



# SDPT – SMART Dual Pressure Transducer

## J1939 CAN or J1587 Communication



### Features

- ◆ 12- through 24-volt operation
- ◆ J1939 CAN or J1587 data bus communication
- ◆ Accepts pressure/vacuum inputs from -14.5 to +150 psi
- ◆ Warning LED activation over vehicle data bus
- ◆ Two active-low switched inputs for system redundancy
- ◆ Minimal footprint (18.7 sq. in.), can be mounted in any position
- ◆ Environmentally sealed against dust and moisture-penetration
- ◆ Can be mounted on chassis
- ◆ 1/8 or 5/32 – inch NPT

### Applications

- ◆ Brake line pressure
- ◆ Pedal application pressure
- ◆ Auxiliary air pressure
- ◆ Turbo boost pressure
- ◆ Suspension pressure
- ◆ Engine manifold vacuum
- ◆ Air or fuel filter restriction vacuum
- ◆ Central tire inflation

**AMETEK VIS** SMART Dual Pressure Transducer (SDPT) converts air pressure and/or vacuum in puts from two separate sources into data signals and broad casts those signals over the vehicle data bus.

Designed to with stand the harsh conditions encountered in the heavy vehicle and construction industries, the SDPT incorporates the same, field-proven, pressure-sensing technology found in AMETEK's Reduced Function Interface Modules.

The SDPT combines two independent pressure sensors, signal conditioning electronics, data bus interface electronics, and a six-pin, self-locking, sealed Packard MetriPack® connector in a compact, environmentally sealed, polymer package. Powered by the vehicle's ignition power, the SDPT eliminates the need for pressurized airlines and hoses behind the dash for instrumentation purposes.

The SDPT uses the vehicle data bus to provide both pressure information and a low-high pressure indication that is suit able for driving a warning light.

The SDPT meets all SAE J1455 and J1113 requirements for vehicular instrumentation. Designed for vehicular braking applications in which reliability and durability are of prime importance, it can be incorporated into a variety of pressure and/ or vacuum monitoring systems, making it the ideal solution for your pressure monitoring applications.

**AMETEK®**  
VEHICULAR INSTRUMENTATION SYSTEMS

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## Specifications

### Physical Characteristics

Housing material – Black mineral-filled nylon plastic

### Environmental Characteristics

Temperature and humidity – meets or exceeds

SAE #J1455-1994-08

Shock and vibration – meets or exceeds

SAE #J1455-1994-08

Salt spray – meets or exceeds SAE #J1455-1994-08

### Electrical Characteristics

Operating limits – 9 to 32 VDC, reverse polarity protected

Jump-start protection:

12-volt input – withstands 24 VDC for 10 minutes

24-volt input – withstands 36 VDC for 10 minutes

Transient protection – meets or exceeds SAE #J1455-1994-08

### Electrical Inputs

Input voltage – 9 to 32 VDC

Input current – 500 mA maximum at 13.8 VDC

Ground Battery – Data bus SAE #J1939 CAN or J1587

### Electrical Outputs

Data bus – SAE #J1939 CAN or J1587

### Mechanical Inputs

Number – 2

Type – Air pressure and/or vacuum

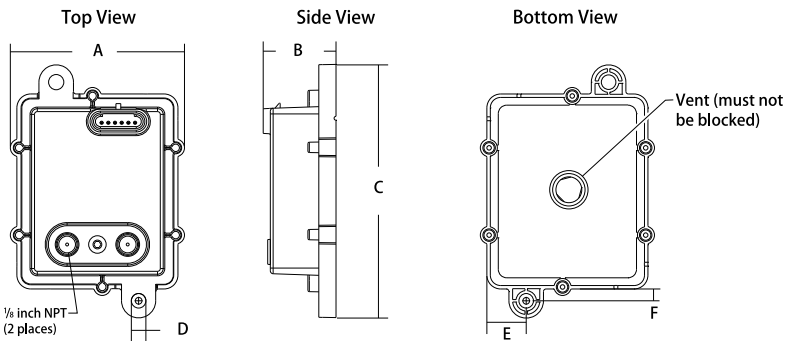
Range and Accuracy:

0 to -1.45 psi: 6% maximum error from 0 to 85°C

0 to -14.5 psi: 3.5% maximum error from 0 to 85°C

0 to 150 psi: 5% maximum error from 0 to 85°C

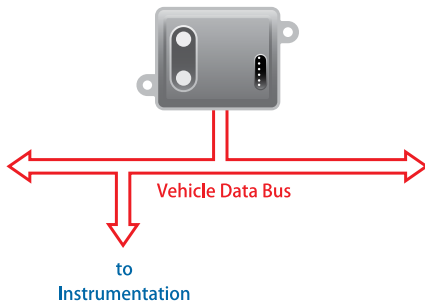
## Installation Data



Dimension	Inches	Millimeter
A	3.6	91.4
B	1.5	38.1
C	5.2	132.1
D	0.3	7.6
E	0.81	20.6
F	0.24	6.1

### Functional Block Diagram

Smart Dual  
Pressure Transducer



### J1939 CAN Electrical Connections

Pin	Signal	Pin	Signal
A	Battery Voltage	D	J1939 Data Bus (-)
B	Battery Ground	E	Switch 1 Input
C	J1939 Data Bus (+)	F	Switch 2 Input

### J1587 Electrical Connections

Pin	Signal	Pin	Signal
A	Battery Voltage	D	J1587 Data Bus (-)
B	Battery Ground	E	Switch 1 Input
C	J1587 Data Bus (+)	F	Switch 2 Input

### Note:

Switch 1 and Switch 2 inputs provide electrical backup for the two direct air inputs to the SDPT. This provides system redundancy should the SDPT fail to respond to a low air input from the mechanical connections. Switch 1 and Switch 2 are active when below 2 volts.



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