



# DIFFERENTIAL PRESSURE INDICATORS — SWITCHES

106

- DIAPHRAGM SENSOR ● WEATHERPROOF ● HIGH OVER PRESSURE ●
- 270 DEG. POINTER TRAVEL ● HI – LO SWITCHING ●
- FLOW OR FILTER MONITORING ●



**STYLE 106D**

SWITZER 106D range of Differential Pressure Indicators are 316 Ti SS diaphragm operated to ensure reliable indication of pressure difference between two inputs.

High and low pressures are applied on either side of a single diaphragm. The resultant motion is transferred to the gauge case through a unique motion – transfer mechanism and a SS movement. The volume

displacement is kept minimum to achieve high repeatability. The pointer movement and dial are fitted in a weatherproof die cast aluminium housing.

High and Low switching for alarm can be provided with adjustable cam mechanism to actuate one or two microswitches. The diaphragm is protected fully from over pressure through a seal valve assembly.

## GENERAL SPECIFICATIONS

<b>Gauge Case</b>	Die Cast Aluminium weatherproof to IP:66. 304 SS case optional	<b>Zero Adjustment</b>	Via Micrometer Pointer
<b>Dial Size</b>	150 mm dia nominal	<b>Sensing Element</b>	316 Ti SS Diaphragm
<b>Scale</b>	Linear, Square Root or Both	<b>Body Material</b>	316 SS standard
<b>Window Material</b>	Toughened float safety glass	<b>Movement</b>	Stainless Steel (non-wetted)
<b>Accuracy *</b>	± 2 % FSR, indicator only. With switching, ± 2 % before & ± 3 % after switching.	<b>Process Connection</b>	1/4" NPTF Std; Others through adaptors.
<b>Ranges</b>	0 – 40 mbar to 0 – 2.5 bar; Refer Ordering Specification for details	<b>Vent / Drain Plug Mounting</b>	Optional Flush Panel standard; 2" Pipe / wall optional Snap acting microswitch
<b>Max. Working Pressure</b>	60 Bar	<b>Alarm Switching (optional)</b>	One for Hi or Lo. Two, one each for Hi & Lo.
<b>Over range Protection</b>	Through built-in seal valve	<b>No. of Switches</b>	5A 250V AC (Res.) 3A, 250V AC (Ind-p.f.0.6)
<b>Max. Process Temp</b>	100°C for Buna – N Seal 230°C for Viton® Seal For higher temperatures use adequate length of impulse piping. Ask for piping nomogram #441184-4	<b>Switch Rating</b>	Adj. from 10% to 90% FSR
		<b>Switch Setting</b>	6 to 8% FSR fixed, for 1 Switch 10 to 12% FSR fixed, for 2 Switches
		<b>Switching Differential</b>	15% FSR
		<b>High – Low Gap (min.)</b>	15% FSR
		<b>Electrical Connection</b>	Via DIN 43650 plug

\* Accuracy includes linearity and hysteresis

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# ORDERING MATRIX

106 D E 1 0 0 0

## Differential Pressure Indicator

106 Style 106

Additional Ranges : Specify range in Order §

0 – 40 mbar	0 – 400 mbar
0 – 60 mbar	0 – 600 mbar
0 – 100 mbar	0 – 1.0 Bar
0 – 160 mbar	0 – 1.6 Bar
0 – 250 mbar	0 – 2.5 Bar

§ Non-std ranges upto 80% of these ranges are possible at extra cost. Consult factory.

## Body, Element Material and Rating

D 316 Ti SS Diaphragm, 316 SS body, 60 bar (900 PSIG)

## Accuracy

E ± 2% FSR, for Indicator without switch  
 F ± 2% & ± 3% FSR, before & after switching

## Seals

- 1 Buna – N
- 2 Viton
- 3 Others (consult factory)

## Process Connection

- 0 1/4" NPTF standard
- 6 1/2" NPTF through 316 SS adaptor
- 9 Others – on request

## Switching

- 0 None
- 1 One Microswitch
- 2 Two Microswitches

## Accessories and Options \*

- 0 None – standard with Studs for Panel Mounting
- F Pipe Mounting with 'U' Bolt & Nuts
- W Wall Mounting Bracket
- L Liquid Filled Dial †
- S 304 SS Case
- T Degreasing for Oxygen Service
- B Blow-out-Disc
- V Vent
- D Drain
- X Others (Consult factory)

\* If more than one accessory / option is required specify W, L, . . . etc.

† Gauges with **Liquid Filled** dials :

- i) **Accuracy will change.** Consult factory.
- ii) **Switching facility not possible.** However switching action can be provided through an externally mounted Differential Pressure Switch (Refer factory for details).

## Notes :

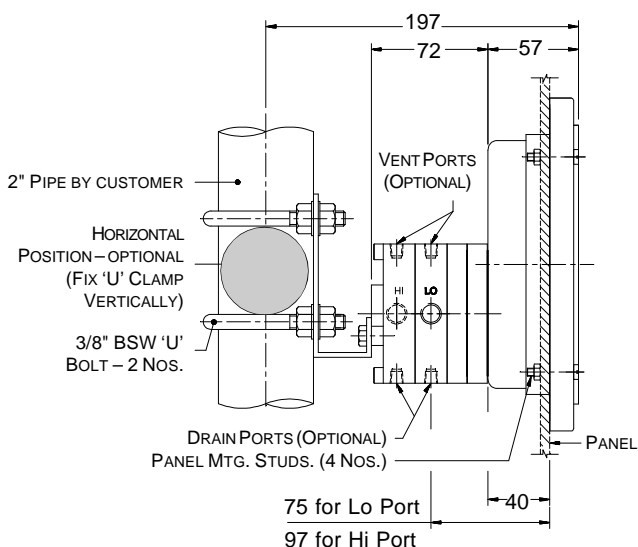
1. Calibration is as per ANSI / ASME B40.1 Clause 6.2.3.
2. Chemical seals are not available.
3. **Accuracy figures are exclusive of test equipment tolerance on the claimed values.**
4. **All performance data guaranteed ±5%.**

## Caution :

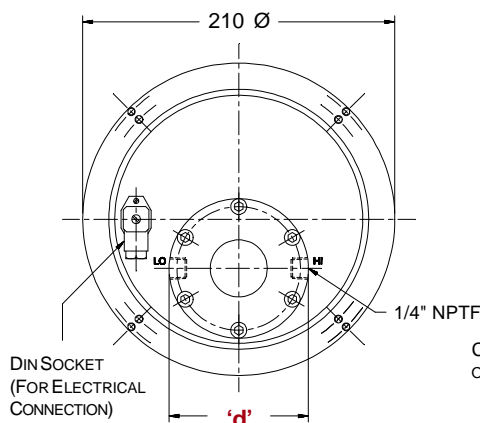
1. Use of snubber is a must if pressure fluctuations are rapid.
2. Use 3-way / 5-way manifold to avoid damage / shift in calibration.

# OVERALL DIMENSIONS

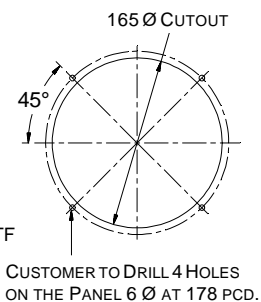
## 2" PIPE MOUNTING



## REAR VIEW (Without Mounting Accessories)



## FLUSH PANEL MOUNTING CUTOUT DIMENSIONS



**d – 88 mm** for 0–600 mbar to 0–2.5 bar ranges  
**145 mm** for 0–40 to 0–400 mbar ranges

- Notes :
1. For wall mounting drill 2 Nos. 10.5Ø holes. Use 3/8" x 40L Coach Screws for fixing the instrument.
  2. S.S. Gauge case dimensions are different. Ask factory for drawing.
  3. All dimensions have a tolerance of ±2.0 mm

ALL DIMENSIONS ARE IN mm

**Prior notification of changes in specification is impracticable due to continuous development.**

FOR SWITZER'S OFFICES IN INDIA

CHECK AT:

<http://www.switzerinstrument.com/offices.htm>