Bently Nevada 21504-000-008-10-02

Engineering Installation, Diagnostic and Acceptance Guide

Bently Nevada 21504-000-008-10-02 is a 3/8-24 UNF unarmored 7200 Series 8 mm standard-mount probe with a 0.8 in case, 1.0 m lead and miniature male coaxial connector. It belongs to the legacy 7200 matched transducer chain.

01 Work package

Complete model	21504-000-008-10-02
Product type	7200 Series 8 mm standard-mount proximity probe
Manufacturer	Bently Nevada
Technical source	Bently Nevada 7200 Proximity Transducer Systems 5 mm and 8 mm Technical/Ordering Information, L5001

Field decisions

1 Establish identity

Capture the full marking, installed companion components and baseline before disconnection.

2 Inspect interfaces

Verify mounting, cable, connector, armor, approval and environmental boundaries.

3 Fit the exact chain

Preserve the documented probe-cable-Proximitor or sensor-monitor relationship.

4 Prove response

Use the approved stopped-machine and operating acceptance procedure.

5 Record as left

Save markings, configuration, test values and operating observations.

Pre-work evidence

Installed drawing	Record the drawing, machine location and channel designation that govern 21504-000-008-10-02.
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.

Selected order-code snapshot

Legacy family	7200 Series 8 mm standard-mount probe.
Selected mechanics	3/8-24 UNF; 0.0 in unthreaded; 0.8 in case.
Lead selection	1.0 m unarmored lead with miniature male coaxial connector.

Evidence boundary

The complete 21504 order fields are decoded from a verified saved copy of the original Bently Nevada L5001 technical and ordering information. Electrical performance values apply to the complete matched 7200 chain.

Initial quality controls

Traceability	Each value is tied to 21504-000-008-10-02, the asset location, test state, instrument and date.
Repeatability	The same approved method and comparable operating state are used for before-and-after readings.
Resolution	Recorded precision does not exceed the capability of the instrument or source document.
Reference state	Stopped, energized, loaded and process-running observations are clearly distinguished.

02 Interface and configuration map

Transducer series	7200 Series 5 mm and 8 mm
Probe tip diameter	8 mm
Mounting configuration	Standard mount
Mounting thread	3/8-24 UNF
Lead armor	No armor
Unthreaded length	0.0 in
Overall case length	0.8 in
Total probe length	1.0 m
Connector	Miniature male coaxial connector
Connector option code	02
Measurement principle	Non-contact eddy-current proximity measurement
Matched-system calibrated range	2.0 mm (80 mil)
Matched-system scale factor	7.87 V/mm (200 mV/mil)
Matched-system frequency response	0 to 10 kHz; -5% at 10 kHz
Reference target	AISI 4140 steel
Proximitor supply	-17.5 to -26 V DC; 12 mA maximum
Probe and cable temperature range	-34 to +177 deg C
Companion electronics	Matching 7200 Series 5 mm/8 mm Proximitor and extension cable

Application checks

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.

Interpretation boundaries

Probe-only limit	Do not present complete-system range, scale or linearity as a standalone output of 21504-000-008-10-02.
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.

System verification controls

Traceability	Each value is tied to 21504-000-008-10-02, the asset location, test state, instrument and date.
Repeatability	The same approved method and comparable operating state are used for before-and-after readings.
Resolution	Recorded precision does not exceed the capability of the instrument or source document.
Reference state	Stopped, energized, loaded and process-running observations are clearly distinguished.

03 Installation workflow

Confirm the complete marking

Match every field of 21504-000-008-10-02 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.

Controlled sequence

01 Isolate	Place the monitored machine and channel in the approved maintenance state; prove the required isolation.
02 Photograph	Capture 21504-000-008-10-02, 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.

Release review

Installation relationship	The 3/8-24 UNF mounting, 0.0 in unthreaded section and 0.8 in case establish the installed probe position.
System boundary	Use the 1.0 m unarmored lead only with the documented 7200 extension cable and Proximitor of the appropriate total system length.
Technical reference	Bently Nevada 7200 Proximity Transducer Systems 5 mm and 8 mm Technical/Ordering Information, L5001.

Installation evidence package

Nameplate evidence	Overall and close photographs showing 21504-000-008-10-02, 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.

04 Diagnostic decision table

Which transducer family must remain with 21504-000-008-10-02?	Keep 21504-000-008-10-02 inside the documented 7200 Series 5 mm/8 mm probe, extension-cable and Proximitor chain; do not substitute a 3300 or 3300 XL companion component.
How should the 0.8 in case of 21504-000-008-10-02 be checked?	Compare the 3/8-24 UNF port, 0.0 in unthreaded section, 0.8 in case, probe datum and target travel with the approved machine drawing.
How should the 1.0 m lead of 21504-000-008-10-02 be handled?	Protect the unarmored coaxial lead from abrasion and unsupported pull, and keep the miniature male coaxial connector clean, dry and free of side load.
What proves acceptable operation after replacing 21504-000-008-10-02?	Restore the documented gap or bias using the approved stopped-machine procedure, then verify monitor indication and operating response against the accepted 7200-channel baseline.
What evidence should be captured before removing 21504-000-008-10-02?	Photograph the complete 21504-000-008-10-02 marking, installed datum, connector, cable route and companion electronics. Record the stopped-machine baseline for the 7200 Series 8 mm standard-mount proximity probe.
How should connector integrity be checked on 21504-000-008-10-02?	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 21504-000-008-10-02?	Retain the exact markings, mechanical datum, companion-component identities, as-left gap or bias, monitor indication and the accepted operating response.
When should 21504-000-008-10-02 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.

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 21504-000-008-10-02.
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 quality controls

Traceability	Each value is tied to 21504-000-008-10-02, the asset location, test state, instrument and date.
Repeatability	The same approved method and comparable operating state are used for before-and-after readings.
Resolution	Recorded precision does not exceed the capability of the instrument or source document.
Reference state	Stopped, energized, loaded and process-running observations are clearly distinguished.
Change control	Every changed setting, connection or mechanical datum has an approved reason and reviewer.
Retention	Evidence remains accessible with the maintenance record for future troubleshooting and replacement review.

05 Acceptance, handover and support

Release the channel only after the exact marking, installed-chain identities, mechanical datum, electrical baseline and controlled operating proof have all been recorded.

As-left verification worksheet

Exact delivered marking	21504-000-008-10-02; 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.

Lifecycle status

Exact order identity	21504-000-008-10-02 is a legacy 7200 Series 3/8-24 UNF unarmored 7200 Series 8 mm standard-mount probe; support depends on exact-marking spares and the installed channel record.
Installed-base support	Preserve the 7200 probe, extension cable, Proximitor, connector and monitor relationship recorded for the machine.
Replacement boundary	A 3300 or 3300 XL component is not a like-for-like substitute unless an approved engineering conversion covers every companion component and calibration requirement.

Available unit details

Offered probe	One 21504-000-008-10-02, configured as a 3/8-24 UNF unarmored 7200 Series 8 mm standard-mount probe.
Selected geometry	0.0 in unthreaded length; 0.8 in case; 1.0 m unarmored lead.
Separate components	7200 extension cable, Proximitor, monitor and mounting hardware are separate unless itemized in the quotation.

Model-specific application limits

Calibrated range	2.0 mm (80 mil) matched system
Scale factor	7.87 V/mm (200 mV/mil) matched system
Frequency response	0 to 10 kHz; -5% at 10 kHz
Probe and cable temperature	-34 to +177 deg C
Reference target	AISI 4140 steel

Verified related product references

Related product	Bently Nevada 84661-96
Related product	Bently Nevada 330102-00-28-10-02-05
Related product	Bently Nevada 330104-00-16-10-02-00
Related product	Bently Nevada 330500-00-01

Engineering contact

Discuss the exact marking and installed application with Apter Power.
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