# Bently Nevada 330102&330103&104 Series Service Manual

330102-00-20-05-01-05

## 1. Description

Manufacturer : Bently Nevada

## 3. Product Information

Manufacturer : Bently Nevada

Product No. :330102-00-20-05-01-05

Product type : 3300 XL 8 mm Proximity Probes

330102 =  3300 XL 8 mm Probe, 3/8-24 UNF thread, with armor

Unthreaded Length Option : 00=0.0 in

Overall Case Length Option : 20= 2.0 in

Total Length Option : 05 = 0.5 meter (1.6 feet)

Connector and Cable-Type Option :01= Miniature coaxial ClickLoc connector with connector protector, standard cable

Agency Approval Option :05 = CSA, ATEX, IECEx  Approvals

Probe Tip Material: Polyphenylene sulfide (PPS)

Probe Case Material: AISI 303 or 304 stainless steel (SST).

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.

Nominal Probe DC Resistance

Resistance (RPROBE) from Center Conductor to Outer Conductor

| Probe Length (m) | RPROBE(Ω) |
|---|---|
| 0.5 | 7.45 ± 0.50 |

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)]

Mechanical

Probe Tip Material Polyphenylene sulfide (PPS).

Probe Case Material

AISI 303 or 304 stainless steel (SST).

Thread Engagement Limits

Probe Case Thread 3/8-24

Maximum Length of Thread Engagement

0.563 in

Probe 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 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.

3300 XL Probe

ia

When installed

with

intrinsically

safe zener

barriers per

drawing 141092

or when

installed with

galvanic

isolators.

Class I, Zone 0: AEx/Ex ia IIC T5...T1 Ga;

Class 1, Groups A, B. C, and D,

Class II, Groups E, F, and G,

Class III;

nA, ec

When installed

with nonincendive

circuit

connected per

drawing

140979.

Class I, Zone 2: AEx/Ex nA IIC T5...T1 Gc;

Class 1, Division 2, Groups A, B, C, D;

Class 1, Zone 2: AEx/Ex ec IIC T5...T1 Gc;

Class I, Division 2, Groups A, B, C, and

D;

Temperature Schedule

(Probe Only)

For EPL Ga and Gc

Temperature Classification T1 Ambient Temperature -55°C to +232°C

Temperature Classification T2 Ambient Temperature -55°C to +177°C

Temperature Classification T3 Ambient Temperature -55°C to +120°C

Temperature Classification T4 Ambient Temperature -55°C to +80°C

Temperature Classification T5 Ambient Temperature -55°C to +40°C

For EPL Dc

Temperature Classification T280°C @ Ta Ambient Temperature -55°C to +232°C

Temperature Classification T225°C @ Ta Ambient Temperature -55°C to +177°C

Temperature Classification T170°C @ Ta Ambient Temperature -55C to +120°C

Temperature Classification T130°C @ Ta Ambient Temperature -55°C to +80°C

Temperature Classification T105°C @ Ta Ambient Temperature -55°C to +100°C

Temperature Classification T90°C @ Ta Ambient Temperature -55°C to +40°C