COMPLETE PRODUCT INFORMATION

31000-16-05-00-033-03-02

Assembly configuration

Bently Nevada 31000-16-05-00-033-03-02 is a probe housing assembly with a 3300 XL 8 mm probe, 0.5 m cable and 3.3 in penetration. Its sleeve allows external gap adjustment.

Item	Configuration / requirement
Assembly type	31000 English proximity probe housing
Installed probe	3300 XL 8 mm probe (option 16)
Probe cable length	0.5 m (20 in)
Standoff adapter	None
Nominal probe penetration	3.3 in (83.8 mm)
Penetration adjustment	+/-0.5 in (13 mm)
Fittings	Two plugs; 3/4-14 NPT fitting; SST reducer; cable seal grip and grommets
Reducer thread	3/4-14 NPT to 1/2-14 NPT

The complete order string identifies the supplied mechanical arrangement. The configured probe remains part of a matched transducer system with an appropriate extension cable and Proximitor.

Read the six option groups together

The code uses AA for the probe, BB for probe cable, CC for standoff, DDD for penetration, EE for fittings and FF for mounting thread. Retain the leading zeros in every group; the housing number by itself does not define the assembled configuration.

Item	Configuration / requirement
AA / BB	16 / 05 - probe selection and its cable length
CC / DDD	00 / 033 - mounting reach
EE / FF	03 / 02 - fittings package and machine interface

Technical reference: Bently Nevada 141610 Rev. R. Apter Power compilation, 28 October 2026.

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Confirm the complete configuration and supplied documentation.

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Materials and operating boundaries

Item	Configuration / requirement
Mounting thread	3/4-14 NPT
Housing material	Conductive glass-reinforced PPS
Probe sleeve and chain	AISI 304 stainless steel
Outer sleeve and screws	AISI 303 stainless steel
Enclosure protection	Type 4X; IP66
Retaining-nut torque	29.4 N m (260 in-lb)
Probe temperature range	-51 to +177 deg.C (operating and storage)

Environmental and pressure boundaries

The PPS housing protects the connection against the specified environmental exposure; it is not designed to withstand internal or external pressure. Keep process leakage contained independently of the enclosure.

Long contact with hot water or condensing steam can reduce housing strength. Apply the probe temperature range to the probe only, and separately assess enclosure, seal and cable exposure.

The retaining-nut torque applies to that nut alone. Hole-plug nuts use a separate 0.5 N m (5 in-lb) value. Inspect each fastener and sealing component before service.

Mechanical test conditions

In the typical housing-strength test, the outer sleeve was horizontal and the housing mounted through an end opening. With the cover fastened and grounding liner installed, the assembly supported 912 N applied about 38 mm from the unsupported end. This is a test configuration, not an allowable field design load.

Impact testing covers two separate 4 J impacts at -39 deg. C and 115 deg. C, and a 7 J impact at ambient temperature under the respective test approvals. Inspect a housing after impact rather than using these figures to accept visible damage.

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Applications and configuration review

Use	Installation context
Bearing-relative measurement	The probe position follows the casing reference, so secure the casing to the bearing before measuring relative shaft vibration. Match the complete sensing chain to the channel configuration.
Compact direct mounting	The no-standoff arrangement places the housing at the outer sleeve. Check cover access, machine-case clearance and the required 3.3 in penetration before choosing the mounting location.
Gap adjustment	The accessible probe sleeve permits adjustment from outside the machine. Set the operating gap from the actual probe response and target, then secure the retaining hardware.
Cable entry management	Option 03 supports a sealed cable entry with a reducer and selectable grommets. Route the cable without strain at the connector and close the remaining housing openings.

System selection

Match the probe, extension cable and Proximitor to the intended monitoring channel. Mechanical fit and similar connector appearance do not establish electrical compatibility. Keep the complete assembly marking in the equipment record.

Use the applicable 3300 XL 8 mm probe instructions, machine mounting drawing and site test procedure for the actual gap setting and return-to-service decision.

Select the housing for the duty

Item	Configuration / requirement
Dual axial measurement	For shaft axial position with dual probes, use the dedicated 21022 arrangement rather than assuming this radial housing is equivalent.
Explosion-proof duty	This PPS housing does not provide explosion-proof protection. A separately engineered assembly is required for that duty.
Process chemistry	High- or low-pH media can erode a probe tip assembly. Provide safe containment and assess the actual process exposure.

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Technical questions and answers

Does 31000-16-05-00-033-03-02 include a standoff adapter?

No. Option 00 specifies no standoff adapter, so the housing mounts through the selected outer-sleeve arrangement. The final 02 option specifies a 3/4-14 NPT mounting thread.

What is the difference between the penetration and sensing gap on 31000-16-05-00-033-03-02?

The 033 option sets a nominal 3.3 in probe penetration through the machine case. The sensing gap is the separate clearance between the probe tip and target, established during installation using the probe procedure.

How are the main structural parts of 31000-16-05-00-033-03-02 constructed?

The housing is conductive, glass-reinforced PPS thermoplastic. The probe sleeve and retaining chain are AISI 304 stainless steel, while the outer sleeve and exterior screws are AISI 303 stainless steel.

Does IP66 make 31000-16-05-00-033-03-02 suitable as a pressure vessel?

No. IP66 and Type 4X describe enclosure protection against the specified environmental exposure. The plastic housing is not designed to resist internal or external pressure, and the user must safely contain any leakage from the probe assembly.

Cable-seal grip selection

The option 03 grommets cover the following cable-size groups. Choose by the actual cable outside diameter and fit the seal correctly; a loose or mismatched grommet defeats the sealed entry.

Grommet range	Cable outside diameter
Small cable group	1/8 to 3/16 in
Intermediate group	1/4 to 5/16 in
Larger cable group	5/16 to 3/8 in

Keep the reducer, cable grip and plugs associated with this fitting package. Their sealing role is separate from the probe sleeve and from the external conduit support.

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Operating and purchasing questions

Which tightening values apply when fitting 31000-16-05-00-033-03-02?

The recommended retaining-nut torque is 29.4 N m (260 in-lb). If hole plugs are used, their nuts are tightened to 0.5 N m (5 in-lb). These are different fasteners and their torque values must not be interchanged.

Can long exposure to hot water affect 31000-16-05-00-033-03-02?

Yes. Prolonged contact with hot water or condensing steam can permanently reduce the strength of the PPS housing. The probe temperature range alone does not establish suitability of the entire housing for sustained steam exposure.

How is the dispatch date confirmed for 31000-16-05-00-033-03-02?

Provide the required quantity and destination with the enquiry. The sales team confirms availability, preparation time and the proposed dispatch date in the offer; the requested delivery date is not a shipment guarantee.

Which supplied items should be stated in an order for 31000-16-05-00-033-03-02?

The order should identify the complete assembly, probe and cable, sleeve, fitting option 03 components and required documents. Request written confirmation of the actual included parts and unit condition before accepting the quotation.

Related housing configurations

These are separate configurations to review, not confirmed interchangeable replacements.

Product page	Selection note
Bently Nevada 31000-16-10-00-030-02-02	Open this complete configuration and compare all ordering options.
Bently Nevada 31000-32-05-15-030-02-02	Open this complete configuration and compare all ordering options.
Bently Nevada 31000-28-10-15-040-03-02	Open this complete configuration and compare all ordering options.

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