges

TYPE No.	PRESSURE RANGE	HYSTERESIS TYPICAL
1391 & 2391	1 to 0 bar vacuum	Hysteresis as the standard for single visual setting
1391 & 2391	0 to 1 bar	
1391 & 2391	0.2 to 4 bar	
1391 & 2391	0.5 to 10 bar	
1391 & 2391	2 to 30 bar	Hysteresis approx. twice the standard for twin visual setting.
1391 & 2391	2 to 40 bar	
1491 & 2491	5 to 125 mbar	
1491 & 2491	15 to 250 mbar	
1491 & 2491	25 to 400 mbar	See p2.
1591 & 2591	9 to 100 bar	
1591 & 2591	14 to 200 bar	
1591 & 2591	20 to 400 bar	

## Cooling Coil Transmitter

- For temperatures up to 300°C
- For viscous or corrosive fluids

The pressure switch body is isolated from the heat source via a secondary diaphragm and coiled copper tube allowing the heat to be dissipated.

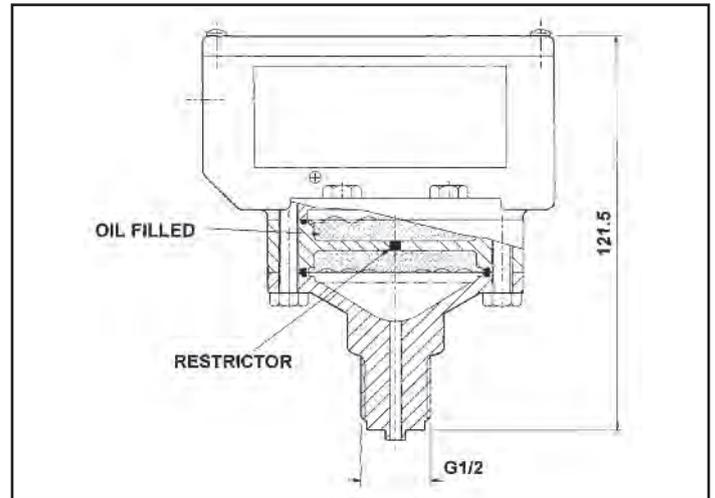
The flange clamping bolts must not be un-tightened as this will break the pressure seal and render the switch in-operative.



## Throttled Transmitter

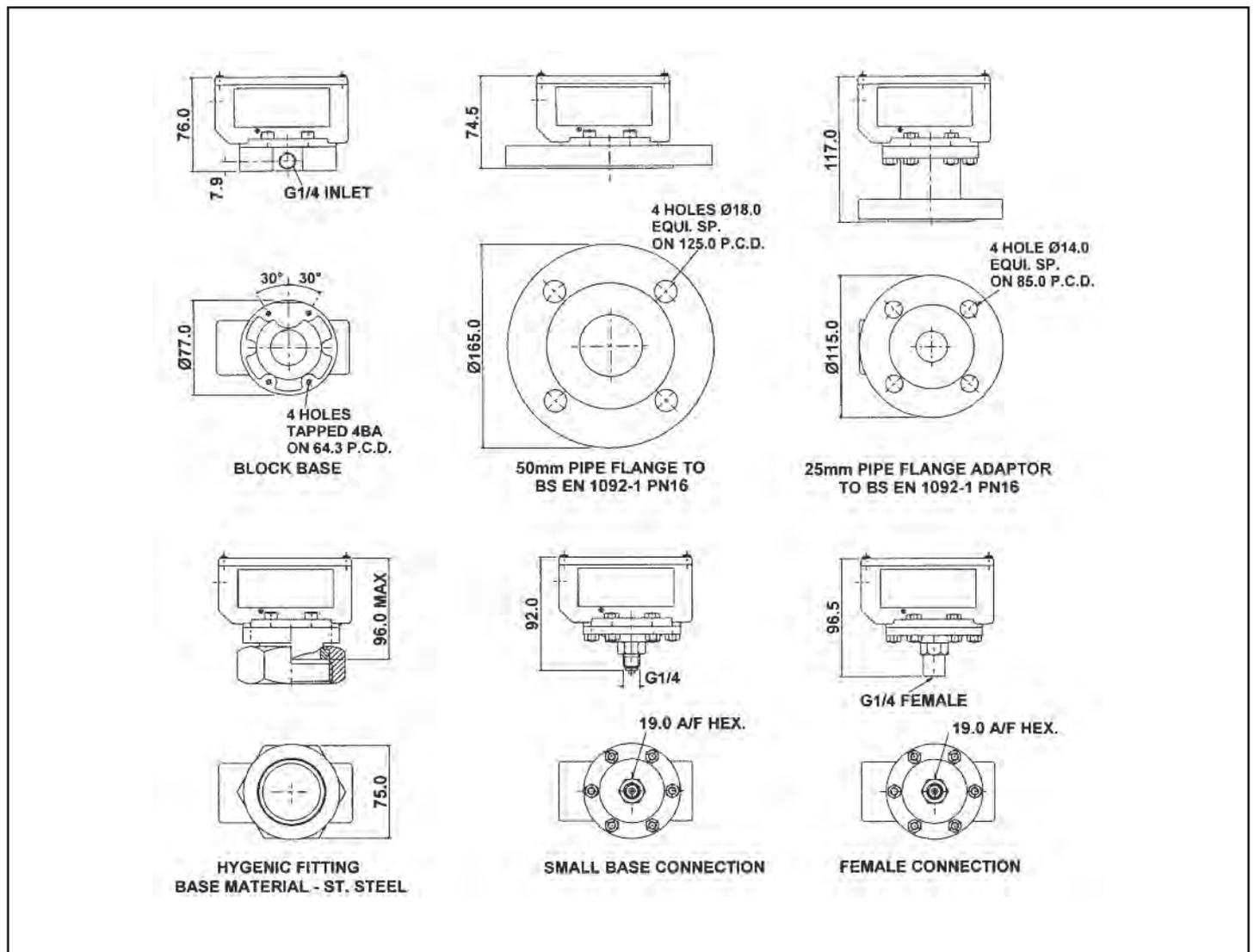
- Stops pressure pulses giving false switching

In many applications where pressure switches are used it is not possible to provide protection against pulsating pressures by means of a snubber involving small orifices. The Bailey & Mackey solution to this problem is integral hydraulic damping, allowing a mean switch point to be achieved irrespective of the severity of the pressure pulses.



## Alternative Base Fittings

Suitable for adding to 1000 Series & 3000 series



To make series 1000 Pressure Switches more suitable for many applications there are several standard options available.

### Option D – Degreased for oxygen use

Pressure switches for use on oxygen have to be free from all traces of oil or grease. Diaphragm pressure switches have the diaphragm, pressure chamber and seal specially cleaned and handled during assembly and are marked with the 'Use no oil' symbol.

### Option G – Gold plated Micro-switches

Micro-switches with Gold plated contacts are used in low power circuits where the contact resistance of standard silver contacts is too high. For electrical loads below 6V at 0.1A dc.

### Option H – Low leak assembly

A modified design of pressure switch is available for use on extinguishers, switchgear, transformers or other sealed pressure systems. Special machining and assembly gives freedom from leaks greater than  $10^{-5}$  Nccs/sec.

### Option M – For mining applications

No aluminium parts used.

### Option P – With plug & socket

Fitted with 4 – pin plug and socket for SPDT micro-switch version.  
Fitted with 7 – pin plug and socket for twin SPDT or DPDT micro-switch versions.

### Option Q – Overload Protection

Pressures above the adjustable range shown in the table should not be applied to the switches. Overload will strain the diaphragm, either causing distortion that will alter the set point of the pressure switch or reduce the diaphragm life through fatigue failure. Normally, the pressure range should be chosen to cover the highest pressures likely to develop in the system; Series 1000 switches can be constructed to accept higher pressures than the adjustable range by fully supporting the diaphragm above its normal operating deflection. Maximum temperature is 60°C.

MAXIMUM ADJUSTABLE RANGE	OVERLOAD PRESSURE ALT. 1	OVERLOAD PRESSURE ALT. 2
400 mbar	7 bar	–
1 bar	28 bar	–
2 bar to 42 bar	70 bar	200 bar

### Option R & RF – Manual Reset

On some applications, for safety reasons, a manual reset is required e.g. after changing a filter element or for alarm purposes.

R = Manual Reset above the set point

RF = Manual Reset Below the set point.

### Option V – Adjustable Hysteresis

This option enables the hysteresis to be increased and can be varied between approximately 5% and 95% of the adjustable pressure range.

### Option X

In some applications a higher electrical rating is required this option is fitted with a micro-switch for 15amps at 250V 50Hz.