

The basic Models of the Series 2000 Pressure Switches follow the same pattern throughout, as far as housing or signal units are concerned.

Basic Standard Specifications

Standard construction: Aluminium Housing and Pressure Chamber(s) with Mounting Bracket.
Buna-N (nitrile rubber) Diaphragms.

Process Connection: $\frac{1}{4}$ " BSP Female (RP $\frac{1}{4}$).

Switch: one S.P.D.T. Microswitch 15 amp 125, 250, 400 vac, $\frac{1}{2}$ amp 125 vdc.
Electrical Connection: Multi Directional Terminal Box with M20 x 1.5 int. Connection.

Housing: Weatherproof, all parts etch primed and stoved with high quality epoxy resin paint.

Electrical Output Switches

In most cases we offer a choice of two non-adjustable differentials in the specifications of the Series 2000 Switch. This is possible by use of microswitches, which have different operating forces and gaps. Please state preference when ordering; if not stated, the higher differential will be supplied automatically. The standard electrical rating for all microswitches for the Series 2000 is 15 amp 400 vac or 2 amp 24 vdc, Single Pole Double Throw (S.P.D.T.) with Silver Contacts.

The lower of the two differentials shown is not recommended for use with DC Current.

Variants or other makes of microswitch can be fitted to suit customer requirements but remember – the switching differential value alters with each different type of microswitch used. Variants can also be supplied with 2 identical or simultaneously activated S.P.D.T. microswitches of the same rating.

Where a manual reset is required, please remember this is only possible with a single switch model of the standard type.

Explosion proof, Flameproof and Twin S.P.D.T. switches cannot have manual reset.

Electrical Connections are a standard M20 x 1.5 int. Variants can be offered to suit customer requirements at extra cost.

Pneumatic Output Switches

All models can be fitted with spool or poppet valves (see Leaflet No. 20/05 & 13/06) note that the differential is higher than that which is given for electrical outputs.

Additional Information

Process Connections are usually $\frac{1}{4}$ " BSP Female (RP $\frac{1}{4}$) as standard, but can be varied according to customer requirements, up to and including 2" BSP Male.

In most cases flanges to DIN Standards, ANSI or BS10 can be fitted (please consult factory).

Switches can be factory set to customer requirements and Test Certificates issued if required.

All switches are available with internal or external adjustment (external adjustment is standard).

SERIES 2000

VARIATIONS AVAILABLE WITH SIRCO CONTROLS

Performance requirements and Health & Safety Regulations demand that guesswork be removed from the choice of controls. The variations allow a positive choice to be made exactly to specification. All the variations available on the range of switches have been listed overleaf with the coding and description of the variables given alongside each code.

Where differentials or other characteristics alter due to variations, this is given in the remark's column.

In studying this list, you will see an infinite number of variations, which could be introduced to make a Standard into a Special Pressure Switch. Care should be taken, because not all variations can be combined; and because certain approval design features items such as microswitches in explosion-proof controls must remain the same.

	<u>Coding</u>	<u>Description</u>	<u>Remarks</u>
SPECIAL	X	Any special requirement not listed – requirement to be stated e.g., Higher Proof Pressure than those listed Internal Adjustment.	
TYPE OF OUTPUT (Electrical)	*BZ-2R	Microswitch SPDT 15 amp 400 vac, 1/2 amp 125 vdc	
	*BM-1R	Microswitch SPDT 22 amp 400 vac, (no DC rating)	1.5 x Smaller of the 2 Differentials
	†*BZ-R	Microswitch SPDT 15 amp 400 vac, (no DC rating)	Smaller of the 2 Differentials
	†*BM-R	Microswitch SPDT 22 amp 400 vac, (no DC rating)	1.5 x Smaller of the 2 Differentials
	*BZ-2R-722	Microswitch SPDT, Gold Plated Contacts 1 amp 125 vac, 1/2 amp 24 vdc	1.5 x Differential
	*MT-4R	Microswitch SPDT 10 amp 125 vac, 10 amp 125 vdc	4 x Differential
	†*E1V3CS	Microswitch SPDT (Kestrel) 5 amp 250 vac, 5 amp 28 vdc	4 x Differential
	†*91-SE1	Microswitch SPDT, Environment Free 5 amp 250 vac, 5 amp 28 vdc	2 x Differential
	†*91-SE1-3N55	Microswitch SPDT, Environment Free, Gold Contact 1 amp 30 vdc	2 x Differential
		†*Licon	Microswitch SPDT, Gold Plated Contacts 7 amp 250 vac, 7 amp 28 vdc
	†BZ-RX	Microswitch SPDT, Manual Reset 15 amp 400 vac, 1/2 amp 125 vdc	
(Pneumatic)	†*SMS	Pneumatic 3 Port Poppet Valve (see Leaflet 03/06)	2 x Differential
	†PV	Pneumatic 3 Port Pilot Operated Valve (see Leaflet 11/05)	4 x Differential
RANGE		See Range Code on appropriate Leaflet	
TWIN	TW	Two Microswitches actuated simultaneously to give DPDT operation Not available with outputs 1HM1, 3HM1	2 x Differential
FLANGE MOUNTING	F	Flange – Customer to state size when required	
VACUUM	V	Vacuum Operated Model	
SAFETY VENTED	G	Safety Vented Construction	
MODEL TYPE	2001 201 2002 202	See Model Code on appropriate Leaflet - examples only shown left	

ENCLOSURES	W	Weatherproof	
	(IP66)	Degree of Protection	
	†*E(d)	ATEX approved for Zone 2 areas Compliant to: (CE) EN IEC 60079-0:2018 EN IEC 60079-15:2019 EN IEC 60079-7 2015:2015 + A1: 2018 ⊕ II 3G Ex ec nC IIC T6 Gc (T _{amb} = -20°C to +60°C)	2 x Differential
		Certificate Number: Certifying Authority:	Baseefa03ATEX0319X – Issue 4 SGS Fimko Oy
		Compliant to: (UKCA) EN IEC 60079-0:2018 EN IEC 60079-15:2019 EN IEC 60079-7:2015 + A1: 2018 ⊕ II 3G Ex ec nC IIC T6 Gc (T _{amb} -20°C to +60°C)	
		Certificate Number: Certifying Authority:	BAS22UKEX0248X SGS Baseefa Limited
	*H(A-K)	ATEX approved for Zone 1 areas Compliant to: (CE) EN IEC 60079-0:2018 EN 60079-1:2014 ⊕ II 2 G Ex db IIB + H ₂ T6 Gb (T _{amb} -20°C to +60°C)	
		Certificate Numbers: Certifying Authority:	Baseefa02ATEX0025X - Issue 4 (single switch) Baseefa02ATEX0026X - Issue 3 (twin/two switch) SGS Fimko Oy
		Compliant to: (UKCA) EN IEC 60079-0:2018 EN 60079-1:2014 ⊕ II 2 G Ex db IIB + H ₂ T6 Gb (T _{amb} -20°C to +60°C)	
		Certificate Number: Certifying Authority:	BAS22UKEX0245X (single switch) BAS22UKEX0246X (twin/two switch) SGS Baseefa Limited
	WIS	Intrinsic Safety. Gold Contact Microswitch classed as 'Simple Electrical Apparatus' and may be used without Certification in a Barrier Circuit. BS EN 60079-11: 2012, BS EN 60079-14: 2014 Para 3.5.5	1½ x Differential
FLUSHOUT	F	Flushout	
PRESSURE CHAMBER(S) <i>(wetted surface)</i>	A	Aluminium	
	S	Stainless Steel	
	J	Trovidor	
	X	P.T.F.E	
	M	Monel	
	I	Incoloy	
	Z	Phosphor Bronze	
	Hast.	Hastelloy	
	Tit.	Titanium	
DIAPHRAGM(S) <i>(wetted surface)</i>	O	Buna-N	
	X	P.T.F.E.	
	T	Stainless Steel	2 x Differential
	V	Viton	1½ x Differential
	M	Monel	2 x Differential
	Tant.	Tantalum	2 x Differential
	Fep	Teflon FEP	
	E	EPDM	
COATED SURFACES	X	PFA (P.T.F.E.) Coating of Pressure Chamber or Flange	

MANUAL RESET	MRR	Manual Reset Rising, not available on outputs marked*
	MRF	Manual Reset Falling, not available on outputs marked*
	R/A	Reset Adjustable, not available on outputs/enclosures marked†

Extra special requirements such as those listed below must be stated in full with the Code of the Control required:

- a) Wetted surfaces to NACE specifications. MR-01-75 (latest revision)
- b) Special cleaning and handling for Nuclear Power usage
- c) Paint specification suitable for sea water or offshore usage – prefix Range Code with **OS**
- d) No copper or copper bearing alloys
- e) Helium leak tested to 10^{-5} torr (or figure required)
- f) Built to withstand full vacuum
- g) Vacuum switch built to withstand positive pressure of x Bar
- h) Controls to be used in ambient temperatures below or in excess of -20°C to +60°C
- i) Degreased for oxygen service