

## MODEL EA & EAF • PRESSURE TRANSDUCERS

### APPLICATIONS

•  
AIR CONDITIONING  
AND REFRIGERATION  
•  
AIR AND GAS  
COMPRESSORS  
•  
DYNAMOMETERS  
AND ENGINE  
TEST STANDS  
•  
ENGINE CONTROLS  
AND MONITORS  
•  
ENVIRONMENTAL  
CONTROL SYSTEMS  
•  
PROCESS  
CONTROL  
EQUIPMENT  
•  
ROBOTICS  
•  
TRANSMISSIONS  
•  
WATER  
MANAGEMENT

The EA is designed for OEM uses requiring high output and corrosion-resistance. It has operated through millions of pressure cycles without damage and is well-suited for the cycling regimes found in automatic equipment, robots, and hydraulic systems.

The EA has been approved by Underwriters Laboratories as a component in float and pressure operated motor controllers (FILE #E93356). Its pressure port, amplifier, and voltage supply regulator are packaged in a Valox case. A mating electrical connector is included with this low priced transducer.

The EAF outputs a low frequency digital signal which is ideal for electrically noisy environments as well as applications requiring long distance signal transmission or an interface to a microprocessor. The output signal is a frequency modulated square wave set from 1 to 6 kHz.



### FEATURES

- Low cost/amplified output
- 0-6 to 0-5000 PSIG
- Valox case
- 1-6 Vdc output or 1-6 kHz
- 1% accuracy

### BENEFITS

- For use by the OEM
- Wide range of application
- Rugged, lightweight
- Compatible with microprocessors
- Suitable for a broad range of applications

D A T A I N S T R U M E N T S I N C .

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# MODEL EA & EAF • PRESSURE TRANSDUCERS

## TECHNICAL SPECIFICATIONS

### RANGE

	0-6, 15, 25 PSIG	0-50, 100, 200, 300 PSIG	0-500, 1000, 2000, 5000 PSIG
	(0-0.4, 1, 2 bar g)	(0-3.5, 7, 14, 21 bar s)	(0-35, 70, 138, 345 bar g)

(bar values are approximate)

### PHYSICAL

<b>Proof Pressure</b>	2 x rated range	2 x rated range	1.5 x rated range
<b>Burst Pressure</b>	20 x rated range	10 x rated range	5 x rated range
<b>Material in Contact With Media</b>	Braze assembly of 300 series stainless steel		
<b>Shock</b>	50 g's peak (5 milliseconds)		
<b>Vibration</b>	Meets MIL-STD 810-C, Figure 514.2-5, Curve AK, 20.7 g rms minimum		
<b>Weight</b>	Less than 3 oz (85 gm) with connector		

### ELECTRICAL

<b>Full Scale Output</b>	EA: $5 \pm 0.1$ mVdc @ 25°C (1-6V) EAF: $5 \pm 0.1$ kHz @ 25°C (1-6kHz)
<b>Zero Output</b>	EA: $1.0 \pm 0.15$ Vdc @ 25°C* EAF: $1.0 \pm 0.15$ kHz @ 25°C**
<b>Excitation</b>	EA: 8 to 24Vdc @ 15 mA nominal EAF: 10 to 20 Vdc @ 20 mA nominal
<b>Output Current (nominal)</b>	Source: 10 mA Sink: 5 mA (8 mA EAF)
<b>Output Voltage (EAF only)</b>	18 Vdc Maximum
<b>Reverse Polarity Protection</b>	No
<b>Enable Voltage (inhibit, EAF only)</b>	8 Vdc maximum
<b>Enable Current Source (EAF only)</b>	9 Vdc maximum
<b>Insulation Resistance</b>	1000 M @ 50 Vdc
<b>Electrical Connection</b>	Automotive type, Valox housing w/crimp pins (supplied)

### PERFORMANCE

<b>Accuracy</b>	$\pm 1\%$ of FSO from best fit straight line including effects of nonlinearity, hysteresis and nonrepeatability
<b>Operating Temperature Range</b>	EA: -55° to 100°C (-67° to 212°F) EAF: -40° to 85°C (-40° to 185°F)
<b>Compensated Temperature Range</b>	-1° to 85°C (30° to 185°F)
<b>Thermal Effect on Zero</b>	Less than $\pm 1\%$ FSO for any 55°C (100°F) change within the compensated range
<b>Thermal Effect on Full Scale Output</b>	Less than $\pm 1\%$ within the compensated range

\* For 6 PSI, zero output is:  $1.0 \pm 0.20$  Vdc @ 25°C

\*\* For 6 PSI, zero output is:  $1.0 \pm 0.20$  kHz @ 25°C

Note: • All specifications are measured at 25°C and rated excitation unless otherwise stated

### OPTIONS

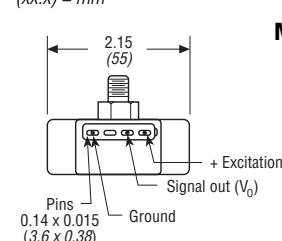
Packard connector for Model EA only.

### ACCESSORY

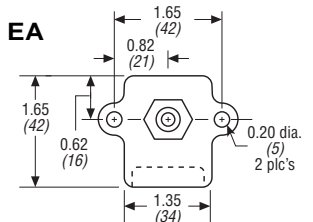
Automotive type Valox connector with crimp pins is supplied with transducer.

### DIMENSIONS

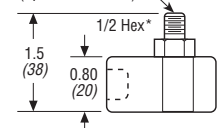
xx.xx = inches  
(xx.x) = mm



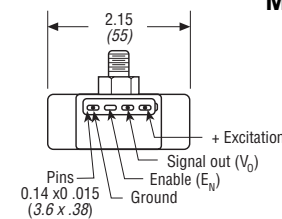
#### Model EA



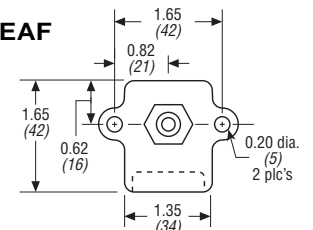
Available ports:  
1/4 (6.35) O.D. straight SS port (0-6 to 0-50 PSI)  
1/8-27 NPT (for EA/6 through 5000)  
3/8-24 UNF (optional on 5000)



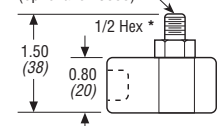
\*9/16 Hex for 3/8-24 UNF port



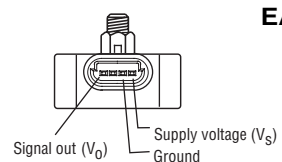
#### Model EAF



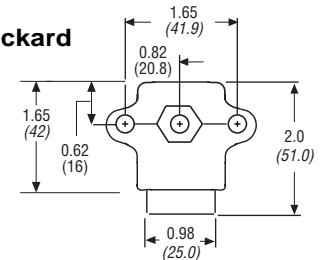
1/4 (6.35) O.D. straight SS port (0-6 to 0-50 psi)  
1/8-27 NPT (for EAF/100 through 5000)  
3/8-24 UNF (optional on 5000)



\*9/16 Hex for 3/8-24 UNF port



#### EA Packard



Mates with # 1262188 Packard connector

\*Dimension with mating connector installed

