Bently Nevada 330101 Series Service Manual

330101-00-15-10-01-00

1. Description

Manufacturer : Bently Nevada

3. Product Information

Manufacturer : Bently Nevada
Product No. : 330101-00-15-10-01-00
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 : 00 - 0.0in
Overall Case Length Option : 15 - 1.5 in
Total Length Option : 10 - 1.0 metre (3.3 feet)
Connector and Cable-Type Option :01
Miniature coaxial ClickLoc
connector with connector
protector, standard cable
00 - Agency Approval Option : 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) 1.0
RPROBE(Ω)
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.
Probe Case Thread 3/8-24
Maximum Length of Thread Engagement 0.563 in
Temperature Schedule
For EPL Ga and Gc
Temperature Classification T1 Ambient Temperature (Probe Only) -55°C to +232°C
Temperature Classification T2 Ambient Temperature (Probe Only) -55°C to +177°C
Temperature Classification T3 Ambient Temperature (Probe Only) -55°C to +120°C

Temperature Classification T4 Ambient Temperature (Probe Only) -55°C to +80°C

Temperature Classification T5 Ambient Temperature (Probe Only) -55°C to +40°C

For EPL Dc

Temperature Classification T280°C @ Ta Ambient Temperature (Probe Only) -55°C to +232°C

Temperature Classification T225°C @ Ta Ambient Temperature (Probe Only) -55°C to +177°C

Temperature Classification T170°C @ Ta Ambient Temperature (Probe Only) -55C to +120°C

Temperature Classification T130°C @ Ta Ambient Temperature (Probe Only) -55°C to +80°C

Temperature Classification T105°C @ Ta Ambient Temperature (Probe Only) -55°C to +100°C

Temperature Classification T90°C @ Ta Ambient Temperature (Probe Only) -55°C to +40°C