

# Bently Nevada 330191&330195 Series Service Manual

330194-15-25-50-05

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## 1. Description

Part Number:330194-15-25-50-05

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## 3. Product Information



Part Number:330194-15-25-50-05

Model: Proximity Probes

Manufacturer: Bently Nevada

Condition: New & Original in Factory Packing

Factory Warranty: 12 Months

Ordering Number

Model: 330194 = 3300 XL 8 mm Probe, M10 x 1 thread, with armor

Unthreaded Length Option:

Length configurations:

Maximum unthreaded length: 230 mm

Minimum unthreaded length: 0 mm

15 = 150 mm

Overall Case Length Option:

Maximum case length: 250 mm

Minimum case length: 20 mm

25 = 250 mm

Total Length Option:50 = 5.0 meters (16.4 feet)

5-meter probes are designed for

use with the 5 meter Proximitor sensor only.

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

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.

One-meter systems do not use an extension cable.

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.

Power

Requires -17.5 Vdc to -26 Vdc

when installed with nonincendive circuit connected per installation drawing 140979

at 12 mA maximum

consumption, -23 Vdc to -26

Vdc with barriers. Operation at

a more positive voltage than

-23.5 Vdc can result in reduced linear range.

Supply

Sensitivity



Less than 2 mV change in  
output voltage per volt change  
in input voltage.

Output

Resistance 50  $\Omega$

Nominal Probe DC Resistance

Resistance (RPROBE) from Center Conductor  
to Outer Conductor

Probe

Length (m) 5.0

RPROBE( $\Omega$ )

8.73  $\pm$  0.50

Probe Tip

Material Polyphenylene sulfide (PPS).

Probe Case

Material

AISI 303 or 304 stainless steel

(SST).

Standard

cable

75 $\Omega$  triaxial, fluoroethylene

propylene (FEP) insulated

probe cable in the following

total probe lengths: 0.5, 1, 1.5, 2,

3, 5, or 9 meters.

Extended

Temperature

Range cable

75 $\Omega$  triaxial, perfluoroalkoxy

(PFA) insulated probe cable in

the following total probe

lengths: 0.5, 1, 1.5, 2, 5, or 9

meters.

Aarmor

(optional on

both)

Flexible AISI 302 or 304 SST

with FEP outer jacket.

Tensile

Strength

(Maximum

Rated)

330 N (75 lbf) probe case to

probe lead.

270 N (60 lbf) at probe lead to

extension cable connectors.

Connector

Material

Gold-plated brass or goldplated beryllium copper.

Connector

Material

Gold-plated brass or goldplated beryllium copper.

Maximum

Connector

Torque

0.565 N•m (5 in•lbf)

Probe Case Thread: M10x1

Maximum Length of Thread

Engagement: 15 mm



Probe 323 g/m (11.4 oz)

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

Probe entity parameters are met when used with BN extension cables and connected to BN Prox.

Temperature Schedule

Temperature

Classification

Ambient Temperature

(Probe Only)

For EPL Ga and Gc

T1 -55°C to +232°C

T2 -55°C to +177°C

T3 -55°C to +120°C

T4 -55°C to +80°C

T5 -55°C to +40°C

For EPL Dc

T280°C @ Ta -55°C to +232°C

T225°C @ Ta -55°C to +177°C

T170°C @ Ta -55°C to +120°C

T130°C @ Ta -55°C to +80°C

T105°C @ Ta -55°C to +100°C

T90°C @ Ta -55°C to +40°C

Effects of 60 Hz Magnetic Fields Up to 300 Gauss

Output Voltage in Mil pp/Gauss

Gap:10

5 or 1-meter Proximitior Sensor: 0.0119

9 meter Proximitior Sensor: 0.0247

Probe : 0.0004

Ext.Cable: 0.0004

Gap:50

5 or 1-meter Proximitior Sensor: 0.0131

9 meter Proximitior Sensor: 0.0323

Probe : 0.0014

Ext.Cable: 0.0014

Gap:90

5 or 1-meter Proximitior Sensor: 0.0133

9 meter Proximitior Sensor: 0.0348

Probe : 0.0045

Ext.Cable: 0.0045

