



# PRESSURE SWITCHES

LOW COST  
WEATHERPROOF

## Prince SERIES

- HIGH REPEATABILITY ● SPRING OPPOSED ● BELLOWS ● COMPACT ●
- TAMPER PROOF SETPOINT ADJUSTMENT ●



PRINCE 901 IN GH ENCLOSURE

This compact version in Switzer series 900 Pressure Switches using components of high reliability is specifically designed for OEMs.

The sensing element is a hydraulically formed seamless Phosphor Bronze or Stainless Steel Bellows mounted external to the weatherproof switch housing.

The mechanical movements are restricted to absolute minimum which ensures long term stability.

Style GH Pressure Die Cast Aluminium housing is best suited for harsh and outdoor mountings.

The instrument is suitable for air, gas, water, steam, oil and several other chemicals which are compatible to Copper alloys and Stainless Steel.

### GENERAL SPECIFICATIONS

<b>Enclosure</b>	Aluminium pressure die cast weatherproof to IP:66	<b>Switch Rating</b>	15A, 250V AC
<b>Repeatability</b>	±0.5% FSR (Note 1)	<b>Sensor / Wetted Parts</b>	Phosphor Bronze Bellows with Brass connector or 316 LSS Bellows with 316 SS connector
<b>Range Setting</b>	External with lock	<b>Process Connection</b>	1/4" NPT(F) standard. Adaptors for other threads optional
<b>Ranges</b>	Vacuum to 35 bar, several standard ranges. Refer Ordering Matrix (Note 2 & 3)	<b>Maximum Fluid Temperature</b>	110°C for Phosphor Bronze Bellows, 170°C for SS Bellows (Note 7)
<b>Differential</b>	<p><b>SPDT Switch (Notes 4 &amp; 5)</b>  <i>Fixed</i> : within 6%  <i>Narrowband adjustable</i> : 6 to 20%  <i>Wideband adjustable</i> : 10 to 60%</p> <p><b>2 × SPDT Switch (Notes 4, 5 &amp; 6)</b>  <i>Fixed</i> : 10%  <i>Narrowband adj.</i> : 10 to 20 %  <i>Wideband Adjustable</i> : 15 to 60%</p>	<b>Ambient Temperature</b>	(-10 to 60°C)
<b>Switching</b>	Instrument quality snap acting microswitch.	<b>Electrical Connection</b>	3/4" ET Nylon Cable gland for 8 mm OD cable, standard Metallic double compression Cable Gland optional.
		<b>Mounting</b>	On-line / Wall
		<b>Weight</b>	600 Gms.

## ORDERING MATRIX

### Example

GH 901 1 V 3

### HOUSING

Al. Pr. die cast weatherproof to IP:66 ——— GH

### ON-OFF DIFFERENTIAL

Fixed ——— 901  
Narrowband Adjustable ——— 902  
Wideband Adjustable ——— 903

### MATERIAL OF SENSOR AND WETTED PARTS

Phosphor Bronze Bellows with Brass connector ——— 1  
316L SS Bellows with 316 SS connector ——— 2

### RANGE

Range (in bar)	MWP (in bar)	
(-)1 to 0	4	V
0.2 to 1.6	9	A
0.4 to 4	9	B
0.7 to 7	18	C
1.0 to 10	18	D
1.6 to 16	25	E
4.0 to 25	36	F
8.0 to 32	36	G
7.0 to 35	52 *	H

\* ONLY with 316L SS Bellows with 316 SS connector

### SWITCH CODE §

SPDT, 15A, 250V AC ——— 3

2 × SPDT, 15A, 250V AC ——— 33

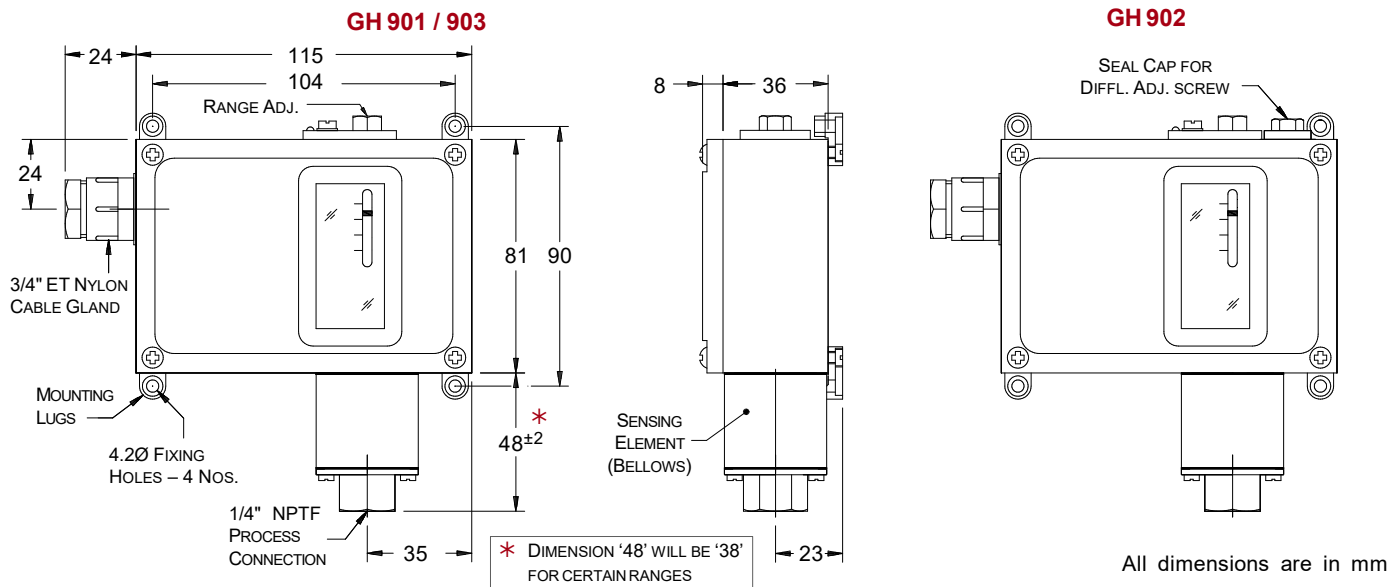
§ DC Rating — Resistive: — 0.5A 110V / 0.25A 220V / 8A 24V

— Inductive: — 0.2A 110V / 0.10A 220V / 7A 24V

## NOTES

- Accuracy and repeatability are same for a Pressure Switch, which is a switching device and not a measuring instrument.
- Select working range of the instrument such that the set pressure lies between 35% to 70% of range span.
- On and off settings should not exceed the upper or lower range value.
- Switching differentials are at midscale and will vary with range setting and operating conditions.
- 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.
- DPDT action is achieved by 2 × SPDT switches synchronised to practical limits i.e., ± 2% of FSR.  
Contact life of microswitches are  $5 \times 10^5$  switching cycles for nominal load. To quench DC sparks, use diode in parallel with inductance, ensuring polarity. A 'R-C' network is also recommended with 'R' value in Ohms equal to coil resistance and 'C' value in micro Farads equal to holding current in Amps.
- Higher process temperatures can be brought down by using longer pressure piping. Ask for piping nomogram # 441184-4.  
Ensure that impulse pipework applies no stress on sensing element housing and use spanners to hold pressure port / housing when connections are made.
- Style GH is weatherproof only if all entries and joint faces are properly sealed.
- A more versatile and wide range of Pressure & Differential Pressure Switches are available in Series 200, 020, 300, 931 & S20/920 Series upto 600 bar.
- Accuracy figures are exclusive of test equipment tolerance on the claimed values.
- All performance data guaranteed ± 5%.

## MOUNTING DIMENSIONS



This is not a contractual document. Prior notification of changes in specifications is impracticable due to continuous improvement



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