Validyne DP45 and DP250 Low Range Differential Pressure Transducers

Features

- **Small Sensor Displacement Volume**
- **Replaceable Diaphragm**
- **Full Scale Differential Pressure Ranges as Low as ±1.40 CMH2O**
- **DP250 is a Low Cost Alternative to the Validyne Model DP45**
- **Designed to work with DSI / Ponemah 7700 Carrier Signal Conditioner**

The Validyne DP45 and DP250 are designed for exceedingly low differential pressure measurements. With full scale ranges down to ±1.40 CMH2O, the sensors are ideal for the measurement of very low flow rates of air and gases for pulmonary applications. Both are designed to provide high quality measurements. The DP45 and DP250 are available in a variety of pressure ranges to easily accommodate your research requirements.

For most pneumotachographs and respiratory chambers a ±2.25 CMH2O range is recommended. For tracheal or pleural pressure a ±22.5 CMH2O pressure range is recommend.

Technical Data Sheet
Validyne DP45 and DP250
Validyne Low Range Differential Pressure Transducers

SPECIFICATIONS

Standard Ranges:	±0.05 to ±100 In H2O FS
Accuracy:	±0.5% Full Scale
Hysteresis:	0.25% pressure excursion
Overpressure:	±200% Full Scale with less than 0.5% Full Scale Zero Shift
Overpressure Limit:	to 2X FS
Line Pressure:	100 In H2O, less than 1% Zero Shift
Inductance:	20mH nominal, each coil
Zero Balance:	= ±5mV/V at rated excitation
Excitation:	
Rated:	5 Vrms at 5kHz
Sensitivity:	20mV/V for Full Scale, nominal
Pressure Media:	Gases compatible with 410ss, Inconel
Temperature:	
Operating:	-65 to 250℉
Specified	0 to 160℉
Thermal Zero Shift:	2%FS/100℉ typical
Thermal Sensitivity Shift:	5%/100℉ typical
Pressure Cavity Volume:	3X10 -3 cubic inch
Volumetric Displacement:	3.X10 -4 cubic inch
Pressure Connection:	Hose barb for 3/16” ID tubing
Electrical Connection:	
Connection to 7700 Series	Lemo – 7 pin
Size: (Approximately)	
Diameter	2.25 Inches
Thickness	1.00 Inches
Weight:	DP45—12 ounces, typical DP250—8 ounces, typical

ORDERING INFORMATION

Part Number	Description
600-1102-001	DP250 ±2.25cmH2O
600-1103-001	DP250 ±22.5cmH2O
600-1100-001	DP45 ±2.25cmH2O
600-1101-001	DP45 ±22.5cmH2O

Accessory	Description
13-7715-35	Signal Conditioner for use with Validyne
J03397	Adapter Cable for use with Validyne (Cannon to Lemo)

Specifications are current at publication.
Due to DSI’s continuing product improvement program, specifications may change without notice.

DSI products are not intended for the purposes of diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of disease, or used as a life support device. Use of DSI products are solely for the purposes of conducting life science research.

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