

# 2.5 Inch Differential Pressure Swichgag<sup>®</sup> for Filter Restriction 25DP and A25DP Series

The 25DP and A25DP Series (2-1/2 inch/64 mm dial) Swichgag<sup>®</sup> instruments are diaphragm-actuated, differential pressure-indicating gages with a built-in electrical switch. This switch is used for tripping alarms and/or shutting down equipment. The gages are intended to monitor and indicate oil, fuel or water filter restriction and can reduce the risk of dangerously high pressure which may rupture the filter, resulting in contaminants entering the system.

The 25DP series mechanism is enclosed in a steel case coated to resist corrosion. The A25DP series has a polycarbonate case sealed from the environment. Featuring a polycarbonate, break-resistant lens and polished stainless steel bezel to help protect the instruments.

The gage pointer acts as a pressure indicator and as one switch pole which completes a circuit when it touches the adjustable limit contact. Contacts have self-cleaning motion to ensure electrical continuity.

Additional features:

- Constant visual indication of the condition of your filter is shown on the dial.
- Two instruments in one with an accurate indicating gage and adjustable p.s.i.d. limit switch reduces inventory and installation time.
- Adjustable contact lets you set the monitoring range of the gage. The contact is tamper proof and can be set only with a 1/16 Allen-head wrench.
- All gages are made of durable materials allowing them to withstand rugged applications.
- Early filter changes cost you money and increase the risk of contaminants entering the system. The filter restriction Swichgag instrument will let you know when to change the filter and maintain peak efficiency.

## Base Models

### 25DP and A25DP Swichgag instrument

The gage pointer makes with an adjustable contact to complete a pilot-duty circuit.

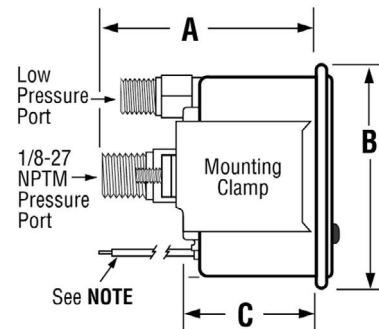
**Note:** 25 Series has 18 AWG (1.0 mm<sup>2</sup>) wire. A25 Series has #6 terminals.  
Dimensions are inches and (millimeters).



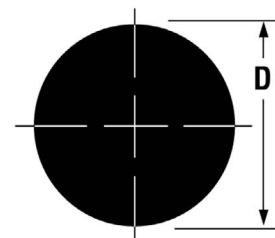
Products covered by this bulletin comply with EMC Council directive 89/336/EEC regarding electromagnetic compatibility except as noted.

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## Dimensions



### Mounting Hole



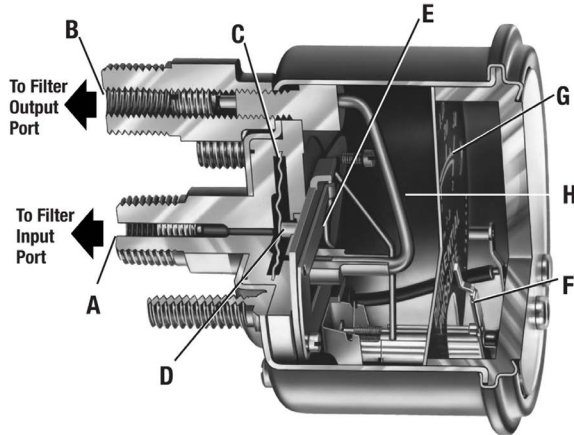
	25DP Series	A25DP Series
A	2-1/8 (54)	1-51/64 (46)
B	3-1/8 (79)	2-29/32 (74)
C	1-3/8 (35)	1-27/64 (36)
D	2-11/16 (68)	2-11/16 (68)

# Specifications

**Dial:** White on black, dual scale;  
U.S.A. standard scale is psi/kPa. Other scales available  
**Case:** 25DP Series: plated steel. A25DP Series: polycarbonate  
**Bezel:** Polished stainless steel, standard; others are available.  
**Lens:** Polycarbonate, high-impact  
**Temperature Range:**  
Ambient: -40° to 150° F (-40° to 66° C)  
Process: -40° to 250° F (-40° to 121° C)  
**Process Connection:** 1/8-27 NPTM brass  
**Sensing Element:** Beryllium copper diaphragm  
**Gage Accuracy:** ±3% maximum across scale

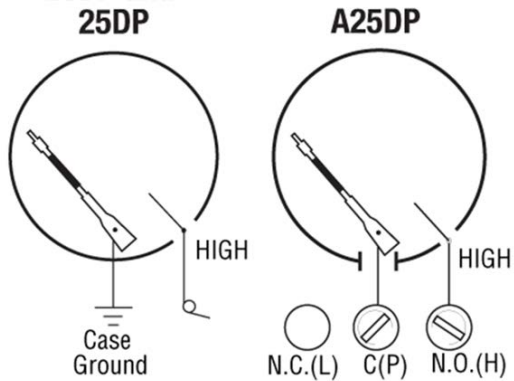
**Adjustable Limit Contact:** SPST contact; pilot duty only, 2 A @ 30 VAC/DC; closed when the low limit is met, open when pointer is in normal operating range. Contacts are gold flashed silver.  
Limit Contact Adjustment:  
by 1/16 in. hex wrench through 100% of scale.  
Limit Contact Wire Leads:  
25DP Series 18 AWG (1.0 mm<sup>2</sup>) x 12 in. (305 mm)  
Limit Contact Terminals:  
A25DP Series #6 screw terminals  
**Unit Weight:** 25DP and A25DP Series: 11 oz. (0.29 kg)  
**Unit Dimensions:** 25DP and A25DP Series:  
4-3/4 x 4-3/4 x 2-3/4 in. (121 x 121 x 70 mm)

## Operating Characteristics



Port **A** connects to the input side of the filter. Pressure pushes diaphragm **C** forward thus pushing the button **D** which turns the crank arm **E** which in turn moves pointer **F** to register the amount of pressure on dial **G**. Port **B** connects to the outlet side of the filter. Pressure is exerted through tube **H** and pushes on the diaphragm thus applying pressure on both sides of the diaphragm. The pointer displays pressure in the amount that the input pressure is greater than the outlet pressure. As the filter is restricted by contaminants and the pressure difference reaches the critical point, the pointer touches the preset limit contact and shuts down the system or activates a visual or audible signal to alert the operator.

## Internal Wiring

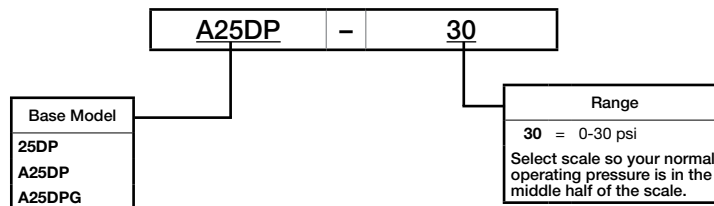


## Ranges and Factory Settings

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Ranges* Available	Max. Static Pressure	Max. Differential Pressure	Contact Setting
0-30 (0-207) [0-2.0]	150 (1.0) [10]	60 (414) [4.0]	20 (138) [1.0]
* Values are shown in psi, (kPa/MPa) and [bar]. Values in kPa/MPa and bar are mathematical conversions from psi. They do not reflect actual second scale change.			

## How to Order

Options listed below.



Approximate Shipping Weight and Dimensions		
Model	Weight	Dimension
25DP	11 oz.. (0.29 kg)	4-3/4 x 4-3/4 x 2-3/4 in. (121 x 121 x 70 mm)
A25DP	11 oz. (0.29 kg)	4-3/4 x 4-3/4 x 2-3/4 in. (121 x 121 x 70 mm)
A25DPG	11 oz. (0.29 kg)	4-3/4 x 4-3/4 x 2-3/4 in. (121 x 121 x 70 mm)