POWERVIEW Analog Gages

MURPHY

PVA SERIES

- For Modern Electronic Engines and Equipment Using SAE J1939 Controller Area Network
- Display SAE J1939 Parameters Broadcast by The PowerView System
- Cutting-Edge, Stepper Motor Technology and Robust Functionality Combined
- Microprocessor Driven for High Accuracy
- Simple Installation and Wiring Design

Description

The PowerView Analog Gages (PVA) are a series of intelligent gages designed to display easy-to-read information transmitted by the PowerView. The PVA gages communicate with the PowerView via a single RS485 twisted pair MODBUS®† RTU serial link. The gages can be daisy-chained using quick-connect harnesses with watertight connectors.

The major feature of the PVA gages is their balance between design and functionality. These modern gages offer a selection of lens and bezel styles and colors. Pages 2, 3 and 4 of this document show you the complete selection of styles available.

The PVA gages also include features such as a smooth stepper motor operation for the 270° sweep pointer, an environmentally sealed case with two Deutsch DT style connectors molded into the casing, and green LED back lighting. They are available for standard 2-1/16 in. (52 mm) and 3-3/8 in. (86 mm) diameter hole sizes. In addition their plastic cases incorporate a "D" shape allowing panel cutouts that eliminate gage rotation during installation.

The PowerView Audible Alarm (PVAA) alerts operators to fault conditions via piezoelectric alarm and relay contacts. It also has a temporary silencer button that silences the audible tone for 2 minutes on warnings and 30 seconds on shutdown conditions.

All PowerView Gages can be powered by 12 or 24 VDC systems.

PVA20 Series Models:

2 inch size gages:

PVA20 –A	=	Engine Oil Pressure
PVA20 –B	=	Coolant Temperature
PVA20 –C	=	Voltmeter
PVA20 –D	=	Percent Load at Current RPM
PVA20 –E	=	Transmission Oil Pressure
PVA20 –F	=	Transmission Oil Temperature
PVA20 –G	=	Engine Oil Temperature
PVA20 –T	=	Tachometer
PVAA20	=	Audible alarm

PVA35 Series Models:

3-1/2 inch size gages:

PVA35 –T	=	Tachometer
PVA35 –S	=	Speedometer

Specifications

Power Supply Input Voltage: 12/24V (8-32VDC min. & max. voltage).

Power Supply Operating Current: (@ 14 VDC) =
PVA20, PVA35: 28 mA minimum; 52 mA maximum.
PVAA20: 19 mA minimum; 46 mA maximum.

Backlight Maximum Current (not applicable to PVAA20): 24 mA.

Input: RS485 MODBUS® RTU data.

Output: Analog Readout.

Relay Rated Load (PVAA20): 0.5 A, 125 VAC; 1 A, 24 VDC.

Relay Maximum Switching Capacity (PVAA20): 62.5 VA, 30W.

External Audible Alarm Output (PVAA20): 28 VDC, 30 mA max. (current sink).

Temporary Silence Button (PVAA20): Charge transfer technology.

Operating Temperature: -40° to 185°F (-40° to 85°C).

Storage Temperature: -76° to 185°F (-60° to 85°C).

Dial: White numerals over black background.

Indicating Pointer: Stepper motor operation with 270° sweep.

Gage Accuracy: PVA20: Better than ±1.0% of scale.
PVA35: Better than ±2% of scale.

Environmentally Sealed Enclosure:

Sealing: *IP68, ±5 psi (±34.4 kPA).*

Case and Clamp Material: *Polyester (PBT).*

Lens Material: *Polycarbonate.*

Bezel Material: *Polyester (PBT).*

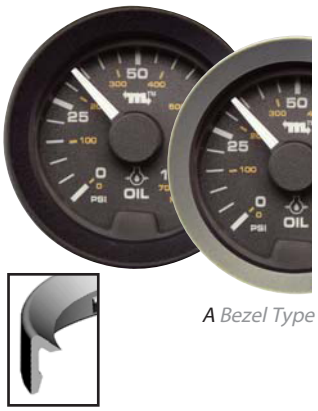
Maximum Panel Thickness: 3/8 in. (9.6 mm).

Connectors: 6-Pin Deutsch DT06 Series.

A-20 Style	*Low Profile SAE Style*	*Contemporary Style*	*Low Curved Style*

PVA20 Series – 2 inch Size Gages for Engine Oil Pressure, Engine Oil Temperature, Transmission Oil Pressure, Engine Coolant Temperature, Transmission Oil Temperature, Voltage, Percent Load, Tachometer

AB Bezel Type



A Bezel Type

BB Bezel Type

B Bezel Type

CB Bezel Type

C Bezel Type

DB Bezel Type

D Bezel Type

PVA35 Series – 3-1/2 inch Size Gages for Tachometer or Speedometer

AB Bezel Type

A Bezel Type

BB Bezel Type

B Bezel Type

CB Bezel Type

C Bezel Type

DB Bezel Type

D Bezel Type

PVAA20 Model – 2 inch Size Audible Alarm

AB Bezel Type

A Bezel Type

BB Bezel Type

B Bezel Type

CB Bezel Type

C Bezel Type

DB Bezel Type

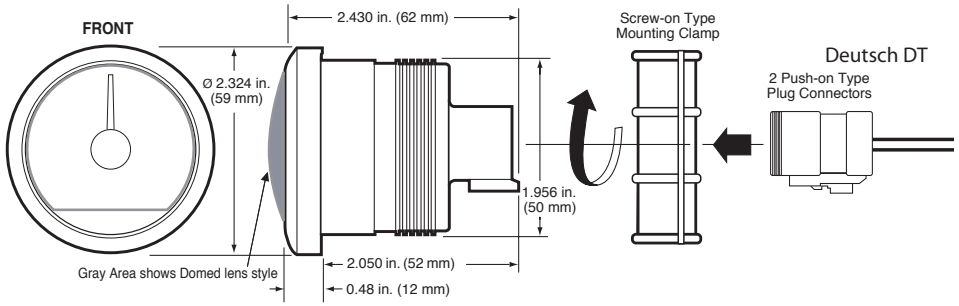
D Bezel Type

Contemporary Domed Bezel and Lens Style

EB Bezel Type

E Bezel Type

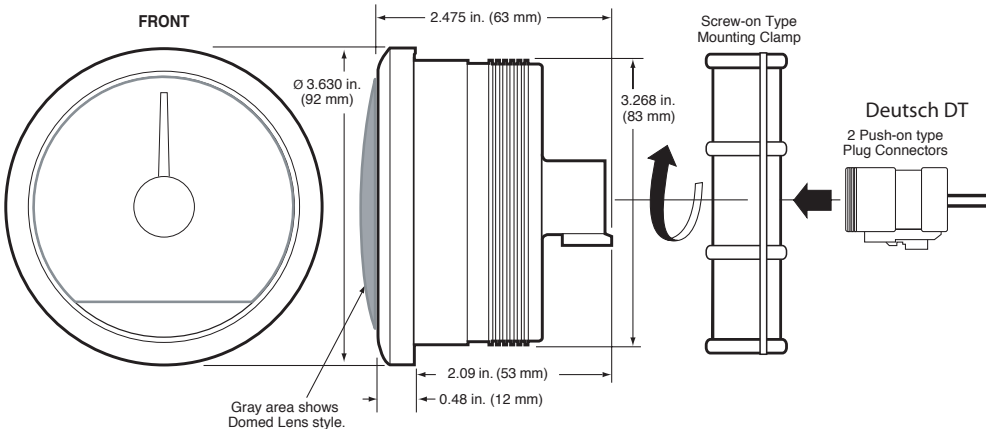
PVA20 Series – Typical Gage Dimensions



EB Domed Bezel and Lens Type

E Bezel Type

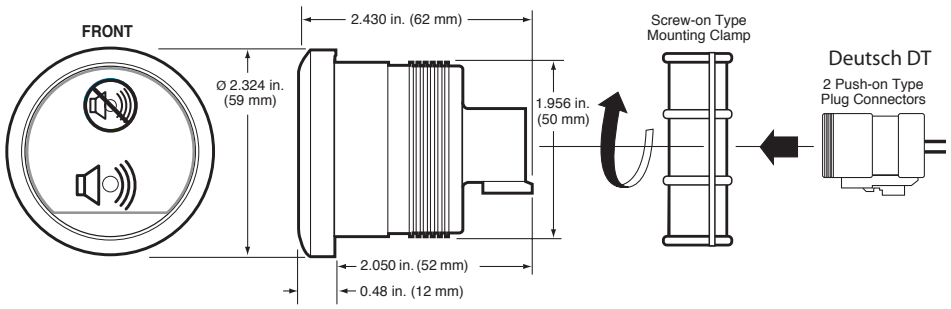
PVA30 Series – Typical Gage Dimensions



EB Domed Bezel and Lens Type

E Bezel Type

PVAA20 Model – Audible Alarm Typical Dimensions



CALL MURCAL TO PLACE YOUR ORDER

P:(661)272-4700 F:(661)947-7570
www.murcal.com e-mail: sales@murcal.com

How to Order: To order the PowerView use the model number designation diagram.

PVA20 – A – 100 – A – R1

Model
PVA20 = 2 inch size PowerView Gage
PVA35 = 3-1/2 inch size PowerView Gage (Tachometer or Speedometer only)
PVAA20 = 2 inch PowerView Audible Alarm

Gage Function *(excludes PVAA20)*
A = Engine Oil Pressure
B = Coolant Temperature
C = Voltmeter
D = Percent Load @ Current RPM
E = Transmission Oil Pressure
F = Transmission Oil Temperature
G = Engine Oil Temperature
T = Tachometer
S = Speedometer

Bezel (All Models)
Bezel Type (flat lens)
A = A20 (Brushed Silver)
AB = A20 (Black)
B = Low profile SAE (Brushed Silver)
BB = Low profile SAE (Black)
C = Contemporary (Brushed Silver)
CB = Contemporary (Black)
D = Low Curved (Brushed Silver)
DB = Low Curved (Black)

Bezel Type (domed lens)
E = Contemporary Domed (Brushed Silver)
EB = Contemporary Domed (Glossy Black)

Remote Gage
R1 = Option for a second gage of identical type on the gage network. For example: If you are already using one PVA20-A-100-A, and a second oil pressure gage is needed, order a PVA20-A-100-A-R1.

Gage Ranges *(excludes PVAA20)*

	Available for Gage Functions
100 =100 psi/700 kPa	A
150 =150 psi/1000 kPa (PVA20-A only)	A
250 =250°F/120°C	B, F, G
12 =12 VDC	C
24 =24 VDC	C
100 =100% Load @ Current RPM	D
400 =400psi/28 bar	E
3000 =3000 RPM	T
85 =85 MPH	S
7B =7 Bar/100 psi	A
10B =10 Bar/150 psi	A
28B =28 Bar/400 psi	E

Wiring Harnesses and Accessories

For details see bulletin PVC-03020B

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

Shipping Weights

All Models: 1 lb. (450 g.)

Shipping Dimensions

All Models: 6 x 6 x 6 inch (153 x 153 x 153 mm.)

MURPHY

USA–ISO 9001:2000 FM 28221
UK–ISO 9001:2000 FM 29422

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