



DIFFERENTIAL PRESSURE INDICATORS — SWITCHES

106 D

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



STYLE 106 D

SWITZER 106 D 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 deflection 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 or SS case. Snubbers are part of the process connections, which protect the instrument from process pressure fluctuations.

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

Gauge Case	Die Cast Aluminium weatherproof to IP:66. 304 SS case optional	Process Connection	1/4" NPTF Std; Others through adaptors.
Dial Size	150 mm dia nominal	Vent	Provided as std.
Scale	Linear, Square Root or Both	Drain	Avl. as an option
Window Material	Toughened safety float glass	Mounting	Flush Panel – standard; 2" Pipe / wall – optional
Accuracy *	Refer overleaf	Alarm Switching (optional)	Snap acting SPDT microswitch
Ranges	0 – 25 mbar to 0 – 2.5 bar; Refer Ordering Specification for details	No. of Switches	One (for HI or LO). OR Two, one each for HI & LO OR DPDT action with Two switches (either HI or LO)
Max. Working Pressure	60 Bar	Switch Rating	5A, 250V AC (Res.) 3A, 24V DC
Over range Protection	Through built-in seal valve	Switch Setting	Adj. from 10% to 90% FSR
Max. Process Temp	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	Switching Differential	8% FSR fixed, for 1 Switch 12 % FSR fixed, for 2 Switches
Zero Adjustment	Via Micrometer Pointer	High – Low Gap (min.)	15% FSR between two switches
Sensing Element	316 Ti SS Diaphragm	Electrical Connection	Via DIN 43650 plug
Body Material	304SS – Std.; 316 SS – optional		
Movement	Stainless Steel (non-wetted)		

* Accuracy includes linearity

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ORDERING MATRIX



106D 4 E 1 0 0 0

DP Indicator 106D – 316 Ti SS Diaphragm

Low Ranges

- 0 – 25 mbar
- 0 – 40 mbar
- 0 – 60 mbar
- 0 – 100 mbar
- 0 – 160 mbar
- 0 – 250 mbar
- 0 – 400 mbar

High Ranges

- 0 – 600 mbar
- 0 – 1.0 Bar
- 0 – 1.6 Bar
- 0 – 2.5 Bar

- Note :**
1. Non-std ranges upto 80% of above ranges are possible at extra cost. Consult factory.
 2. Compound range of ± 125 mm at **extra cost**. Consult factory

Body Material

- 4 304 SS
- 6 316 SS

Std. Accuracy

- E ± 1.0 % Span for Indicator without switch for Low ranges
- ± 1.5 % Span for Indicator without switch for High ranges
- F ± 1.5 % Span for Indicator with switch for Low ranges
- ± 2.0 % Span for Indicator with switch for High ranges

Spl. Accuracy for High Ranges at Extra Cost

- G $\pm 1\%$ ascending & $\pm 1.5\%$ descending without switch
- H $\pm 1\%$ ascending & $\pm 2.0\%$ descending with switching

Seals

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

Process Connection

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

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
 - 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).

Switching

- 0 None
- 1 One SPDT Microswitch - For HI or LO
- 2 Two SPDT Microswitches - One for HI & one for LO
- 3 DPDT action with Two switches either for HI or LO

Notes :

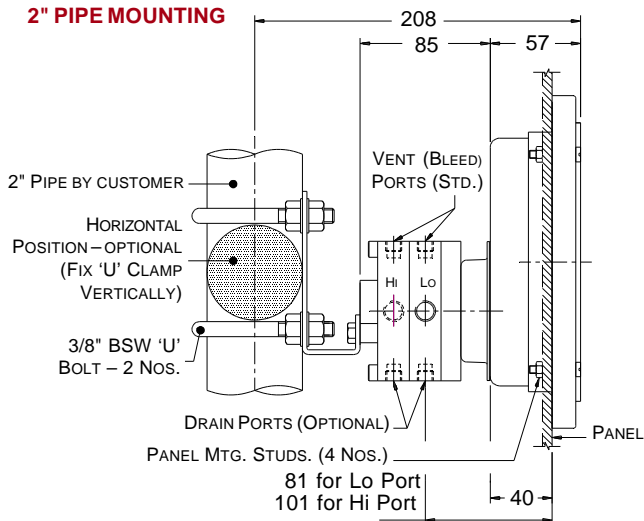
1. Calibration is as per ANSI / ASME B40.1 Clause 6.2.3.
2. Chemical seals are not available.
3. **Accuracy figures are exclusive of test equipment tolerance on the claimed values.**
4. **All performance data guaranteed $\pm 5\%$.**

Caution :

1. Adjust snubbers suitably to guard against pressure fluctuations in the process.
2. Use 3-way / 5-way manifold to avoid damage / shift in calibration.

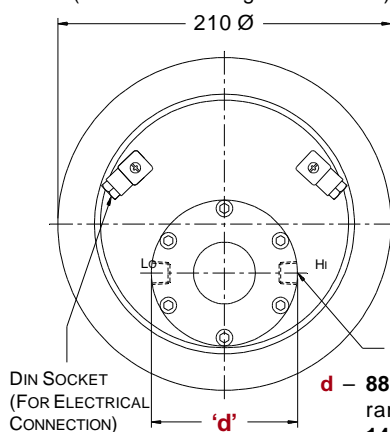
OVERALL DIMENSIONS

2" PIPE MOUNTING

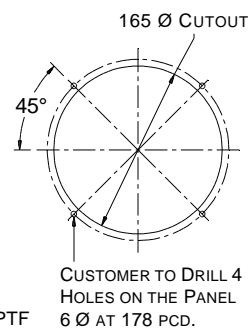


REAR VIEW

(Without Mounting Accessories)



FLUSH PANEL MOUNTING CUTOUT DIMENSIONS



- d – 88 mm for 0–600 mbar to 0–2.5 bar ranges
- 145 mm for 0–25 to 0–400 mbar ranges

- Notes :**
1. For wall mounting drill 2 Nos. 10.5 \varnothing 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

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

FOR SWITZER'S OFFICES IN INDIA

CHECK AT:

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