

PERSEUS LOW PRESSURE

PF61 & PF62 PERSEUS ATEX/IECEX Exd, Exia & INDUSTRIAL PRESSURE SWITCH

This range of switches features a robust high quality housing with 1 or 2 sealed SPDT microswitches and has been designed for use in environments where explosive gases can be present (e.g. gas fields, oil rigs & chemical plants etc). Microswitches can be set for single, dual simultaneous, or dual independently adjustable operation. Environmentally sealed or hermetically sealed microswitch options are available. One of the benefits of the Perseus range is the separation of the flameproof and adjustment chambers allowing adjustment of the set point with power on and the switch in operation. The housing is available with one or two electrical entries.



LOW PRESSURE

FEATURES

- ✓ 316 Stainless steel or black anodised aluminium switchcase to IP66 & IP67 standards.
- ✓ Wetted parts NACE MR-01-75 compliant.
- ✓ SIL 2 – IEC61508 proven reliability.
- ✓ Single or dual microswitch option.
- ✓ Settings from 8 mbar to 250 mbar.
- ✓ ATEX/IECEX Flameproof version
II 2 G Ex db IIC T6...T5 Ga
(Tamb -50°C to +75°C...+90°C)
(with or without resistors)
- ✓ ATEX/IECEX Intrinsically safe version
II 1 G Ex ia IIC T6...T2 Ga
(Tamb - 50°C to +78°C...+93°C)
(without resistors)
- ✓ ATEX/IECEX Intrinsically safe version
II 1 G Ex ia IIC T5 ...T2 Ga
(Tamb - 50 to +72°C...+122°C)
(with resistors)
- ✓ ATEX/IECEX Intrinsically safe version
II 1 D Ex ia IIIC T135°C Da
(Tamb -50°C to +70°C)
(with or without resistors)

Wetted Parts : 316 stainless steel

Diaphragm : Viton (std) or Nitrile

Process Connection : 1/4" BSP.P or 1/4" NPT Female

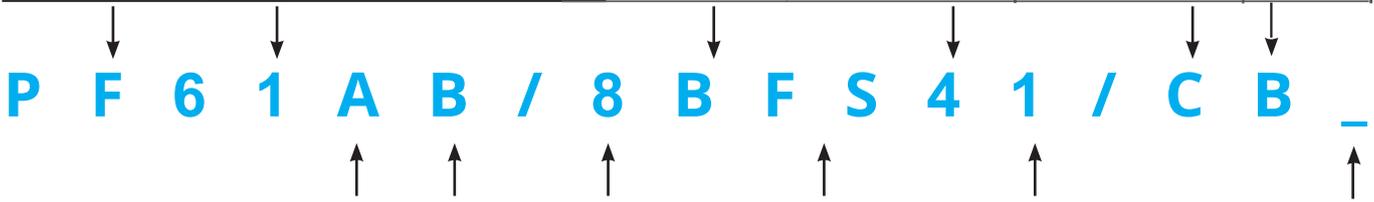
LOW PRESSURE RANGES Viton or Nitrile diaphragm

Dual microswitches will increase the stated deadband.

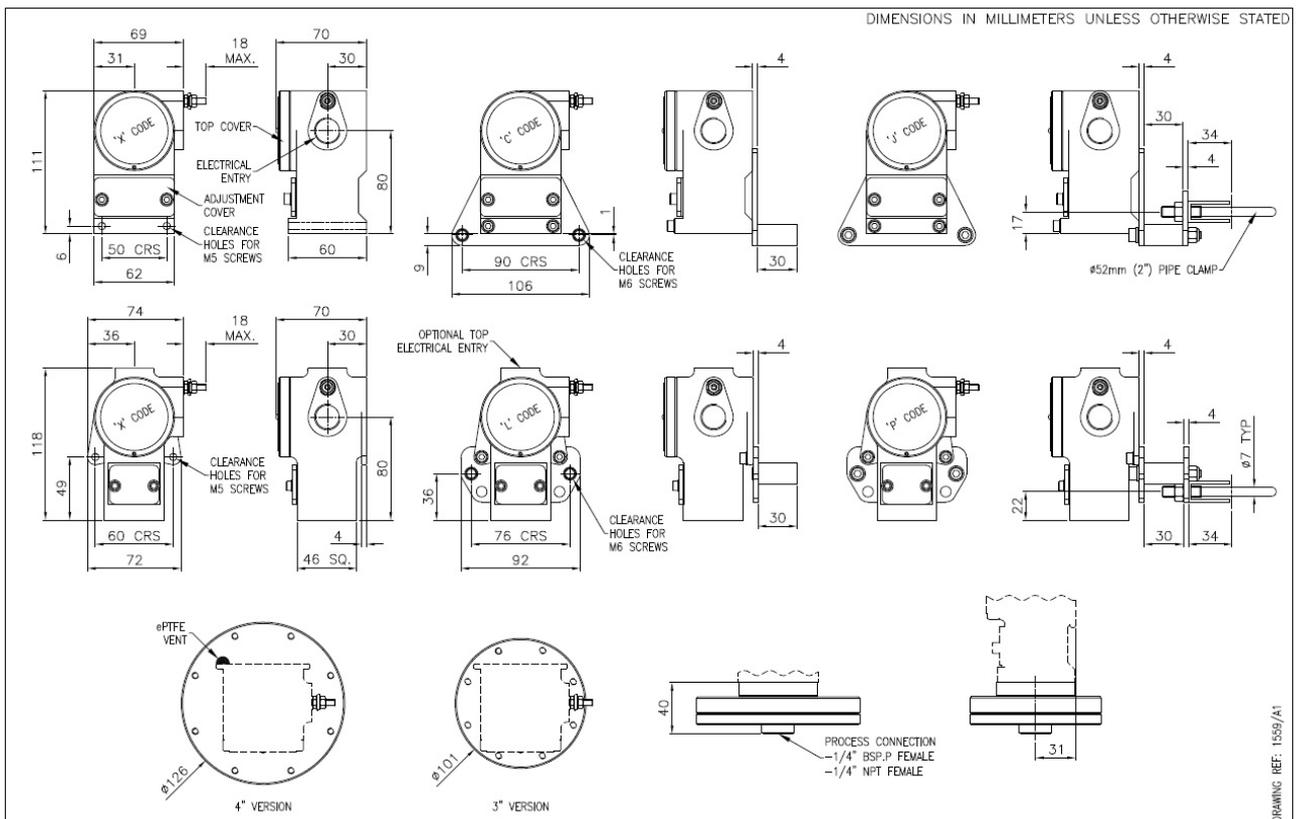
NOTE : Switch with special range of 5 - 128 mbar must be mounted inverted.

ADJUSTMENT RANGE MBAR	ADJUSTMENT RANGE "WG	MAX. WORKING PRESSURE (BAR)	DEADBAND MBAR	DIAPHRAGM CODE	SPRING CODE
50 - 250	20 - 100	7	5 - 20	3	B
8 - 128	5 - 50	5	4 - 10	4	B

PART NUMBER BREAKDOWN	MICROSWITCH OPTIONS 1 = 1 X SPDT 2 = 2 X SPDT LINKED 5 = 1 X HERMETIC SEALED 6 = 2 X HERMETIC SEALED	ELECTRICAL CONNECTION ENTRY B = RIGHT HAND SIDE L* = DUAL ENTRY T* = DUAL ENTRY TOP PLUGGED R* = DUAL ENTRY SIDE PLUGGED *STAINLESS STEEL HOUSING ONLY		BRACKET C = STANDARD BRACKET (ALUM) L = STANDARD BRACKET (ST.ST) J = 2" PIPE BRACKET (ALUM) P = 2" PIPE BRACKET (ST.ST)
		SWITCHCASE PF6 = STANDARD PR6 = WITH RESISTORS	SPRING CODE PLEASE REFER TO RANGE TABLE	



SWITCHCASE MATERIAL A = BLACK ANODISED ALUMINIUM S = STAINLESS STEEL	DIAPHRAGM 7 = NEOPRENE 8 = NITRILE 9 = VITON	PROCESS CONNECTION 1 = 1/4" BSP.P FEMALE 2 = 1/4" NPT FEMALE
CERTIFICATION O = ATEX/IECEX Exia INTRINSICALLY SAFE B = ATEX/IECEX Exd FLAMEPROOF A = INDUSTRIAL / MARINE	PRESSURE HOUSING FS = 316 ST STEEL	ELECTRIC CONNECTION _ = M20 LEAVE BLANK C = 1/2" NPT ADAPTOR F = M25 ADAPTOR



INDUSTRIAL SWITCHES

INTRODUCTION

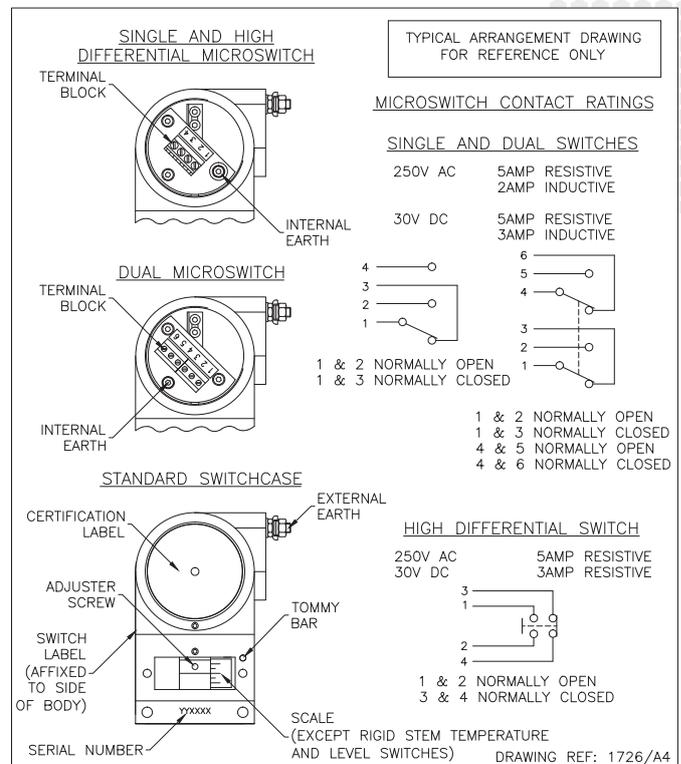
The Perseus **pressure, vacuum, differential pressure, temperature, and level** switches are designed for use in environments where explosive gases and dust can be present (e.g. Gas fields, Oil rigs and Chemical plants etc.) and have been ATEX and IECEx certified as detailed overleaf (SIL2 - IEC61508 proven reliability).

These switches are manufactured from a high quality casting which offers robust construction and protection to IP67 for use within heavily polluted industrial environments. A special feature of the instruments is the separation of the flameproof and adjustment compartments allowing for safe on-site adjustment of the set point with power on and the switch in operation.

Perseus Exd switches must be installed in accordance with BS EN 60079-14

CALIBRATION

The design features a simple form of adjustment against a calibrated scale. This enables a user to order switches set at a predetermined point or stock a mid range setting and adjust switches to suit the particular application. The set point can be safely adjusted with the switch electrically live. Adjustment is made by removing the access cover and rotating the set point adjuster using a suitable tommy bar stowed to the right of the scale plate. The setting is read from the centre of the set point adjuster against the calibrated scale. Rotation to the left will increase the set point and to the right decrease it.



Perseus Stainless steel switchcase with dual electrical connection option

TECHNICAL SPECIFICATION

Switchcase & covers: 316 Stainless steel or black anodised aluminium case and 316 stainless steel adjustment cover.

Microswitch: 1 x SPCO/SPDT or 2 x SPCO/SPDT gold flashed silver contacts. Single switch is available with adjustable deadband option. Dual switches are either mechanically linked to provide DPDT switching action (reset of switches could be up to 3% apart) or independently adjustable. Microswitches are environmentally sealed as standard, hermetically sealed can be supplied as an option. Dual microswitches may increase deadband by a factor of two.

Microswitch rating: 5 Amps @ 250 VAC resistive, 2 Amps @ 250VAC inductive
5 Amps @ 30VDC resistive, 2 Amps @ 30 VDC inductive

Electrical Connections: Terminals suitable for cable 0.5 - 2.5 mm². (Max 1.5 mm² for dual microswitch version)

Electrical Conduit Entry: One or two M20 x 1.5 ISO. ½" NPT or M25 via adaptors

Environmental Protection: IP66 & IP67 in accordance with BS EN 60529 : 1992 & IEC 60529 : 2001.

Vibration and shock parameters: Switches were subjected Lloyds Register Test Specification 1, section 13 BS EN 60068-2-6 : 1996 (Test Fc vibration) and BS EN 60068-2-27 : 1995 (Test Ea shock).

Temperature Limitations: Pressure, Vacuum and Differential Pressure.

Process: Diaphragm actuated (unless otherwise stated) -30 to +100°C (Nitrile) or -20 to +150 Deg.C (Viton).
Piston actuated -30 to 100°C (Nitrile), -20 to +150°C (Viton), -50 to +150°C (PTFE) or -35 to +100°C (EPDM).

Ambient: -40 to +85°C. -50 to +125°C option - refer to sales office)

Storage: -50 to +85 Deg.C (For temperature, level and flow switches please refer to specific pages).

ATEX/IECEx certified Exd Flameproof - Gas (with or without resistors) CE Ex II 2 G Exd IIC T6...T5 Gb.
T6 Tamb -50°C to +75°C, T5 Tamb -50°C to +90°C.

Special conditions for safe use. 1) No modifications must be made to the flamepaths of the unit without consultation of the drawings. 2) When conduit is utilised it must be sealed in accordance with Clause 13.2.2 of EN 60079-1:2007 with a suitably approved (Ex d IIC Gb) conduit sealing devise. 3) Suitably rated cable must be selected based on T Class shown above. 4) Only suitably certified Ex d IIC Gb cable glands to be used.

ATEX/IECEx certified Exia Intrinsically Safe - Gas & dust

CE Ex II 1 G Exia IIC T6 Ga Ta -50 to +78°C, T5 Ta +93°C, T4 Ta +128°C or

CE Ex II 1 G Exia IIC T5 Ga Ta -50 to +72°C, T4 Ta +122°C (with resistors).

CE Ex II 1 D Exia IIIC T135°C Da Ta -50 to +70°C

Special conditions for safe use. 1) Aluminium may only be used when the ignition hazardous assessment shows there is no risk of ignition from incendive impact or abrasion sparks.

Accuracy: +/-1% at 20°C.

Continuous development may result in changes to specification 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.

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