Bently Nevada 21000-28-05-20-029-03-02

Complete Product Information

Bently Nevada 21000-28-05-20-029-03-02 is a 21000 housing with 3300 XL 8 mm probe, selectable hazardous-area approvals with 0.5 m probe cable, 2.0 in (50.8 mm) standoff and 2.9 in (73.7 mm) penetration. The ordered fittings and mounting interface must match the machine case.

01 Product identity and verified data

Complete model	21000-28-05-20-029-03-02
Product type	21000 proximity probe housing assembly
Manufacturer	Bently Nevada
Technical source	Bently Nevada 21000, 24701 and 164818 Proximity Probe Housing Assemblies Datasheet, 141600 Rev. AC
Housing series	21000
Installed probe option	3300 XL 8 mm probe, selectable hazardous-area approvals
Probe cable length	0.5 m
Standoff adapter	2.0 in (50.8 mm)
Probe penetration	2.9 in (73.7 mm)
Fittings	Plug, reducer and cable-seal grip set
Mounting interface	3/4-14 NPT
Housing material	Aluminum body with AISI 304 stainless-steel sleeve

Engineering purpose

The complete 21000-28-05-20-029-03-02 identity fixes the offered mechanical and cable configuration; installed performance still depends on the documented companion components, target and monitoring channel.

02 Additional technical specifications

Environmental protection	Externally mounted housing; approval depends on complete approved arrangement
Typical assembly mass	1.1 kg typical without fittings
Penetration adjustment	+/-0.5 in (13 mm)
Sleeve-support rule	Add support when standoff plus penetration exceeds 12 in (305 mm)
Primary installation	Externally accessible radial probe mounting through a machine case
Safety boundary	Housing is mechanical/environmental protection, not a pressure vessel

Evidence boundary

Exact order fields are decoded only where the cited manufacturer ordering table supports them. System performance values apply to the complete matched transducer chain under the stated reference conditions.

03 Engineering overview

21000-28-05-20-029-03-02 packages a 3300 XL 8 mm probe, selectable hazardous-area approvals in an externally accessible housing. Its ordered 2.0 in (50.8 mm) standoff and 2.9 in (73.7 mm) penetration define the machine-case reach and must be checked against the approved drawing before the installed assembly is disturbed.

The selected fitting set is Plug, reducer and cable-seal grip set; the mounting interface is 3/4-14 NPT. Inspect sleeve support, conduit direction, sealing surfaces, retaining hardware and cable clearance before setting the probe.

The housing provides access and environmental protection but does not create the electrical measurement by itself. Final acceptance must verify the probe, extension cable and Proximitor relationship, restored gap or bias, cover closure and monitor response.

Application map

Radial shaft vibration

Use a documented bearing location and matched transducer chain to measure shaft motion relative to the probe mounting.

Axial position

Aim the probe at an approved conductive thrust target and keep the full expected travel inside the characterized working region.

Phase or speed reference

Use only with an approved once-per-turn target feature and a monitoring channel configured for phase or speed reference.

Installed-channel maintenance

Preserve the exact probe, cable, Proximitor, mounting geometry and machine baseline recorded for the existing channel.

Installed-chain controls

Installed drawing	Record the drawing, machine location and channel designation that govern 21000-28-05-20-029-03-02.
Probe marking	Capture the complete order identity and any tag or revision visible on the delivered item.
Mechanical reference	Record thread or sleeve datum, insertion depth, lock position and expected target travel.
Cable identity	Confirm lead construction, connector condition, routing, strain relief and electrical-length relationship.
Companion electronics	Record the matching extension cable, Proximitor or signal conditioner and monitor channel.
Target condition	Confirm target material, width, runout surface and clearance from nearby conductive material.
Static baseline	Record stopped-machine gap or bias and compare it with the approved maintenance baseline.
Operating baseline	Record monitor indication and expected response after the complete channel is returned to service.

Interpretation boundaries

Probe-only limit	Do not present complete-system range, scale or linearity as a standalone output of 21000-28-05-20-029-03-02.
Target influence	Material, geometry, finish and nearby conductive surfaces can change the installed response.
Length influence	Probe lead and extension cable form part of the calibrated electrical relationship.
Temperature influence	Apply component temperature limits at their actual locations and compare with process transients.
Mechanical influence	Thread engagement, rigidity, target travel and cable support affect repeatability and service life.
Acceptance rule	Use the approved machine baseline and maintenance procedure for the final as-left decision.

04 Installation and product precautions

Confirm the complete marking

Match every field of 21000-28-05-20-029-03-02 with the installed spare-parts record before removal or installation.

Protect the sensing face

Keep the probe tip, connector and cable free from impact, moisture, metal chips and unsupported loading.

Preserve the mechanical datum

Record reach, thread engagement, lock position and target relationship before disturbing the installed component.

Control the cable route

Maintain the approved bend radius, separation and strain relief; do not twist, kink or crush the coaxial path.

Restore the operating point

Use the approved stopped-machine procedure to restore gap or bias and verify expected target travel.

Prove the complete channel

Verify the as-left electrical reading, monitor indication and operating response before return to service.

Technical notes

Installation relationship	Combine the 2.0 in (50.8 mm) standoff and 2.9 in (73.7 mm) penetration with the machine-case datum to establish probe position.
Protection boundary	Externally mounted housing; approval depends on complete approved arrangement; the housing does not establish process-pressure containment or complete intrinsically safe approval.
Technical reference	Bently Nevada 21000, 24701 and 164818 Proximity Probe Housing Assemblies Datasheet, 141600 Rev. AC.

Controlled installation sequence

01 Isolate	Place the monitored machine and channel in the approved maintenance state; prove the required isolation.
02 Photograph	Capture 21000-28-05-20-029-03-02, the installed datum, connector, route and companion-component markings.
03 Measure	Record mechanical position and the applicable stopped-machine electrical reading before removal.

04 Compare	Check delivered identity, interfaces and evidence against the approved drawing and spare-parts record.
05 Install	Fit without twisting the lead; preserve thread engagement, target clearance, bend radius and strain relief.
06 Set point	Establish the operating gap or datum only with the approved stopped-machine procedure.
07 Prove	Compare local reading, monitor indication and controlled operating response with the accepted baseline.
08 Handover	Record as-left values, photographs, deviations, responsible technician and release approval.

Engineering questions

How should the ordered reach of 21000-28-05-20-029-03-02 be established?	Use the 2.0 in (50.8 mm) standoff and 2.9 in (73.7 mm) penetration values with the machine-case datum, then confirm the probe tip reaches the target without exceeding the sleeve adjustment range.
When does 21000-28-05-20-029-03-02 require additional sleeve support?	Provide support near the probe whenever standoff plus penetration exceeds 12 in (305 mm), and review shorter long-reach installations for resonance under machine vibration.
How should the fittings on 21000-28-05-20-029-03-02 be inspected?	Confirm the exact supplied arrangement—Plug, reducer and cable-seal grip set—then verify sealing, cable clearance, conduit direction and unused-port closure.
What must be proved after setting the probe in 21000-28-05-20-029-03-02?	Tighten the retaining arrangement to the documented method, restore the approved gap or bias, and prove monitor indication and operating response before closing the cover.
What evidence should be captured before removing 21000-28-05-20-029-03-02?	Photograph the complete 21000-28-05-20-029-03-02 marking, installed datum, connector, cable route and companion electronics. Record the stopped-machine baseline for the 21000 proximity probe housing assembly.
How should connector integrity be checked on 21000-28-05-20-029-03-02?	Isolate the channel, inspect the coaxial contacts for moisture and damage, verify continuity only with an approved method, and provide strain relief so the connector carries no cable load.
What commissioning record is required for 21000-28-05-20-029-03-02?	Retain the exact markings, mechanical datum, companion-component identities, as-left gap or bias, monitor indication and the accepted operating response.
When should 21000-28-05-20-029-03-02 be withheld from service?	Do not release the channel if the complete identity, mechanical fit, cable construction, connector, approval marking or measured response differs from the approved installed record.

Acceptance and support

Retain the full marking, installed-chain identities, test readings and approved machine configuration. Confirm the exact offered item and included scope in the written quotation.

Discuss the exact marking and installed application with Apter Power.
sales13@apterpower.com | +86 18030235313

Verified related product references

Related product	330500-00-01
Related product	330980-70-CN
Related product	330930-040-03-00
Related product	84661-96

Commissioning record template

Installed asset	Machine, bearing, channel or cabinet reference
Companion identities	Probe, cable, sensor, interface or monitor markings
Mechanical datum	Mounting reference, reach, alignment or sealing condition
Electrical datum	Chain length, connector, shield, supply or input assignment
Before-work baseline	Gap, bias, vibration, continuity or channel observation
As-left result	Final measured value and functional proof

Approval basis	Applicable drawing, control requirement or site procedure
Handover	Technician, date, revision and maintenance-record location

Release checklist

Identity accepted	Complete marking agrees with the order, photographs and installed asset record.
Interfaces accepted	Mechanical fit, connector, wiring and companion components match the approved design.
Environment accepted	Temperature, contamination, vibration and route protection remain inside documented limits.
Configuration accepted	Hardware assignment, chain length or supply settings agree with the installed configuration.
Static proof accepted	Gap, bias, output voltage, channel state or continuity result is recorded as applicable.
Operating proof accepted	The returned channel response agrees with the approved machine or system baseline.

As-left verification worksheet

Exact delivered marking	21000-28-05-20-029-03-02; photograph and record any additional label detail.
Installed asset reference	Machine, bearing, train, channel and drawing identifiers.
Mechanical as found	Reach, lock position, gap reference, cable route and connector support.
Static reading as found	Gap, bias, continuity or channel value appropriate to the installed system.
Companion identities	Extension cable, Proximitor or conditioner and monitor channel markings.
Mechanical as left	Final reach, lock position, target clearance and route protection.
Static reading as left	Final gap, bias, continuity or channel value with test conditions.
Operating proof	Monitor response and machine observation accepted by the responsible authority.
Deviation record	Any difference from drawing or baseline, disposition and approval reference.
Release signatures	Technician, reviewer, operations owner and date.

Escalation triggers

Identity conflict	Stop if the complete marking, suffix, revision or approval identity differs from the approved record.
Host mismatch	Escalate if the rack, carrier, backplane, terminal unit or controller assignment is not documented for 21000-28-05-20-029-03-02.
Interface damage	Do not energize with bent contacts, damaged insulation, loose retainers, contamination or heat discoloration.
Environmental breach	Review any exposure beyond the documented temperature, vibration, humidity, contamination or enclosure boundary.
Unapproved substitution	Do not transfer ratings or compatibility from an adjacent order code without manufacturer evidence.
Configuration conflict	Stop if hardware settings, firmware, channel assignment or project configuration disagree with the installed record.
Unstable measurement	Investigate noise, drift, intermittent status or inconsistent readings before replacing another component.
Failed functional proof	Keep the asset in the approved maintenance state until the complete acceptance sequence is passed and recorded.

Evidence package

Nameplate evidence	Overall and close photographs showing 21000-28-05-20-029-03-02, revision, approval and serial details where present.
Installation evidence	Views of the rack position, mechanical datum, terminal assignment, cable route and strain relief.
Configuration evidence	Export or screenshots identifying the approved hardware assignment and parameters without exposing credentials.
Baseline evidence	As-found readings with units, test conditions, machine state and the instrument used.
Inspection evidence	Connector, contact, insulation, fastener, contamination and heat-condition observations.
Functional evidence	As-left readings and the controlled input, output or channel response used for acceptance.
Change evidence	Any wiring, setting, firmware or mechanical change linked to its approved work reference.
Release evidence	Technician, reviewer, date, asset reference and the maintenance-record location for traceability.