Blind Pressure & Differential Pressure Switches

PRISMA Instruments
& Gauge Bourdon France

GENERAL has been designing & manufacturing reliable, high quality diaphragm type blind pressure switches to suit to most of the industrial applications for accurate control of the process equipments. Rigorous and continuous tests are conducted for design and quality conformance.

BLIND PRESSURE SWITCH

Application Area:
Safety, Alarming & Tripping of following systems

- Compressors, Pumps
- Turbines, Generators
- Boilers, etc…
- Fluid Power/Hydraulics
- High/Low Limit level staging functions.

BLIND DIFFERENTIAL PRESSURE SWITCH

Application Area:
Loss of pressure due to choking

- Across Filters
- Across Blowers
- Across Orifice Plates, Nozzle & Venturi
- Across water steam interface in boilers etc…

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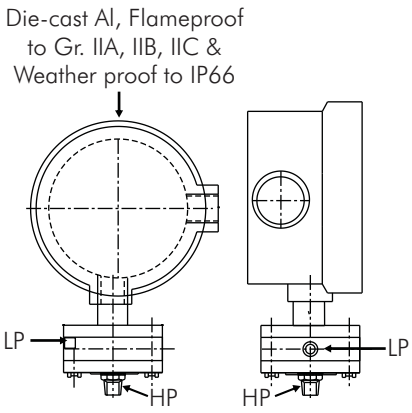
Blind Pressure & Differential Pressure Switches



Blind Differential Pressure Switch (Flameproof)

Specifications

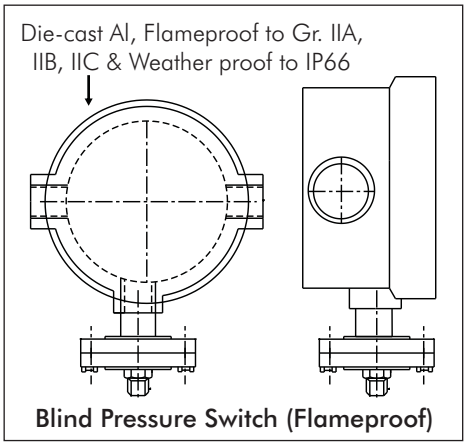
Standard	BS-6134:1991
Repeat Accuracy	+/- 0.5% FSR
Scale Accuracy	+/- 3% FSR
Static pressure	Generally Static pressure provided 150% FSR, on request maximum Static pressure of 100Kg / cm^2 can be offered for screwed type process connection, shift of +/-2% in set point will be observed after pressure falls from Static pressure. For Flanged type connection maximum Static pressure can be 150% FSR or as per Flange rating whichever is higher.
Ambient Temp	(-)20°C to 70°C
Process Temp	(-)20°C to 170°C for SS wetted parts with Teflon Seal
Set Point	Adjustable from 20 to 80% for better performance.
High Voltage Strength	Withstands 0.5 KV between open contact for 1 Sec & 2 KV between terminals and earth for one minute.
Insulation Resistance	>10 M Ohms at 500VDC
Intrinsic Safety	Switches are classified as Simple Electrical Apparatus as per BS-5345 and suitable to be used in intrinsically safe equipments/systems without certification.
Mounting	Surface mounting /Pipe/Field.
Enclosure	Weatherproof IP67 / Flameproof IIA, IIB, IIC

Notes:

1. Gr.IIA & IIB T6 as per IS 2148-2004 (IEC-60079:2001) & W/p to IP 66 as per IS12063-1987 (equivalent to NEC CL.1,Gr.C & D.)
2. Gr.IIC,T6 as per IS 2148-2004(IEC-60079:2001) & W/p to IP66 as per IS12063-1987 (equivalent to NEC CL.1, DIV.1, Gr.A & B.)
3. Weatherproof enclosure is effective only if all entries and joint faces are properly sealed. Flameproof enclosure is weatherproof only if cover 'O' ring is retained in position and proper flameproof cable gland is used. It is recommended to procure cable glands along with flameproof instruments to avoid neglect of it while installation.
4. Accuracy & repeatability are one and the same for all blind differential pressure switches. A shift of ±2% may be observed in set point when pressure falls from full static pressure. Settings will also shift with varying temperature.
5. The instrument is calibrated in the mounting position depicted in the drawing. Hence mounting in any other direction will cause a minor range shift, especially in low and compound ranges.

Blind Pressure & Differential Pressure Switches

6. A pressure switch is a switching device and not a measuring instrument - even though it has a scale to assist setting. For this reason, Test Certificates will not contain individual ON-OFF switching values at different scale readings. Maximum differential obtained alone will be declared, besides other specifications.
7. Switching differentials furnished are nominal maximum values under test conditions at mid-scale and will vary with range settings and operating conditions.
8. On & off setting should not exceed the upper or lower range of the span.
9. Ambient temperature range: All models are suitable for operating within a range of ambient temperature from (–) 20°C to (+) 70°C provided the process fluid does not freeze within this range. Below 0°C, precautions should be taken in humid atmospheres to prevent frost formation inside the instrument from jamming the mechanism. Occasional excursions beyond this range are possible but accuracy might be impaired. The microswitch is the limiting factor which should never exceed the limits (–) 25°C to (+) 80°C.
10. Fluid Temperature: A pressure switch connected to the main pipe is not subjected to the flow and therefore is not fully exposed to the fluid temperature. Use of adequate length of impulse piping will greatly reduce excessive heating of the sensing element. For e.g., connection of 7.5 cm of 12 mm dia impulse piping will reduce water temperature of 100°C to 65°C at an ambient temperature of 50°C.
11. Ensure that impulse pipe work applies no stress on sensing element housing and use spanners to hold pressure port / housing when connections are made.
12. Select the range of the instrument such that the set value lies between 35 to 65% of the FSR.
13. Scale Markings are for guidance only. Set the correct set value against precision master gauge.



Blind Pressure Switch (Flameproof)

Features and Benefits

Complete Product Line	Standard models and customized specials cover pressure range from 760 mm Hg VAC to 350 kg/cm^2.
Robust Construction	Rugged, high-cycle rate tolerance, long life, not critical to vibration, high overrange and proof pressures, excellent corrosion resistance to hostile environments.
Instrument Quality	High resolution of Set Points, high repeatability, narrow dead band, negligible temperature effect.
Wetted Parts	Wide selection materials, process connection configurations and sizes. Optional “fire-safe” pressure sensor.
Snap-Action Electrical Switching	Wide selection UL Listed and CSA Certified switching elements for AC and DC service. Optional “hermetically sealed” capsule for hazardous and hostile environments.
Field Adjustable	Self-locking adjustment, no special tools required. No-charge factory calibration.
Cost Effective	Simple and fast installation without special tools, long service life, no required periodic service or spare parts.
Built-In Quality	Rigid quality standards maintained from raw material to finished product.
Service	Factory sales engineers and area SOR representatives provide effective and prompt worldwide service.
Delivery	Routine shipments 7 to 10 working days. Emergency shipments via same day air.

Ordering Code (How to order)

GF	SS	010	W	103	WGE	SX	86S	IK	P
Type	Series	Range	Enclosure Type	Switch Type	Conduit Entry	Sensor	Process Connection	Switch Activation	Accessories

GF	BPS with fixed switching differential (select from Table I)
SS	BPS with Metal diaphragm (select from Table II)
010	1-10 kg/cm2 (select from Table III)
W	Weather proof (select from Table IV)
103	1 SPDT 15A 230VAC general purpose snap acting switch. (select from Table V)
WGE	1/2" NPT Brass nickel plated DCCG. (select from Table VI)
SX	SS316L Diaphragm with SS316 wetted parts & Teflon seal. (select from Table VII)
86S	1/2" NPT(M) SS316 process connections. (select from Table VIII)
IK	Calibration for increasing pressure in kg/cm2 (select from Table IX)
P	2" Pipe mounting Bracket. (select from Table X)

NOTE : Specifications are subject to change without prior notice due to continuous product development.

Model Selection Guide

Please select one code from each of the following tables to complete the model selection

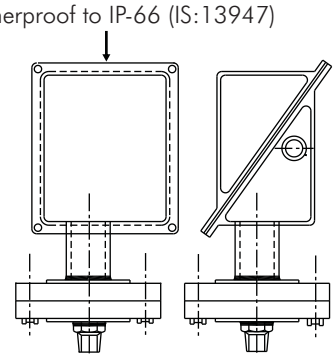
Table I : Model

DESCRIPTION	CODE
Blind pressure switch with fixed switching differential	GF
Blind pressure switch with adjustable switching differential	GA
Blind differential pressure switch with fixed switching differential	DF
Blind differential pressure switch with adjustable switching differential	DA

Table II : Series

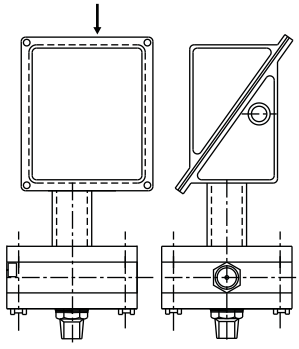
DESCRIPTION	CODE
Pressure switch Metal diaphragm	SS
Differential pressure switch Metal diaphragm	DS
Pressure switch Rubber diaphragm	SR
Differential pressure switch Rubber diaphragm	DR

Die-cast Aluminium,
Weatherproof to IP-66 (IS:13947)



Blind Pressure Switch (Weatherproof)

Die-cast Aluminium,
Weatherproof to IP-66 (IS:13947)



Blind Differential Pressure Switch (Weatherproof)

Table III : Ranges

RANGE	Availability	COD	Dimensional Details of Sensor System	
			BPS L x D	BDPS L x D
-0.9 to 0 kg/cm2	In SS series	VP9	60 x 60	90 x 60
-0.9 to 1.5 kg/cm2	In SS series	C15	60 x 60	90 x 60
-0.5 to 0.5 kg/cm2	In SS series	CP5	60 x 60	90 x 60
-200 to +200 mm WC	In all series	C02	105 x 50	110 x 65
-400 to +400 mmWC	In all series	C04	105 x 50	110 x 65
-800 to 0 mmWC	In all series	C08	105 x 50	110 x 65
20 to 200 mmWC	In all series	W02	105 x 40	110 x 55
40 to 400 mmWC	In all series	W04	105 x 40	110 x 55
50 to 500 mmWC	In all series	W05	105 x 40	110 x 55
100 to 1000 mmWC	In all series	W10	90 x 40	110 x 55
600 to 6000 mmWC	In all series	W60	65 x 40	110 x 55
0.05 to 0.16 kg/cm2	In all series	P16	90 x 40	110 x 55
0.08 to 0.4 kg/cm2	In all series	0P4	65 x 40	110 x 55
0.2 to 1 kg/cm2	In all series	001	60 x 40	80 x 55
0.2 to 2 kg/cm2	In all series	002	60 x 40	80 x 55
0.4 to 4 kg/cm2	In all series	004	60 x 40	80 x 55
0.6 to 6 kg/cm2	In all series	006	60 x 40	80 x 55
1.0 to 10 kg/cm2	In SS series	010	60 x 40	80 x 55
1.5 to 15 kg/cm2	In SS series	015	60 x 40	-
2.0 to 20 kg/cm2	In SS series	020	45 x 40	-
2.0 to 25 kg/cm2	In SS series	025	45 x 40	-
4.0 to 40 kg/cm2	In SS series	040	45 x 40	-
6.0 to 60 kg/cm2	In SS series	060	35 x 40	-
10 to 100 kg/cm2	In SS series	100	35 x 40	-
10 to 160 kg/cm2	In SS series	160	35 x 40	-
20 to 200 kg/cm2	In SS series	200	35 x 40	-
25 to 250 kg/cm2	In SS series	250	35 x 40	-
35 to 350 kg/cm2	In SS series	350	35 x 40	-

NOTE : For other ranges please contact to factory

Table IV : Type of Enclosure

DESCRIPTION	CODE
Weather proof with die-cast Aluminium with epoxy powder coated conforming to IP-67 protection in accordance with IS:13947 Part I, 1993	W
Flame proof & weather proof with die cast Aluminium with epoxy powder coating conforming to IP-66 protection – suitable to gas group I, IIA, IIB (NEC Cl. 1, Div 1, Gr C & D), as per IS 2148-2004 (IEC-60079:2001) & W/p to IP 66 as per IS12063-1987 (equivalent to NEC CL.1, Gr.C & D).	F
Flame proof & weather proof with die cast Aluminium with epoxy powder coating conforming to IP-66 protection – suitable to gas group IIC (NEC Cl. 1, Div 1, Gr B, C & D), as per IS 2148-2004 (IEC-60079:2001) & W/p to IP 66 as per IS12063-1987 (equivalent to NEC CL.1, Gr.C & D).	C

Table V : Type of Micro Switch

DESCRIPTION	CODE	AVAILABILITY IN MODELS	A.C.RATING	D.C.RATING		
				Volt -	Current Resistive	Inductive
1-SPDT general purpose	**100**	GF/GD	5A-250VAC	220	0.25A	0.03A
				110	0.50A	0.07A
				24	5.0A	3.00A
2-SPDT general purpose	**200**	GF/GD	5A-250VAC	220	0.25A	0.03A
				110	0.50A	0.07A
				24	5.0A	3.00A
1-SPDT-low switching differential	**101**	GF/GD/GA/DA	15A-250 VAC	220	0.2A	0.03A
				110	0.4A	0.03A
				24	2.0A	1.00A
2-SPDT-low switching differential	**201**	GF/GD/GA/DA	15A-250VAC	220	0.2A	0.03A
				110	0.4A	0.03A
				24	2.0A	1.00A
1-SPDT-General Purpose	**102**	GF/GD/GA/DA	5A-250VAC	220	0.25A	0.1A
				110	0.5A	0.2A
				24	8A	7A
2-SPDT-General Purpose	**202**	GF/GD/GA/DA	5A-250VAC	220	0.25A	0.1A
				110	0.5A	0.2A
				24	8A	7A
SPDT-General Purpose	**103**	GF/GD/GA/DA	15A-250VAC	220	0.25A	0.1A
				110	0.5A	0.2A
				24	8A	7A
2-SPDT-General Purpose	**203**	GF/GD/GA/DA	15A-250VAC	220	0.25A	0.1A
				110	0.5A	0.2A
				24	8A	7A
1-SPDT- Very low switching differential	**104**	GF/GD	10A-250 VAC	220	0.2A	0.03A
				110	0.4A	0.03A
				24	2.0A	1.00A
2-SPDT- Very low switching differential	**204**	GF/GD	10A-250 VAC	220	0.2A	0.03A
				110	0.4A	0.03A
				24	2.0A	1.00A
SPDT-Gold Contact	**105**	GF/GD/GA/DA	1A-250VAC	N/A		
2-SPDT-Gold Contact	**205**	GF/GD/GA/DA	1A-250VAC	N/A		
SPDT-General Purpose	**106**	GF/GD/GA/DA	10A-250VAC	30	6A	6A
2-SPDT-General Purpose	**206**	GF/GD/GA/DA	10A-250VAC	30	6A	6A
1-DPDT.	**107**	GF/GD/GA/DA	10A-250 VAC	250	0.2A	0.01A
				125	0.3A	0.02A
				24	6.0A	1.00A
1-SPDT environmentally sealed	**108**	GF/GD	5A-250VAC		Consult Factory	
2-SPDT environmentally sealed	**208**	GF/GD	5A-250VAC		Consult Factory	
Any special requirement	**XXX**	N/A	N/A		N/A	

NOTE : For 2nos SPDT version +/-2% FSR variation can be observed between two micro switch change overs.

Table VI : Type of Electrical Entry

Please specify entry/gland as per the code given below.
SCCG : Single compression cable gland **DCCG** : Double compression cable gland.

DESCRIPTION	W/P	CODE FLP(IIA/IIB)	FLP(IIC)
SCCG WSS	-	-	-
3/8"BSPF	W1S	F11	C11
¾" ETF W11	F1S	C1S	
½" BSPF	W12	F12	C12
½" NPTF	W13	F13	C13
¾" BSPF	W14	F14	C14
¾" NTPF	W15	F15	C15
¾"ET DCCG Brass	WGA	FGA	CGA
¾"ET DCCG SS	WGB	FGB	CGB
½"BSP DCCG Brass	WGC	FGC	CGC
½"BSP DCCG SS	WGD	FGD	CGD
½"NPT DCCG Brass	WGE	FGE	CGE
½"NPT DCCG SS	WGF	FGF	CGF
¾"NPT DCCG Brass	WGG	FGG	CGG
¾"NPT DCCG SS	WGH	FGH	CGH
¾"BSP DCCG Brass	WGI	FGI	CGI
¾"BSP DCCG SS	WGJ	FGJ	CGJ
4 Pin Connector*	4PC	-	-
7 Pin connector*	7PC	-	-

a) On request SCCG-shall be provided for weather proof housing : use CODE as "WSS"

b) For "double entry" please insert number "2" in middle position of the code. (e.g- CODE X2X)

c) For "double entry" but one entry plugged insert letter "P" in middle position (e.g-CODE XPX).

d) For flameproof enclosure entry is directly provided on the housing.

e) Specify "99X" for any special requirement.

f) *For 4 & 7 pin connector option please replace P by R for 47 Kohms resistor (Between two contacts).

g) *For 4 & 7 pin connector option replace C by G for gold contacts.

Table VII : Sensor System (Diaphragm & Wetted Parts)

DESCRIPTION	CODE
SS316L diaphragm with SS304 wetted parts & teflon seal	SS
SS316L diaphragm with SS316 wetted parts & teflon seal	SX
Neoprene diaphragm and Aluminium wetted parts with nitrile seal	NA
Silicone diaphragm and Aluminium wetted parts with teflon seal	SA
EPDM diaphragm and Aluminium wetted parts with teflon seal	EA
Viton diaphragm and Aluminium wetted parts with teflon seal	VA
Monel diaphragm with Monel wetted parts& teflon seal.	MM
Hastelloy diaphragm with Hastelloy wetted parts & teflon seal.	HH
Any other special construction (Please specify complete details separately)	XX

NOTE :
1. Range code VP9, C15 & CP5 wetted parts other than SS304, SS316, SS316L are possible with Chemical seal.
2. Range code CO2,CO4, CO8, are possible with SS304, SS316, SS316L, Alu only.
3. Wetted Parts can be proved confirming to NACE MR-01-75 as optional.

Table VIII : Type of Process Connection Required

XOA-AIUMINUM X4S-SS304 X6S-SS316

SIZE	BSP(F)	BSP(M)	NPT(F)	NPT(M)
1/4"	10A 14S 16S	20A 24S 26S	30A 34S 36S	40A 44S 46S
1/2"	50A 54S 56S	60A 64S 66S	70A 74S 76S	80A 84S 86S

Special Mention 99X for selection other than the above
¼" BSP (F) is standard. Any other connections will be provided with suitable adaptors.

Table IX : Calibration / Units

DESCRIPTION	CODE
Calibration in increasing pressure in kg/cm2	IK
Calibration in decreasing pressure in kg/cm2	DK
Calibration in increasing pressure in bar	IB
Calibration in decreasing pressure in bar	DB

For any other pressure units please specify IX - for increasing and DX - for decreasing

Table X : Accessories

TYPE	CODE
Snubber	S
Syphon	Y
Manifold	M
Chemical seal	C
SS Tag plate	T
Surface Mounting bracket	B
2" Pipe mounting bracket	P
Any other	X
No accessory	O

Switching Differential Chart :
Direct Pressure Switch, Fixed Differential

RANGE	AVAILABILITY IN SERIES	Micro Switch CODE						
		100	101	102	103	104	105	106
-0.9 to 0 kg/cm2	SS	0.20	0.10	0.40	0.40	0.06	0.40	0.40
-0.9 to 1.5 kg/cm2	SS	0.20	0.10	0.40	0.40	0.06	0.40	0.40
-0.5 to 0.5 kg/cm2	SS	0.20	0.10	0.40	0.40	0.06	0.40	0.40
-200 to +200 mmWC	SS, SR	90	100	-	-	100	-	-
-400 to +400 mmWC	SS, SR	150	100	-	-	100	-	-
-800 to 0 mmWC	SS, SR	200	150	-	-	100	-	-
20 to 200 mmWC	SS, SR	100	60	-	-	50	-	-
40 to 400 mmWC	SS, SR	100	100	-	-	50	-	-
50 to 500 mmWC	SS, SR	100	100	-	-	50	-	-
100 to 1000 mmWC	SS, SR	120	100	-	-	80	-	-
0.05 to 0.16 kg/cm2	SS, SR	0.015	0.015	0.06	0.06	0.012	0.06	0.06
0.08 to 0.4 kg/cm2	SS, SR	0.045	0.025	0.06	0.06	0.010	0.06	0.06
60 to 600 mBar	SS, SR	50	30	70	70	15	70	70
0.2 to 1 kg/cm2	SS, SR	0.15	0.080	0.30	0.30	0.05	0.30	0.30
0.2 to 2 kg/cm2	SS	0.20	0.10	0.40	0.40	0.05	0.40	0.40
0.4 to 4 kg/cm2	SS	0.40	0.30	0.50	0.50	0.10	0.50	0.50
0.6 to 6 kg/cm2	SS	0.50	0.40	0.60	0.60	0.20	0.60	0.60
1.0 to 10 kg/cm2	SS	0.70	0.60	0.80	0.80	0.40	0.80	0.80
1.5 to 15 kg/cm2	SS	1.00	0.80	2.00	2.00	0.60	2.00	2.00
2.0 to 20 kg/cm2	SS	2.00	1.20	3.00	3.00	1.00	3.00	3.00
2.0 to 25 kg/cm2	SS	3.00	1.50	4.00	4.00	1.50	4.00	4.00
4.0 to 40 kg/cm2	SS	3.00	1.50	4.00	4.00	1.50	4.00	4.00
6.0 to 60 kg/cm2	SS	5.00	3.00	7.00	7.00	2.00	7.00	7.00
10 to 100 kg/cm2	SS	7.00	4.00	8.00	8.00	3.00	8.00	8.00
10 to 160 kg/cm2	SS	8.00	5.00	9.00	9.00	4.00	9.00	9.00
20 to 200 kg/cm2	SS	9.00	6.00	11.00	11.00	5.00	11.00	11.00
25 to 250 kg/cm2	SS	10.0	7.00	12.00	12.00	6.00	12.00	12.00
35 to 350 kg/cm2	SS	15.0	12.00	20.00	20.00	-	-	-

NOTE :
1. Switching differential for 2SPDT & flameproof is 1.5 times that of 1SPDT
2. Switching differentials are nominal maximum values at mid-point and change along the set points

Switching Differential Chart :
Direct Pressure Switch, Adjustable Differential

RANGE	AVAILABILITY IN SERIES	Micro Switch CODE 101	102	103	106
-0.9 to 0 kg/cm2	SS	0.1-0.4	0.4-0.8	0.4-0.8	0.4-0.8
-0.9 to 1.5 kg/cm2	SS	0.1-0.4	0.4-0.8	0.4-0.8	0.4-0.8
-0.5 to 0.5 kg/cm2	SS	0.1-0.4	0.4-0.8	0.4-0.8	0.4-0.8
-200 to +200 mmWC	SS, SR	100-200	-	-	-
-400 to +400 mmWC	SS, SR	100-300	-	-	-
-800 to 0 mmWC	SS, SR	200-500	-	-	-
20 to 200 mmWC	SS, SR	60-100	-	-	-
40 to 400 mmWC	SS, SR	100-300	-	-	-
50 to 500 mmWC	SS, SR	100-300	-	-	-
100 to 1000 mmWC	SS, SR	100-500	-	-	-
0.05 to 0.16 kg/cm2	SS, SR	0.02-0.06	-	-	-
0.08 to 0.4 kg/cm2	SS, SR	0.05-0.06	0.08-0.2	0.08-0.2	0.08-0.2
60 to 600 mBar	SS, SR	30-60	90-300	90-300	90-300
0.2 to 1 kg/cm2	SS, SR	0.08-0.30	0.3-0.6	0.3-0.6	0.3-0.6
0.2 to 2 kg/cm2	SS	0.1-0.3	0.4-1	0.4-1	0.4-1
0.4 to 4 kg/cm2	SS	0.3-1	0.5-2	0.5-2	0.5-2
0.6 to 6 kg/cm2	SS	0.4-2	0.6-3	0.6-3	0.6-3
1.0 to 10 kg/cm2	SS	0.6-2	1-5	1-5	1-5
1.5 to 15 kg/cm2	SS	0.8-3	2-8	2-8	2-8
2.0 to 20 kg/cm2	SS	1.2-5	3-12	3-12	3-12
2.0 to 25 kg/cm2	SS	1.5-6	4-12	4-12	4-12
4.0 to 40 kg/cm2	SS	1.5-6	5-25	5-25	5-25
6.0 to 60 kg/cm2	SS	3-6	7-30	7-30	7-30
10 to 100 kg/cm2	SS	4-8	8-50	8-50	8-50
10 to 160 kg/cm2	SS	5-8	10-80	10-80	10-80
20 to 200 kg/cm2	SS	6-10	12-100	12-100	12-100
25 to 250 kg/cm2	SS	7-10	50-150	50-150	50-150

Switching Differential Chart :
Differential Pressure Switch, Fixed Differential

RANGE	AVAILABILITY IN SERIES	Micro Switch CODE 100	101	102	103	104	105	106
-0.9 to 0 kg/cm2	DS	0.20	0.10	0.40	0.40	0.06	0.40	0.40
-0.9 to 1.5 kg/cm2	DS	0.20	0.10	0.40	0.40	0.06	0.40	0.40
-0.5 to 0.5 kg/cm2	DS	0.20	0.10	0.40	0.40	0.06	0.40	0.40
-200 to +200 mmWC	DS, DR	90	100	-	-	100	-	-
-400 to +400 mmWC	DS, DR	150	100	-	-	100	-	-
-800 to 0 mmWC	DS, DR	200	150	-	-	100	-	-
20 to 200 mmWC	DS, DR	100	60	-	-	50	-	-
40 to 400 mmWC	DS, DR	100	100	-	-	50	-	-
50 to 500 mmWC	DS, DR	100	100	-	-	50	-	-
100 to 1000 mmWC	DS, DR	120	100	-	-	80	-	-
0.05 to 0.16 kg/cm2	DS, DR	0.015	0.015	0.06	0.06	0.012	0.06	0.06
0.08 to 0.4 kg/cm2	DS, DR	0.045	0.025	0.06	0.06	0.010	0.06	0.06
60 to 600 mBar	DS, DR	50	30	70	70	15	70	70
0.2 to 1 kg/cm2	DS, DR	0.15	0.080	0.30	0.30	0.05	0.30	0.30
0.2 to 2 kg/cm2	DS	0.20	0.10	0.40	0.40	0.05	0.40	0.40
0.4 to 4 kg/cm2	DS	0.40	0.30	0.50	0.50	0.10	0.50	0.50
0.6 to 6 kg/cm2	DS	0.50	0.40	0.60	0.60	0.20	0.60	0.60
1.0 to 10 kg/cm2	DS	0.70	0.60	0.80	0.80	0.40	0.80	0.80

Switching Differential Chart :
Differential Pressure Switch, Adjustable Differential

RANGE	AVAILABILITY IN SERIES	Micro Switch CODE 101	102	103	106
-0.9 to 0 kg/cm2	DS	0.1-0.4	0.4-0.8	0.4-0.8	0.4-0.8
-0.9 to 1.5 kg/cm2	DS	0.1-0.4	0.4-0.8	0.4-0.8	0.4-0.8
-0.5 to 0.5 kg/cm2	DS	0.1-0.4	0.4-0.8	0.4-0.8	0.4-0.8
-200 to +200 mmWC	DS, DR	100-200	-	-	-
-400 to +400 mmWC	DS, DR	100-300	-	-	-
-800 to 0 mmWC	DS, DR	200-500	-	-	-
20 to 200 mmWC	DS, DR	60-100	-	-	-
40 to 400 mmWC	DS, DR	100-300	-	-	-
50 to 500 mmWC	DS, DR	100-300	-	-	-
100 to 1000 mmWC	DS, DR	100-500	-	-	-
0.05 to 0.16 kg/cm2	DS, DR	0.02-0.06	-	-	-
0.08 to 0.4 kg/cm2	DS, DR	0.05-0.06	0.08-0.2	0.08-0.2	0.08-0.2
60 to 600 mBar	DS, DR	30-60	90-300	90-300	90-300
0.2 to 1 kg/cm2	DS, DR	0.08-0.30	0.3-0.6	0.3-0.6	0.3-0.6
0.2 to 2 kg/cm2	DS	0.1-0.3	0.4-1	0.4-1	0.4-1
0.4 to 4 kg/cm2	DS	0.3-1	0.5-2	0.5-2	0.5-2
0.6 to 6 kg/cm2	DS	0.4-2	0.6-3	0.6-3	0.6-3
1.0 to 10 kg/cm2	DS	0.6-2	1-5	1-5	1-5

Glossary of Terms

Adjustable Range
The span of pressure between upper and lower limits within which the pressure switch can be adjusted to actuate/deactuate. It is expressed for increasing pressure.

Dead Band
The difference in pressure between the increasing Set Point and the decreasing Set Point. It is expressed as typical, which is an average with the increasing Set Point at mid-range for a pressure switch with the standard K switching element. It is normally fixed (non-adjustable).

DPDT Switching Element
DPDT is two synchronized SPDT switching elements which actuate together at increasing Set Point and deactuate together at decreasing Set Point. Discrete SPDT switching elements allow two independent circuits to be switched; i.e., one AC and one DC.

Fire-Safe
The ability of a welded seal pressure sensor to contain the process at elevated temperatures up to 1200°F at the rated overrange pressure, unsupported by the body of the pressure switch.

Pressure Switch
A bi-stable electromechanical device that actuates/deactuates one or more electrical switching element(s) at a predetermined discrete pressure/vacuum (Set Point) upon rising or falling pressure/vacuum.

Proof Pressure
The maximum input pressure that can be continuously applied to the pressure switch without causing leakage or catastrophic material failure. Permanent change of Set Points may occur, or the device may be rendered inoperative.

Repeatability
The ability of a pressure switch to successively operate at a Set Point that is approached from a starting point in the same direction and returns to the starting point over three consecutive cycles to establish a pressure profile. Repeatability on SOR switches will be smaller than 1% of full scale per ISA/ANSI S51.1.

Set Point
That discrete pressure at which the pressure switch is adjusted to actuate/deactuate on rising or falling pressure. It must fall within the adjustable range and be called out as increasing or decreasing pressure.

SPDT Switching Element
Single-Pole, Double Throw (SPDT) has three connections: C - Common, NO - Normally Open and NC - Normally Closed, which allows the switching element to be electrically connected to the circuit in either NO or NC state.

Overrange
The maximum input pressure that can be continuously applied to the pressure switch without causing permanent change of Set Point, leakage or material failure.

The synchronization linkage is factory set, and is not field adjustable. Synchronization is verified by connecting test lamps to the switching elements and observing them go “On” simultaneously at actuation and “Off” simultaneously at deactuation.