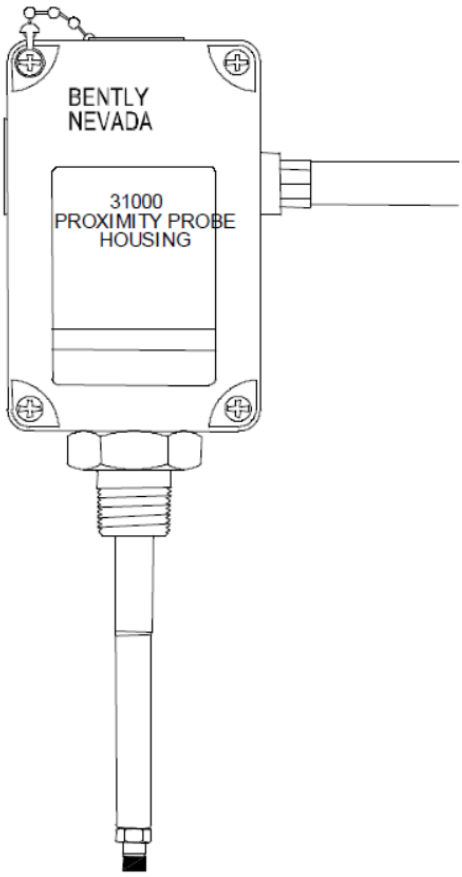
31000 and 32000 Proximity Probe Housing Assemblies

Datasheet

Bently Nevada Machinery Condition Monitoring

141610 Rev. N



Description

The 31000/32000 Proximity Probe Housing Assemblies are recommended when mounting proximity probes through the machine case and are typically used for radially mounted transducers, whether vibration or Keyphasor measurements.

When using these housings to measure radial vibration, ensure that the machine casing is affixed to the bearing in order to get an accurate relative vibration signal.

When measuring shaft axial position with dual proximity probes, use housing 21022 instead. Consult datasheet (document 141601).

Use of a Proximity probe housing allows external access to the proximity probe and its extension cable, permitting gap adjustment or probe replacement without disassembly of the machine. The 31000/32000 Proximity Probe Housing Assembly is made of polyphenylene sulfide (PPS), an advanced, high-strength, thermoplastic with excellent corrosion resistance. Other elements of the housing assembly are made of corrosion-resistant stainless steel. The housing can be ordered with installed 3300 XL Proximity Probes and a variety of conduit fittings.

The 31000/32000 Proximity Probe Housing Assembly is fully compliant with the American Petroleum Institute's (API) 670 Standard for externally mounted proximity probe housings.

When installed in conjunction with an approved transducer system and appropriate I.S. barriers, the 31000/32000

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Proximity Probe Housing Assembly can be used in intrinsically safe hazardous area applications.

The 31000/32000 Housing is intended to provide mechanical and environmental protection only, and is not an explosion-proof housing. When an explosion proof proximity probe housing assembly is required, use housing CA21000 or CA24701. Consult the datasheet (document 141600).

Related Documents

For probe information, refer to the following manuals:

- *3300 XL 8mm & 3300 5mm Proximity Transducer System User Guide* (document 141078)
- *3300 XL NSv Proximity Transducer System User Guide*(document 147357)
- *3300 XL 11mm Proximity Transducer System Installation*User Guide (document 146255)
- *Radiation Resistant Probe and Proximitor System*(document TW8029407)

Ordering Information

For the detailed listing of country and product-specific approvals, refer to the *Approvals Quick Reference Guide (108M1756)*.

For additional technical documentation, please log in to bntechsupport.com and access the Bently Nevada Media Library.

Table 1: Maximum "C" Option plus "D" Option for different "B" Options (probe cable length)

Probe Cable Length	Maximum C plus D
0.5 meter	394 mm (15.5 in)
1.0 meter	760 mm (30.0 in)

Table 2: Maximum "C" Option plus "D" Option for different "B" Options (probe cable length) where P/N and S/N Label on Probe Cable is visible outside of probe sleeve

Probe Cable Length	Maximum C plus D with Visible P/N and S/N Label
0.5 meter	64 mm (2.5 in)
1.0 meter	483 mm (19.0 in)

Conduit fittings are necessary when hardline conduit or metal tubing is brought into the housing. Flexible conduit should be ordered with integral 3/4-14 NPT fittings and do not require additional conduit fittings with the housing. If using flexible conduit, order the "E" = 00 option.

EnglishProximity Probe Housing Assemblies

31000-AA-BB-CC-DDD-EE-FF

A: Probe with Connector	
00	Probe not required
16	3300 XL 8 mm probe
26	3300 XL NSv probe
27	3300 XL NSv probe, multiple approvals
28	3300 XL 8 mm probe, multiple approvals
29	3300 XL 8 mm probe, with connector protector
30	3300 XL 8 mm probe, with connector protector, multiple approvals
31	3300 XL NSv probe with connector protector
32	3300 XL NSv probe with connector protector, multiple approvals
33	3300 XL 11 mm probe
34	3300 XL 11 mm probe, multiple approvals
35	3300 XL 11 mm probe with connector protector
36	3300 XL 11 mm probe with connector protector, multiple approvals
B: Probe Cable Length	
00	Probe cable not required (Option A must also be 00)
05	0.5 m (20 in)
10	1.0 m (39 in)
C: Standoff Adapter Length (Option C Dimension)	

	Must be ordered if Standoff Adapter Length option is not 00.
15	Minimum length 1.5 in (38 mm)
75	Maximum length 7.5 in (191 mm)
	Recommendation Order in increments of 0.5 in (13 mm)
	Examples 1.5 in (38 mm) = **15** No standoff adapter = **00**

D: Probe Penetration Option (Option D Dimension)	
10	Minimum length 1.0 in (25.4 mm)
	Recommendation Order in increments of 0.1 in (3 mm)
	Examples No probe sleeve = **000** 3.7 in (94 mm) = **037** 22.4 in (569 mm) = **224**

"C" plus "D" dimensions greater than 12 in (305 mm) require additional sleeve support near the probe to prevent resonance from occurring. Sleeve adjustment range of Probe Penetration Option "D" is ±0.5 in (13 mm).

For probe penetration lengths between 1.0 and 2.0 inches, it may be necessary to counter bore the machine case to reduce probe side view or rear view effects.

E: Fittings	
00	Without fittings
01	One 3/4-14 NPT fitting, two plugs.
02	Two 3/4-14 NPT fittings, one plug.
03	Two plugs, one 3/4-14 NPT fitting One 3/4-14 to 1/2-14 NPT SST reducer One cable seal grip with grommets for the following cable sizes: • 1/8 to 3/16 inches • 1/4 to 5/16 inches • 5/16 to 3/8 inches
06	One 3/4-14 NPT fitting One 3/4-14 NPT to 1/2-14 NPR SST reducer Two plugs

F: Mounting Thread Option	
00	No outer sleeve, retainer, or retaining nut
02	3/4-14 NPT (Required if ordering Standoff Adapter Option).
05	7/8-14 UNF 2A

MetricProximity Probe Housing Assemblies

32000-AA-BB-CC-DDD-EE-FF

A: Probe with Connector	
00	Probe not required
16	3300 XL 8 mm probe
26	3300 XL NSv probe
27	3300 XL NSv probe, multiple approvals
28	3300 XL 8 mm probe, multiple approvals
29	3300 XL 8 mm probe, with connector protector
30	3300 XL 8 mm probe, with connector protector, multiple approvals
31	3300 XL NSv probe with connector protector
32	3300 XL NSv probe with connector protector, multiple approvals
33	3300 XL 11 mm probe
34	3300 XL 11 mm probe, multiple approvals
35	3300 XL 11 mm probe with connector protector
36	3300 XL 11 mm probe with connector protector, multiple approvals
B: Probe Cable Length	
00	Probe cable not required (Option A must also be 00)
05	0.5 m (20 in)
10	1.0 m (39 in)
C: Standoff Adapter Length (Option C Dimension)	
	Must be ordered if Standoff Adapter Length option is not 00.
04	Minimum length 40 mm
20	Maximum length 200 mm
	Recommendation Order in increments of 10 mm
D: Probe Penetration Option (Option D Dimension)	
760	Maximum length 760 mm
025	Minimum length 25 mm
	Recommendation Order in increments of 1.0 mm
	Examples No probe sleeve = **000** 50 mm = **050** 760 mm = **760**

"C" plus "D" dimensions greater than 12 in (305 mm) require additional sleeve support near the probe to prevent resonance from occurring. Sleeve adjustment range of Probe Penetration Option "D" is ±0.5 in (13 mm).

For probe penetration lengths between 25 and 50 millimeters, it may be necessary to counter bore the machine case to reduce probe side view or rear view effects.

E: Fittings	
00	Without fittings; two plugs and two washers.
01	One M25 fitting, two plugs.
02	Two M25 fittings, one plug.

03	Two plugs, one M20 fitting One cable seal grip with grommets for armored probe cable
05	One DIN PG11 fitting, two plugs
07	One PG21 x M20 fitting Two plugs
08	Two PG21 x M20 fittings One plug
F: Mounting Thread Option	
00	No outer sleeve, retainer, or retaining nut
01	M24 X 3
02	3/4-14 NPT (Required if ordering Standoff Adapter Option.)

Terminal Housing

106769-AA

The 106769 housing consists of a 31000-style PPS housing with two terminal mounting blocks (each terminal block has four terminals) mounted in each housing. Sixteen ring lugs are supplied loose inside the housing for connecting transducer cables. Conduit fittings are 3/4-14 NPT chrome-plated zinc fittings.

A: Conduit Fitting Option	
00	No fittings
01	One fitting
02	Two fittings