

This series of pressure switches can be used for all applications where an electrical circuit is required to close or open at a required pressure.

The robustness of this series of pressure switches enables all applications in all industries to be satisfied.

- **Robust & Reliable**
- **Diaphragm Operated <42 bar**
- **Piston Operated >42 bar**
- **Proven Performance**
- **Wetted parts for use with all Fluids**
- **Fully Adjustable**
- **Easily Customised**
- **Enclosure Rating IP65**
- **CE marked for all Directives that apply**
- **LPCB Approved**
- **UL 508 Certified**

### Pressure Ranges

TYPE No.	PRESSURE RANGE	HYSTERESIS TYPICAL
1381	-1 to +1 bar	0.04 bar
1381	0.2 to 4 bar	0.07 bar
1381	0.5 to 11 bar	0.3 bar
1381	0.7 to 14 bar	0.4 bar
1381	2 to 28 bar	0.6 bar
1381	2 to 42 bar	0.8 bar
1481	5 to 125 mbar	2.5 mbar
1481	15 to 250 mbar	4 mbar
1481	25 to 400 mbar	10 mbar
1581	9 to 100 bar	10 bar*
1581	14 to 200 bar	18 bar*
1581	20 to 400 bar	25 bar*

\*Typical for mid-range set point

### Maximum Pressure

To ensure long service life select the pressure range as follows:

Dynamic pressure applications  $P_{max} = 75\%$  of Range

Static pressure applications  $P_{max} = 100\%$  of Range

Maximum pressure that can be applied is 125% of pressure range

(see option Q page 8 for higher pressures.)

### Electrical Ratings

10 amp at 250V 50 Hz Inductive load

1 amp at 30V dc Inductive load

For other voltages and currents please consult our technical department.

**Setting Accuracy** .....±2%

**Temperature Range** .....-10 to +85°C  
(Process fluid must not solidify)

**Temperature Coefficient** .....0.05%  
of range per °c from 20°C



### Installation

These pressure switches can be mounted directly on the connecting thread. Sealing grooves are machined onto the end face of parallel threads for use with sealing washers. A Mounting Bracket is available if required.

### Vacuum Setting

At ambient pressure the switches will be in the operated condition consequently the wiring should be reversed i.e. NO becomes NC.

### Connecting Threads

All connecting threads used in industry are available including British, American and metric. Please state the connection thread when ordering.

### Flanges & Hygienic Fittings

(see page 5 for alternative connections)

Flanged fittings are available and all types of Hygienic fittings can be supplied assembled directly onto the pressure switch.

If flush diaphragms are required please consult our Technical Department

### Materials of Construction Types 1381 & 1481

Diaphragm.....Beryllium Copper

Seal .....Glass filled PTFE <11 bar  
Nitrile rubber >11 bar

Base .....Brass

Housing .....Aluminium / Zinc diecast

Cover.....Glass Filled Nylon with Nitrile seal

### Material of Construction Type 1581

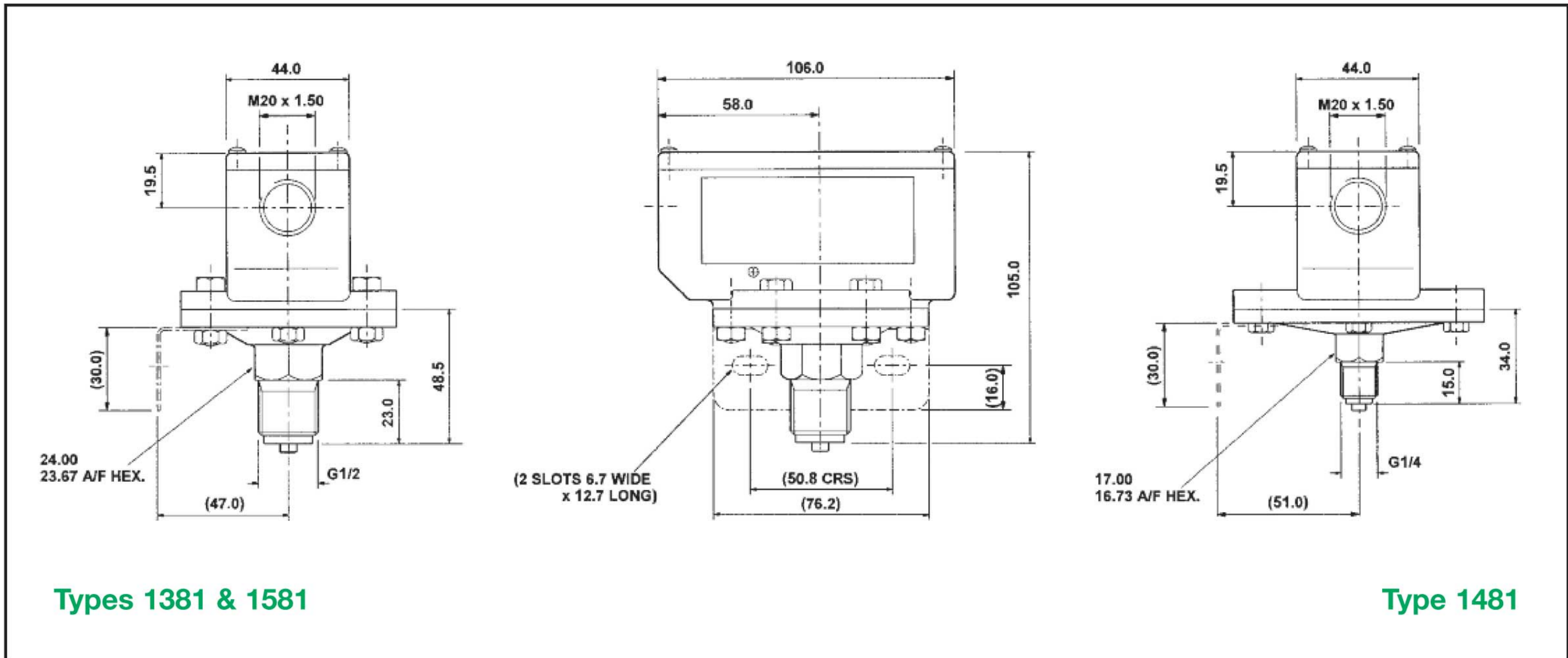
Piston .....Stainless Steel

Seal .....Nitrile rubber with PTFE  
anti-extrusion rings

Base .....Stainless Steel

Housing .....Aluminium / Zinc diecast

Cover.....Glass Filled Nylon with Nitrile seal



### Alternative Wetted Parts

(see page 9 for abbreviated chemical compatibility chart)

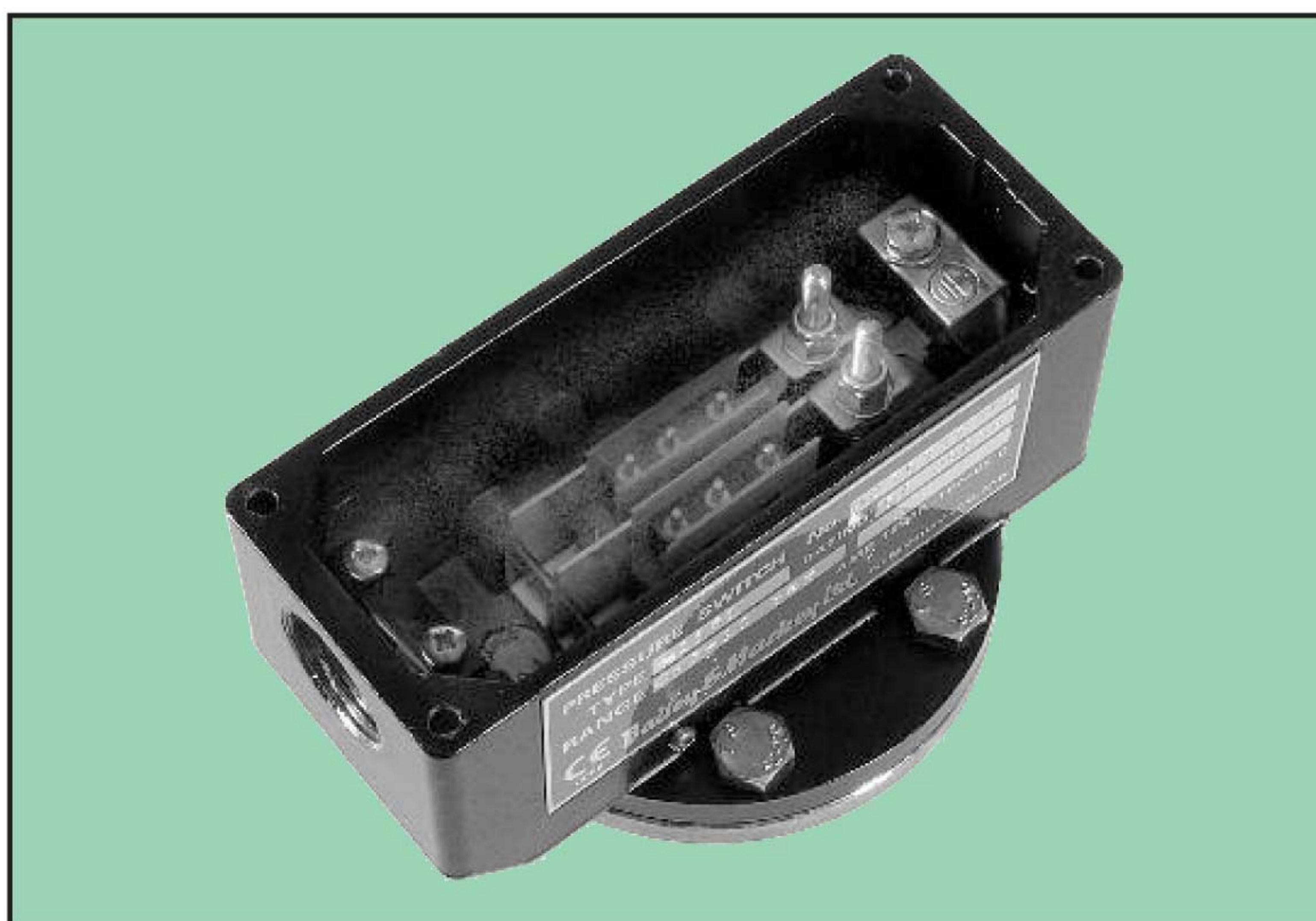
Switches with standard wetted parts above are suitable for applications using air, nitrogen, inert gasses, oils, water & steam.

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.

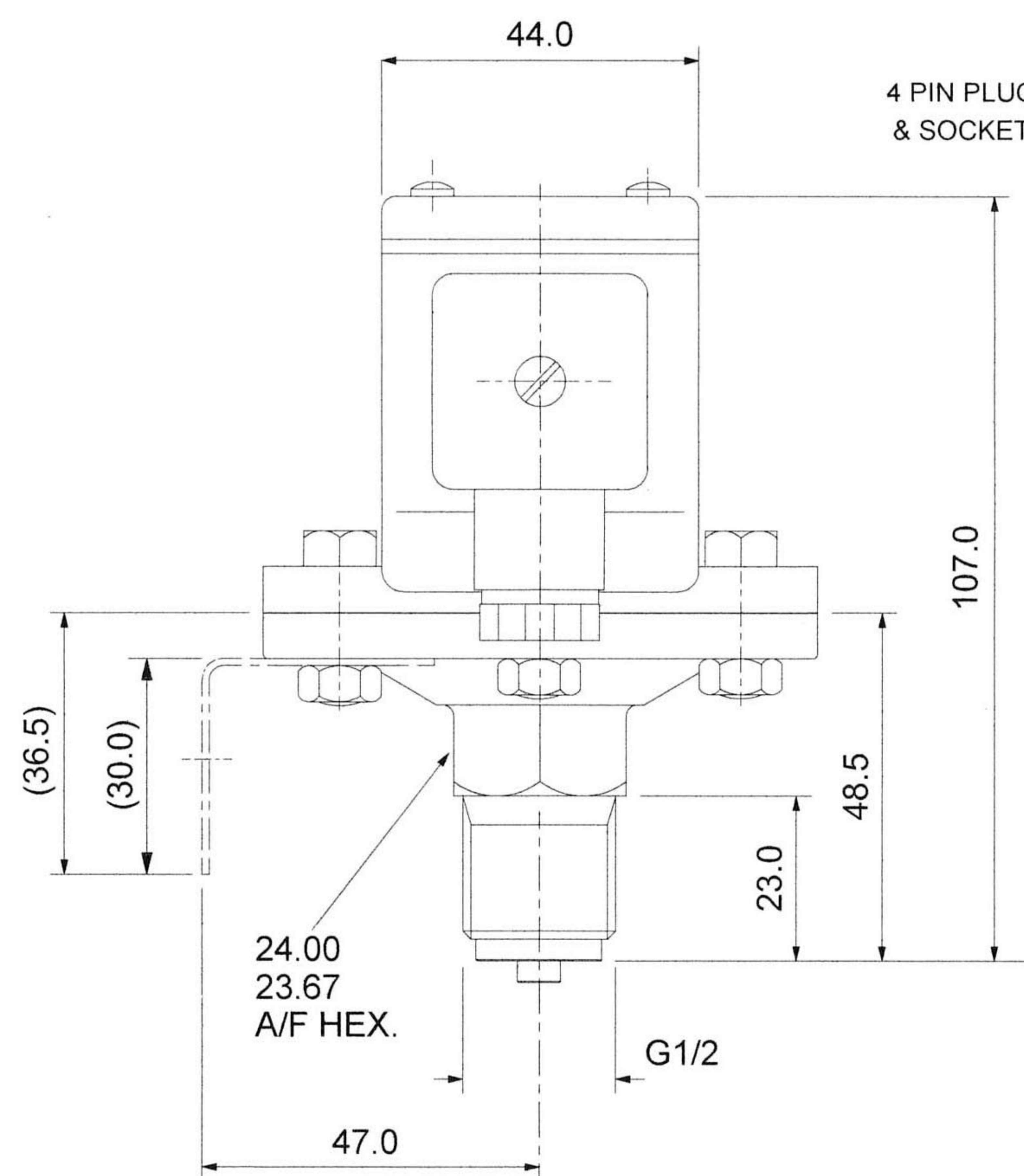
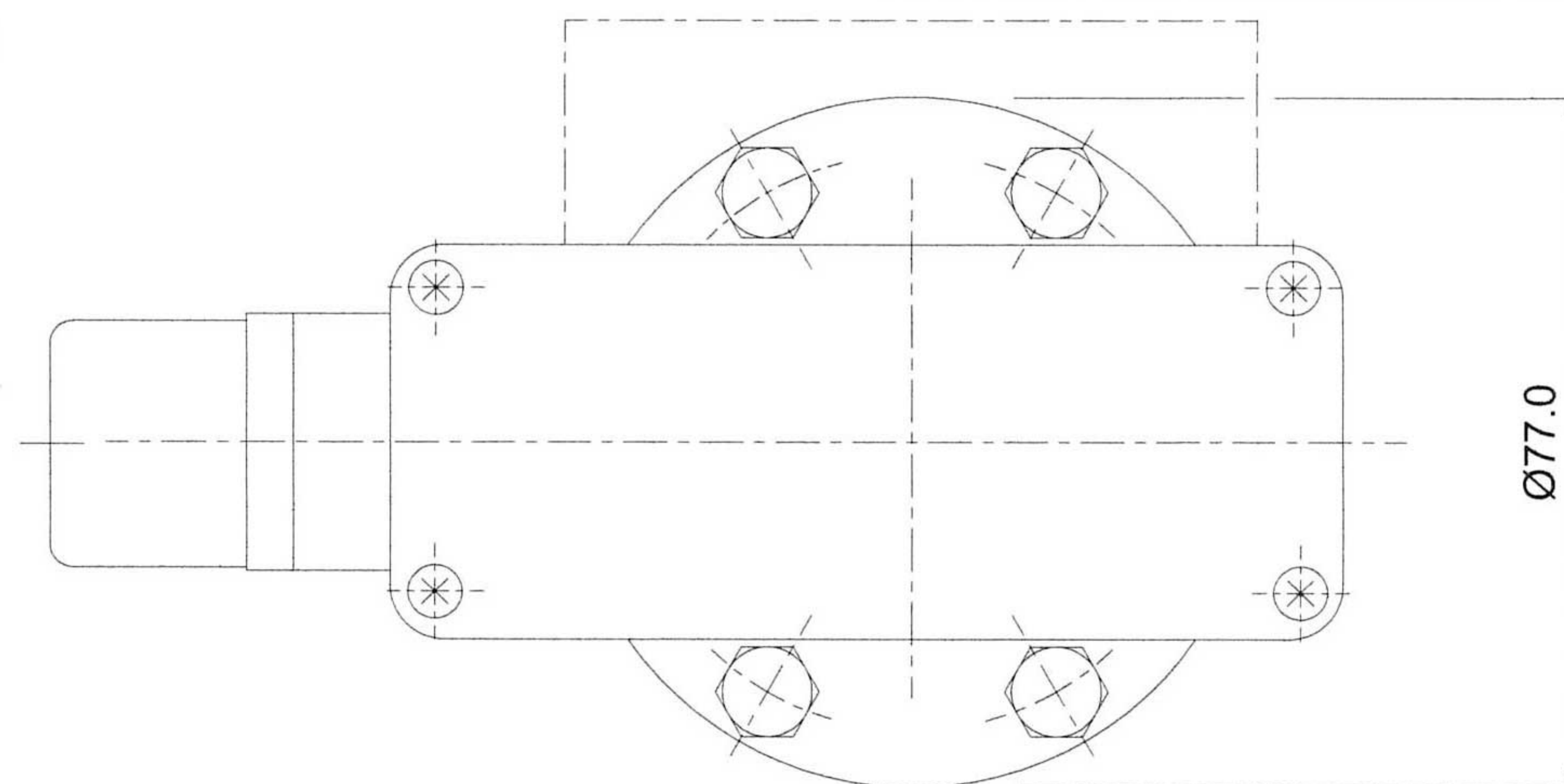
These switches can be set to give High/High, Low/Low or High/Low set points.

1381P/3

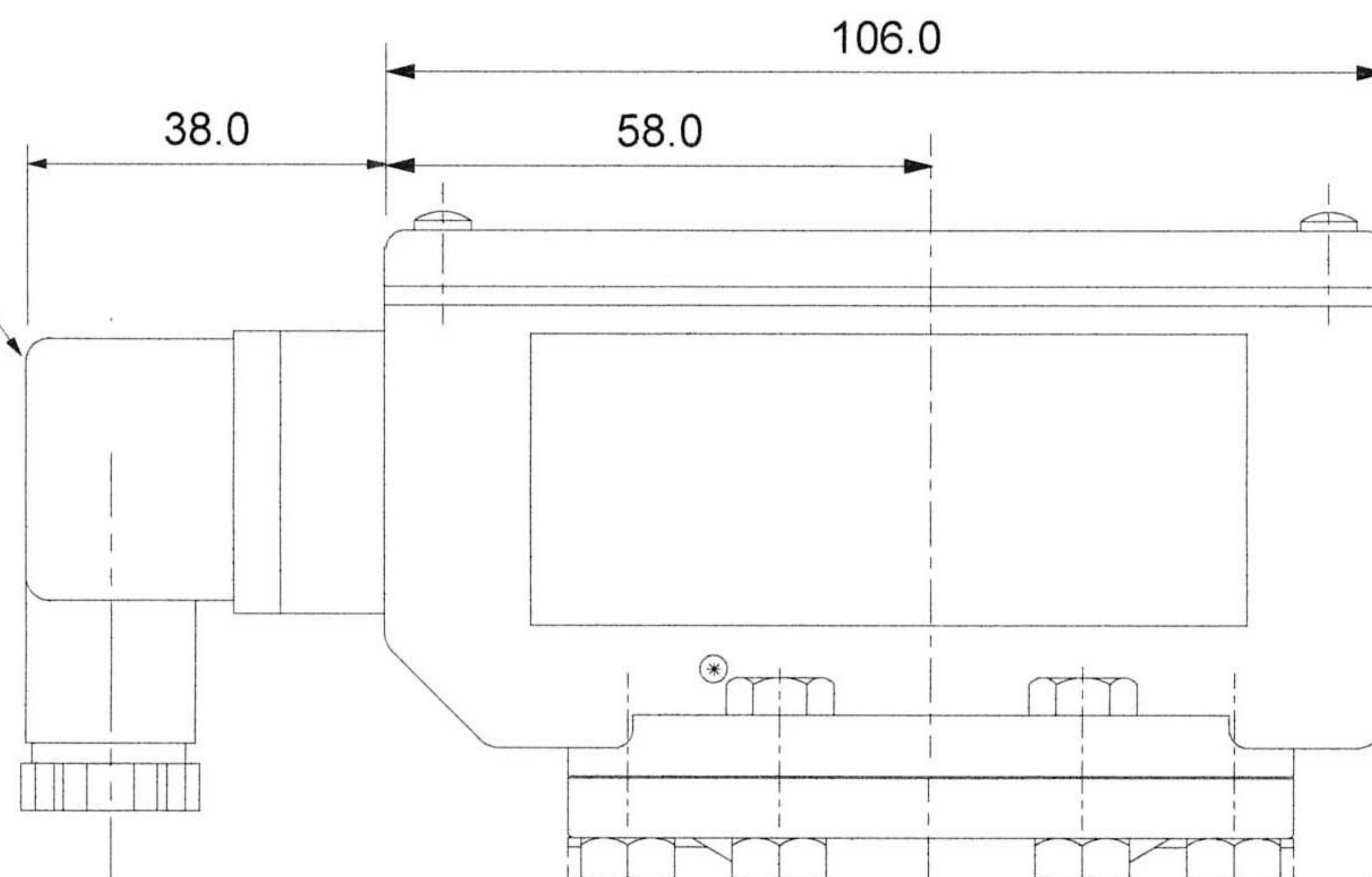
THIRD ANGLE PROJECTION

TERMINALS

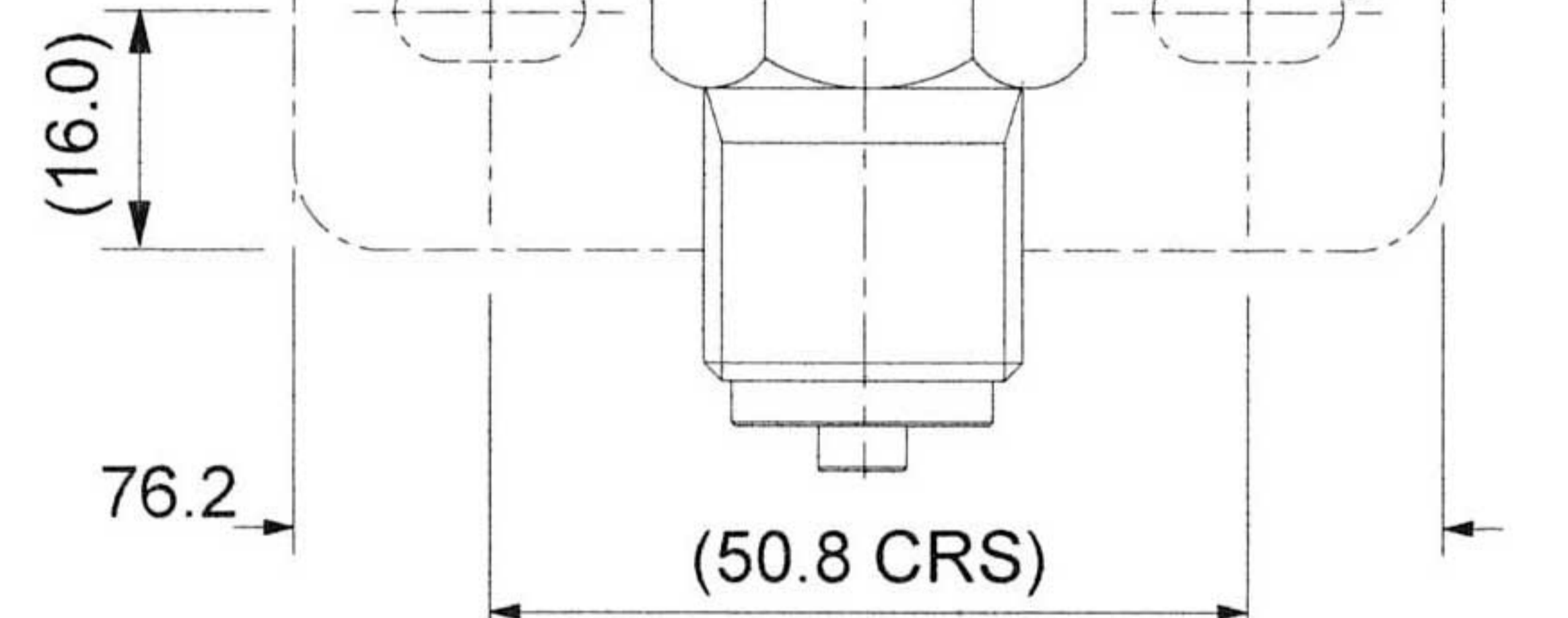
PLUG	
1	COM.
2	N/C
3	N/O
	EARTH



4 PIN PLUG & SOCKET



(2 SLOTS 6.7 WIDE x 12.7 LONG)



WALL MOUNTING BRACKET ONLY IF REQUIRED.

DIMENSIONS IN MILLIMETRES				
TOLERANCES				
0.0 ± 0.5mm				
0.00 ± 0.1mm				
UNLESS OTHERWISE STATED				PART Nos.
MATL.	FINISH	No. PER SET	DRN. D.P.	CHKD. T.B.
—	—	—	—	—
TITLE			SCALE	DATE
1381P TYPE SWITCH			1:1 (A3)	22.3.04
DRG No.			1381P/3	
BAILEY & MACKAY LTD.			ENGLAND	
BIRMINGHAM			REV.	

No.	DATE	AUTY.	ALTERATIONS.



**bafsa**

