# Bently Nevada 330102&330103&104 Series Service Manual

330103-02-06-10-02-00

## 1. Description

"Manufacturer : Bently Nevada

## 3. Product Information

"Manufacturer : Bently Nevada

Product No. : 330103-02-06-10-02-00

Product type : 3300 XL 8 mm Proximity Probes

330103 =  3300 XL 8 mm Probe, M10 x 1 thread, without armor

Unthreaded Length Option : 02= 20mm

Overall Case Length Option : 06=60mm

Total Length Option :  10 =1.0 meter (3.3 feet)

Connector and Cable-Type Option :

02 = Miniature coaxial ClickLoc

connector, standard cable

Agency Approval Option :00 = Not required

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) 1.0

RPROBE(Ω)

7.59 ± 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).

Probe

Case

Thread

Maximum Length of Thread
Engagement
M10x1 15 mm
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;
Thread Engagement Limits
Probe Case Thread M10x1
Maximum Length of Thread Engagement
15 mm

Probe Case Torque

Probe Type Standardforward mounted probes

Maximum Rated  33.9 N•m (300 in•lbf)

Recommended 11.2 N•m (100 in•lbf)

Probe Case Torque

Probe Type Standard forward mount probes - first three threads

Maximum Rated  22.6 N•m (200 in•lbf)

Recommended 7.5 N•m (66 in•lbf)

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