

Bently Nevada 330173&330171 Series Service Manual

330171-04-12-05-02-CN

1. Description

Manufacturer : Bently Nevada

3. Product Information

Manufacturer : Bently Nevada

Product No. : 330171-04-12-05-02-CN

Product type : 330171 3300 5mm Probe, 1/4-28 UNF thread, without armor

Made in U.S.A

Unthreaded Length Option : 04 = 0.4 in

Overall Case Length Option : 12=1.2 in

Total Length Option : 0 5 0.5 meter (1.6 feet)

Connector Option : 0 2 Miniature coaxial ClickLoc connector, standard cable

Agency Approval Option : CN =Country Specific

Probe Tip Material: Polyphenylene sulfide (PPS).

Probe Case Material: AISI 304 stainless steel (SST).

Probe Case Thread 1/4-28

Maximum Length of Thread Engagement 0.375 in

When drilling and tapping a mounting hole for a 1/4-28 probe, a #3 or larger tap drill is recommended.

Weight : 0.323 Kg

Specifications

Unless otherwise noted, the following

specifications are for a proximity transducer

system between +18°C and +27°C (+64°F to

+80°F) with a -24 Vdc power supply, a 10 kW

load, an AISI 4140 steel target, and a probe

gapped at 1.27 mm (50 mils).

Electrical

Power

Requires -17.5 Vdc to -26 Vdc at

12 mA maximum consumption.

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 W

Probe DC Resistance

Probe Length (m) 0.5

Resistance from the Center Conductor to the Outer Conductor (Ω) 7.45 ± 0.50

Probe Tip

Material Polyphenylene sulfide (PPS)

Probe Case

Material

AISI 303 or 304 stainless steel

(SST)

Probe Cable

75 Ω triaxial, fluoroethylene

propylene (FEP) insulated

probe cable in the following

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

(1.6, 3.3, 16.4, or 29.5 feet)

5mm Probe

Tensile

Strength

222 N (50 lbf) probe case to

probe lead. 222 N (50 lbf)

probe lead to extension cable

connectors

Connector	
material	
Gold-plated brass or goldplated beryllium copper	
Probe case	
torque	
5.1 N·m (45in·lb) recommended	
7.3 N·m (65 in·lb) maximum	
Connectortoconnector	
torque	
Refer to the table below:	
Recommended Torque	
Maximum	
torque 0.565 N·m (0.42 ft•lbf)	
Minimum	
Cable Bend	
Radius	
25.4 mm (1.0in)	
Probe Temperature	
Range	
-35°C to +177°C (-	
31°F to +351°F)	
Exposing the probe to temperatures	
below -34°C (-30°F) may cause	
premature failure of the pressure	
seal.	
Effects of 60 Hz Magnetic Fields Up to 300 Gauss (5 meter system)	
Output voltage in mil pp/gauss	
Gap 10 mil	
XL Proximitior Sensor 0.0119	
Probe 0.0004	
XL Ext. Cable 0.0004	
Gap 50 mil	
XL Proximitior Sensor 0.0131	
Probe 0.0014	
XL Ext. Cable 0.0014	
Gap 90 mil	
XL Proximitior Sensor 0.0133	
Probe 0.0045	
XL Ext. Cable 0.0045	
Thread Engagement Limits	
Probe Case Thread 1/4-28	
Maximum Length of Thread Engagement	
0.375 in	
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	

