

# DYNAMIC PRESSURE TRANSDUCERS

## HIGH FREQUENCY, ACCELERATION COMPENSATED

0-250 to 0-5000 psi

### DPX101 Series



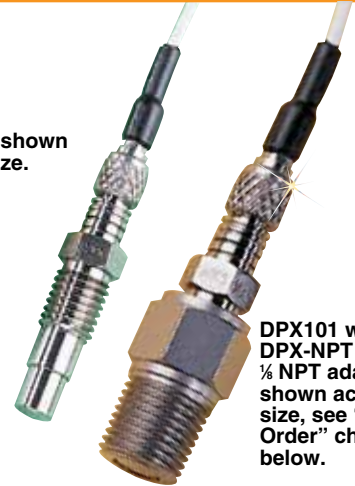
- ✓ Ideal for Monitoring Explosion or Pulsation Pressures
- ✓ 1  $\mu$ s Rise Time
- ✓ Welded Flush Diaphragm
- ✓ Pressure Ranges Up to 5000 psi
- ✓ High-Level 5 V Output
- ✓ Calibration Certificate Supplied

OMEGA's DPX101 dynamic pressure transducers are ideal for measuring pressure transients or dynamic pressure pulsations in liquids or gases. With their wide dynamic range, they can measure pressure events with rise times as fast as 1  $\mu$ s, frequencies to hundreds of kHz, and pressure levels down to fractions of a psi. Using pure synthetic quartz crystals under high compressive preload, these transducers produce a clean, low-impedance voltage signal compatible with many readout instruments.

#### SPECIFICATIONS

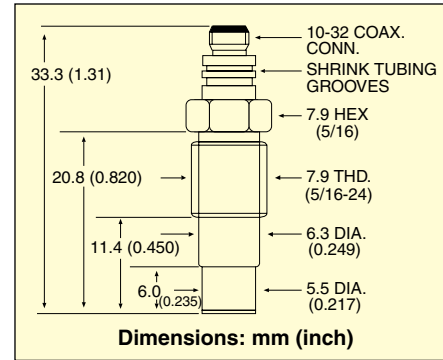
**Excitation:** 2 mA nominal @ 18 to 30 Vdc, constant current  
**Rated Output:** 5V nominal FS  
**Rise Time:** 1.0  $\mu$ s  
**Resonant Frequency:** 500 kHz  
**High Frequency Range:** 170 kHz (approx.  $\frac{1}{3}$  of resonant frequency)  
**Low Frequency Range (-3 dB):** 0.08 Hz (101-250), 0.03 Hz (101-500), 0.02 Hz (101-1K), 0.003 Hz (101-5K)  
**Acceleration Sensitivity:** 0.002 psig  
**Discharge Time Constant:** 2 s (DPX101-250), 5 s (DPX101-500), 10 s (DPX101-1K), 50 s (DPX101-5K)

DPX101 shown actual size.



DPX101 with DPX-NPT 1/8 NPT adaptor shown actual size, see "To Order" chart below.

**Proof Pressure:**  
 5000 psi (DPX101-250)  
 10,000 psi (DPX101-500)  
 10,000 psi (DPX101-1K)  
 15,000 psi (DPX101-5K)  
**Overload Recovery:** 10  $\mu$ s for 2x range  
**Maximum Shock:**  $\pm$ 10,000 g peak  
**Maximum Vibration:**  $\pm$ 5000 g  
**Amplitude Linearity:**  $\pm$ 1% FS (BSFL/0)  
**Temperature Range:** -100 to 250°F (-75 to 120°C)  
**Temperature Sensitivity Effect:** 0.03% FS/°F  
**Output Impedance:** 100  $\Omega$   
**Bias Voltage:** 10V nominal  
**Noise Floor (Wideband, RMS):** 0.004 psi (DPX101-250), 0.007 psi (DPX101-500), 0.014 psi (DPX101-1K), 0.07 psi (DPX101-5K)  
**Weight:** 14 g (0.5 oz) nominal  
**Material:** 316L SS diaphragm, 17-4 SS housing  
**Connector:** 10-32 male termination (cable sold separately; order Model No. ACC-CB2-10)



To Order	
MODEL NO.	RANGE (psig)
DPX101-250	0 to 250
DPX101-500	0 to 500
DPX101-1K	0 to 1000
DPX101-5K	0 to 5000
ACC-CB2-10	3 m (10') coaxial cable (10-32/BNCM) required

#### ACCESSORIES

MODEL NO.	DESCRIPTION
DPX-NPT	1/8 NPT flush mount adaptor
DPX101-3824	3/8-24 flush mount adaptor
DPX-6600	Replacement brass seals
POWER SUPPLIES	
ACC-PS1	Battery power supply (BNC connections)
ACC-PS2	Battery power supply/amplifier (BNC connections)
ACC-PS3	AC power supply (BNC connections)
CABLES	
ACC-CB4-15	4.6 m (15') coaxial cable (BNCM/BNCM)
ACC-CB5-2	0.6 m (2') coaxial cable (BNCM/banana plug)
ACC-CB6	178 mm (7") coaxial cable (BNCM/pigtail)

Comes complete with 2 DPX-6600 seals, calibration certificate and operator's manual. Visit us online for details on the above accessories.

**Ordering Example:** DPX101-250, 0 to 250 psig transducer, DPX-NPT, 3.2 mm (1/8") flush mount adaptor, ACC-CB2-10, 3 m (10') coaxial cable, ACC-PS1, power supply, and ACC-CB5-2, banana plug cable.