

**HIGH PERFORMANCE
VERY BROAD BAND
SEISMOMETER
EP-300**

The **EP300** represents the new generation of low noise very broadband seismometers equally suitable for stationary, field and OBS (reduced power version) applications. The sensor's highly efficient electrodynamic force-balancing feedback provides for an



extended dynamic range, excellent stability and linearity across the entire passband.

The instrument uses three identical proprietary electrochemical sensors mounted orthogonally along the N, E, and Z-axes. These sensors have many advantages over traditional electromechanical devices. In particular, they have much larger ground motion-to-voltage conversion ratio that results in a uniquely shaped noise curve that it starts bending up at much longer periods and then raises more shallow than the traditional $1/f$ curves.

Similarly to other eentec seismometers, the **EP300** is extremely rugged which makes it ideal for field use. This seismometer *does not* require a mass lock, mass centering, or special installation

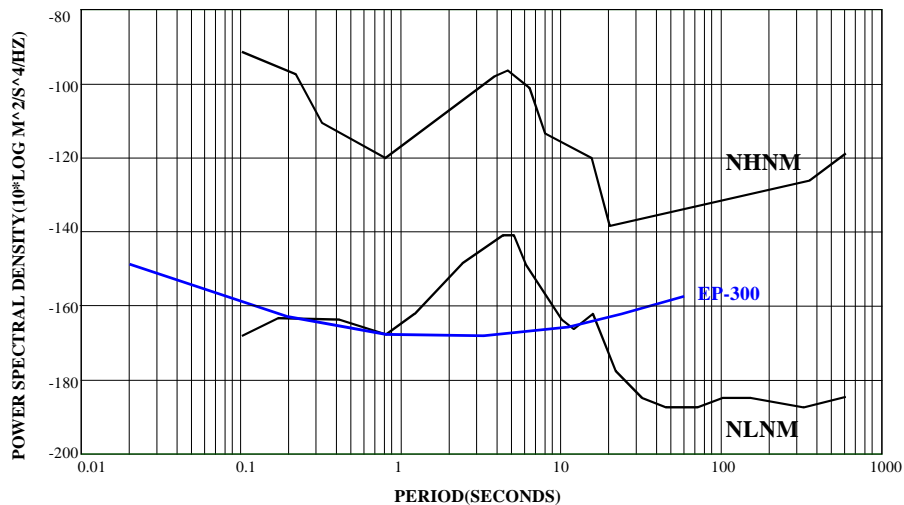
equipment or procedures. It has low power consumption, operates over a wide temperature range; it is waterproof up to the one-meter depths, and stays operational within a wide range of installation tilts. It provides low cost of ownership, *requiring no maintenance* over the life of the instrument.

Options include a 114 mm diameter borehole package, with internal inclinometers. Three and five-year extended warranties are available.

EP300 Specifications

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| Operating principle: | Electrochemical motion transducer with force-balancing feedback |
| Output signals | 2 horizontal, 1 vertical; very broad passband, velocity flat response |
| Output signal swing | +/-10V (+/-20 V p-p differential) |
| Dynamic Range | 150 dB @ 1Hz |
| Bandwidth | <i>Standard:</i> 0.0167 – 50 Hz; <i>Optional:</i> 0.0083 – 50 Hz |
| Generator constant | <i>Standard:</i> 2000 V/m/s; <i>Opt.:</i> 350 – 20,000 V/m/s |
| Calibration input | 1k ohm; 1V in – 1V out; individual for each channel |
| Mass Lock | NONE REQUIRED |
| Mass Centering | NONE REQUIRED |
| Maximum installation tilt ¹ | +/-10° |
| Mechanical resonances | >150 Hz |
| Environmental | Waterproof, submersible (1m) |
| Temperature range | Standard: -12 to + 55 C |
| Case diameter | 200 mm (4.5 inches, 114.3mm borehole) |
| Case height | 220 mm |
| Weight (Al housing) | 11 kg |
| Power – Standard | 10 – 15 Vdc; 12 Vdc nominal |
| Supply current | Standard: 30 mA; LP version: 10 mA |
| Connector | 14-pin circular or customized |

EP300 SEISMOMETER NOISE CURVE



¹ All three sensors stay fully operational, however they sensitivity axes will rotate in accordance with the tilt.