Bently Nevada 330880&330881 Series Service Manual

330881-28-05-058-08-02

1. Description

Manufacturer : Bently Nevada

3. Product Information

Manufacturer : Bently Nevada

Product No. : 330881-28-05-058-08-02

Product Type : PROXPAC XL Proximity Transducer

Made in U.S.A

Probe and Approvals Option :2 8

3300 XL 8 mm probe with

Multiple Approvals

Standoff Adapter Option (B Dimension) : 0 5 50 mm

Probe Penetration Option (C Dimension) :058= 58mm

Fittings Option : 0 8

Two PG21 x M20 fittings, one plug

Conduit fittings are

necessary when

hardline conduit or

metal piping is

brought into the

housing. If using

flexible conduit, you

should order with

integral 3/4-14 NPT

fittings so that you do

not require additional

conduit fittings with

the housing. If using

flexible conduit, order

the D = 0 0 option.

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)