Bently Nevada 330102-20-96-10-02-05

Complete Product Information

Bently Nevada 330102-20-96-10-02-05 is a 3/8-24 UNF armored 3300 XL 8 mm probe with 2.0 in unthreaded reach, a 9.6 in case and 1.0 m total probe length. It operates only inside a matched eddy-current transducer chain.

01 Product identity and verified data

Complete model	330102-20-96-10-02-05
Product type	3300 XL 8 mm proximity probe
Manufacturer	Bently Nevada
Technical source	Bently Nevada 3300 XL 8 mm Proximity Transducer System Datasheet, 141194 Rev. AN
Probe family	3300 XL 8 mm
Thread	3/8-24 UNF
Cable armor	Stainless-steel armor
Unthreaded length	2.0 in
Overall case length	9.6 in
Total probe length	1.0 m
Connector	Miniature coaxial ClickLoc, standard cable
Approval selection	CSA, ATEX and IECEx approvals selected

Engineering purpose

The complete 330102-20-96-10-02-05 identity fixes the offered mechanical and cable configuration; installed performance still depends on the documented companion components, target and monitoring channel.

Selected order-code snapshot

Selected mechanics	3/8-24 UNF; 2.0 in unthreaded reach; 9.6 in case.
Lead and connector	1.0 m; Miniature coaxial ClickLoc, standard cable.
System boundary	Scale, linearity and gap belong to the complete matched 3300 XL 8 mm chain.

02 Technical capability and engineering overview

Nominal probe DC resistance	7.59 +/- 0.50 ohm
Matched-system linear range	2.0 mm under stated reference conditions
Matched-system scale factor	7.87 V/mm (200 mV/mil)
Proximitor supply	-17.5 to -26 V DC; 12 mA maximum without barriers
Proximitor output resistance	50 ohm
Reference target	AISI 4140 steel
Measurement roles	Static position, dynamic vibration, phase reference and speed

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.

Engineering overview

330102-20-96-10-02-05 is the passive sensing element of a 3300 XL 8 mm eddy-current chain. Its 3/8-24 UNF body, 2.0 in unthreaded reach and 9.6 in case must be compared with the installed port and target travel before removal.

The 1.0 m lead uses miniature coaxial clickloc, standard cable. Preserve the electrical-length relationship to the installed Proximitor, keep the coaxial interface clean and dry, and support the cable independently of the connector.

Published range and scale factor belong to the probe, extension cable and Proximitor as a matched system on the reference target. Final acceptance must restore the approved gap and prove the monitor response against the machine baseline.

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.

03 Installed-chain controls and precautions

Interpretation boundaries

Probe-only limit	Do not present complete-system range, scale or linearity as a standalone output of 330102-20-96-10-02-05.
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.

Installed-chain controls

Installed drawing	Record the drawing, machine location and channel designation that govern 330102-20-96-10-02-05.
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.

Product precautions

Confirm the complete marking

Match every field of 330102-20-96-10-02-05 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.

04 Installation, diagnostics and engineering decisions

01 Isolate	Place the monitored machine and channel in the approved maintenance state; prove the required isolation.
02 Photograph	Capture 330102-20-96-10-02-05, 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

Which extension cable and Proximitor belong with 330102-20-96-10-02-05?	Use 330102-20-96-10-02-05 in a documented 3300 XL 8 mm chain whose probe plus extension cable equals the selected system length. Confirm every component marking before disconnection.
How should the 9.6 in case of 330102-20-96-10-02-05 be checked mechanically?	Compare the 3/8-24 UNF port depth, 2.0 in unthreaded reach, lock position and target travel with the approved machine drawing.
What does the connector selection on 330102-20-96-10-02-05 require during installation?	The selected interface is Miniature coaxial ClickLoc, standard cable. Keep it clean and dry, fully seat it, and add only the approved environmental protection and strain relief.
How should the matched-system performance of 330102-20-96-10-02-05 be proved?	Restore the approved gap, confirm bias and monitor indication, then compare the operating response with the accepted machine baseline; do not treat the probe as a standalone voltage source.
What evidence should be captured before removing 330102-20-96-10-02-05?	Photograph the complete 330102-20-96-10-02-05 marking, installed datum, connector, cable route and companion electronics. Record the stopped-machine baseline for the 3300 XL 8 mm proximity probe.
How should connector integrity be checked on 330102-20-96-10-02-05?	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 330102-20-96-10-02-05?	Retain the exact markings, mechanical datum, companion-component identities, as-left gap or bias, monitor indication and the accepted operating response.
When should 330102-20-96-10-02-05 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.

05 Escalation and as-left record

Technical notes

Installation relationship	The 3/8-24 UNF mounting, 2.0 in unthreaded reach and 9.6 in case establish the probe position.
Electrical boundary	The 1.0 m probe and miniature coaxial clickloc, standard cable must remain within the documented 3300 XL 8 mm chain.
Technical reference	Bently Nevada 3300 XL 8 mm Proximity Transducer System Datasheet, 141194 Rev. AN.

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 330102-20-96-10-02-05.
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.

As-left verification worksheet

Exact delivered marking	330102-20-96-10-02-05; 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.

06 Evidence, lifecycle and offered scope

Evidence package

Nameplate evidence	Overall and close photographs showing 330102-20-96-10-02-05, 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.

Lifecycle status

Exact order identity	330102-20-96-10-02-05 is a configured 3/8-24 UNF armored 3300 XL 8 mm probe; the reviewed manufacturer data does not assign a separate lifecycle phase to this complete option string.
Installed-base support	Support planning must preserve the 3300 XL 8 mm proximity transducer system probe, cable, Proximitor and monitor relationship recorded for the installed channel.
Replacement boundary	A newer or adjacent probe code is not a like-for-like replacement unless thread, reach, cable length, connector, approvals and calibrated chain are all documented.

Available unit details

Offered probe	One 330102-20-96-10-02-05 configured as a 3/8-24 UNF armored 3300 XL 8 mm probe.
Selected geometry	Unthreaded length 2.0 in, case length 9.6 in, total lead length 1.0 m.
Separate components	Extension cable, Proximitor Sensor, monitor and mounting hardware are separate unless itemized in the quotation.

Product-specific technical notes

Installation relationship	The 3/8-24 UNF mounting, 2.0 in unthreaded reach and 9.6 in case establish the probe position.
Electrical boundary	The 1.0 m probe and miniature coaxial clickloc, standard cable must remain within the documented 3300 XL 8 mm chain.
Technical reference	Bently Nevada 3300 XL 8 mm Proximity Transducer System Datasheet, 141194 Rev. AN.

07 Release and engineering support

Evidence quality controls

Traceability	Each value is tied to 330102-20-96-10-02-05, 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.

Release checklist

Identity accepted	Complete marking agrees with the approved order and installed record.
Interfaces accepted	Mechanical fit, connector, cable and companion electronics match the documented chain.
Static proof accepted	Gap, bias and monitor indication have been recorded under the approved stopped-machine method.
Operating proof accepted	The returned channel response agrees with the accepted machine baseline.

Verified related product references

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
Related product	Bently Nevada 330980-70-CN

Maintenance record fields

Installed chain	Record the machine point, channel, 330102-20-96-10-02-05 marking and all matched companion-component identities.
As-left result	Record mechanical position, cable support, applicable electrical reading and controlled functional response.
Closeout evidence	Record baseline, technician, reviewer, date, work order and the location of photographs and test evidence.

Engineering contact

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