# 01 31000-16-05-00-033-03-02

## Identify the work scope

This Apter Power guide supports installation preparation for 31000-16-05-00-033-03-02. The actual work follows the manufacturer probe instructions, machine drawing and site isolation procedure.

| Item | Configuration / requirement |
|---|---|
| Configured probe | 3300 XL 8 mm with connector, probe option 16. |
| Cable and sleeve | Probe cable: 0.5 m (20 in); standoff: None; nominal penetration: 3.3 in (83.8 mm). |
| Mechanical interface | 3/4-14 NPT machine mounting; option 03 conduit and cable fittings. |
| Measurement purpose | Define radial vibration or Keyphasor duty and identify the intended shaft target. |
| System record | Record the probe, extension cable, Proximitor and monitor channel as one installed sensing chain. |

## Preparation before access

Arrange the necessary isolation and access controls. Inspect the PPS body, cover, stainless hardware, sleeve, seals and cable connection. Resolve damage, contamination or a configuration mismatch before fitting the assembly.

The enclosure offers mechanical and environmental protection. A hazardous-area installation needs the applicable approved transducer arrangement and barriers; the housing is not explosion-proof.

## Documents to have at the work site

| Item | Configuration / requirement |
|---|---|
| Probe procedure | 3300 XL 8 mm and 3300 5 mm Proximity Transducer System User Guide, 141078. |
| Approval review | Use the actual unit markings and the applicable approval documents for the installation. |

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

**PRODUCT SUPPORT**

Confirm the complete configuration and supplied documentation.

**sales13@apterpower.com**

**+86 180 3023 5313**

SCAN TO CONTACT

# 02 Plan reach and cable routing

| Item | Configuration / requirement |
|---|---|
| Selected C plus D | 3.3 in combined standoff and penetration. |
| Cable-length limit | For a 0.5 m cable, maximum C plus D is 15.5 in; for 1.0 m it is 30.0 in. |
| Label access | A cable label remains outside the sleeve only within the separate C plus D limits: 2.5 in for 0.5 m or 19.0 in for 1.0 m. |
| Additional sleeve support | Combined C plus D greater than 12 in requires support near the probe to prevent resonance. These selected configurations remain below that threshold. |
| Adjustment | The nominal penetration can be adjusted plus or minus 0.5 in. Establish the actual sensing gap separately. |
| Entry route | Use the suitable one of four side openings for the sleeve and required cable/conduit entry. Avoid cable strain at the connection. |

## Configuration-specific check

This assembly uses 0.5 m (20 in) of probe cable and a combined reach of 3.3 in. Confirm both the mechanical location and the electrical system arrangement before installation.

Do not extend or alter the measuring chain simply to accommodate a routing problem. Select the matched probe and cable arrangement through the approved system configuration.

## Conduit choice is part of the installation

Hardline conduit or metal tubing requires the matching conduit fitting at the enclosure. Flexible conduit should have its own integral 3/4-14 NPT fitting and uses a different fitting-selection approach. This ordered assembly retains option 03; resolve any proposed routing change before fitting it.

Maintain access to the cover and the selected cable entry. The cable should reach its connection without using the housing to carry an unsupported conduit load or forcing the connector into place.

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

**PRODUCT SUPPORT**

Confirm the complete configuration and supplied documentation.

**sales13@apterpower.com**

**+86 180 3023 5313**

SCAN TO CONTACT

# 03 Fit, adjust and close the housing

| Item | Configuration / requirement |
|---|---|
| 1. Outer sleeve | Install the outer sleeve into the machine case with the specified mounting interface. |
| 2. Probe position | Insert the probe sleeve and adjust the sensing gap to the target using the applicable probe procedure. |
| 3. Housing placement | Disconnect the probe cable as required and fit the housing over the outer sleeve. |
| 4. Retaining hardware | Slide the retainer under the retaining nut. Recommended retaining-nut torque: 29.4 N m (260 in-lb). |
| 5. Cable connection | Reconnect the matched probe cable and restore the appropriate connector protection. |
| 6. Cover and openings | Fit the cover and tighten its captive screws. Where hole plugs are used, tighten plug nuts to 0.5 N m (5 in-lb). |

## Keep sealing tasks separate

Choose the grommet for the actual cable size and seal unused entries. A closed cover alone cannot compensate for an unsuitable gland, damaged O-ring or incorrectly fitted plug.

The gap, alignment and cable arrangement must remain unchanged while the mounting hardware is secured. Recheck them before applying the final cover.

## Inspection at closure

| Item | Configuration / requirement |
|---|---|
| O-rings and mating surfaces | Check the correct seals are present, seated and free of damage or debris. |
| Retainer and chain | Confirm the retaining hardware is in its intended position and the stainless retaining chain is secure. |
| Unused openings | Install the suitable plugs and inspect the finished entry arrangement before restoring operation. |

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

**PRODUCT SUPPORT**

Confirm the complete configuration and supplied documentation.

**sales13@apterpower.com**

**+86 180 3023 5313**

SCAN TO CONTACT

# 04 Assess exposure and verify the channel

| Item | Configuration / requirement |
|---|---|
| Bearing reference | For radial vibration, the machine casing must be affixed to the bearing to maintain an accurate relative measurement. |
| Thermal exposure | The installed 3300 XL 8 mm probe has a -51 to +177 deg. C operating and storage range. Evaluate each other component at its own exposure. |
| Water and steam | Avoid treating the IP66 enclosure rating as approval for prolonged hot-water or condensing-steam contact. |
| Pressure and leakage | The housing is not a pressure vessel. Ensure leaking liquids or gases are contained safely by the installation. |
| Channel verification | Check final probe position and gap-related response using the approved target, system configuration and test procedure. |
| Return-to-service record | Retain full markings, configuration changes, final readings and required site authorization. |

Do not use a nominal order-code dimension as the probe gap or a housing rating as a system safety approval. Functional acceptance belongs to the complete installed channel.

## Two sealing locations

With the 3300 XL 8 mm probe, the internal probe-case seal uses a Viton O-ring. A Neoprene O-ring seals between the sleeve and housing. Check both interfaces when investigating leakage; the water-resistant plastic enclosure is not a substitute for process containment.

Probes are not pressure tested before shipment as a standard operation. If the application needs a pressure-seal test, define that requirement with the responsible engineering team before accepting the installation.

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

**PRODUCT SUPPORT**

Confirm the complete configuration and supplied documentation.

**sales13@apterpower.com**

**+86 180 3023 5313**

SCAN TO CONTACT

# 05 Service evidence and related configurations

## Before removing a component

Identify the channel, preserve the complete markings and record the installed sleeve position. Follow the machine isolation procedure before accessing the probe or disconnecting its cable.

## After maintenance

Inspect seals and openings, restore the matched cable connection and close the cover. Verify the final sensing gap and channel response, and retain the test results with the equipment record.

## Related housing configurations

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

| Product page | Selection note |
| --- | --- |
| Bently Nevada 31000-16-10-00-050-03-02 | Open this complete configuration and compare all ordering options. |
| Bently Nevada 31000-30-05-15-049-01-02 | Open this complete configuration and compare all ordering options. |
| Bently Nevada 31000-00-00-15-050-02-02 | Open this complete configuration and compare all ordering options. |

## Document control

Apter Power preparation guide R1. Technical basis: 31000 and 32000 Proximity Probe Housing Assemblies, 141610 Rev. R, specifications, English ordering options and installation figures. The separate official excerpt preserves selected source pages; this guide is not a manufacturer-issued manual.

## Acceptance is configuration-specific

An alternative housing can change probe type, cable length, standoff, penetration, fitting package or mounting thread. Compare each relevant option with the installed drawing before accepting a different reference; neither a similar enclosure nor a matching base number proves interchangeability.

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

**PRODUCT SUPPORT**

Confirm the complete configuration and supplied documentation.

**sales13@apterpower.com**

**+86 180 3023 5313**

SCAN TO CONTACT