

New Product

3300, 5mm Proximity

Continuing the tradition of excellence

Machinery transducers must endure harsh environments and provide consistent readings for extended periods of time without failures. The noncontacting proximity probe is a crucial part of any monitoring system that needs to maintain extreme accuracy and stability indefinitely.

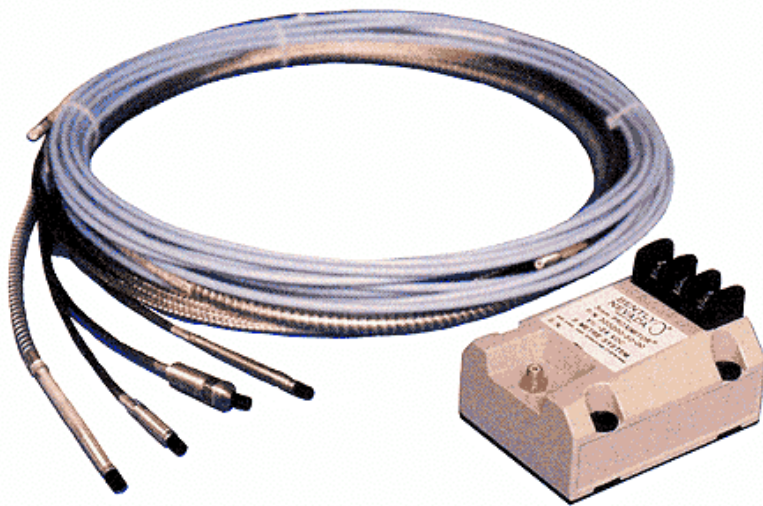
It is our belief that Bently Nevada probes and Proximitors® are the most reliable parts of your monitoring system. If your transducer system provides accurate readings, your monitoring and diagnostic equipment will build from these measurements and provide you with the key information you need to make your maintenance decisions.

Bently Nevada 3300 proximity systems are the most accurate and reliable eddy current proximity sensors available. Since the 3300, 8mm probe was introduced in 1990, over ten thousand systems have been installed worldwide. These systems continue to perform exceptionally well.

The 3300, 5 mm proximity transducer builds on this tradition of excellence. It supplements the existing 8mm proximity system and allows you to use the latest 3300 technology in smaller probe configurations.

Applications for eddy current probes

Eddy current proximity probes have been successfully used in many applications requiring noncontacting vibration and position measurements. They are



commonly used to directly measure the peak-to-peak vibration and the position of the rotor within its fluid film bearings. The distinct advantage of using proximity probes is that you can measure and observe direct shaft motion at its source. When monitoring rotating equipment with fluid film bearings, noncontacting eddy current probes provide the highest level of performance of any machinery vibration sensor.

When monitoring rotating equipment, XY radial vibration measurements should be made at each bearing. Dual axial (thrust) position is also necessary for complete machine condition monitoring. The Keyphasor® probe for speed and phase reference, mode iden-

tification probes, and eccentricity and differential expansion probes should all be considered when specifying the monitoring system.

Proximity probes can also measure rod drop on reciprocating machinery to provide protection against piston-to-cylinder contact.

Since Bently Nevada proximity probes **have no moving parts to wear out or degrade**, they will continue to perform for long periods of time. The 3300, 5mm transducer's design builds on this principle by only using electronic components and materials of construction that can produce a virtually unlimited life span, even in harsh operating conditions.

Transducer System

llence in machinery monitoring



Available
April
1992

Down-sized for tight installations

Stainless steel cases for the 3300, 5mm probe are equipped with 1/4-28 UNF and M8-1 threads. This smaller diameter probe is ideal for vibration and position measurements on pumps, compressors, turbines and other machines with space restrictions. This probe complies with American Petroleum Institute (API) specification 670 including a linear range of 80 mils (2mm).

For many years, our miniature tip probes were constructed with a stainless steel threaded case and a fiberglass tip. We've retained the stainless steel case but have replaced the probe tip with **polyphenylene sulfide (PPS)**, a high performance, thermal plastic now used in our advanced probes. The use of a PPS tip provides a 100 psi (7 bar) pressure rating between the 5 mm probe's tip and its case. The result is added reliability at the probe tip where the environment is most severe. In addition, the specifications for relative humidity have been increased to 100%, condensing, non-submerged (with the protection of the coaxial connector).

The patented Cable Loc design, first developed by Bently Nevada for the 3300, 8mm probe, has been incorporated in our new 5mm probe design. Cable Loc makes the cable junction inside the steel case stronger than in previous miniature probes by providing

a 50 pound (23 kg) tensile pull strength between cable and case. This feature helps the probe resist rough handling during installations and on-line usage.

Ruggedized cable is a standard feature of the 3300, 5mm probe. This cable contains an electrically floating outer stainless steel shield, which provides mechanical protection from nicks or cuts. Ruggedized cable minimizes the chance of an accidental short to ground if the cable stays in contact with a burr or sharp edge while being pulled through conduit. Reducing the possibility of a ground loop between the transducer and the monitor makes the system more dependable. Insulated stainless steel connectors on the cable are also a standard feature to protect and give added strength to the connection.

Isolated 3300 Proximity® is accurate and stable

All 3300 Series Proximity® are electrically isolated to reduce the possibility of ground loops at remote locations. This important feature helps keep your monitoring system trouble-free by isolating machinery transducers. The recommended single-point ground at the monitor is therefore easy to accomplish.

High accuracy and minimal output changes over a wide temperature range make the 3300, 5mm Proximity® a dependable part of the system. With its

electronics removed from the hot and hostile environment of the probe, the 3300, 5mm Proximity® is capable of long-term operation over the life of your machine. The proven concept of separate probe and electronics has these benefits:

- high reliability
- great flexibility when observing various shaft materials
- wide temperature range for proximity probes
- small probe sizes available
- increased accuracy and stability
- low cost in spares inventory

Improved 3300, 5mm Proximity Transducer System costs less

The new 3300, 5mm proximity system is priced lower than 3000 and 7200 Series Transducer Systems offered in the past. This is due to more efficient manufacturing techniques. Bently Nevada is committed to offering high quality transducer products that provide lasting value and improved performance at a lower price.

Our 3300 proximity sensors are designed to work with most rotating and reciprocating machinery applications. When 3300 proximity systems are used in conjunction with 3300 monitoring systems, the result is performance you can depend on. Contact your nearest Bently Nevada sales representative for more information. ☐