

# 20, 25, A20 and A25 Series Vacuum Swichgage® instrument

VAC-96023B  
Revised 03-06  
Catalog Section 05



## 2 and 2-1/2 in. (51 and 64 mm) Dial

- Combination Indicating Gage and Limit Switch
- Critical Vacuum Limit Switches Are Visible and Adjustable (Most Models)
- Switch Can Activate Alarms and/or Shutdown Equipment
- Monitor Engine Load

### Description

The 20 Series (2 inch/51 mm dial) and the 25 Series (2-1/2 inch/64 mm dial) Swichgage instruments are diaphragm-actuated, vacuum-indicating gages, with built-in electrical switches. These switches are used for tripping alarms and/or shutdown devices.

The 20 and 25 series gage mechanism is enclosed in a steel case coated to resist corrosion. The A20 and A25 series gage has a polycarbonate case and is sealed from the environment. All gages feature a polycarbonate, break-resistant lens and a polished, stainless steel bezel to help protect these rugged, built-to-last 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 a self-cleaning motion to ensure electrical continuity.

Gage-only models, without contacts (Murphygage® instruments), are also available. A pulsation dampener (PD2160) is included with each Swichgage to help eliminate pointer flutter. When monitoring intake manifold vacuum, the PD2160 is mounted in the manifold. The PD2160 has a 1/8-27 NPT connection.

A vacuum tubing kit (V5179) is available for all models to help reduce pulsations. The kit includes 48 inches (1.2 m) of copper tubing and two compression fittings. Specify tubing kit V5179.

### Applications

Commonly used to measure loading of spark ignition engines through intake manifold vacuum. Also can serve as overspeed protection from sudden loss of load on these engines. Use anywhere the vacuum source is compatible with port materials.

### Specifications

**Dial:** White on black, dual scale; U.S.A. standard scale is Inches of Hg/kPa.

**Case (mounting clamp included):**

20 and 25 Series: *Plated steel.*  
A20 and A25 Series: *Polycarbonate/glass filled.*

**Bezel:** Polished stainless steel, standard; others are available (see How to Order).

**Lens:** Polycarbonate, high-impact.

**Process Connection:** 1/8-27 NPTM brass.

**Sensing Element:** Beryllium copper diaphragm.

**Gage Accuracy:** ±2% of scale in operating range (mid 1/3 of scale).

### Adjustable Limit Contacts:

2-SPST contacts; pilot-duty only, 2 A @ 30 VAC/DC. Contacts are gold flashed silver. Limit Contact Adjustment: *by a 1/16 in. hex wrench.*

Limit Contact Wire Leads (20 and 25 Series):

*18 AWG (1.0 mm<sup>2</sup>) x 12 in. (305 mm).*

Limit Contact Terminals: *A20 Series number 4 screw terminals; A25 Series number 6 screw terminals.*

### Unit Weight

20 Series: *8 oz. (0.23 kg).*

25 Series: *11 oz. (0.31 kg).*

A20 Series: *6 oz. (0.17 kg).*

A25 Series: *10 oz. (0.28 kg).*

### Unit Dimensions

20 and A20 Series: *3 x 3 x 3 in. (76 x 76 x 76 mm).*

25 and A25 Series: *4-3/4 x 4-3/4 x 2-3/4 in. (121 x 121 x 70 mm).*

### Warranty

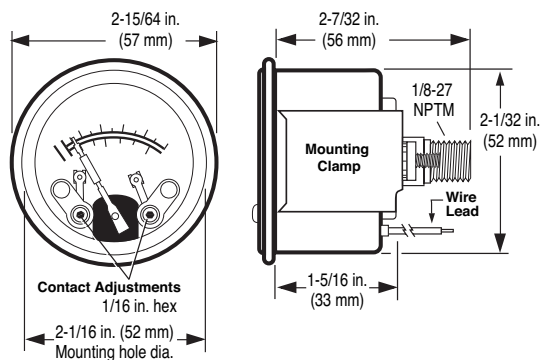
A limited warranty on materials and workmanship is given with this FW Murphy product. A copy of the warranty may be viewed or printed by going to [www.fwmurphy.com/support/warranty.htm](http://www.fwmurphy.com/support/warranty.htm)

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

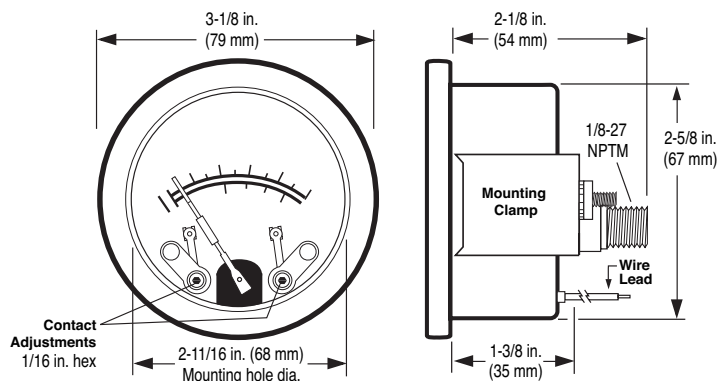


# Dimensions

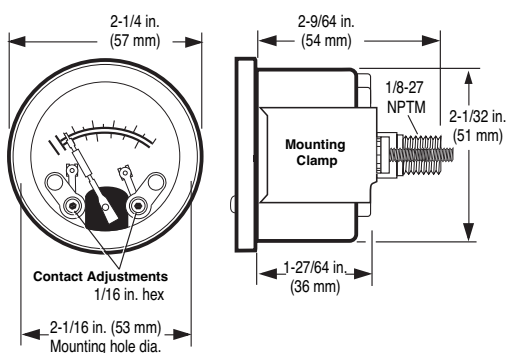
## 20 Series Models



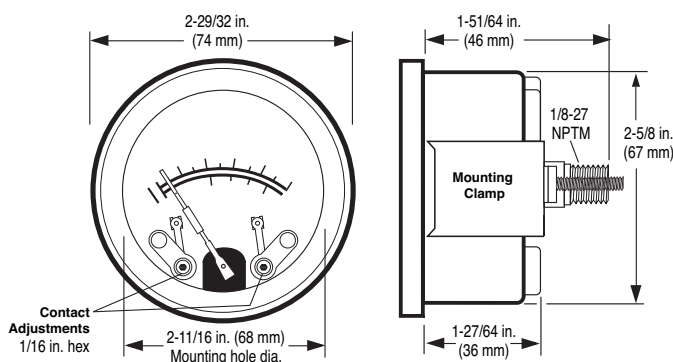
## 25 Series Models



## A20 Series Models

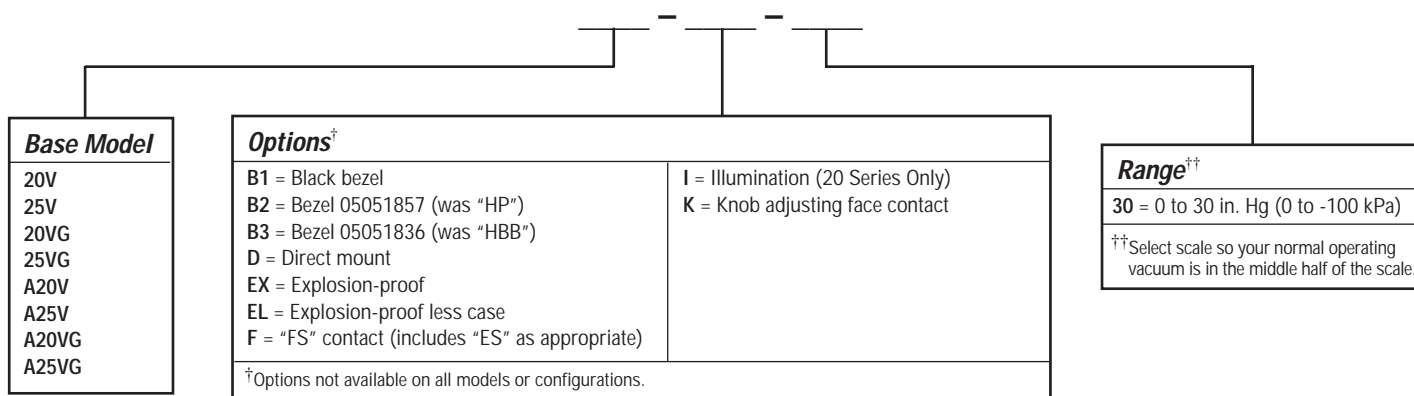


## A25 Series Models



# How to Order

To order, use the diagram below. List options in ascending alphabetical order (A-Z). Example: **20V-I-30**.  
Order the **vacuum tubing kit** as a separate item (specify **V5179**).



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