FLUSH DIAPHRAGM

ANC4B 316 stainless steel or black anodised aluminium switchcase.

IP66/IP67 certified housing.

Low switching differential.

Calibrated adjustment scale.

Pressure Settings from 100 mBar to 34 Bar.

Single or dual microswitch option. Adjustable deadband option.

Wetted parts NACE MR-01-75 compliant.

Manual reset pushbutton option.

ATEX Certified Option
CE Ⓔx II1G 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 flush diaphragm for settings of between 0.1 and 34 bar (2 to 500 PSI). Dual microswitch and adjustable deadband options are available as detailed on the opposite page. For specification and introduction to the Guardian switch range refer to pages 10 & 11.

FLUSH DIAPHRAGM FLANGE MOUNTED

The fitting of Viton diaphragm or dual microswitches may increase the deadband by a factor of two.

ADJUSTMENT RANGE (BAR)	ADJUSTMENT RANGE (PSI)	MAX WORKING PRESS. (BAR)	SWITCH DIFF (LOW DIFF) (BAR)	SWITCH DIFF (MED DIFF) (BAR)	DIAPHRAGM CODE	SPRING CODE
5.0 - 7.0	75 - 100	40	<0.35	<0.7	32	B
3.0 - 5.0	45 - 75	40	<0.25	<0.5	32	G
2.0 - 4.0	30 - 60	40	<0.20	<0.40	32	R
1.0 - 3.0	15 - 45	40	<0.15	<0.30	32	0
0.1 - 4.1	2 - 16	40	<0.4	N/A	32	2

Manufacturer catalogue page 14

PART NUMBER BREAKDOWN

MICROSWITCH OPTIONS
01 = SINGLE SWITCH (LOW DIFF)
02 = DUAL SWITCHES (LOW DIFF)
03 = SINGLE SWITCH (MEDIUM DIFF) - **STANDARD**
04 = DUAL SWITCHES (MEDIUM DIFF)
05 = SINGLE (LOW DIFF) USE FOR EExia USE
06 = DUAL (LOW DIFF) USE FOR EExia USE
0C = MANUAL (RESET FALLING)
0D = MANUAL (RESET RISING)
0E = DUAL HIGH CURRENT DC SWITCHING
0K = DPDT MICROSWITCH
0M = SINGLE HIGH CURRENT DC SWITCHING

ADJUSTABLE DEADBAND
07 = SINGLE SWITCH - STANDARD
08 = SINGLE SWITCH - USE FOR EExia
09 = MANUAL AND AUTO (RESET FALLING)
0A = MANUAL AND AUTO (RESET RISING)

PLEASE REFER TO MICROSWITCH RATINGS ON PAGE 11.

SPRING CODE SEE RANGE SHEET

DIAPHRAGM CODE SEE RANGE SHEET

F = FLUSH DIAPHRAGM FLANGE MOUNTED

FLANGE MATERIAL
S = 316 STAINLESS

S P 1 1 0 3 / V 0 1 0 N 1 5 / F S 2 X

SWITCHCASE
S = STAINLESS STEEL

IF ALUMINIUM CASE REQUIRED LEAVE BLANK

DIAPHRAGM
V = VITON
N = NITRILE

10 = STD

N = STANDARD ADJUSTER
A = SECONDARY ADJUSTER (FOR DUAL SETTINGS AND ADJ. DEADBAND)
F = FIXED ADJUSTER - REFER TO SALES

BS4504 FLANGE 2"
2 = PN40 FLANGE
0 = SPECIAL - SEE TEXT 50, 65, 80 & 100MM SIZES AVAILABLE

SPECIFICATION

Wetted parts : 316 St. steel
Diaphragm : Viton
Pressure Limitations : Please refer to range sheets. All switches can be subjected to a full vacuum.

Process connections : 2" BS4504 PN40 flange. Other sizes available.

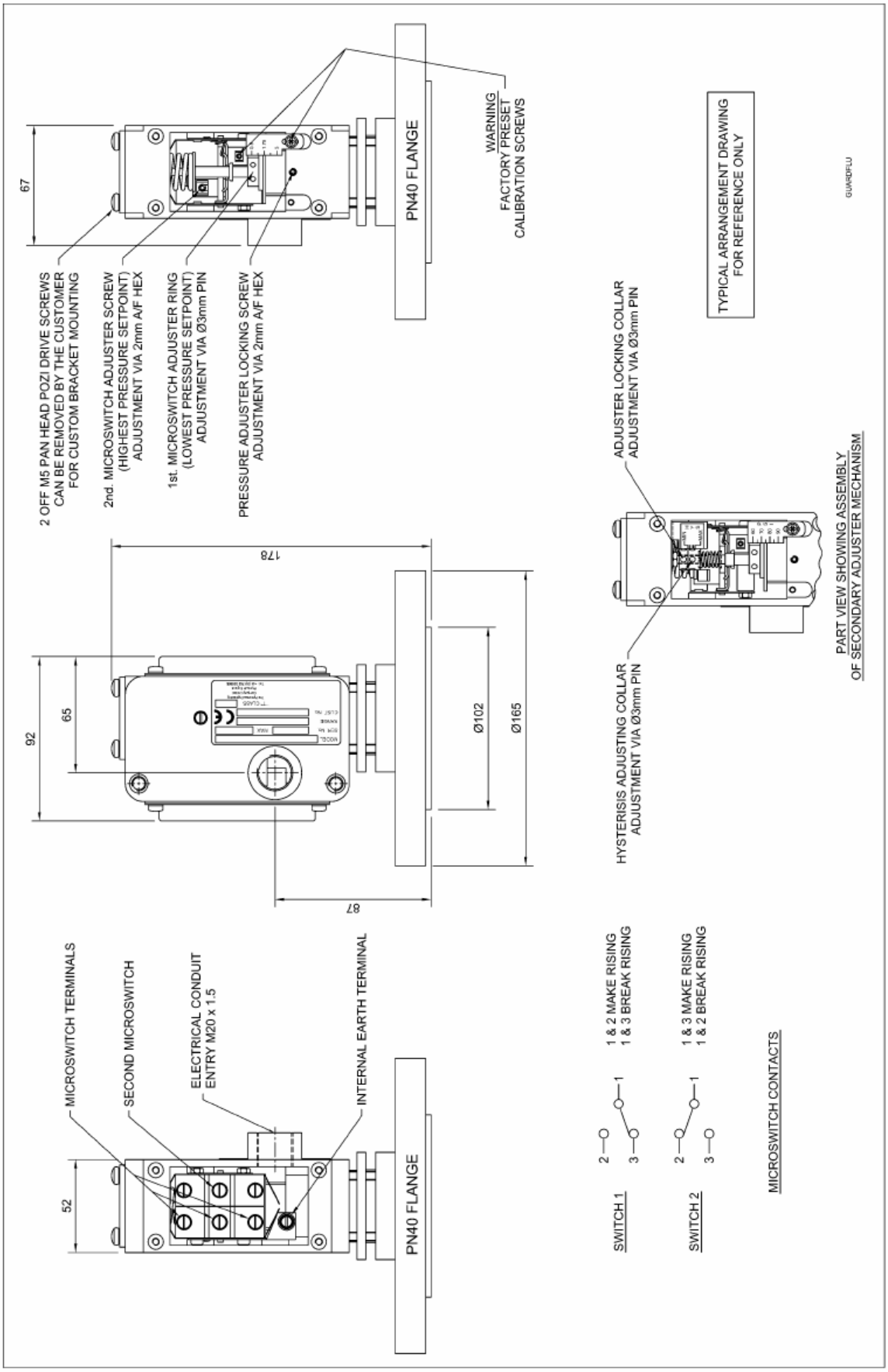
For detailed drawing showing options refer to Fig.2 page 17

FLUSH DIAPHRAGM FLANGE MOUNTED

The fitting of Viton diaphragm or dual microswitches may increase the deadband by a factor of two.

ADJUSTMENT RANGE (BAR)	ADJUSTMENT RANGE (PSI)	MAX WORKING PRESS. (BAR)	SWITCH DIFF (LOW DIFF) (BAR)	SWITCH DIFF (MED DIFF) (BAR)	DIAPHRAGM CODE	SPRING CODE
24 - 34	350 - 500	40	<1.7	<3.4	15	B
14 - 24	200 - 350	40	<1.2	<2.4	15	G
8.0 - 13	120 - 260	40	<0.9	<1.8	15	R
3.0 - 13	45 - 185	40	0 1	<1.3	15	0
0.5 - 6.0	10 - 90	40	0 05 0	<0.6	15	1

Manufacturer catalogue page 15



Manufacturer catalogue page 17

GUARDIAN INDUSTRIAL & ATEX EExia SWITCHES

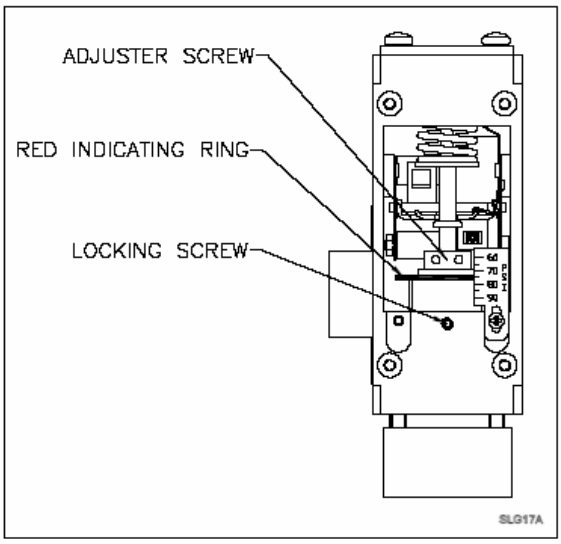
INTRODUCTION

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 gasketted 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.

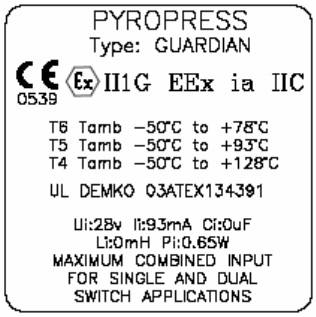
Environmental Protection : Switches have been tested and certified by an external test house to IP66 in accordance with BS EN 60529 : 1992. In addition further internal tests confirm that the switchcase meets the requirements of IP67.

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).
EExia : 94/9/EEC ATEX coded CE Ⓔx II1G EExia IIC CAT 1 (Zone 0) areas.

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



Manufacturer catalogue page 11