Bently Nevada 330191&330195 Series Service Manual

330194-05-13-10-05

1. Description

Part Number:330194-05-13-10-05

3. Product Information

Part Number:330194-05-13-10-05

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

0 5 =5 0 mm

Overall Case Length Option:

Maximum case length: 250 mm

Minimum case length: 20 mm

13= 130 mm

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

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 Ω

Nominal Probe DC Resistance

Resistance (RPROBE) from Center Conductor

to Outer Conductor

Probe

Length (m) 1.0

RPROBE(Ω)

7.59 ± 0.50

Probe Tip

Material Polyphenylene sulfide (PPS).

Probe Case

Material

AISI 303 or 304 stainless steel

(SST).

Standard

cable

75Ω 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

75Ω triaxial, perfluoroalkoxy

(PFA) insulated probe cable in

the following total probe

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

meters.

Armor

(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	-55C 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 Proximitor Sensor: 0.0119

9 meter Proximitor Sensor: 0.0247

Probe : 0.0004

Ext.Cable: 0.0004

Gap:50

5 or 1-meter Proximitor Sensor: 0.0131

9 meter Proximitor Sensor: 0.0323

Probe : 0.0014

Ext.Cable: 0.0014

Gap:90

5 or 1-meter Proximitor Sensor: 0.0133

9 meter Proximitor Sensor: 0.0348

Probe : 0.0045

Ext.Cable: 0.0045