

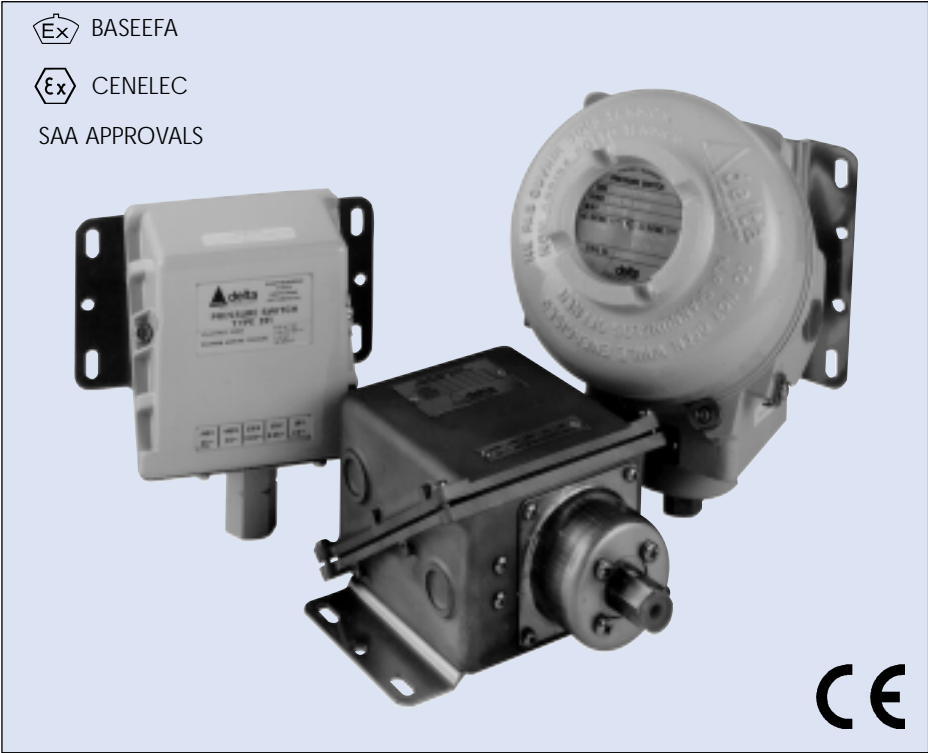
WEED INSTRUMENT

INSTRUMENTATION SOLUTIONS FOR INDUSTRY

**201/2/3
 281
 ISSUE L**

**BELLOWS OPERATED
 PRESSURE SWITCHES**

- ▲ Precision stainless steel mechanism for arduous atmospheres and high humidity.
- ▲ Set points adjustable over whole range against calibrated scale with tamperproof adjuster.
- ▲ Precise and accurate operation guaranteed by use of hydraulic formed bellows, or capsule stack.
- ▲ Weatherproof and Explosionproof models.
- ▲ NACE MR-01-75 compatibility.
- ▲ Models for fixed switching differential, adjustable differential and HI-LO operation.
- ▲ Safety vented design as standard.
- ▲ Hermetically sealed microswitch options.



HOW TO ORDER

The standard material for the sensing element is either brass or stainless steel.

For applications where this is unsuitable, eg sea water and/or sour gas (NACE MR-01-75). Monel is available.

Models 201-3 and 281 complement the 230 series for pressures 75 bar and below.

When ordering, please state the relevant product code for each instrument, made up as follows:

Enclosure. See Table 1. _____

Model. See Table 2. _____

Electrical Entry. See Table 3. _____

Material of Wetted Parts. See Table 4. _____

Range. See Table 5. _____

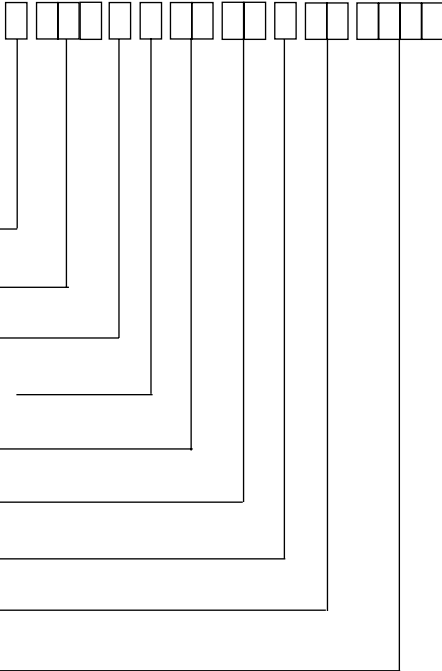
Switching Options. See Table 6. _____

Process Connection. See Table 7. _____

Options. See Table 8. _____

Special Engineering. _____

By consultation with our engineers. See Table 9.



ENCLOSURES

FINISH

All enclosures except Type A are finished in light grey epoxy resin paint. Special finishes to order.

INTRINSIC SAFETY

Pressure switches neither store nor generate electricity and are therefore normally usable in intrinsically safe circuits without further certification, provided that the power source of the circuit is certified Exi and the installation is in accordance with the relevant codes of practice (eg ANSI/ISA 12.6 or BS 5345 Part 4, 1977). Because of the low voltages and currents of I.S. circuits, we recommend using gold and/or sealed contacts.

NOTE: Enclosure Codes W & A with range BC, C6, E1 and E8 (BU, CP, E4, E7) have weather protection reduced to IP54. In the interests of reliability not all enclosures are available with all wetted parts materials. See Table 4.

Temperatures in Table 1 refer to limitations for certified enclosures. See **TECHNICAL DATA**.

Low Voltage Directive (LVD) - 72/23/EC Amended by 93/86/EEC.

The LVD does not apply to products with enclosure codes 'H', 'K', 'M', 'N' for use in hazardous areas. Switch products with enclosure codes 'H', 'K', 'M', 'N', are covered by the Explosive Atmospheres Directive ATEX - 94/9/EC and when CE-marked will indicate compliance with this directive alone. The following directives do not apply to switch products manufactured by Delta Controls: Electromagnetic Compatibility EMC - 89/336/EEC amended by 93/68/EEC. Machinery Safety Directive MSD - 89/392/EEC amended by 93/68/EEC.

MODELS

NOTE: Models 202, 203 cannot be supplied with all materials of wetted parts. See Table 4.

TABLE 1







SAFE AREA ENCLOSURES		Code
General Purpose Weatherproof The basic enclosure is pressure die-cast in zinc alloy, offering weather protection not less than NEMA type 4 + 13/IP66.		W
Weatherproof For Aggressive Atmospheres Investment cast enclosure in austenitic stainless steel with weather protection not less than NEMA type 4X + 13/IP66.		A
EXPLOSIONPROOF ENCLOSURES DIVISION 1 (ZONE 1)		
Aluminum Alloy EExd IIC T6 (-60 to +40°C), T4 (-60 to +80°C) Gravity die-cast enclosure in aluminium-silicon alloy. BASEEFA certified to CENELEC EN50 014 and EN50 018 Suitable for outdoor use, IP66. N.B. Electrical Entry must be specified since usage differs between CENELEC countries.	 	H
Australian Approval Exd IIC T6 (-60 to +40°C)	SAA	
Cast Iron EExd IIC T6(-60 to +40°C), T4 (-60 to +80°C) As Code H, but sand cast in high quality grey iron.	 	K
Australian Approval Exd IIC T6 (-60 to +40°C)	SAA	
Many countries have a separate approvals system for underground mining use. For the UK we offer approval by HSE(M). Group 1 Temperature class T6, plus weather protection IP55. Cast Iron Only.		M
ExN ENCLOSURES DIVISION 2 (ZONE 2)		
Type of Protection ExN II T6 (-20 to +40°C) As Code 'W' but BASEEFA certified to BS 4683 Part 3 ExN II T6. Weatherproof to NEMA type 4/IP66. Limited switching facility (see Table 6).		N

TABLE 2

	Code
Fixed Switching Differential. See Tables 10A & 10C. Basic model giving close, fixed switching differential using proprietary microswitch operated by high integrity stainless steel mechanism. Set point field adjustable over full range against calibrated scale. SPDT & DPDT options available.	201
Adjustable Switching Differential (Limited Span) See Tables 10B & 10D. Achieved by special microswitch with built in adjuster, SPDT only. Not available with enclosure code N.	202
Adjustable Switching Differential (Wide Span) See Tables 10B & 10D. Falling set point adjustable against a calibrated scale. Rising reset point adjustable to increase switching differential by up to 50% of range	203
HI-LO Switching (Adjustable Gap) See Tables 10A & 10C. Two individual set points and separate electrical circuits, with independent adjustment against calibrated scale.	281

ELECTRICAL ENTRY

Adaptors are available for other popular thread sizes.

MATERIAL OF WETTED PARTS

Brass bellows are only available on enclosures W and N, and Rc¹/₄ process connection size, see Table 7.

Not all ranges are available with all materials. Refer to Table 5 for availability.

SETTING RANGES

Please state when ordering whether bar or psi scales are required.

1 bar = 100kPa = 14.5 psi

1 mbar = 100Pa = 0.39 in.H₂O

P_{max} = maximum working pressure

* Ranges BC, C6 & E1 (BU, CP, E4) not available on Model 202. Range G1 (GF) (receiver switch) is only available as Models 201/281.

§ Range BC & C6 (BU, CP) not available on HI-LO model. (281)

† Available as Special Engineering.

TABLE 3



	Code
Enclosures W & N: Clearance for 20mm/ ³ / ₄ in outside dia conduit.	1
Enclosures H, K & A: M20 x 1.5 ISO thread.	0
Enclosures H & K: M20 x 1.5 ISO thread, dual entry.	5
Enclosures H & K ³ / ₄ - NPT INT.	3
Enclosures H & K: ³ / ₄ - NPT INT, dual entry.	6
Enclosure W: M20 x 1.5 elbow adaptor.	0
Enclosure N: M20 x 1.5 straight adaptor. (Approved)	0
Enclosure M: Cable size and type must be specified.	*

*Code on application.

TABLE 4



	Code
Brass bellows soft soldered to brass fittings (model 201) only.	1
Stainless steel bellows/capsule stack and process connection all welded fabrication.	2
Nickel Alloy (Monel) bellows/capsule stack and process connection. Suitable for NACE MR-01-75). All welded fabrication.	M

TABLE 5



P _{max}		RANGE						Code
bar	psi	bar	mbar	Code	psi	in.Hg	in.H ₂ O	
1.4	20		-1000 to 0	AO		-30 to 0		AB
1	15		-12.5 to +12.5	BC§*			-5 to +5	BU§*
4	60	-1 to 1.5		G3	-14.5 to +20			GK
1	15		3 to 25	C6§*			1 to 10	CP§*
1	15		5 to 120	E1 *			2 to 50	E4 *
1	15		50 to 350	E8	1 to 5			E7
1.4	20	0.2 to 1		G1 *	3 to 15			GF *
2	30	0.1 to 1.5		G5	1 to 20			GP
8	100	0.2 to 4		J0	2 to 60			J3
9	125	0.2 to 7		M1	3 to 100			M4
20	300	0.3 to 15		P6	4 to 200			PB
40	600	6 to 25		Q2	85 to 400			QB
100	1400	10 to 40		R3	40 to 600			RB
100	1400	15 to 75		S7	200 to 1000			SB

AVAILABILITY MATERIAL CODE			RANGE CODE
1	2	M	
	✓	†	AO/AB
	✓	✓	BC/BU
✓	✓	†	G3/GK
	✓	✓	C6/CP
✓	✓	✓	E1/E4
	✓	✓	E8/E7
✓	✓	✓	G1/GF
	✓	✓	G5/GP
	✓	✓	J0/J3
✓	✓	✓	M1/M4
✓	✓	✓	P6/PB
	✓	✓	Q2/QB
	✓	✓	R3/RB
	✓	✓	S7/SB

SWITCHING OPTIONS

TABLE 6



A much wider variety of switching options can be engineered to customers requirements for Model 201 switches, manual latching, pneumatic output etc. Please consult our engineers for further information.
 On Models 202, 203 and 281, only the switching options specified can be supplied.

Model 201										
UL/CSA RATING (RESISTIVE) §SEE NOTE	IEC 947-5-1/EN 60947-5-1 RATING								Contact	Code
	Designation & Utilization Category		Rated operational current I_e (A) at rated operational voltage U_e	U_i	U_{imp}	VA rating				
							Make	Break		
5 Amps @ 110/250V AC Light Duty for AC only	AC14 DC13	D300 R300	0.6/0.3A @ 120/240V AC 0.22/0.1A @ 125/250V DC	250V	0.8kV	AC DC	432 28	72 28	SPDT DPDT	00 01
5 Amps @ 110/250V AC and 2 Amps @ 30V DC General purpose precision	AC14 DC13	D300 R300	0.6/0.3A @ 120/240V AC 0.22/0.1A @ 125/250V DC	250V	0.8kV	AC DC	432 28	72 28	SPDT DPDT	02 03
1 Amp @ 125V AC and §100 mA @ 30V DC gold alloy contacts for low voltage switching	1A @ 125 VAC RESISTIVE (IEC 1058-1/EN 61058-1)								SPDT DPDT	04 05
§5 Amps @ 110/250V AC and 5 Amps @ 30V DC Environmentally sealed	AC14 DC13	D300 R300	0.6/0.3A @ 120/240V AC 0.22/0.1A @ 125/250V DC	250V	0.5kV	AC DC	432 28	72 28	SPDT* DPDT*	08 09
§1 Amp @ 30V AC and 30V DC Environmentally sealed with gold contacts	AC14	E150	0.3A @ 120V AC	125V	0.5kV	AC	216	36	SPDT* DPDT*	0G 0H
5 Amps @250V AC and 2 Amps @ 30V DC Hermetically sealed. Gold plated silver contacts	AC14 DC13	D300 R300	0.6/0.3A @ 120/240V AC 0.22/0.1A @ 125/250V DC	250V	0.5kV	AC DC	432 28	72 28	SPDT DPDT	H2 H3†, H6‡
†2 Single pole, double throw. simultaneous falling under pressure. ‡2 Single pole, double throw, simultaneous rising under pressure.										
Model 202 (Cannot be supplied with enclosure Code N)										
5 Amps @ 110/250V AC Adjustable for AC only	AC14	D300	0.6/0.3A @ 120/240V AC	250V	0.8kV	AC	432	72	SPDT	0C
5 Amps @ 110/250V AC and 2 Amps @ 30V DC Adjustable	AC14 DC13	D300 R300	0.6/0.3A @ 120/240V AC 0.22/0.1A @ 125/250V DC	250V	0.8kV	AC DC	432 28	72 28	SPDT	0D
Model 203										
5 Amps @ 110/250V AC and 2 Amps @ 30V DC General purpose precision	AC14 DC13	D300 R300	0.6/0.3A @ 120/240V AC 0.22/0.1A @ 125/250V DC	250V	0.8kV	AC DC	432 28	72 28	SPDT DPDT	02 03
1 Amp @ 125V AC and §100mA @ 30V DC Gold alloy contacts for low voltage switching	1A @ 125 VAC RESISTIVE (IEC 1058-1/EN 61058-1)								SPDT DPDT	04 05
Model 281										
5 Amps @ 110/250V AC Light duty for AC only	AC14 DC13	D300 R300	0.6/0.3A @ 120/240V AC 0.22/0.1A @ 125/250V DC	250V	0.8kV	AC DC	432 28	72 28	SPDT	00
5 Amps @ 110/250V AC and 2 Amps @ 30V DC General purpose precision	AC14 DC13	D300 R300	0.6/0.3A @ 120/240V AC 0.22/0.1A @ 125/250V DC	250V	0.8kV	AC DC	432 28	72 28	SPDT	02
1 Amp @ 125V AC and §100 mA @ 30V DC Gold alloy contacts for low voltage switching	1A @ 125 VAC RESISTIVE (IEC 1058-1/EN 61058-1)								SPDT	04
§5 Amps @ 110/250V AC and 5 Amps @ 30V DC Environmentally sealed	AC14 DC13	D300 R300	0.6/0.3A @ 120/240V AC 0.22/0.1A @ 125/250V DC	250V	0.5kV	AC DC	432 28	72 28	SPDT*	08
§1 Amp @ 30V AC and 30V DC Environmentally sealed with gold contacts	AC14	E150	0.3A @ 120V AC	125V	0.5kV	AC	216	36	SPDT*	0P

The electrical rating is dependent on the microswitch fitted to the instrument. The electrical ratings defined by each approval that the micro switch complies with and is shown on the product nameplate, ie UL/CSA, or IEC. It should be noted that the instrument must be used within the electrical rating specified from the approval you require. This table lists the actual IEC ratings against the Designation & Utilization Category marked on the nameplates. In the absence of any verification by UL/CSA the microswitch §manufacturer's rating is stated in **italics and bold**.
If in doubt seek guidance from the factory.

NOTE: For low energy circuits e.g. 30V and up to 100mA, we recommend using gold alloy contact switches.
 U_i = rated insulation voltage; U_{imp} = rated impulse withstand voltage across contacts.

*Suitable for use with ExN Enclosures (Code N).

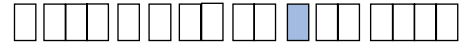
PROCESS CONNECTION

Other thread specifications and sizes are available without using adaptors.

Adaptors are available for applications where their use is permitted.

Brass bellows are only available with Rc^{1/4} Process Connection.

TABLE 7



	Code
Rc ^{1/4} (^{1/4} BSP tr INTERNAL) to BS21 (ISO 7/1)	A
^{1/4} - 18 NPT INTERNAL	F
^{1/2} - 14 NPT INTERNAL	H
^{1/2} - 14 NPT EXTERNAL	J

OPTIONS AND TREATMENTS

Combinations available, apply for details.

TABLE 8



	Code
Tropicalisation High humidity environment.	01
Marine and Offshore Saline atmosphere or salt spray.	02
Ammonia Process (wetted) parts and construction suitable for atmospheric ammonia.	03
Oxygen Service 2 Process (wetted) parts are cleaned for oxygen.	04
Oxygen Service 3 Process and non process parts are cleaned for use with oxygen.	05
Stainless Steel Pipe Mounting Bracket Permits local 2" pipework to be utilised for mounting the Instrument.	10
Tagging - Variety of tagging methods are available	APPLY FOR DETAILS
Applies when - no option is required and selection is made from special engineering.	00

SPECIAL ENGINEERING

To your individual requirements, where specified.

For your convenience, enter your special listing in spaces provided.

TABLE 9



FEATURE	Code

PERFORMANCE DATA

BAR UNITS (SI)

TABLE 10A
MODELS 201, 281
FIXED SWITCHING DIFFERENTIAL

MODEL 281: The switching differential on each point may be up to 1.5 times that of Table 10A & 10C. Care must be exercised, therefore, in specifying high differential switches on sensitive ranges, or set point separation less than 3 times switching differential.

TABLE 10B
MODELS 202,203
ADJUSTABLE SWITCHING DIFFERENTIAL

TABLE 10

		mbar units											TABLE 10A				
Range Code	Range mbar/bar	Wetted parts Code	SPDT Options								DPDT Options						
			O0	O2	O4	O8	OG	OP	H2	O1	O3	O5	O9	OH	H3/H6		
A0	-1000 to 0	2	14	43	15	64	64	100	150	20	56	22	75	75	225		
BC	-12.5 to +12.5	2M	2	6	2	13	13	N/A	5	3	10	4	15	15	8		
G3	-1 to +1.5	1	36	113	38	180	180	250	180	50	137	53	210	210	270		
G3	-1 to +1.5	2	15	46	16	71	71	100	180	20	59	23	82	82	270		
C6	3 to 25	2M	2	6	2	13	13	N/A	5	3	10	4	15	15	8		
E1	5 to 120	1	2	5	2	12	12	15	5	3	9	3	14	14	8		
E1	5 to 120	2M	2	7	2	14	14	15	5	4	11	4	16	16	8		
E8	50 to 350	2M	2	7	2	14	14	15	6	3	10	4	16	16	9		
G1	0.2 to 1	1	3	9	3	15	15	20	28	5	13	5	17	17	42		
G1	0.2 to 1	2M	6	18	6	30	30	40	28	8	22	8	35	35	42		
G5	0.1 to 1.5	2M	5	17	6	25	25	40	80	10	25	10	29	29	120		
J0	0.2 to 4	2M	34	106	36	160	160	250	420	50	234	52	190	190	630		
M1	0.2 to 7	1	30	98	32	140	140	220	500	45	126	48	170	170	750		
M1	0.2 to 7	2M	50	112	38	180	180	250	500	50	139	54	200	200	750		
P6	0.3 to 15	1	62	196	66	310	310	450	1200	90	245	95	350	350	1800		
P6	0.3 to 15	2M	76	240	80	390	390	520	1200	100	285	110	440	440	1800		
Q2	6 to 25	2M	160	492	165	800	800	1000	2300	210	587	230	900	900	3450		
R3	10 to 40	2M	310	991	340	1500	1500	2200	3000	440	1300	490	1700	1700	4500		
S7	15 to 75	2M	330	1000	350	1600	1600	2400	3060	460	1300	510	1900	1900	4590		

		mbar/bar units											TABLE 10B				
Range Code	Range mbar/bar	Wetted parts Code	202								203						
			SPDT ONLY				SPDT OPTIONS				DPDT OPTIONS						
			OC		OD		O2 or O4		O3 or O5								
			Min	Max	Min	Max	Min	Max	Min	Max							
A0	-1000 to 0	2	27	77	80	185	170	500	250	500							
BC	-12.5 to +12.5	2M	N/A	N/A	N/A	N/A	8	25	10	25							
G3	-1 to +1.5	1	68	187	210	497	700	1500	1100	1500							
G3	-1 to +1.5	2	29	80	86	200	700	1500	1100	1500							
C6	3 to 25	2M	N/A	N/A	N/A	N/A	8	25	10	25							
E1	5 to 120	1	N/A	N/A	N/A	N/A	13	60	20	60							
E1	5 to 120	2M	N/A	N/A	N/A	N/A	25	60	37	60							
E8	50 to 350	2M	4	14	11	23	100	200	150	200							
G5	0.1 to 1.5	2M	11	35	31	67	150	700	225	700							
J0	0.2 to 4	2M	65	183	197	459	400	2000	600	2000							
M1	0.2 to 7	1	59	168	176	409	600	3500	900	3500							
M1	0.2 to 7	2M	68	189	207	488	600	3500	900	3500							
P6	0.3 to 15	1	120	335	363	852	1000	7000	1500	7000							
P6	0.3 to 15	2M	143	338	443	1000	1000	7000	1500	7000							
Q2	6 to 25	2M	294	796	908	2100	2	12.5	3	12.5							
R3	10 to 40	2M	611	1700	1800	4200	5	20	7.5	20							
S7	15 to 75	2M	639	1700	1900	4500	5	37.5	7.5	37.5							

PSI UNITS

TABLE 10C
MODELS 201, 281
FIXED SWITCHING DIFFERENTIAL

Switching differentials in psi/in.Hg/in.H₂O.

		TABLE 10C															
Range Code	Range psi/in.Hg/in.H ₂ O	Wetted parts Code	SPDT Options								DPDT Options						
			O0	O2	O4	O8	OG	OP	H2	O1	O3	O5	O9	OH	H3/H6		
AB	-30 to 0	2	0.45	1.30	0.5	2.0	2.0	3.0	4.4	0.65	1.7	0.65	2.25	2.25	6.64		
BU	-5 to +5	2M	0.8	2.4	0.8	5.2	5.2	N/A	2	1.2	4.0	1.6	6.0	6.0	3.2		
GK	-30 to +20	1	0.52	1.65	0.5	2.6	2.6	3.6	2.6	0.7	2.0	0.77	3.0	3.0	3.9		
GK	-30 to +20	2	0.2	0.67	0.23	1.0	1.0	1.5	2.6	0.3	0.85	0.33	1.2	1.2	3.9		
CP	1 to 10	2M	0.8	2.4	0.8	5.2	5.2	N/A	2	1.2	4.0	1.6	6.0	6.0	3.2		
E4	2 to 50	1	0.8	2.0	0.8	5.0	5.0	6	2	1.2	3.6	1.2	5.5	5.5	3.2		
E4	2 to 50	2M	0.8	2.8	0.8	5.5	5.5	6	2	1.6	4.5	1.6	6.5	6.5	3.2		
E7	1 to 5	2M	0.03	0.1	0.03	0.2	0.2	0.2	0.09	0.04	0.15	0.06	0.23	0.23	0.13		
GF	3 to 15	1	0.04	0.13	0.05	0.22	0.22	0.3	0.41	0.07	0.2	0.07	0.25	0.25	0.61		
GF	3 to 15	2M	0.09	0.26	0.1	0.43	0.43	0.6	0.41	0.1	0.32	0.12	0.50	0.50	0.61		
GP	1 to 20	2M	0.07	0.25	0.1	0.35	0.35	0.6	1.2	0.15	0.38	0.15	0.42	0.42	1.74		
J0	2 to 60	2M	0.5	1.5	0.5	2.5	2.5	3.6	6.1	0.7	3.5	0.8	2.8	2.8	9.14		
M1	3 to 100	1	0.45	1.4	0.5	2.0	2.0	3.0	7.3	0.65	1.8	0.7	2.5	2.5	10.88		
M1	3 to 100	2M	0.5	1.6	0.6	2.6	2.6	3.6	7.3	0.7	2.0	0.8	2.9	2.9	10.88		
P6	4 to 200	1	0.9	2.8	1	4.5	4.5	6.5	17.4	1.3	3.5	1.4	5	5	26.1		
P6	4 to 200	2M	1.1	3.5	1.2	5.7	5.7	7.5	17.4	1.5	4.2	1.6	6.4	6.4	26.1		
Q2	85 to 400	2M	2.3	7	2.5	11.6	11.6	14	33.4	3.0	8.5	3.3	13	13	50.03		
R3	140 to 600	2M	4.5	14.3	5	22	22	31	43.5	6.4	19	7	25	25	65.25		
S7	200 to 1000	2M	4.8	14.5	5	23	23	34	44.4	6.7	19	7.5	28	28	65.26		

TABLE 10D
MODELS 202, 203
ADJUSTABLE SWITCHING DIFFERENTIAL

Due to manufacturing tolerances the figures quoted in these tables are for guidance only. Should the differential be critical for specific applications our engineers should be consulted prior to ordering.

Explosionproof models may be up to 2 times higher depending on the range. Should the differential be critical for specific applications our engineers should be consulted prior to ordering.

		TABLE 10D															
Range Code	Range psi/in.Hg/in.H ₂ O	Wetted parts Code	202								203						
			SPDT ONLY				SPDT OPTIONS				DPDT OPTIONS						
			OC		OD		O2 or O4		O3 or O5								
			Min	Max	Min	Max	Min	Max	Min	Max							
AB	-30 to 0	2	0.80	2.2	2.4	5.4	5.0	14.5	7.5	14.5							
BU	-5 to +5	2M	N/A	N/A	N/A	N/A	3.5	10	4	10							
GK	-30 to +20	1	1.0	2.7	3.0	7.0	10	21	16	21							
GK	-30 to +20	2	0.45	1.1	1.2	2.9	10	21	16	21							
CP	1 to 10	2M	N/A	N/A	N/A	N/A	3.5	10	4	10							
E4	2 to 50	1	N/A	N/A	N/A	N/A	5.5	24	8	24							
E4	2 to 50	2M	N/A	N/A	N/A	N/A	10	24	15	24							
E7	1 to 5	2M	0.06	0.20	0.16	0.33	1.5	29	2.1	2.9							
GP	1 to 20	2M	0.16	0.50	0.5	0.95	2.2	10	3.3	10							
J3	2 to 60	2M	1.0	2.6	2.9	6.6	6	29	9	29							
M4	3 to 100	1	0.86	2.4	2.6	5.9	9	50	13	50							
M4	3 to 100	2M	1.0	2.7	3.0	7.0	9	50	13	50							
PB	4 to 200	1	1.75	4.8	5.3	12	15	100	22	100							
PB	4 to 200	2M	2.1	4.9	6.5	14.5	15	100	22	100							
QB	85 to 400	2M	4.3	11.5	13.5	30	30	180	44	180							
RB	140 to 600	2M	8.9	24	26	60	75	290	110	290							
SB	200 to 1000	2M	9.33	24	28	65	75	500	110	500							

TECHNICAL DATA

ACCURACY

Set point repeatability $\pm 0.5\%$ of full scale at 20°C ambient.
Scale accuracy $\pm 2\%$ of full scale.

AMBIENT TEMPERATURE RANGE

All models are suitable for operating within a range of ambient temperature from -25 to +60°C (-13 to +140°F). Special build available for temperatures down to -60°C (-76°F)

CAUTION:

Moving parts have been treated with a water repelling lubricant before leaving factory. Occasional inspection and the application of a water repelling lubricant is recommended to ensure moving parts remain free under all conditions.

WARNING: Does not apply to Oxygen Services, see Table 8.

ELECTRICAL CONNECTIONS

Terminal block

Cable entry is to a non-pinching block made of a non-hygroscopic thermosetting plastic, suitable for cables up to 2.5mm²/14AWG.

Earthing/Grounding

An earthing facility is provided.

Dielectric Strength

The electrical assembly is capable of withstanding *2kV between live parts and earth/ground and 500V between open contacts.

*1.2kV for microswitch Codes HP, HQ, HT, H2, H3 and H6. Refer to Table 6.

MAXIMUM PROCESS TEMPERATURE

Whilst the component parts withstand +60°C (+140°F), process temperatures up to +120°C (+248°F) are subject to appropriate installation practice.

Electrical Entry

Standard options are listed in Table 3. Pg, UNI and ET threads can be accommodated by adaptors. Dual entry available on some enclosures.

OPTIONAL EXTRAS

Chemical Seals

Chemical Seals of our own or proprietary manufacture can be fitted when required.

Mounting





Position/Location/Installation

Vertical as shown, **in dimensions**, taking care to avoid siting in locations that transmit excessive shock or vibration. For further advice contact our engineers.

UNIT WEIGHTS

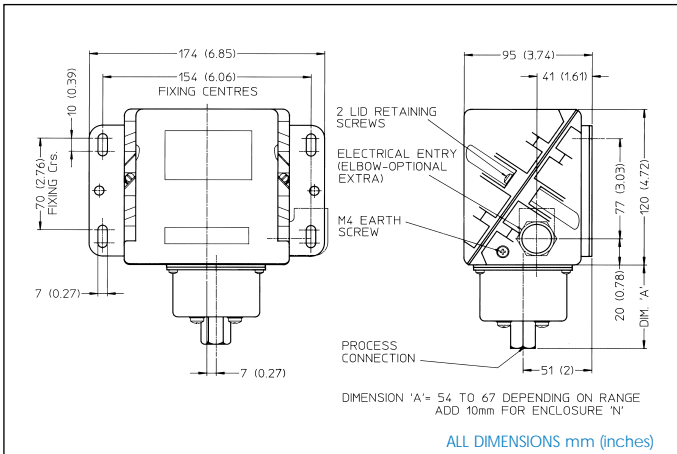
ENCLOSURES (Approx.)	
'W' & 'N'	3.1kg/6.8lb
'A'	3.9kg/8.6lb
'H'	4.6kg/10.2lb
'K'	9.4kg/20.7lb
'M'	9.9kg/21.8lb

APPROVALS

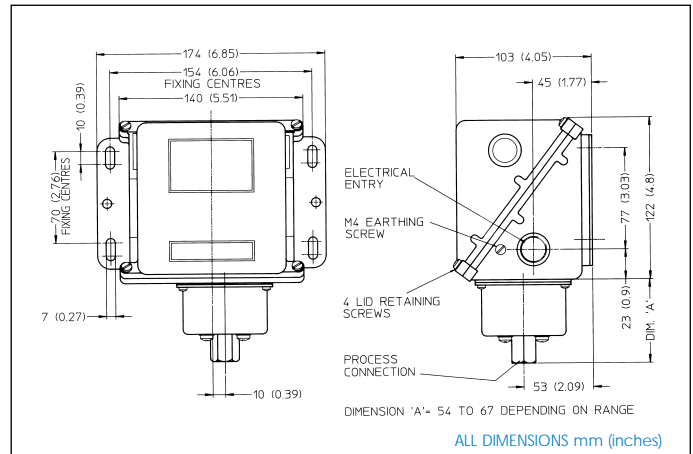
<p>CENELEC/BASEEFA  </p> <p>BASEEFA certified to CENELEC EN50 014 and EN50 018. for use in Zone 1 hazardous areas.</p> <p>Enclosure Codes H and K and all models. BASEEFA No. Ex 86B 1341</p>
<p>BASEEFA certified to BS 4683 Part 3. </p> <p>For use in ZONE 2 hazardous areas.</p> <p>Enclosure Code N. BASEEFA No. Ex 77019/B</p>
<p>HSE (M) certified to BS 4683. </p> <p>For use in group 1 (Mining) applications. Enclosure Code M HSE No. FLP 78011</p>
<p>AUSTRALIAN (SAA) APPROVAL Standard Association of Australia Explosion protection Electrical Equipment Type of Protection Ex d IIC T6</p> <p>Cert No. AUS Ex1137</p>

DIMENSIONS

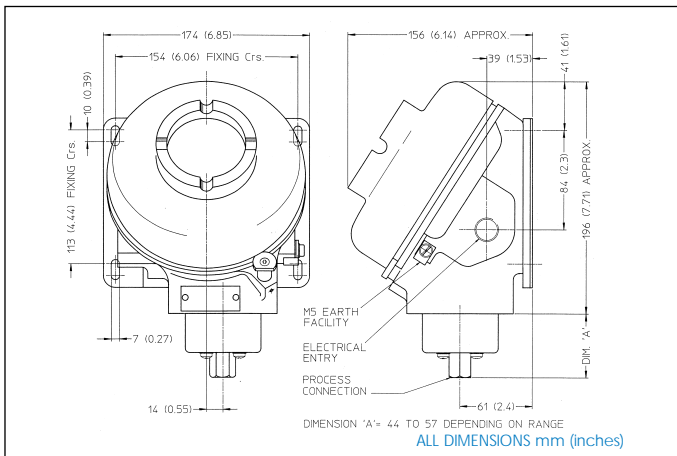
'W & N' ENCLOSURES



'A' ENCLOSURE



'H, K & M' ENCLOSURES



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DELTA CONTROLS LIMITED, ISLAND FARM AVENUE, WEST MOLESEY, SURREY KT8 2UZ
 TEL: +44 (0)20 8939 3500 FAX: +44 (0)20 8783 1163
 E-MAIL: sales@delta-controls.com WEB SITE: www.delta-controls.com

Registered Office Registered in England No. 486464

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