

# Type V2 Fused Silicon Pressure Transducer/ Transmitter

- True 1% interchangeability from unit to unit – laser trimmed technology
- Fused silicon for superior linearity and repeatable performance
- Extremely high proof and pressure tolerance
- · Reverse polarity protected
- Wide operating range of -40° to +250°F
- EMI/RFI protected IEC 801-3
- Natural gas vehicle systems approvals available; compliant to NGV 3.1

The new Ashcroft® V2 premier pressure transducer utilizes fused silicon strain gage technology. This unique technology is based on a principle that results in superior lin-

earity and repeatability performance, high proof-and-burst pressure tolerance, and wide operating temperature capability.

There are no epoxies or organic materials, such as O-rings, to contribute to signal instability or drift. This robust unit is virtually unaffected by shock, vibration, mounting position, or pressure pulsation. The wide operating temperature range, all-stainless steel wetted materials, high overpressure protection, and highly reliable Ashcroft electronics make the V Series transducer a solid choice for many applications.

The V2 transducer meets needs for a variety of demanding OEM applications such as compressor, off-road vehicles and construction equipment, HVAC/refrigeration,



hydraulic-OEM machine tool, irrigation pump control, railroad brake system, fuel management systems, industrial engines and on-road CNG pressure control.

#### PERFORMANCE CHARACTERISTICS

±0.6%
±0.4%
±0.1%
±0.1%

**Stability:** ±0.5% F.S./year, non-cumulative **Durability:** 100 million cycles 15/115%

Standard Ranges (psi):

Consult factory for nonstandard ranges and and venting options.

0/15	0/200	0/2500	0/10,000
0/30	0/300	0/3000	Vac./0
0/60	0/500	0/3600	Vac./15
0/100	0/750	0/5000	Vac./30
0/150	0/1000	0/7500	Vac./100

### **ENVIRONMENTAL CHARACTERISTICS**

**Temperature Limits:** 

Storage: -65 to +275°F -54 to +135°C Operating: -40 to +250°F -40 to +121°C Compensated -40/+212°F -40/+100°C

Thermal Coefficients: (68°F ref.)
ZERO ±0.04% F.S./°F max.
SPAN ±0.04% F.S./°F max.

Humidity: Meets MIL-E-5272C.

Output	Excitation	Current
4-20mA	8-30 Vdc	N/A
1-6 Vdc	8-30 Vdc	10mA typ.
1-5 Vdc	8-30 Vdc	10mA typ.
0.5-4.5 Vdc <sup>1</sup>	8-30 Vdc	10mA typ.
0.5 to 4.5 Vdo	<sup>2</sup> 5V typ. <sup>3</sup>	5mA typ.

5V typ.3

2.5mA @ 5V

1 Nonratiometric 2 Ratiometric 3 10V max

Interchangeability:  $\pm 1.0\%$ Zero Balance: All models  $\pm 1.0\%$ Span: All models  $\pm 1.0\%$ 

**ELECTRICAL SPECIFICATIONS** 

RFI Protection: Standard IEC 801-3

Level 4 at 20 V/M

10mV/V

Resonse Time: Less than 5 msec Circuit to Case Insulation Resistance:

500M ohms @ 50 Vdc

All models are reverse polarity protected

#### PHYSICAL CHARACTERISTICS

**Standard Process Connections:** 

1/8" NPT – Male 1/4" NPT – Male 7/<sub>16</sub>"-20 – Male

Enclosure: NEMA 4X

Materials: Body – 6/6 Glass Filled Nylon Socket/Diaphragm – 300 Series/17-4PH SS

Weight: Approx. 3 oz.

#### OPTIONAL FEATURES

• Temperature Output – Available on voltage outputs. Consult factory

#### **AGENCY APPROVALS**

Natural Gas Vehicle Systems CGA/AGA compliant to NGV 3.1

## FUNCTIONAL CHARACTERISTICS

Overpressure (F.S.):	<b>Proof</b>	<u>Burst</u>
0/15 to 0/1500	250%	750%
0/2000 to 0/5000	250%	400%
0/7500	200%	250%
0/10 000	150%	200%

Position Effect: Less than 0.01% F.S.

Vibration:

Tests were performed in all three axes with negligible performance changes.

Sweep: 50-2kHz 5g peak Shock: 1000g peak Random: 16g rms

#### TO ORDER THIS TYPE V2 TRANSDUCER/TRANSMITTER: V 2 Select: 1. Type (V2) 2. Accuracy/TC 3. Pressure Connection (M01) 1/8 NPT-M (M02) 1/4 NPT-M (MEK) 7/16-20M Pressure ranges up to and including 10,000 psi 4. Output Signal (45) 0.5/4.5 Vdc Nonratiometric (42) 4-20mA (M/V) 10mV/V (RM) Ratiometric 0.5/4.5 Vdc (15) 1/5 Vdc 5. Electrical Termination (A0) M.C., no cable (A1) M.C., cable length to order (A2) M.C. & 3 ft. cable (A3) M.C. & 6 ft. cable (A6) M.C. & 12 ft. cable (A7) M.C. & 15 ft. cable (AA) M.C. & 1 ft. cable (A8) M.C. & 20 ft. cable (A9) M.C. & 6 in. cable (NC) No M.C. supplied (A8) M.C. w/sep. wire leads, to order 7. X Variations See drawing 64A234

Consult factory for guidance in product selection Phone (203) 783-6650 FAX (203) 783-6659 or Visit our Web Site at www.dresser.com/instruments

