

MODELS:

2009	Single Switch,	Differential Non-Adjustable
209	Single Switch,	Differential Adjustable
2011	Two Switch,	Differential Non-Adjustable
211	Two Switch,	Differential Adjustable on 1 st Switch Only

All models available are temperature sensitive switches, have vapour pressure filled temperature systems and cover the range between -30 and +360°C in a group of 6 basic models.

Controls can be supplied with varying degrees of protection, and with various approvals for use in Explosion-proof/Flameproof areas. (Refer to list for options). More detailed information on these approvals can be found in the relevant sections of this catalogue.

Materials used in the manufacture of Capillary, Bulb, Armour and Bulbwell are according to customer requirements and operational application.

All switches are fitted with a mounting bracket as Standard (except where Direct Mounting required).

All switches are available with internal or external set point adjustment (External Adjustment is Standard).



TEMPERATURE CONTROLS

OPERATING RANGE	DIFFERENTIAL NON-ADJUSTABLE	BASIC MODEL CODE	MAX WORKING TEMPERATURE
-30 to +20°C	4°C	NLR1 – 2009W – SHD	120°C
20 to 70°C	4°C	NLR2 – 2009W – SHD	150°C
60 to 110°C	5.5°C	NR3 – 2009W – SHD	200°C
90 to 160°C	5.5°C	R4 – 2009W – SHD	220°C
140 to 200°C	6.5°C	R5 – 2009W – SHD	300°C
190 to 360°C	7.5°C	R6 – 2009W – SHD	410°C
DIFFERENTIAL ADJUSTABLE			
-30 to +20°C	4 to 13°C	NLR1 – 209W – SHD	120°C
20 to 70°C	4 to 10°C	NLR2 – 209W – SHD	150°C
60 to 110°C	5.5 to 12°C	NR3 – 209W – SHD	200°C
90 to 160°C	5.5 to 15°C	R4 – 209W – SHD	220°C
140 to 200°C	6.5 to 20°C	R5 – 209W – SHD	300°C
190 to 360°C	7.5 to 40°C	R6 – 209W – SHD	410°C

Standard switches contain one single pole double throw microswitch.

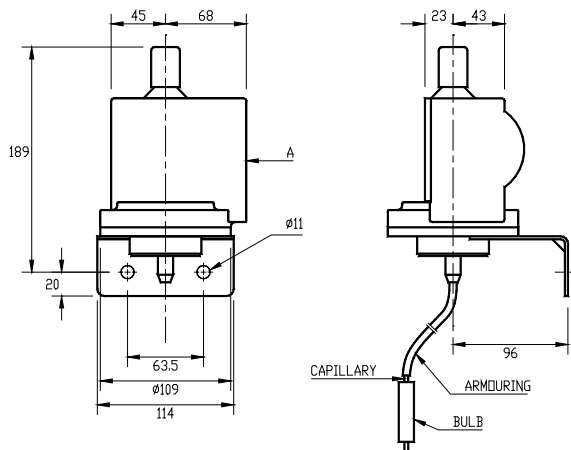
Standard electrical rating 15 amps 400 vac.

Standard electrical entry M20 x 1.5 Int. through 360°.

Standard construction, Models NLR1 & NLR2 have a 12.7mm diameter Stainless Steel bulb x 152mm long overall with 2 metres of Stainless Steel capillary & Stainless Steel armouring.

Models NR3, R4, R5 & R6 have a 12.7mm diameter Stainless Steel bulb x 114mm long overall with 2 metres of Stainless Steel capillary & armouring.

For construction other than above refer to the 2nd page of this leaflet for options and change code accordingly.



Terminal box, explosion-proof/flameproof enclosure, pneumatic valve fitted to surface 'A'

DEGREE OF PROTECTION	WEATHERPROOF	CODE	W
	IP55 IP66		IP55 IP66
ELECTRICAL OUTPUTS (CE) (FOR HAZARDOUS AREAS)	ATEX approved for Zone 2 areas 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: Baseefa03ATEX0319X Issue 4 Certifying Authority: SGS Fimko Oy	E(d)	All ranges will have 2 x the larger of the two Non-Adjustable Differentials listed.
(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: BAS22UKEX0248X Certifying Authority: SGS Baseefa Limited		
(CE)	ATEX approved for Zone 1 areas EN IEC 60079-0:2018, EN 60079-1:2014 ⊕ II 2 G Ex db IIB + H2 T6 Gb (T _{amb} -20°C to +60°C) Certificate Number: Baseefa02ATEX0025X Issue 4 (single switch) *1 Certificate Number: Baseefa02ATEX0026X Issue 3 (twin/two switch) *1 Certifying Authority: SGS Fimko Oy	H(A – K)	*1/*2 H(A) = BZ-2R *1/*2 H(B) = BZ-R *1/*2 H(C) = BZ-2R-722 *1 H(D) = 91-SE1 *1 H(F) = 91-SE1-3N55 *1 H(I) = MT-4R *1/*2 H(J) = BM-2R *1/*2 H(K) = BM-1R
(UKCA)	EN IEC 60079-0:2018, EN 60079-1:2014 ⊕ II 2 G Ex db IIB + H2 T6 Gb (T _{amb} -20°C to +60°C) Certificate Number: BAS22UKEX0245X (single switch) *2 Certificate Number: BAS22UKEX0246X (twin/two switch) *2 Certifying Authority: SGS Baseefa Limited		Differentials Listed over and Electrical Ratings will vary depending on Microswitch Fitted. See Leaflet 22/02 for Details
	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)	WIS	All ranges will have 1.5 x the larger of the two Non-Adjustable Differentials listed.
S.P.D.T. ALTERNATIVES	HIGH LOAD 10 amp, 125 vac/vdc		Prefix Range Code with 'X' and state ratings.
TWO SWITCH MODELS (ELECTRICAL OUTPUT)	Max. Setting Span = 30% of the Range Span Adjustable Differential is not available on second switch.	2011 211	E(d), H(D), H(F), H(I) Not available as Two Switch Model
TWIN SWITCH MODELS (ELECTRICAL OUTPUT)	Twin Microswitches for simultaneous action	TW	Differential x 2
PNEUMATIC VALVE SWITCHES	Poppet 3 port Pilot Operated 3 port	SMS Prefix Range Code: PV	All ranges will have 2 x the larger of the two Non-Adjustable Differentials listed. Differential will be 5 x the larger listed.
BULB	STAINLESS STEEL	S	
CAPILLARY	STAINLESS STEEL – over 2 metres specify length	H	
ARMOURING	STAINLESS STEEL – over 2 metres specify length	D	
THERMOWELL	STAINLESS STEEL State bulbwell length in millimetres after thermowell code	T	For additional information on thermowells see leaflet 06/23
MANUAL RESET (RISING or FALLING)	Available on all Electrical & Pneumatic 2009/209 Series, except Explosion-proof/Flameproof Models.	MRR (Reset on Rising Pressure) MRF (Reset on Falling Pressure)	