



POWERVIEW Analog Gages

PV-02125B
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Catalog Section 78
(00-02-0534)

FWMurphy



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

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

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



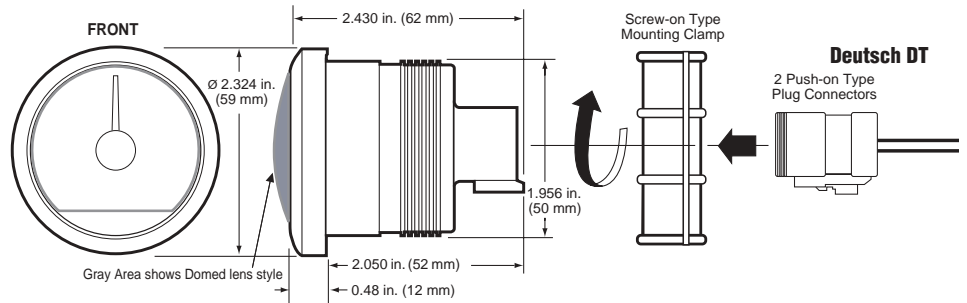
Contemporary Domed Bezel and Lens Style

EB Bezel Type



E Bezel Type

PVA20 Series – Typical Gage Dimensions

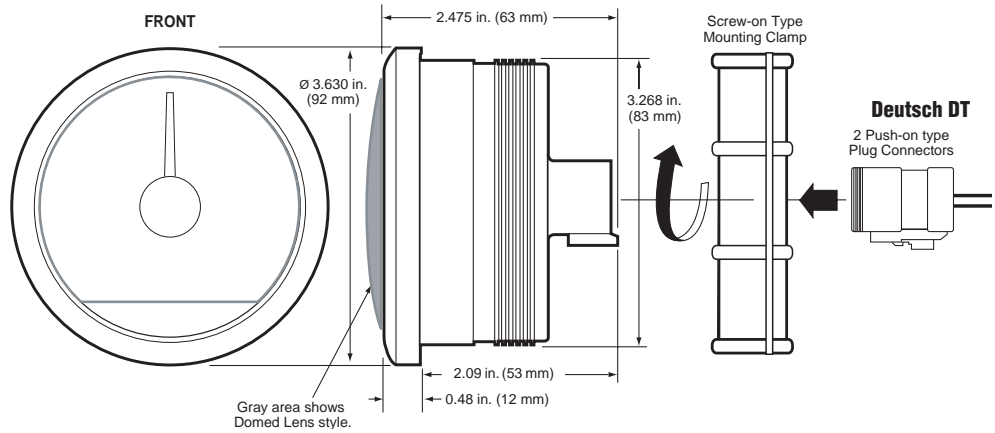


PVA30 Series – Typical Gage Dimensions

EB Domed Bezel and Lens Type



E Bezel Type

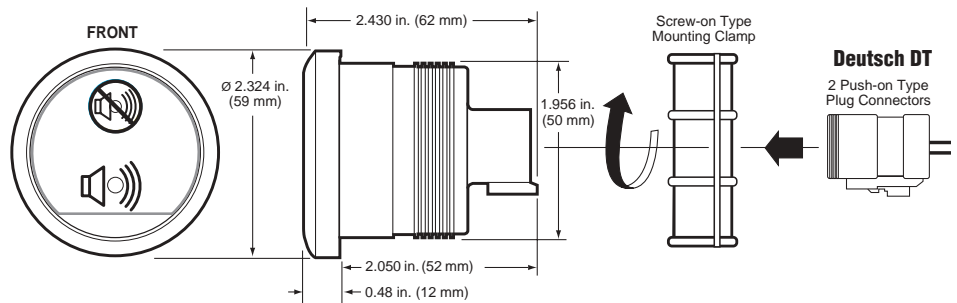


PVAA20 Model – Audible Alarm Typical Dimensions

EB Domed Bezel and Lens Type



E Bezel Type



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 two-year warranty on materials and workmanship is given with this FWMurphy product. A copy of the warranty may be viewed or printed by going to www.fwmurphy.com/warranty.asp.

Shipping Weights

All Models: 1 lb. (450 g.)

Shipping Dimensions

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

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