# Bently Nevada 330101 Series Service Manual

330101-32-53-10-02-00

## 1. Description

Manufacturer : Bently Nevada

## 3. Product Information

Manufacturer : Bently Nevada

Product No. : 330101-32-53-10-02-00

Product Type : 3300 XL 8 mm Probe, 3/8-24 UNF thread,

without armor

Made in U.S.A

330101 - 3300 XL 8 mm Probe, 3/8-24 UNF thread, without armor

Unthreaded Length Option :32 - 3.2 in

Overall Case Length Option :53- 5.3 in

Total Length Option : 10 - 1.0 metre (3.3 feet)

Connector and Cable-Type Option : 02= Miniature coaxial ClickLoc connector, standard cable

Agency Approval Option : 00 Not required

The 3300 XL probe and extension cable also

reflect improvements over previous designs. A

patented TipLoc molding method provides a

more robust bond between the probe tip and

the probe body. The probe’s cable incorporates

a patented CableLoc design that provides 330

N (75 lbf) pull strength to more securely attach

the probe cable and probe tip.

You can also order 3300 XL 8 mm probes and

extension cables with an optional FluidLoc

cable option. This option prevents oil and other

liquids from leaking out of the machine through

the cable’s interior.

8 mm probes provide

a thicker encapsulation

of the probe coil in the molded PPS plastic

probe tip. This results in

a more rugged probe.

The larger diameter of the probe body also

provides

a stronger, more robust case. We

recommend that you use

8 mm probes when

possible to provide optimal robustness against

physical abuse

Nominal Probe DC Resistance

Resistance (RPROBE) from Center Conductor

to Outer Conductor

Probe

Length (m)

RPROBE(Ω)

1.0 7.59 ± 0.50

Extension Cable

Capacitance

69.9 pF/m (21.3 pF/ft)

typical

Field Wiring

0.2 to 1.5 mm2 (16 to 24

AWG). Recommend using

3 conductor shielded triad

cable and tinned field

wiring. Maximum length of

305 meters (1,000 feet)

between the 3300 XL

Proximitor Sensor and the

monitor. See the frequency

response graphs, Figures

10 and 12, for signal rolloff

at high frequencies when using longer field wiring lengths.

Linear Range

2 mm (80 mils). Linear range begins at approximately 0.25 mm (10 mils) from target and is from 0.25 to 2.3 mm (10 to 90 mils) (approximately –1 to –17 Vdc).

Recommended Gap Setting for Radial Vibration

-9 Vdc [approximately 1.27 mm (50 mils)]

Incremental Scale Factor (ISF)

Standard 5 or 1 meter System

7.87 V/mm (200 mV/mil) ± 5% including interchangeability error when measured in increments of 0.25 mm (10 mils) over the 80 mil linear range from 0°C to +45°C (+32°F to +113°F).

Standard 9 meter System

7.87 V/mm (200 mV/mil) ± 6.5% including interchangeability error when measured in increments of 0.25 mm (10 mils) over the 80 mil linear range from 0°C to +45°C (+32°F to +113°F).

Extended Temperature Range (ETR) for 5 and 9 Meter Systems

7.87 V/mm (200 mV/mil) ± 6.5% including interchangeability error when measured in increments of 0.25 mm (10 mils) over the 80 mil linear range from 0°C to +45°C (+32°F to +113°F).

Deviation from best fit straight line (DSL)

Standard 5 or 1 meter System

Less than ±0.025 mm (±1 mil) with components at 0°C to +45°C (+32°F to +113°F).

Standard 9 meter System

Less than ±0.038 mm (±1.5 mil) with components at 0°C to +45°C (+32°F to +113°F).

Extended Temperature Range 5 and 9 meter Systems

Less than ±0.038 mm (±1.5 mil) with components at 0°C to +45°C (+32°F to +113°F).

Probe Tip Material Polyphenylene sulfide (PPS).

Probe Case Material

AISI 303 or 304 stainless steel (SST).

323 g/m (11.4 oz)

Probe Temperature Range

Operating and Storage Temperature

Standard Probe

-52°C to +177°C (-62°F to +350°F)

Extended Temperature Range Probe

-52°C to +218°C (-62°F to +425°F) for the probe tip; -51°C to +260°C (-60°F to +500°F) for the probe cable and connector.

Exposing the probe to temperatures below –34˚C (-30˚F) may cause premature failure of the pressure seal.

Probe Pressure

3300 XL 8 mm probes are designed to seal differential pressure between the probe tip and case. The probe sealing material consists of a Viton® O ring. Probes are not pressure tested prior to shipment. Contact our custom design department if you require a test of the pressure seal for your application.

Probe Relative Humidity

Less than a 3% change in Average Scale Factor (ASF) when tested in 93% humidity in accordance with IEC standard 68 2 3 for up to 56 days.