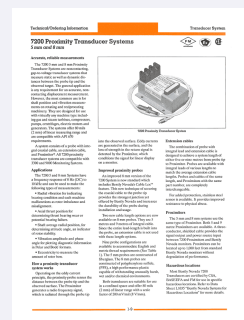


FIELD INSTALLATION QUICK GUIDE

Installation Instructions

Bently Nevada 18745-04

7200 Proximitor Sensor



PRODUCT	18745-04
FAMILY	Bently Nevada 7200 proximity systems
FUNCTION	7200 Proximitor Sensor
STATUS	Verify exact configuration

Prepared by Amikon Limited from Bently Nevada manufacturer documentation. This guide does not replace the complete manufacturer manual, site procedure, hazardous-area drawing, or approval document.

01

CONFIRM THE ORDERED CONFIGURATION

Model Number	18745-04
System Family	7200 proximity transducer system
Probe System Size	5 mm / 8 mm family application
Power Arrangement	Two-wire DC powered
Scale Factor	200 mV/mil
Metric Scale Factor	7.87 V/mm
Frequency Response	DC to 10 kHz

02

MOUNTING AND CONNECTION

- Use the matched probe, extension cable and 18745-04 Proximitor as one calibrated transducer system for radial shaft vibration.
- Apply the DC response and 200 mV/mil scale to thrust-position service after verifying target material and calibrated gap.
- Confirm scale factor: 200 mV/mil.
- Complete the documented acceptance check: Check supply polarity, system length, initial gap, scale factor and monitor indication before returning the machine channel to protection service.

MANUFACTURER INSTALLATION REFERENCE

Official manufacturer reference reproduced from Bently Nevada manufacturer documentation. Use the current source document and all referenced drawings and notes for installation.

Technical/Ordering Information

Transducer System

7200 Proximity Transducer Systems 5 mm and 8 mm



Accurate, reliable measurements

The 7200 5 mm and 8 mm Proximity Transducer Systems are noncontacting, gap-to-voltage transducer systems that measure static as well as dynamic distances between the probe tip and the observed target. The general application is any requirement for an accurate, non-contacting displacement measurement. However, the most common use is for shaft position and vibration measurements on rotating and reciprocating machinery. They are designed for use with virtually any machine type including gas and steam turbines, compressors, pumps, centrifuges, electric motors and generators. The systems offer 80 mils (2 mm) of linear measuring range and are compatible with API 670 requirements.

A system consists of a probe with integral coaxial cable, an extension cable, and Proximitors®. All 7200 proximity transducer systems are compatible with 3300 and 9000 Monitoring Systems.

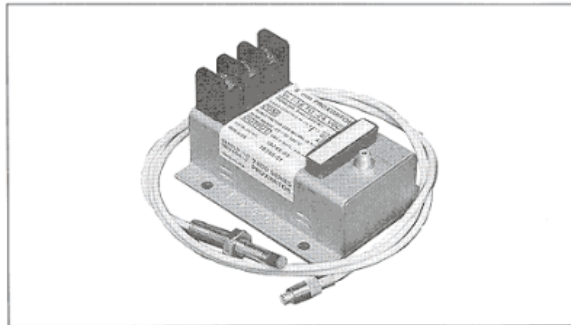
Applications

The 7200 5 and 8 mm Systems have a frequency response of 0 Hz (DC) to 10 kHz and can be used to make the following types of measurements:

- Radial vibration for indicating bearing condition and such machine malfunctions as rotor imbalance and misalignment.
- Axial thrust position for determining thrust bearing wear or potential bearing failure.
- Shaft average radial position, for determining attitude angle, an indicator of rotor stability.
- Vibration amplitude and phase angle for plotting diagnostic information in Polar and Bodé formats.
- Eccentricity to measure the amount of rotor bow.

How a proximity transducer system works

Operating on the eddy current principle, the proximity probe senses the distance between the probe tip and the observed surface. The Proximitors generates a radio frequency signal, which is radiated through the probe tip



7200 Proximity Transducer System

into the observed surface. Eddy currents are generated in the surface, and the loss of strength in the return signal is detected by the Proximitors, which conditions the signal for linear display on a monitor.

Improved proximity probes

An improved 8 mm version of the 7200 System is now standard which includes Bently Nevada's Cable Loc™ feature. This new technique of securing the coaxial cable to the probe tip provides the strongest junction yet offered by Bently Nevada and increases the durability of the probe during installation and usage.

Two new cable length options are now available on 8 mm probes. They are 5 metres and 9 metres of integral cable. Since the entire lead-length is built into the probe, an extension cable is not used with these length options.

Nine probe configurations are available to accommodate English and metric thread requirements (See Table 1). The 5 mm probes are constructed of fiberglass. The 8 mm probes are constructed of polyphenylene sulfide, (PPS), a high performance plastic capable of withstanding unusually harsh, wet and/or chemical environments.

Both transducers are suitable for use in a confined space and offer 80 mils (2 mm) of linear range with a scale factor of 200 mV/mil (8 V/mm).

Extension cables

The combination of probe with integral lead and extension cable is designed to achieve a system length of either five or nine metres from probe tip to Proximitors. Probes are available with integral leads of various lengths to match the average extension cable lengths. Probes and cables of the same length, and Proximitors with the same part number, are completely interchangeable.

For added protection, stainless steel armor is available. It provides improved resistance to physical abuse.

Proximitors

The 5 mm and 8 mm systems use the same type of Proximitors. Both 5 and 9 metre Proximitors are available. A three-conductor, shielded cable provides the signal output and power source input between 7200 Proximitors and Bently Nevada monitors. Proximitors can be located up to 1,000 feet from standard Bently Nevada monitors without degradation of performance.

Hazardous locations

Most Bently Nevada 7200 Transducers are certified by CSA, BASEEFA and FM for use in specific hazardous locations. Refer to Data Sheet L1035 "Bently Nevada Systems for Hazardous Locations" for more details.

04

CABLE ROUTING AND CONNECTION

- Apply the DC response and 200 mV/mil scale to thrust-position service after verifying target material and calibrated gap.
- Restore the documented frequency response and verify DC to 10 kHz.
- Support all cables, connectors or mechanical interfaces without strain.
- Inspect shields, earth paths, fasteners and adjacent hardware before service.

05

INITIAL SYSTEM CHECKS

- Confirm exact model identity and compatible system components before energizing.
- Check the saved configuration against the controlled site requirements.
- Check supply polarity, system length, initial gap, scale factor and monitor indication before returning the machine channel to protection service.
- Record the installed model, baseline values and final status.

06

CONTROLLED DOCUMENTS

Official source	Bently Nevada manufacturer documentation
Product record	18745-04
Manufacturer	Bently Nevada
Support	INFO@AMIKON.CN