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G & L-Series Pressure Switches

FEATURES

TYPICAL USES



L-Series
Watertight Enclosure
Pressure Switch



L-Series
Watertight Enclosure
Differential Pressure Switch



G-Series
Watertight Enclosure
Pressure Switch



G-Series
Watertight Enclosure
Differential Pressure Switch

SPECIFICATIONS

Set Repeatability (Accuracy):	±1% of span (Additional setpoint shift of ±1% of range per 50°F from initial setpoint set at 70°F typical)
Switch Type:	SPDT or 2 SPDT with independent setpoints, or 2 SPDT acting as DPDT (X2C)
Setpoint:	Single setpoint, fixed deadband Single setpoint, adjustable deadband Independent setpoint, fixed deadband
Deadband:	Fixed or adjustable deadband
Enclosure Ratings:	G Series - NEMA 4X, IP66 L Series - NEMA 4X, IP66
Enclosure Material:	G Series - 316L Stainless steel L Series - Epoxy coated aluminum
Process Connection:	¼ NPT Female, ½ NPT Female, ¼ NPT Female and ½ NPT Male Combination
Electrical Termination:	¾ NPT Female

APPROVALS

Watertight:	L Series - UL, CSA, FM, CE, RoHS, CRN G Series - UL, CSA, CE, RoHS, CRN

KEY BENEFITS

- **316L SS (G-Series) or epoxy-coated aluminum (L-Series) enclosures provide added protection in harsh environments**
- **Designed for use in wide range of applications**
- **Easily configurable to meet your application requirements**
- **Hermetically sealed micro switches offer improved reliability and safety (UL Class I Div II approval)**

WETTED COMPONENTS

Actuator Seal	Process Connection:	
	Pressure Switches	**Differential Switches**
Buna-N®, Teflon®, Viton®, 316L SS, or Monel®	316L SS or Monel® for psi ranges Epoxy coated carbon steel or 316L SS for IW ranges	Nickel plated brass or 316L SS for psid ranges Epoxy coated carbon steel or 316L SS for IWD ranges

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ORDERING CODE Example:	GPSN4	G	S	25	X6B	100#
Enclosure – Pressure Switch						
GPSN4 - Single setpoint, fixed deadband, N4 - NEMA 4, 4X, IP66	GPSN4					
GPAN4 - Single setpoint, adjustable deadband, N4 - NEMA 4, 4X, IP66						
GPDN4 - Two independent adjustable setpoints, fixed deadband, N4 - NEMA 4, 4X, IP66						
LPSN4 - Single setpoint, fixed deadband, N4 - NEMA 4, 4X, IP66						
LPAN4 - Single setpoint, adjustable deadband, N4 - NEMA 4, 4X, IP66						
LPDN4 - Two independent adjustable setpoints, fixed deadband, N4 - NEMA 4, 4X, IP66						
Enclosure – Differential Pressure Switch						
GDSN4 - Single setpoint, fixed deadband, N4 - NEMA 4, 4X, IP66						
GDAN4 - Single setpoint, adjustable deadband, N4 - NEMA 4, 4X, IP66						
GDDN4 - Two independent adjustable setpoints, fixed deadband, N4 - NEMA 4, 4X, IP66						
LDSN4 - Single setpoint, fixed deadband, N4 - NEMA 4, 4X, IP66						
LDAN4 - Single setpoint, adjustable deadband, N4 - NEMA 4, 4X, IP66						
LDDN4 - Two independent adjustable setpoints, fixed deadband, N4 - NEMA 4, 4X, IP66						
Switch Elements For Single Setpoint with Adjustable Deadband - UL/CSA Listed						
H - General purpose, 10A - 125/250 Vac. ½A, 125Vdc, ¼A, 250Vdc						
J - Hermetically sealed, general pupose - 11A, - 125/250 Vac, 5A, 30Vdc						
Single/Dual Switch Setpoint with Fixed Deadband - UL/CSA Listed						
C/CC - Heavy duty ac, 22A - 125/250 Vac						
F/FF - Sealed environment proof, 15A - 125/250 Vac. (estimated dc rating - 4A, 28Vdc, not UL listed)						
G/GG - General purpose, 15A - 125/250/480 Vac, ½A - 125 Vdc, ¼A - 250 Vdc (not listed at 480 Vac)		G				
H/HH - General purpose, 10A - 125/250 Vac 10A, Vdc (P series only)						
J/JJ - Hermetically sealed switch, general purpose, 11A, 125/250 Vac, 5A, 30 Vdc						
K/KK - Narrow deadband, 15A - 125/250 Vac. (estimated dc rating, 0.4A, 120 Vdc, not UL listed)						
L/LL - Hermetically sealed switch, gold contacts, 1A - 125 Vac						
M/MM - Low level (gold) contacts, 1A - 125 Vac						
P/PP - Hermetically sealed AC - 5A, 125/250 Vac. (estimated dc rating - 2.5A, 28Vdc, not UL listed)						
S/SS - Heavy duty dc, 10A - 125 Vac or dc, ⅛ HP - 125 Vac or dc.						
U/UU - Manual reset actuates on increasing pressure 15A, 125/250 Vac, 6A, 130Vdc						
Y/YY - High temperature 300°F (148°C) ambient, 15A, 125/250 Vac						
W/WW - Ammonia service - 5A, 125/250 Vac, 6A, 30 Vdc						
Actuator Seal						

	Temperature Limits			
Material	Ambient	Process		
B - Buna-N®	-20°F to 150°F	0°F to 150°F		
V - Viton®	-20°F to 150°F	20°F to 300°F		
T - Teflon®	-20°F to 150°F	0°F to 150°F		
S - 316L SS	-20°F to 150°F	20°F to 300°F	Not available in vacuum, & inches of water ranges or pressures above 1,000 psi	S
P - Monel®	-20°F to 150°F	20°F to 300°F	Not available in vacuum, & inches of water ranges or pressures above 1,000 psi	

Process Connections						
25 - ¼ NPT Female				25		
06 - ¼ NPT Female and ½ NPT Male combination						
07 - ½ NPT Female						
Options - Select from Table 4 on page 4 (If choosing an option(s) must include an "X")					X _ _	
6B - Cleaned for oxygen service					6B	
Pressure Range (select from pressure range table on page 3)						
100# - 100 psi						100#

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TABLE 1 - PRESSURE/VACUUM RANGES

Approximate Deadband Switch Element for Buna-N® Diaphragm

Nominal Ranges		Overpressure Ratings		See multiplier TABLE 3 for additional material multipliers								
				LPA-GPA	LPS-GPS				LPD-GPD			
				Switch Element								
		Proof#	Minimum Burst psi	J, H	G	J, H	K, F	P	GG	JJ, HH	KK, FF	PP
Vacuum												
30IMV	–760 mmHg	250	400	6-24	2.5-4	6-24	1-2	1-2.5	3-5.5	4-6.5	1-2	1-2.5
Compound												
30IMV/ 15#	–760 mmHg/ 1.0 kg/cm²	250	400	6-24 3-12	2.5-4 1-2.5	4-6 1-3.5	1-2 0.5-1.5	1-2.5 0.5-2	3-5.5 1.5-5.5	4-6.5 1.5-4	1-2 1-2	1-2.5 1-2
Pressure												
30IW	750 mmH₂O	20	35	4.0-27	1.5-3.5	2.0-4.0	0.5-1.0	0.7-2.0	2.1-4.9	2.8-5.6	0.7-1.4	0.7-2.8
60IW	1,500 mmH₂O	20	35	5.0-54	1.5-4.0	2.5-5.0	0.5-1.4	1.0-2.5	3-5.6	3.5-7.0	0.7-2.0	2-3.5
100IW	2,500 mmH₂O	20	35	8.5-90	2.0-5.5	4.0-8.5	1.0-2.0	1.4-3.0	4-7.7	5.6-11.7	1.4-2.8	1-4.2
150IW	3,750 mmH₂O	20	35	18-135	5.0-11	10-18	1.5-3.0	2.0-6.0	7.0-16	14-25.1	2.1-4.2	5-9.2
15#	1.0 kg/cm²	500	1,500	2.5-13	1.0-1.5	1.0-2.5	0.5-1.0	0.75-1.5	1.4-2.1	1.4-3.5	0.7-1.4	1-1.4
30#	2.0 kg/cm²	500	1,500	3.0-27	1.0-2.8	1.0-3.2	0.75-1.5	1-1.8	1.4-5	3-6	1-2.1	1.4-2.5
60#	4.0 kg/cm²	500	1,500	5-54	2.0-4.0	2.0-4.5	1.0-2.0	1.0-2.5	3-7	4-8	1.4-2.8	1.4-3.5
100#	7.0 kg/cm²	1,000	3,000	10-90	3-6	5.0-10	1.0-2.5	1.4-3.2	7-12	7.0-14	1.4-3.5	3-7
200#	14 kg/cm²	1,000	3,000	18-180	7-14	10-18	1.0-4.0	5.0-8.0	10-23	14-25	1.4-5.6	7.0-11.2
400#	28 kg/cm²	2,400	3,000	45-360	16-30	16-45	4.0-8.0	5.0-15	22-42	22-63	5.6-11.2	7.0-21
600#	42 kg/cm²	2,400	3,000	75-540	16-50	20-75	5.0-15	6.0-25	22-70	28-105	7.0-21	8.0-35
1000#(1)	70 kg/cm²	12,000(1)	14,000	160-900	75-130	50-160	7.0-30	10-85	70-180	70-223	10-42	14-119
2000#	140 kg/cm²	12,000	14,000	350-1,800	150-200	150-350	20-50	25-110	209-279	209-488	28-70	35-154
3000#	210 kg/cm²	12,000	14,000	400-2,600	180-250	180-400	30-70	30-190	251-349	251-558	42-98	42-226

(1) Proof pressure is 4,000 psi with SS and Monel® welded diaphragms

TABLE 2 - DIFFERENTIAL PRESSURE RANGES

Approximate Deadband Switch Element for Buna-N® Diaphragm

Nominal Ranges		Overpressure Ratings		See multiplier TABLE 3 for additional material multipliers								
				LDA-GDA	LDG-GDA				LDG-GDA			
				Switch Element								
		Static #	Minimum Proof #	J, H	G	J, H	K, F	P	GG	JJ, HH	KK, FF	PP
Differential Pressure												
30IWD	–760 mmHg	5.4	21.6	4.0-27	1.3-3.5	2.0-4.0	0.5-1.0	0.7-2.0	2.1-4.9	2.8-5.6	0.7-1.4	0.7-2.8
60IWD	1,500 mmH₂O	5.4	21.6	5.0-54	1.5-4.0	2.5-5.0	0.5-1.4	1.0-2.5	3-5.6	3.5-7.0	0.7-2.0	2-3.5
100IWD	2,500 mmH₂O	5.4	21.6	8.5-90	2.0-5.5	4.0-8.5	1.0-2.0	1.4-3.0	4-7.7	5.6-11.7	1.4-2.8	1-4.2
150IWD	3,750 mmH₂O	5.4	21.6	18-135	5.0-11	10-18	1.5-3.0	2.0-6.0	7.0-16	14-25.1	2.1-4.2	5-9.2
30#D	2.0 kg/cm²	500	1,500	3.0-27	1.0-2.8	1.0-3.2	0.75-1.5	1-1.8	1.4-5	3-6	1-2.1	1.4-2.5
60#D	4.0 kg/cm²	500	1,500	5-54	2.0-4.0	2.0-4.5	1.0-2.0	1.0-2.5	3-7	4-8	1.4-2.8	1.4-3.5
200#D	14 kg/cm²	1,000	3,000	18-180	7-14	10-18	1.0-4.0	5.0-8.0	10-23	14-25	1.4-5.6	7.0-11.2
400#D	28 kg/cm²	2,400	3,000	45-360	16-30	16-45	4.0-8.0	5.0-15	22-42	22-63	5.6-11.2	7.0-21

TABLE 3 - DEADBAND MULTIPLIER TABLE

Diaphragm Material	Multiply	Notes
Buna-N®	1.0	Multiplier table for additional diaphragm materials
Viton®	1.4	
Teflon®	1.7	
316 SS	1.7	
Monel®	1.7	

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TABLE 4 - OPTIONS				Pressure		Differential Pressure	
Code	Description	G Series	L Series	psi	inH_2O	psid	inH_2O
CH	Chained cover	•	•	•	•	•	•
FP	Fungus proofing	•	•	•	•	•	•
FS	Factory adjusted setpoints (Supply static pressure for D/P switches)	•	•	•	•	•	•
G5	Gas/Oil UL Limit control to 150 inH_2O (LDS only)		•				•
G6	Gas/Oil UL Limit control to 600 psi (LDS only)		•	•			
G8	Steam limit control to 600 psi (UL listed steam control)		•	•			
G9	Fire safe actuator High operating pressure for inH_2O ranges	•	•	•			
HX	40 psi Static (Pressure and D/P) 100 psi Proof (Pressure) 160 psi Proof (D/P)	•	•		•	•	
JL	¾″ to ½″ Reducing bushing	•	•	•	•	•	•
K3	Terminal blocks	•	•	•	•	•	•
NH	Tagging Stainless steel	•	•	•	•	•	•
PK	Pilot lights		•	•	•	•	•
PM	¾″ Sealed conduit connection with 16″ lead wires	•	•	•	•	•	•
TA	316 SS pressure connection for H_2O ranges	•	•		•		•
UD	316 SS Pressure Connection for psid ranges	•	•			•	
2C	DPDT with Single Setpoint Adjustment	•	•	•	•	•	•
6B	Cleaned for oxygen service	•	•	•		•	
FM	FM Approval (includes pilot lights)		•	•	•	•	•
Y53A	1½″ Sanitary seal with glycerin fill with 3A Approval	•	•				
Y63A	2″ Sanitary seal with glycerin fill with 3A Approval	•	•		•		
HS	High static operating pressure for psi range D/P	•	•			•	

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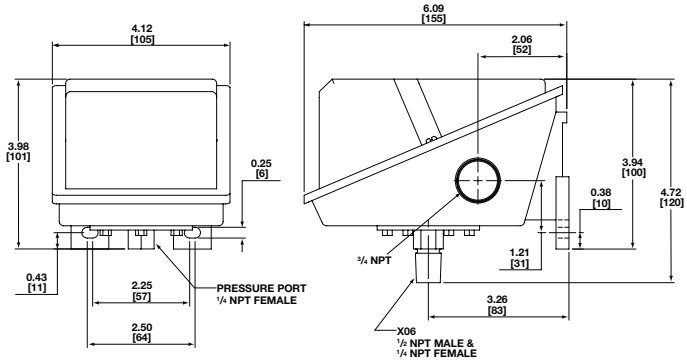
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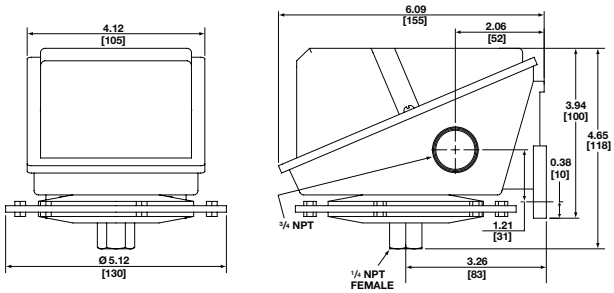
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For reference only, consult Ashcroft for specific dimensional drawings

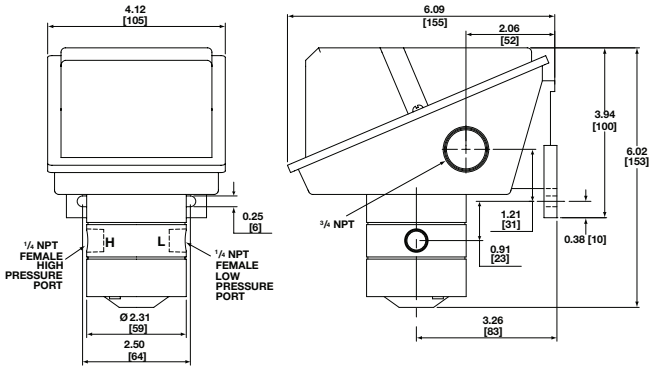
PRESSURE SWITCH – PSI RANGES



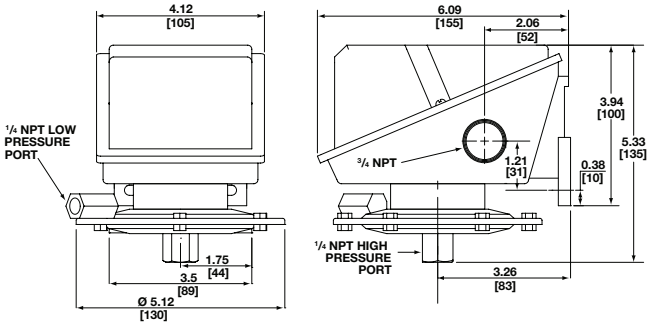
PRESSURE SWITCH – INCHES OF WATER RANGES



DIFFERENTIAL PRESSURE SWITCH – PSI DIFFERENTIAL RANGES



DIFFERENTIAL PRESSURE SWITCH – INCHES OF WATER RANGES



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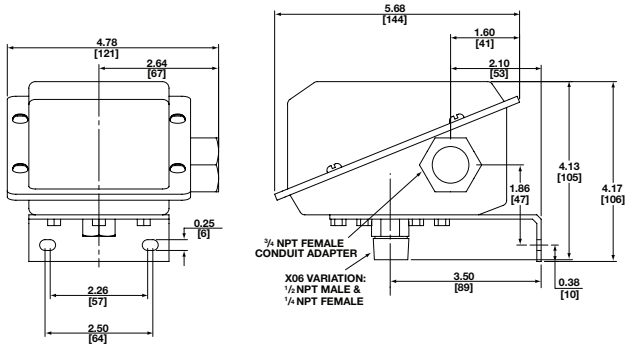
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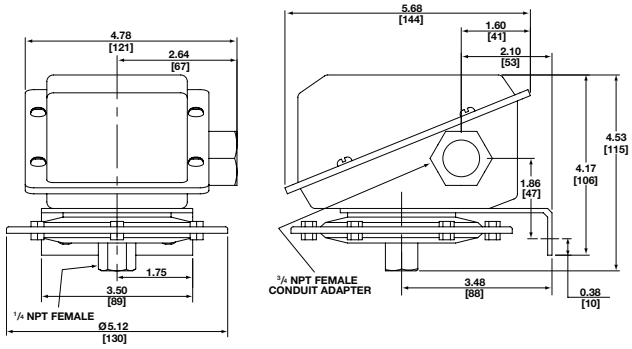
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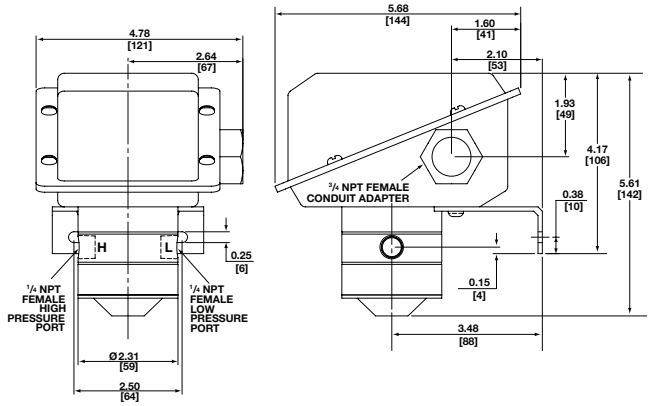
PRESSURE SWITCH – PSI RANGES



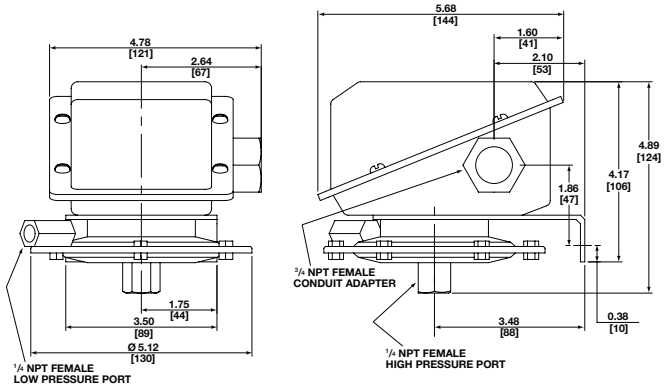
PRESSURE SWITCH – INCHES OF WATER RANGES



DIFFERENTIAL PRESSURE SWITCH – PSI DIFFERENTIAL RANGES



DIFFERENTIAL PRESSURE SWITCH – INCHES OF WATER RANGES



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