



# Dynamic Pressure Sensors

## Model P-200-1 P-200-2

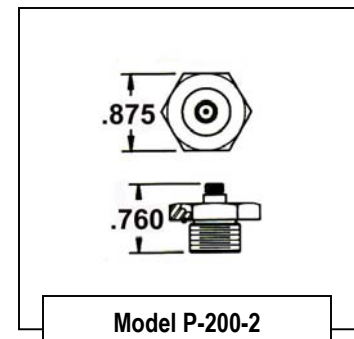
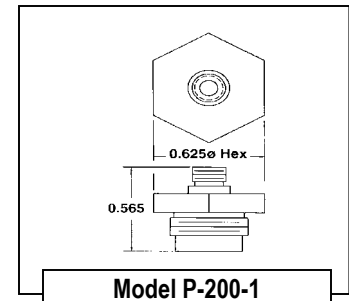
The Columbia Series P200 High Intensity Acoustic Sensors (Microphones) are designed to measure a wide range of dynamic pressure variations, including high intensity sound pressure levels in applications requiring fast rise times and broad frequency response. The sensor is very sensitive allowing very low pressure measurements to 0.01 psi as well as high pressure transient measurements to 5,000 psi at temperatures up to +150 Degrees C.

The P200 Series has a flush diaphragm and incorporates an O-ring seal. The special case construction, although very small in size, provides the advantages of very high natural frequency and exceptional mechanical isolation along with extreme ruggedness. The Model P-200-2 provides additional electrical isolation for prevention of ground loops. *Consult the factory for customized versions of this sensor.*

- **Fast Pressure Variations, Surges & Dynamic Blasts**
- **Very Low & High Pressure**
- **Wide Frequency Response**
- **Small Size / Lightweight**
- **Case Grounded or Electrically Isolated**

### Specifications

| Transfer / Electrical                          | P-200-1  | P-200-2  |
|--|--|--|
| Charge Sensitivity                             | 25 pC / psi  |  |
| Pressure Range                                 | 0.01 To 5,000 psi                                      |  |
| Pressure Overload (without damage)             | 50%  |  |
| Frequency Response                             | 2 To 18,000 Hz   |  |
| Resonant Frequency                             | 90KHz  |  |
| Amplitude Linearity                            | +/-2%  |  |
| Capacitance                                    | 500 pF   |  |
| Output Resistance                              | 1 x 10 <sup>10</sup> Ohms                              |  |
| Grounding                                      | Case Grounded  | Electrically Isolated                                    |
| <b>Environmental</b>                           |  |  |
| Temperature Range (Less than +/-10% Variation) | -65 To +300 Deg F (-54 To +150 Deg C)                  |  |
| Humidity <sup>1</sup>                          | 0 To 100% R.H.   |  |
| Vibration Limit                                | 500 g  |  |
| Shock Limit                                    | 1,000 g  |  |
| <b>Physical</b>                                |  |  |
| Size   | 0.625 In. Hex x 0.565 In. H<br>(15.9 mm Hex x 14 mm H) | 0.875 In. Hex x 0.760 In. H<br>(22.2 mm Hex x 19.3 mm H) |
| Weight   | 0.3 Oz (8.5 Gm)  | 0.6 Oz (17 Gm)   |
| Material                                       | Type 316 Stainless Steel                               |  |
| Body & Diaphragm                               | Type 316 Stainless Steel                               |  |
| Electrical Interface                           | #10-32 Coaxial Thread                                  |  |
| Mounting                                       | 7/16-28 NEF Thread                                     | 9/16-24 NEF-2 Thread                                     |



#### NOTES:

<sup>1</sup> With Connector Mated or Protected, Unit is Hermetically Sealed.

#### Accessories Supplied:

- (1) Cable Assembly, LNHT-3 Ft.
- (1) Hardwood Storage Box
- (1) Standard Calibration Data.