

LOW PRESSURE

ANC4B 316 stainless steel or black anodised aluminium switchcase.

IP66/IP67 certified housing.

Low switching differential.


Calibrated adjustment scale.

Pressure Settings from 10 mBar to 500 mBar.

Single or dual microswitch option. Adjustable deadband option.

Wetted parts NACE MR-01-75 compliant.

Manual reset pushbutton option.

ATEX Certified Option
 CE  IIIG EEx ia IIC
 T6 Tamb -50 to +78°C
 T5 Tamb -50 to +93°C
 T4 Tamb -50 to +128°C

P1100 GUARDIAN INDUSTRIAL & ATEX EExia CERTIFIED PRESSURE SWITCH



The range incorporates a Viton diaphragm to cover pressure applications for settings between 10 and 500 mBar (0.145 to 7.25 PSI). Dual microswitch and adjustable deadband options are available as table on page 13. For specification and introduction to the Guardian switch range refer to pages 10 & 11.

SPECIFICATION

Wetted parts : 316 St. steel

Diaphragm : Viton

Pressure Limitations : Please refer to table below. All switches can be subjected to a full vacuum.

Process connections :

1/4" or 1/2" BSP.P or NPT female.

Drawing of 50 - 500 mBar Fig. 3 page 23.

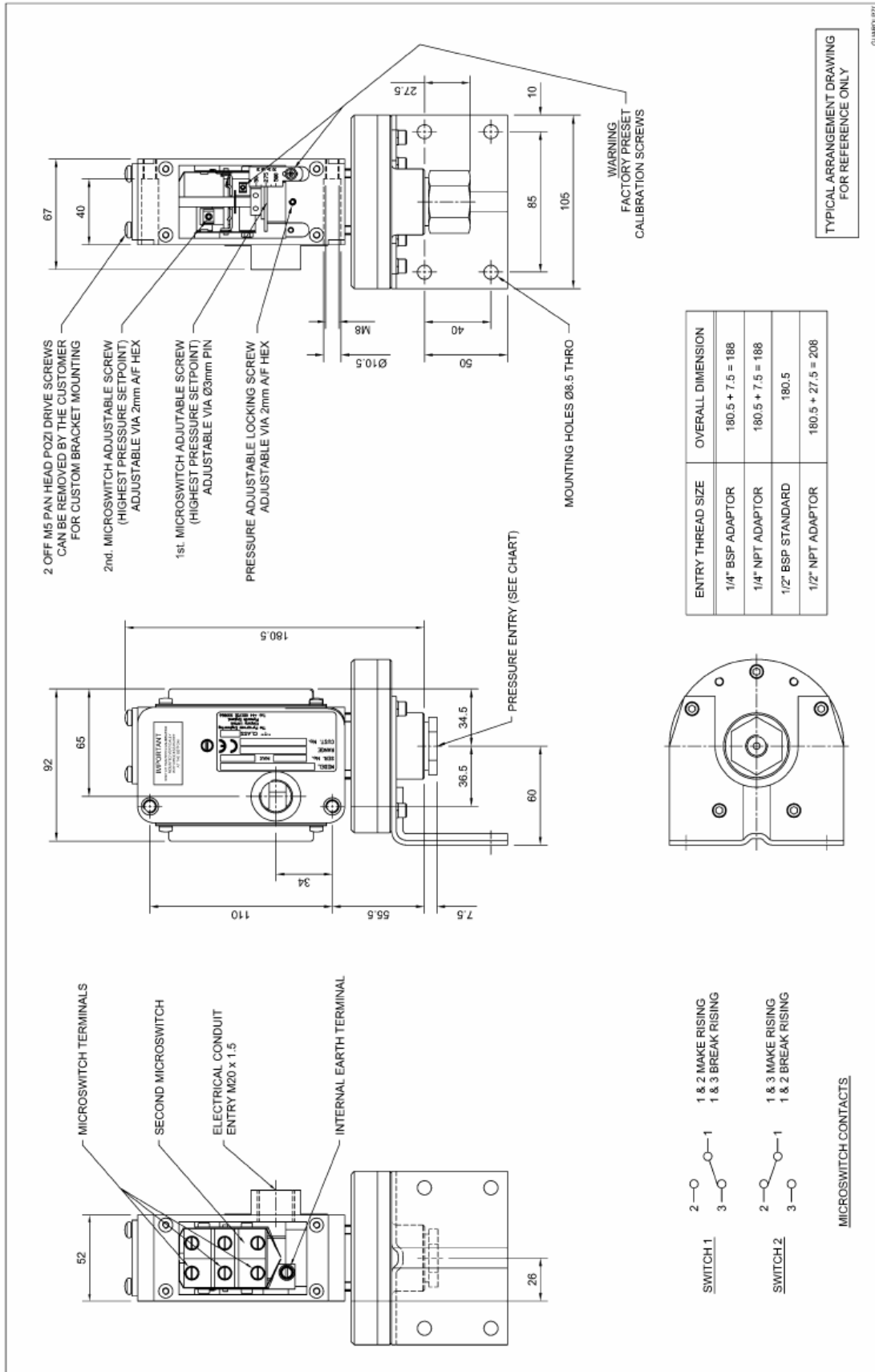
Drawing of 10 - 130 mBar Fig. 4 page 24.

ADJUSTMENT RANGE (MBAR)	MAX WORKING PRESS. (BAR)	DEADBAND (MBAR) (LOW DIFF MICRO)	SETTING SWITCH 2 (FROM SWITCH 1) MIN (MBAR) MAX	EXAMPLE SETTING 1 (MBAR)	ADJUSTMENT SETTING 2 (MBAR)
50 - 500	5.5	<13	70 240	100	170 TO 240
10 - 130	1.4	<4	15 85	60	75 TO 145

MICROSWITCH : 01 = SINGLE - LOW DIFF 02 = DUAL - LOW DIFF 05 = SINGLE - LOW DIFF FOR ATEX EExia 06 = DUAL - LOW DIFF FOR ATEX OTHER OPTIONS REFER TO SALES.	PROCESS CONNECTION 71 = 1/4" BSP.P FEMALE 72 = 1/4" NPT FEMALE 10 = 1/2" BSP.P FEMALE 74 = 1/2" NPT FEMALE	THE FITTING OF MEDIUM DIFFERENTIAL OR DUAL MICROSWITCHES MAY INCREASE THE DEADBAND BY A FACTOR OF TWO.
50 - 500	P110_B5-N07SS5X	FIG. 4 PAGE 23
10 - 130	P110_B5-N14SS5X	FIG. 5 PAGE 24
RANGE	PART NUMBER <small>PREFX WITH "S" FOR STAINLESS STEEL SWITCHCASE</small>	DRAWING

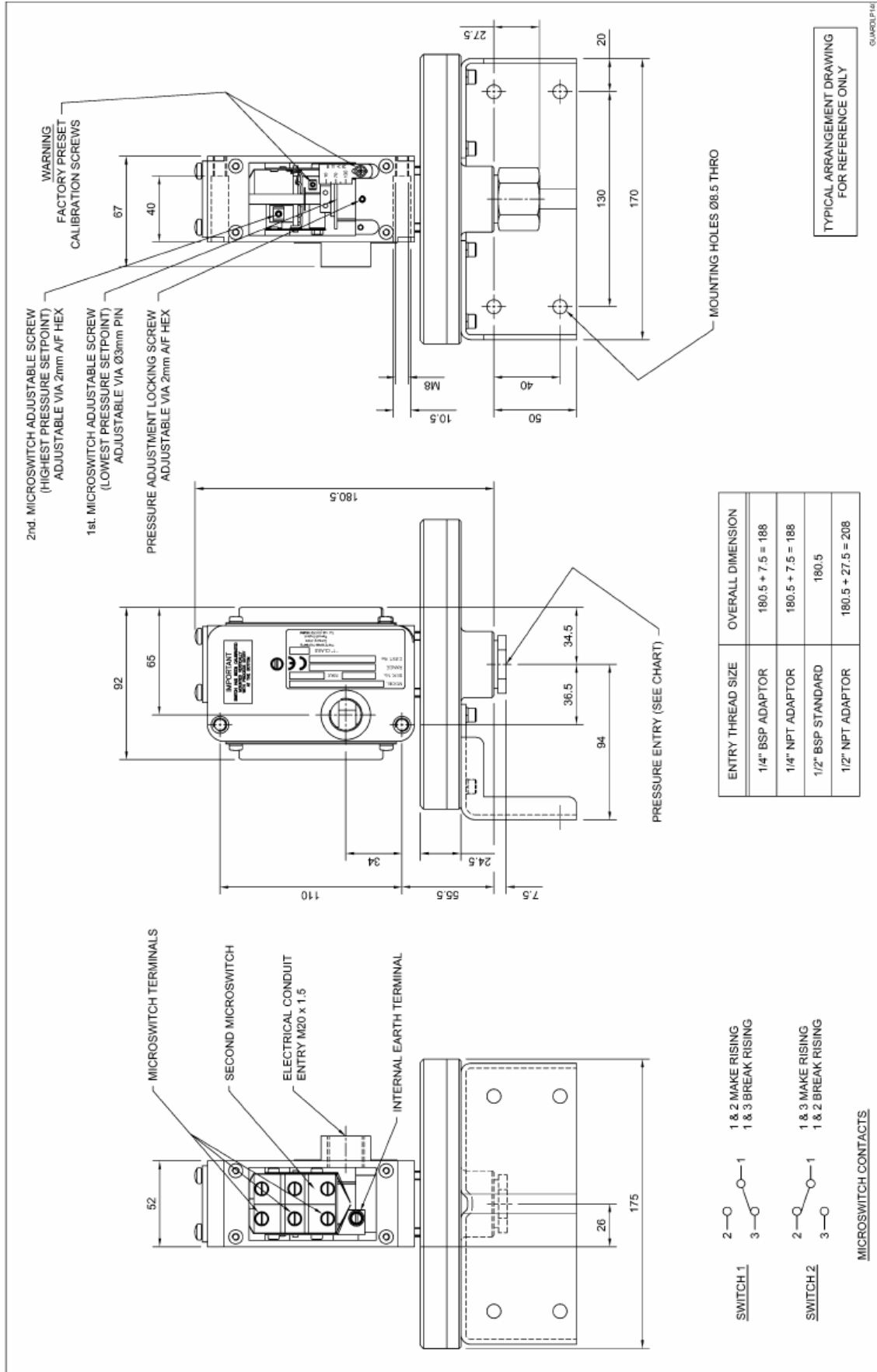
Manufacturer catalogue page 20

FIG. 4 TYPE P1100 - 70 GUARDIAN LOW PRESSURE SWITCH



Manufacturer catalogue page 23

FIG. 5 TYPE P1100 - 140 GUARDIAN LOW PRESSURE SWITCH



GUARDIAN INDUSTRIAL & ATEX EExia SWITCHES

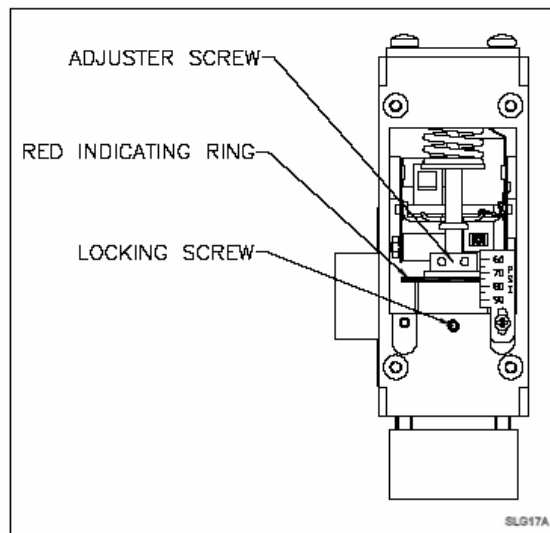
INTRODUCTION

The Guardian **pressure, differential pressure, temperature, level and flow** switches are a part of our extensive range of specialist process sensors. They utilise the expertise gained from over 55 years experience of designing and manufacturing control devices for industrial, marine and hazardous area applications.

These switches are constructed with either a robust aluminium or stainless steel enclosure. The aluminium casting is black anodised and supplied with 316 stainless steel covers. The stainless steel case is a natural finish. Covers are gasketed and sealed to achieve an environmental seal to IP66 & IP67 standards. The internals utilise a unique mechanism designed by the engineers at PYROPRESS to produce a wide range, low switching differential and excellent repeatability. This combined with a variety of microswitches, mountings and sensor options has produced a switch range suitable for all weatherproof and intrinsically safe applications.

CALIBRATION

The design features a simple form of calibration adjustment against a scale plate. This allows users to either order units with a specific setting, or stock a mid range setting and then calibrate to suit the application. Calibration is performed on the opposite side of the switch to the electrical connections, and can be set safely with the switch supply live. On removal of the adjustment cover a small grub screw can be loosened allowing the adjusting ring to be turned with a small Tommy bar or Allen key. The setting is read from the centre of the red indicating ring against the calibrated scale plate.



Calibration procedures for dual microswitches and adjustable switching differential switches are detailed on the operating and maintenance instructions supplied with each switch.

Manufacturer catalogue page 10

TECHNICAL SPECIFICATION

Switchcase and covers : ANC4B 316 stainless steel switchcase with 316 stainless steel covers or black anodised aluminium switchcase and 316 stainless steel covers. Optional 304 stainless steel mounting bracket.

Microswitch : SPCO/SPDT. Options include single or twin switch assemblies for simultaneous or separately adjustable set points, adjustable switching differential, manual reset and noble metal contacts for use on intrinsically safe circuits.

Microswitch rating

Low differential microswitch : 5 Amps @ 250 V.AC/1 Amp @ 24 V.DC
Medium, high differential : 10 Amps @ 250 V.AC
and manual reset : 3 Amps @ 24 V.DC
Special (magnetic blow-out) : 10 Amps @ 250V.AC or DC

Electrical Connections : Screwed terminals direct onto microswitch, suitable for cable up to 2.5 mm². (Manual reset microswitch is supplied with 6BA solder tags).

Electrical Conduit Entry : M20 x 1.5 straight entry. Adaptors are available.

Environmental Protection : Switches have been tested and certified by an external test house to IP66 in accordance with BS EN 60529 : 1992. In addition further internal tests confirm that the switchcase meets the requirements of IP67.

Vibration and shock parameters : Switches were subjected to Lloyds Register Type Approval System Test Specification No.1 Clause 130 Vibration Test 142 and shock tested to BS EN 60068-2-27 : 1987.

Temperature Limitations: Pressure, Vacuum and Differential Pressure.

Ambient : -10 to +80 Deg.C (standard). -55°C to +130°C (special).


Process : Diaphragm actuated -50 to +90°C (Nitrile) or -20 to +150°C (Viton).
Piston actuated -40 to +120°C (Nitrile) or -20 to +150°C (Viton) or -60 to +150°C (PTFE).

Storage : -60 to +80°C.

(For temperature, level and flow switches please refer to specific pages).

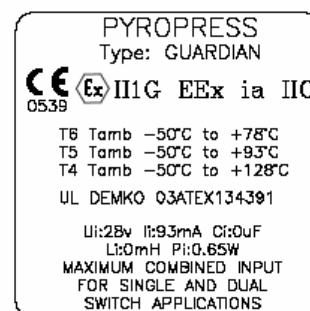
Certification: All switches are CE certified and marked in accordance with the following EU directives.

Industrial : 73/23/EEC (Low Voltage Directive).

EEExia : 94/9/EEC ATEX coded CE  II1G EEExia IIC

CAT 1 (Zone 0) areas.

Accuracy: 1% @ 20°C (setting accuracy : 2%).



Manufacturer catalogue page 11