Bently Nevada 330880&330881 Series Service Manual

330881-00-04-150-06-02

1. Description

Manufacturer : Bently Nevada

3. Product Information

Manufacturer : Bently Nevada

Product No. :330881-00-04-150-06-02

Product Type : PROXPAC XL Proximity Transducer

Made in U.S.A

Probe and Approvals Option :0 0= No probe; Proximitor sensor without approvals

Standoff Adapter Option (B Dimension) : 0 4 =40 mm

Probe Penetration Option (C Dimension) :150 =150 mm

Fittings Option :0 6= One 3/4-14 NPT fitting, one 3/4-14 NPT to 1/2-14 NPT SST reducer and two plugs

Mounting Thread Option : 0 2= 3/4-14 NPT (required if ordering Standoff Adapter Option)

Weight : 1.44 Kg

Mechanical

Housing Ratings

IP66 rating verified by BASEEFA report number T07/0709.

Probe Tip

Material

Polyphenylene Sulfide (PPS)

Probe Case

Material

AISI 304 stainless steel

Probe Cable

1-metre length, 75 Ω triaxial, fluoroethylene propylene (FEP) insulated.

Probe

Connector

Gold-plated brass ClickLoc* connector

Probe Tensile

Strength

330 N (75 lb) between probe cable and case, maximum.

Housing

Material

Ultraviolet (UV) resistant, glassreinforced polyphenylene sulfide (PPS) thermoplastic containing conductive fibers.

Sleeve Material

and Retaining

Chain

AISI 304 stainless steel

Outer Sleeve

and Retaining

Screws

AISI 303 stainless steel

Sleeve O-Ring

Material

Neoprene

Grounding Liner

and Retaining

Plate Material

AISI 304 Stainless Steel

Vibration

Isolation

Material

Extra Soft Cellular Silicone

Lid Label

Material

Gloss Radiant White Polyester

Recommended

Torque

Retaining Nut

29.5 N·m (260 in·lb)

Probe Sleeve

Locknut

39.3 N·m (350 in·lb)

Housing

Strength Typical

Outer sleeve was mounted on a test stand with its axis parallel to horizontal and the housing mounted on the outer sleeve through an end hole. The housing supported 912 N (205 lbf) placed approximately 38 mm (1.5 in) from the unsupported end with the cover fastened in place and grounding liner installed.

Housing Impact

Strength

Certified by BASEEFA to withstand two separate 4 Joule (5.4 ft·lb) impacts at -39°C (-38°F) and at 115°C (239°F). CSA verified that samples of the housing and cover could withstand a 7 Joule (9.5 ft·lb) impact at ambient room temperature.

Total System

Weight

1.44 kg (3.2 lbm) typical with 0.3 metre (12 in) sleeve length.

Environmental Limits

Probe

Temperature

Range

Operating

Temperature:

-51 °C to +177 °C (-60 °F to +350 °F).

Note: Exposing the probe to temperatures below –34 °C (-29 °F) may cause premature failure of the pressure seal.

Power

Requires -17.5 Vdc to -26 Vdc without barriers 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

Field wiring:

0.2 to 1.5 mm2 (16 to 24 AWG) . Recommend using 3-conductor shielded triax cable and tinned field wiring. Maximum length of 305 metres (1,000 feet) between the 3300 XL Proximitor Sensor and the monitor. See the frequency response graph (Figure 1, page 7) 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 mm to 2.3 mm (10 mils to 90 mils) (approximately –1 Vdc to –17 Vdc).

Recommended Gap Setting:

1.27 mm (50 mils)

Incremental Scale Factor (ISF)

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).

Deviation from best fit straight line (DSL)

Standard 1 metre system

Less than ±0.025mm (±1 mil) with components at 0 °C to +45 °C (+32 °F to +113 °F).

Frequency Response

0 to 10 kHz: +0, -3 dB, with up to 305 metres (1000 feet) of field wiring.

Minimum Target Size

15.2 mm (0.6 in) diameter (flat target)

Shaft Diameter Minimum

50.8 mm (2.0 in)

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