

# Bently Nevada 330140&330141 Series Service Manual

330140-08-30-02-00

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## 1. Description

Manufacturer : Bently Nevada

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## 3. Product Information



Manufacturer : Bently Nevada  
Product No. :330140-08-30-02-00  
Product Type : 330141 3300 XL 8 mm Probe with armor  
Made in U.S.A  
Overall Case Length 08=0.8in  
Total Length Option: 3.0 8.17 ± 0.50  
C: Connector and Cable-Type Option  
02 Miniature coaxial ClickLoc  
connector, standard cable  
Agency Approval Option  
00 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)  
RPROBE(Ω)  
3.0 8.17 ± 0.50  
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).

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  $-34^{\circ}\text{C}$  ( $-30^{\circ}\text{F}$ ) 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.

#### 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.

