MANUFACTURER DOCUMENT PACKAGE

# Manufacturer's Manual

Reference package for procurement and maintenance review

BENTLY NEVADA

## 21000-28-05-20-020-03-02

**EXTERNAL PROXIMITY PROBE HOUSING**

Used with the applicable 21000, 24701, and 164818 Probe Housing Assemblies configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

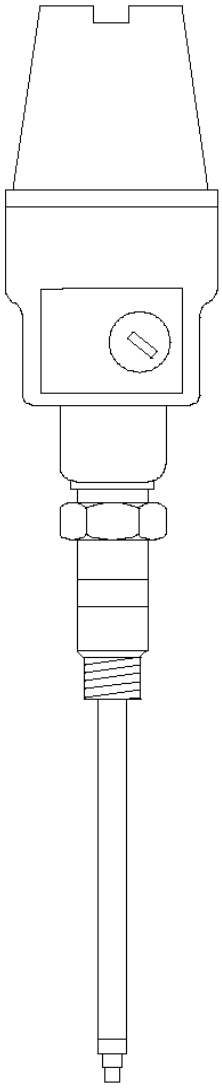
Source: Bently Nevada 141600 Rev. AC; housing specification and English ordering tables.

# 21000, 24701, and 164818 Proximity Probe Housing Assemblies

## Datasheet

Cordant™

141600 Rev. AC



## Description

To externally mount proximity probes, use one of these all-metal Proximity Probe Housing Assemblies:

- 21000 aluminum probe housing assembly
- 24701 stainless steel probe housing assembly

The 21000, 24701, and 164818 Proximity Probe Housing Assemblies consist of the following parts:

- A dome cover that screws into the body of the housing
- Threaded ports for conduit connections
- A probe sleeve of optional length
- O-rings
- A reverse mount proximity probe
- A thread seal
- Optional conduit fittings
- An optional standoff adapter

A newer 31000/32000 proximity probe housing assembly is available with more flexible mounting options, better environmental resistance, and other improved features. We recommend this proximity probe housing assembly for installations where an explosion proof housing is not required. See 31000 and 32000 Proximity Probe Housings product datasheet (document 141610).

The 21000, 24701, and 164818 Proximity Probe Housing Assemblies are available with Canadian Standards Association (CSA) approvals. They are rated explosion proof for hazardous areas.

C US

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# Specifications

## Environmental

### Temperature Range

| 3300 XL 8mm Probe | |
|---|---|
| Operating and storage | -51°C to +177°C (-60°F to +351°F) |
| **3300 XL 11mm Probe** | |
| Operating and storage | -51°C to +177°C (-60°F to +351°F) |
| **3300 NSv Probe** | |
| Operating | -34°C to +177°C (-30°F to +351°F) |
| Storage | -51°C to +177°C (-60°F to +351°F) |

**CAUTION**

**EQUIPMENT DAMAGE**

Exposing 3300 XL or 3300 NSv probes to temperatures below -34°C (-30°F) may cause premature failure of their pressure seals.

## Mechanical

| Material | |
|---|---|
| 21000 | Aluminum body with 304 stainless steel sleeve |
| 24701 | 303 stainless steel body, with 304 stainless steel sleeve |
| **Mass (Weight)** | |
| 21000 | 1.1 kg (2.4 lb) typical, without fittings |
| 24701 | 1.8 kg (4.1 lb) typical, without fittings |

| | |
|---|---|
| Monitor Module | 1 full-height front slot |
| I/O Modules | 1 full-height rear slot |

# 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.

## Proximity Probe Housing Assemblies

### 21000-AA-BB-CC-DDD-EE-FF

| A: Probe with Connector | |
|---|---|
| **00** | Probe not required |
| **14** | 420 nuclear |
| **16** | 3300 XL 8mm probe |
| **26** | 3300 XL NSv probe |
| **27** | 3300 XL NSv probe, selectable hazardous area approvals |
| **28** | 3300 XL 8mm probe, selectable hazardous area approvals |
| **29** | 3300 XL 11mm probe |
| **30** | 3300 XL 11mm probe, selectable hazardous area approvals |
| **31** | 3300 XL NSv probe with connector protector |
| **32** | 3300 XL NSv probe with connector protector, selectable hazardous area approvals |
| **33** | 3300 XL 8mm probe with connector protector |
| **34** | 3300 XL 8mm probe with connector protector, selectable hazardous area approvals |
| **35** | 3300 XL 11mm probe with connector protector |
| **36** | 3300 XL 11mm probe with connector protector, selectable hazardous area approvals |
| **37** | 3300 XL 8mm probe, ETR, selectable hazardous area approvals (available for 21000 only) |
| **B: Probe Cable Length** | |
| **00** | Probe cable not required |
| **05** | 0.5 m (20 in) |
| **10** | 1.0 m (39 in) |
| **12** | 12.0 in |
| **18** | 18.0 in |
| **24** | 24.0 in |
| **30** | 30.0 in |
| **36** | 36.0 in |
| **C: Standoff Adapter (Option C Dimension)** | |
| **15** | Minimum length 1.5 in (38 mm) |
| **75** | Maximum length 7.5 in (191 mm) |
| | **Recommendation**<br>Order in increments of 0.5 in (13 mm) |
| | **Examples**<br>1.5 in (38 mm) = **15**<br>No standoff adapter = **00** |
| **D: Probe Penetration (Option D Dimension)** | |
| **10** | Minimum length 1.0 in (25.4 mm) |
| **Other** | |
| | **Recommendation**<br>Order in increments of 0.1 in (3 mm) |

| | |
|---|---|
| | **Examples**<br>3.7 in (94 mm) = **037**<br>22.4 in (569 mm) = **224** |

Probe P/N and S/N may be displayed on a flag label for some combinations of the C plus D options where only a small section of the probe cable is visible.

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.

If you select a probe penetration length (C plus D) greater than 300 mm (12 in), you must add sleeve support near the probe to prevent resonance from occurring. Adjustment range of probe penetration option D is 13 mm (± 0.5 in). For the maximum value of C plus D, see Figure 1: 21000/CA21000 Proximity Probe Housing Assembly on page 16.

| E: Fittings | |
|---|---|
| **00** | Without fittings |
| **01** | One 3/4-14 NPT explosion-proof fitting<br>One 3/4-14 NPT plug |
| **02** | Two 3/4-14 NPT explosion-proof fittings |
| **03** | One 3/4-14 NPT plug<br>One 3/4-14 to 1/2-14 NPT reducer<br>One cable seal grip with grommets for the following cable sizes:<br>• 1/8 to 3/16 inches<br>• 1/4 to 5/16 inches<br>• 5/16 to 3/8 inches |
| **04** | One 3/4-14 NPT plug only |

Although explosion-proof fittings are available for all housings, only CA versions of the housing are rated as explosion-proof by CSA when ordered with the **E:00**, **E:01**, **E:02**, or **E:04** options.

| F: Mounting Thread | |
|---|---|
| **01** | As cast without threads |
| **02** | 3/4-14 NPT<br>Must be ordered if Standoff Adapter Length option is **not** 00. |
| **04** | 1/2-14 BSP |

## 24701-AA-BB-CC-DDD-EE-FF

| A: Probe with Connector | |
|---|---|
| **00** | Probe not required |
| **14** | 420 nuclear |
| **16** | 3300 XL 8mm probe |
| **26** | 3300 XL NSv probe |
| **27** | 3300 XL NSv probe, with approval option |
| **28** | 3300 XL 8mm, with approval option |
| **29** | 3300 XL 11mm |
| **30** | 3300 XL 11mm, with approval option |
| **31** | 3300 XL NSv with connector protector |
| **32** | 3300 XL NSv with connector protector and approval option |
| **33** | 3300 XL 8mm with connector protector |
| **34** | 3300 XL 8mm with connector protector and approval option |