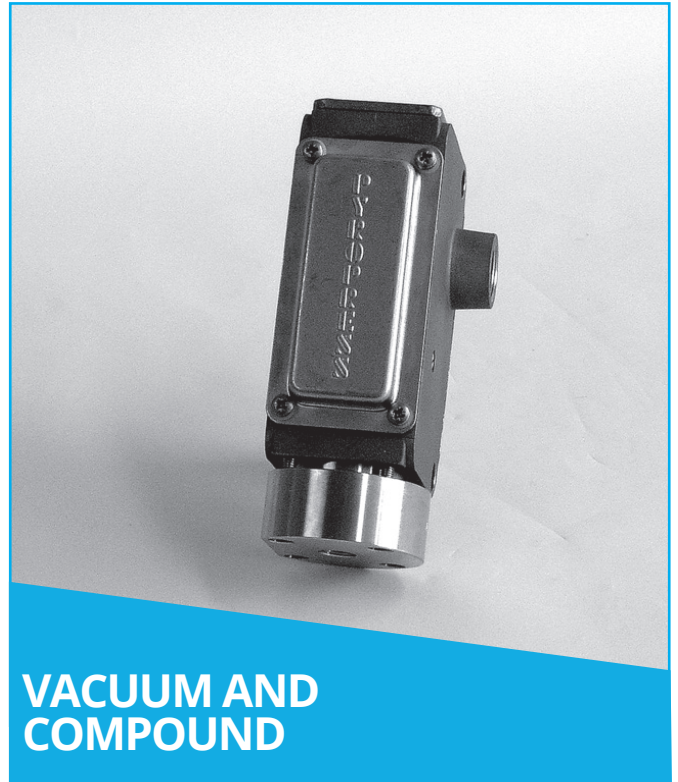


GUARDIAN VACUUM/ COMPOUND

V1100 GUARDIAN INDUSTRIAL VACUUM SWITCH

The range is suitable for applications between 10 mbar and 950 mbar of vacuum. Dual microswitch and adjustable deadband options are available. A compound version is also available adjustable between -1 and +2 bar, though it cannot be set within 150 mbar either side of the zero point or have an adjustable deadband.



FEATURES

- ✓ 316 stainless steel or black anodised aluminium switchcase.
- ✓ IP66/IP67 certified housing.
- ✓ SIL2 - IEC61508 proven reliability.
- ✓ Internal adjustment scale
- ✓ Vacuum Settings from 10 to 950 mbar.
- ✓ Single or dual microswitch option.
- ✓ Wetted parts NACE MR-01-75 compliant.
- ✓ Manual reset pushbutton option.

SPECIFICATION

Wetted parts : 316 St. Steel

Diaphragm : Viton

Process connections :

1/4" BSP.P or NPT female.

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

Electrical connection :

M20 x 1.5 ISO female standard

Suffix "F" for M25 x 1.5 ISO female

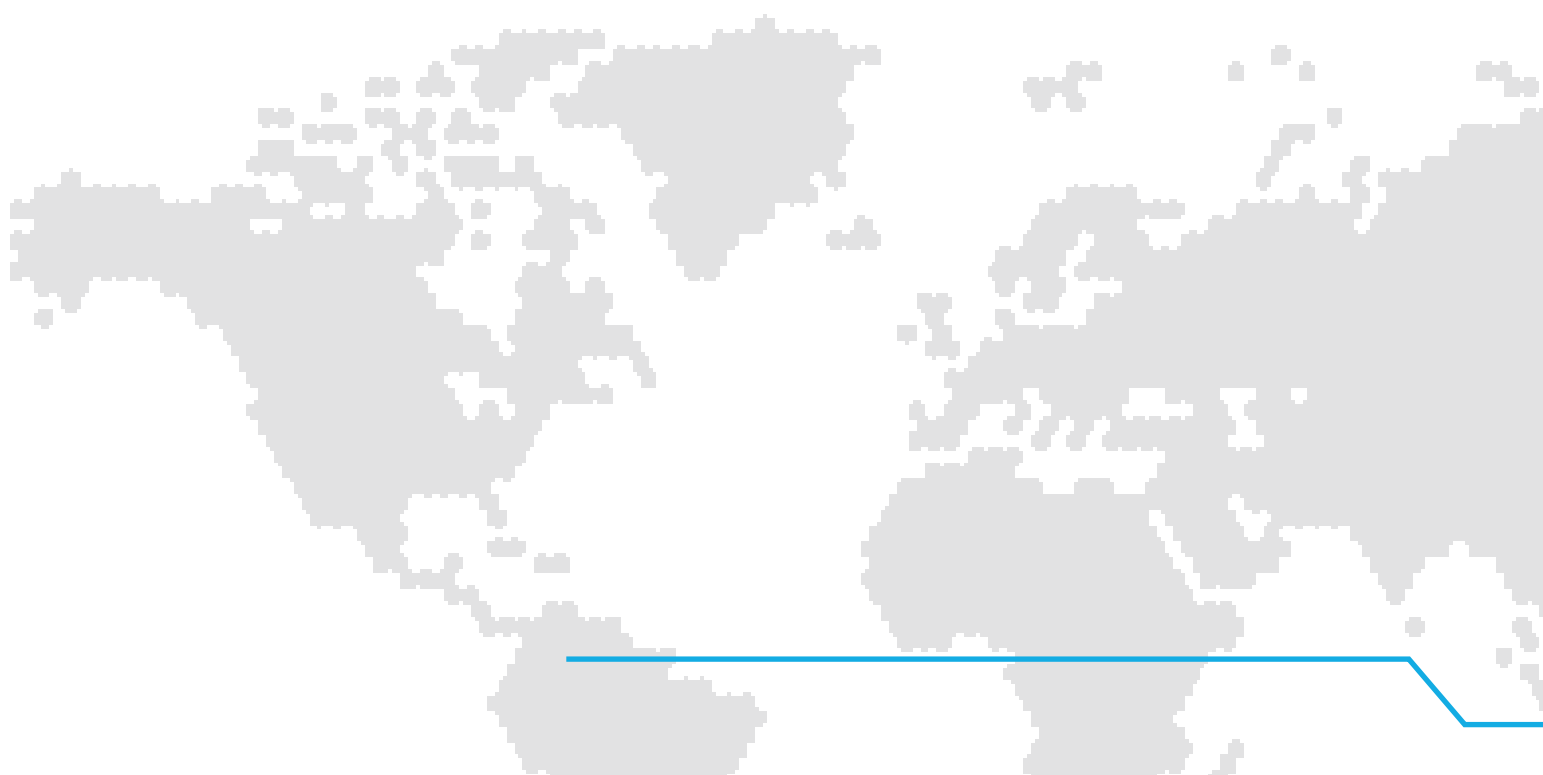
or "C" for 1/2" NPT female

ADJUSTMENT RANGE (mbar) VACUUM	MAX WORKING PRESS. (bar)	DEADBAND (mbar)	SETTING SWITCH 2 (FROM SWITCH 1) MIN (mbar) MAX	PART NUMBER <small>PREFIX WITH "S" FOR STAINLESS STEEL SWITCHCASE</small>	DRAWING
-950 to -150	13	<70	80 800	(S) V110_/B5_N30/SS5X	Page 3
-550 to -50	5.5	<35	70 240	(S) V110_/B5_N07/SS5X	Page 4
-130 to -10	1.4	<10	15 85	(S) V110_/B5_N14/SS5X	Page 5

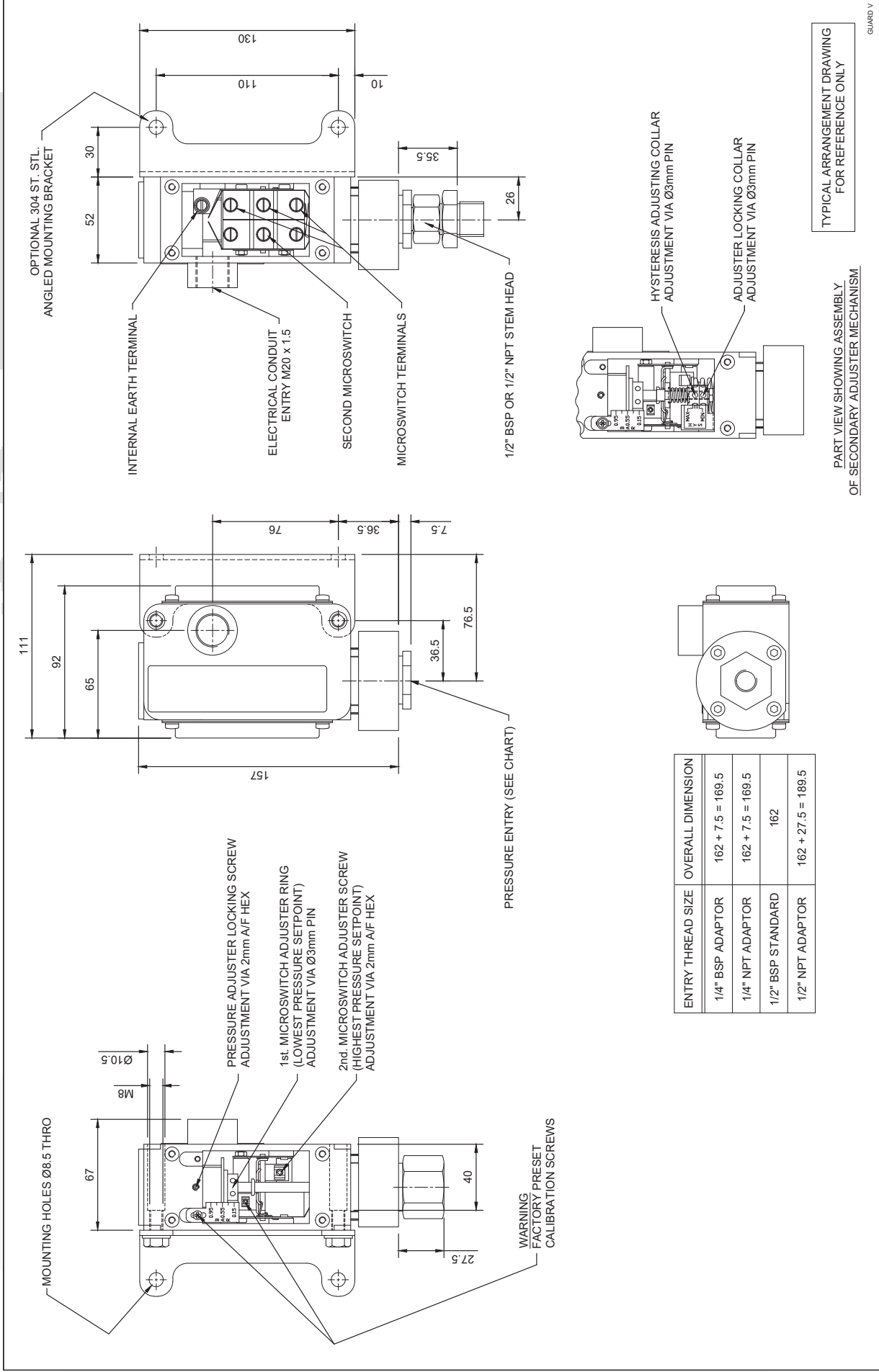
VACUUM PRESSURE VERSION

-1 to +2 bar	13	<100	CONTACT SALES	(S) P110_/B6_N30/SS5X	Page 6
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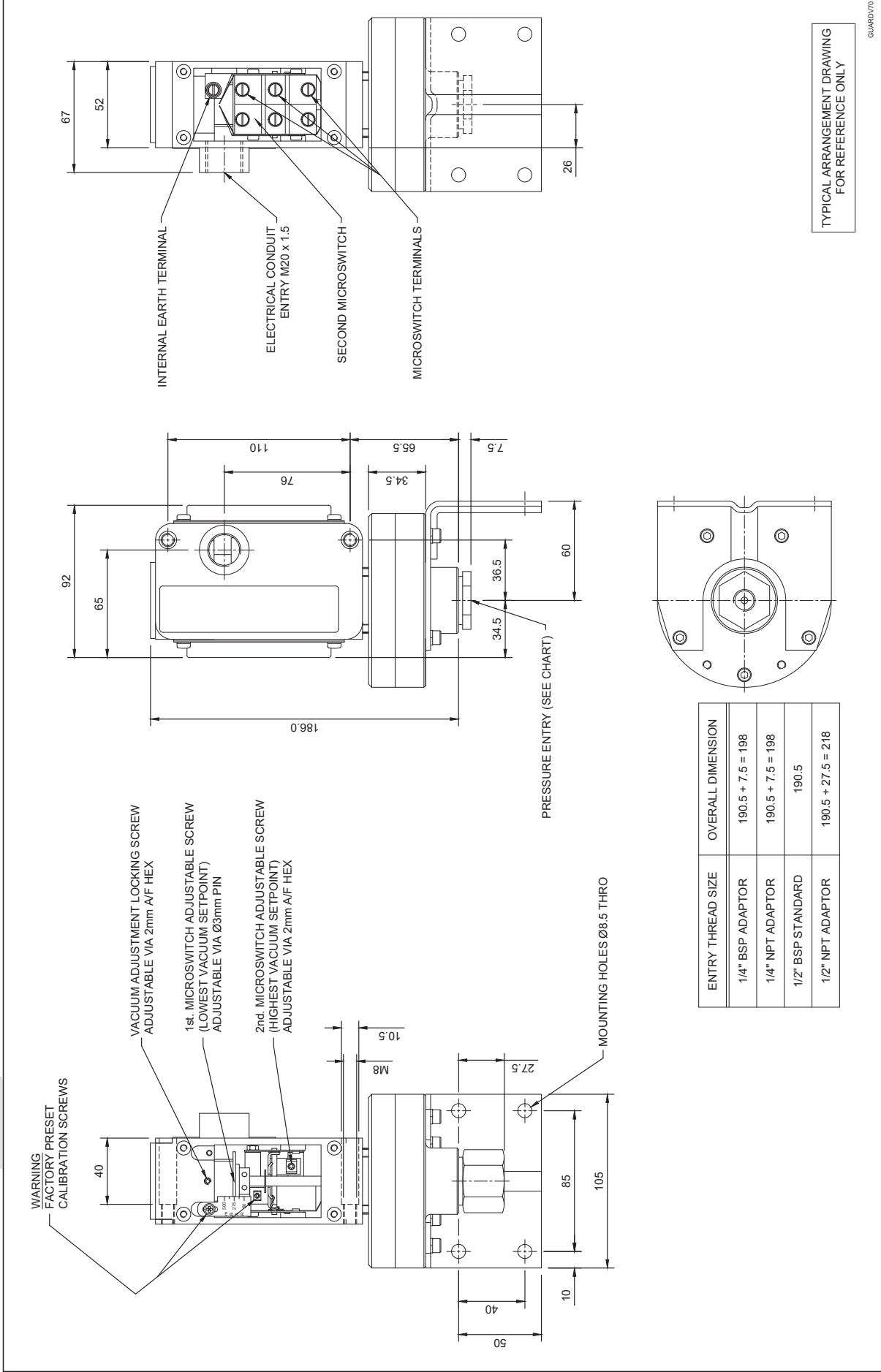
THE FITTING OF MEDIUM DIFFERENTIAL OR DUAL MICROSWITCHES MAY INCREASE THE DEADBAND BY A FACTOR OF TWO. DUAL MICROSWITCH ADJUSTMENT LIMITS ARE AVAILABLE FROM OUR SALES OFFICE	MICROSWITCH : 01 = SINGLE SWITCH 02 = DUAL SWITCHES	PROCESS CONNECTION 71 = 1/4" BSP.P FEMALE 72 = 1/4" NPT FEMALE 10 = 1/2" BSP.P FEMALE 74 = 1/2" NPT FEMALE 82 = 1/2" BSP.P MALE 84 = 1/2" NPT MALE
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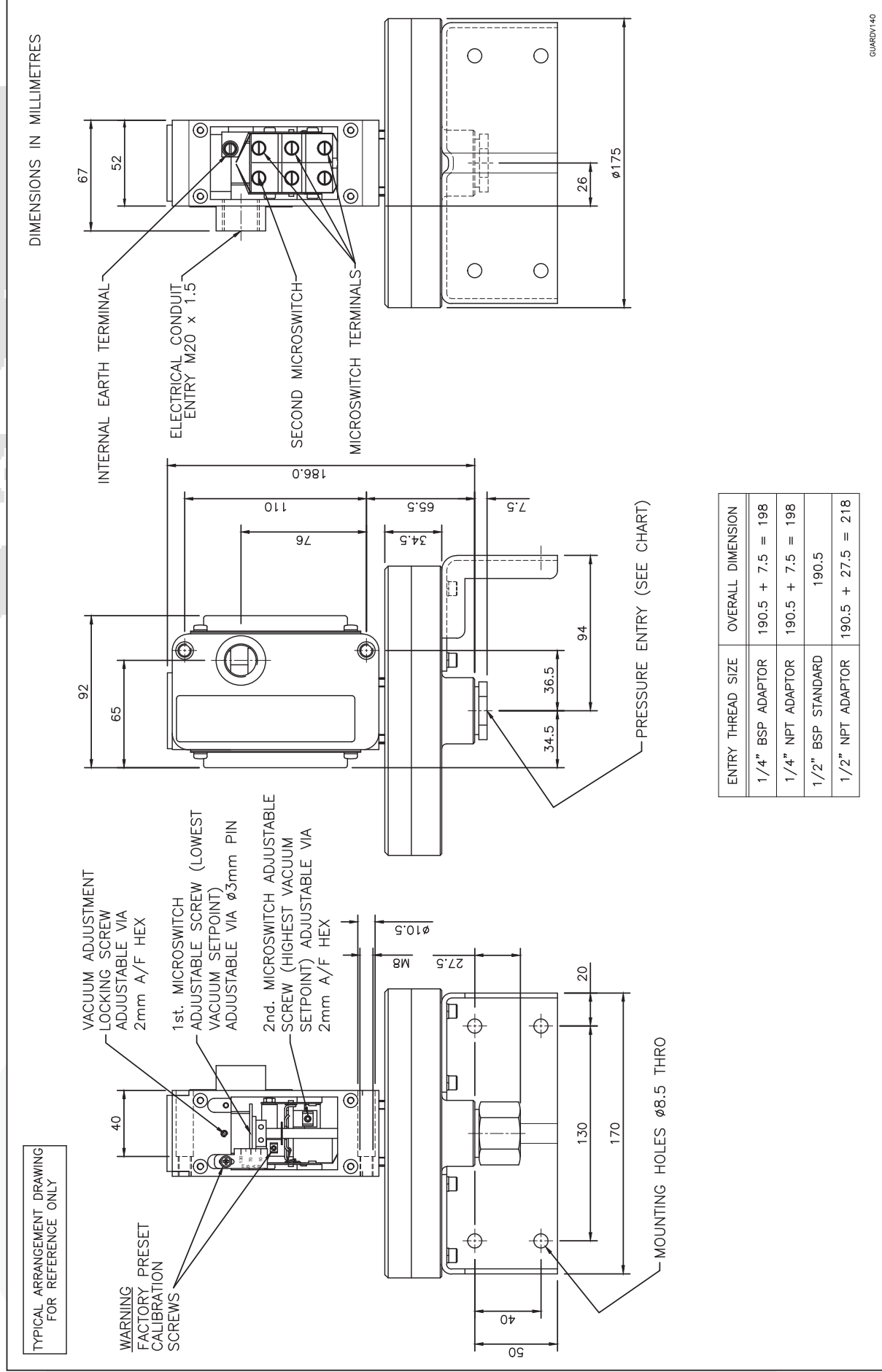
TYPE V1000 GUARDIAN VACUUM SWITCH



TYPE V1000 - 70 GUARDIAN VACUUM SWITCH

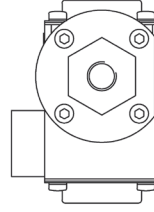
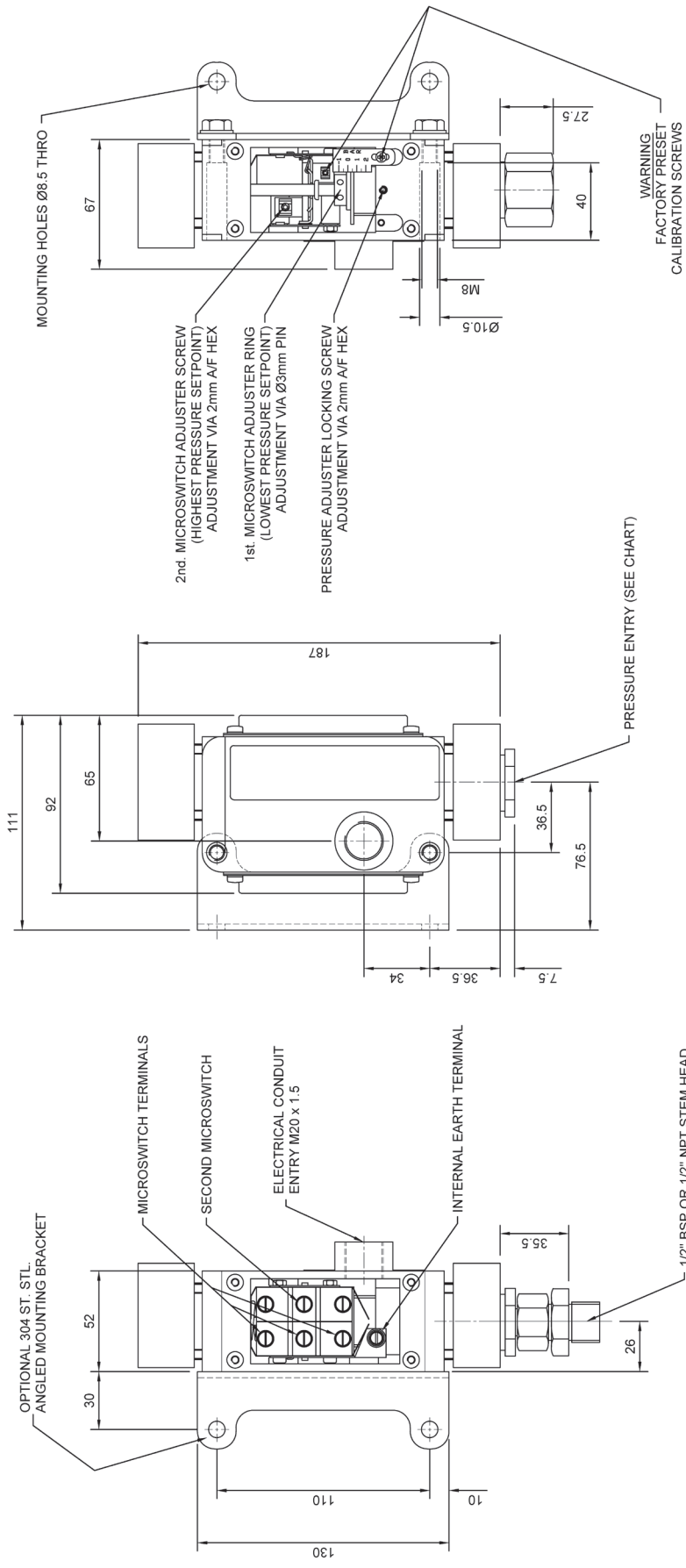


TYPE V1000 - 140 GUARDIAN VACUUM SWITCH



ENTRY THREAD SIZE	OVERALL DIMENSION
1/4" BSP ADAPTOR	190.5 + 7.5 = 198
1/4" NPT ADAPTOR	190.5 + 7.5 = 198
1/2" BSP STANDARD	190.5
1/2" NPT ADAPTOR	190.5 + 27.5 = 218

TYPE P1100 - GUARDIAN VACUUM / PRESSURE SWITCH



ENTRY THREAD SIZE	OVERALL DIMENSION
1/4" BSP ADAPTOR	187 + 7.5 = 194.5
1/4" NPT ADAPTOR	187 + 7.5 = 194.5
1/2" BSP STANDARD	187
1/2" NPT ADAPTOR	187 + 27.5 = 214.5

TYPICAL ARRANGEMENT DRAWING FOR REFERENCE ONLY

GUARD VP

INTRODUCTION

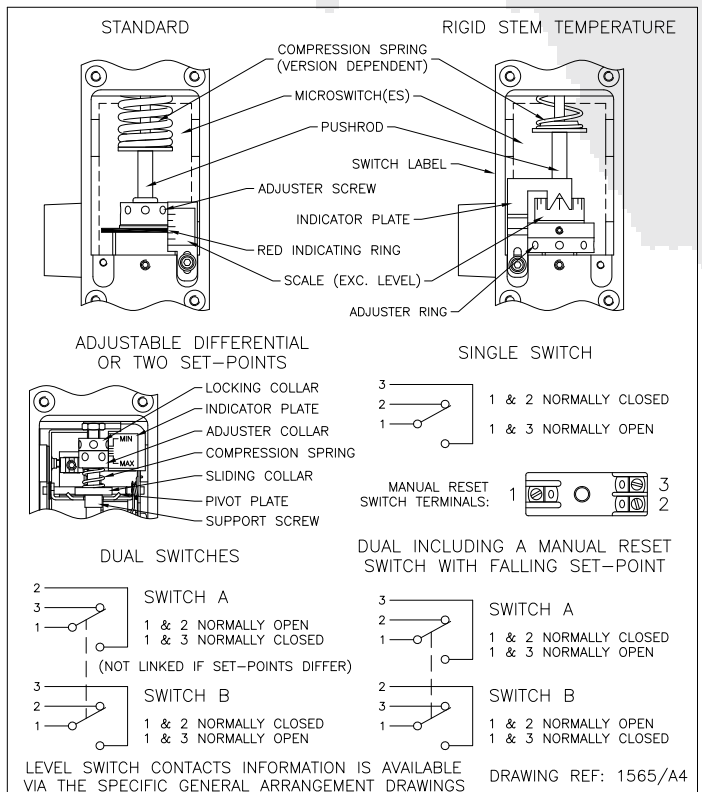
The Guardian pressure, differential pressure, temperature, level and flow switches are a part of our extensive range of specialist process sensors. They utilise the expertise gained from over 60 years experience of designing and manufacturing control devices for industrial, marine and hazardous area 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 pickled and passivated. 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.



TECHNICAL SPECIFICATION

Switchcase and covers: 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 and manual reset.

Microswitch rating	: 6 Amps @ 480 V.AC
Standard microswitch	: 10 Amps @ 250 V.AC & 125 V.AC
	: 5 Amps @ 30 V.DC & 0.05 Amps @ 125 V.DC
Adjustable deadband and high	: 1.5 Amps @ 250 V.AC & DC
Current DC switching	: 7.5 Amps @ 125 V.AC & 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 12 or 13 Vibration Test 1 or 2 (refer to sales for exact specifications) and shock tested to BS EN 60068-2-27 : 1987.

Temperature Limitations: Pressure, Vacuum and Differential Pressure.

Process: Diaphragm actuated (unless otherwise stated) -30 to +100°C (Nitrile) or -20 to +150°C (Viton). Piston actuated -30 to +100°C (Nitrile), or -20 to +150°C (Viton) or -40 to +150°C (PTFE) -35 to +100°C (EPDM)

Ambient: -25 to +80 Deg.C.

Storage: -25 to +80°C. (For temp, level and flow refer to specific pages).

Certification: All switches are CE certified and marked in accordance with 2014/35/EU (Low Voltage Directive).

Accuracy +/-1% at 20°C.

Continuous development may result in changes to specifications without prior notice.

ABOUT PYROPRESS

Our products are designed to work in demanding and hazardous environments which require fast and cost effective solutions in instrumentation and control.

Pyropress control sensors provide safe and reliable electrical switching of alarm or control circuits in response to changes in temperature, pressure, differential pressure, vacuum, flow and level conditions.

QUALITY

To support the design of state of the art products the company has invested heavily in the latest CNC technology.

We are able to produce our own components to a high degree of accuracy assuring a reliable and consistent quality product.