

7200

MODEL-SPECIFIC TECHNICAL DOSSIER

21505-00-12-05-02

Armored Proximity Probe

Bently Nevada 21505-00-12-05-02 is a 7200-series armored 8 mm standard-mount proximity probe with a 3/8-24 case, 0.5 m integral cable and miniature male coaxial connector. It measures shaft displacement or vibration as part of a matched 7200 transducer system.

01 VERIFIED DETAIL 7200-series 8 mm standard-mount proximity probe	02 VERIFIED DETAIL 3/8-24 case with stainless-steel lead armor
03 VERIFIED DETAIL 0.5 m integral 95 ohm coaxial probe lead	04 VERIFIED DETAIL Miniature male coaxial mating connector

MATCHED MEASUREMENT CHAIN

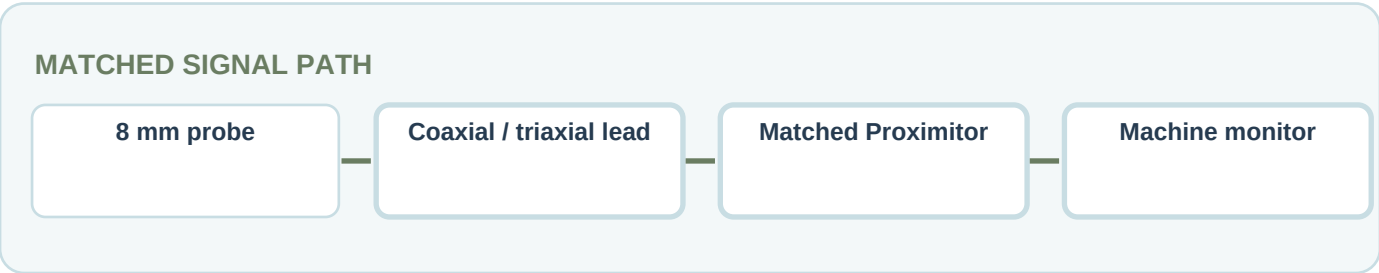


ENGINEERING BOUNDARY

A 21505 proximity probe is not an accelerometer. Preserve the 7200-series probe, extension-cable and Proximitor combination during replacement and test the calibrated loop as a system.

System Role and Interfaces

Bently Nevada 21505-00-12-05-02 is a 7200-series armored 8 mm standard-mount proximity probe with a 3/8-24 case, 0.5 m integral cable and miniature male coaxial connector. It measures shaft displacement or vibration as part of a matched 7200 transducer system.



INTERFACE / PURPOSE / CHECK

Mechanical mount	3/8-24	Match the documented mounting and case code.
Probe cable	95 ohm coaxial probe lead, miniature male connector and armored route	Preserve the specified lead and connector chain.
System pairing	Matched 7200-series Proximitors sensor	Use the correct total system length or 7200 series.
Measurement output	Gap-to-voltage probe input for static shaft position or dynamic vibration	Accept the loop by a controlled response test.

DOCUMENTED CHECKPOINT

The 21505 base code identifies a proximity probe, not an accelerometer or sensor cable. Match its 7200-series probe and 0.5 m integral lead to the correct extension cable and Proximitors, then verify the final calibrated system response.

Technical Parameters

Order-code details and matched-system values are identified separately.

PARAMETER	DOCUMENTED VALUE	PARAMETER	DOCUMENTED VALUE
Probe family	7200 5 mm / 8 mm transducer system	Integral cable length	0.5 m
Base order code	21505	Probe cable	95 ohm coaxial
Probe tip	8 mm	Connector option	02 - miniature male coaxial
Mounting style	Standard mount	Matched-system scale factor	200 mV/mil (7.87 V/mm)
Mounting thread	3/8-24	Matched-system calibrated range	80 mil (2.0 mm)
Lead armor	Stainless steel	Matched-system frequency response	0 to 10 kHz
Unthreaded section	0.0 in	Probe and extension cable operating range	-34 to +177 C
Overall case length option	1.2 in	Matched-system target	AISI 4140 steel

APPLICATION BOUNDARY

A 21505 proximity probe is not an accelerometer. Preserve the 7200-series probe, extension-cable and Proximitor combination during replacement and test the calibrated loop as a system.

Applications and Acceptance

Legacy 7200 machinery monitoring

Maintain the documented 7200 gap-to-voltage sensing loop on a rotating shaft.

Armored probe replacement

Match the 21505 stainless-steel armored lead in the original mounting position.

Short integral-lead installation

Route the 0.5 m probe lead into the specified 7200 extension-cable chain.

Controlled transducer acceptance

Verify calibrated 80 mil range after the probe, cable and Proximitor are matched.

ENGINEERING DECISIONS

Is 21505-00-12-05-02 an accelerometer?

No. It is an armored 8 mm 7200-series standard-mount proximity probe for a matched gap-to-voltage transducer system.

How does the 21505 base differ from 21504?

Both are 8 mm standard-mount, 3/8-24 probe families; 21505 includes stainless-steel lead armor, while 21504 does not.

What does the 12 case option mean here?

It specifies a 1.2-inch overall probe case; the preceding 00 leaves the unthreaded section at zero.

Which cable length does option 05 select?

It selects a 0.5 m integral probe cable, not a 5 m cable.

Further Technical Decisions

What mating connection is specified by the final 02?
A miniature male coaxial connector; it is not an M12 waterproof connector.

Can the probe be evaluated as a standalone vibration sensor?
No. The published 7200 scale and range are properties of a calibrated probe, extension-cable and Proximator system.

What range applies to a correctly matched 7200 8 mm system?
The calibrated system range is 80 mil (2.0 mm), starting about 10 mil from the probe face.

Which reference target underlies the 7200 system specifications?
The system specifications use an AISI 4140 steel target at the stated test conditions.

RELATED BENTLY NEVADA PRODUCT PAGES

- 01 Bently Nevada 21505-00-28-05-02
- 02 Bently Nevada 21504-000-020-05-02
- 03 Bently Nevada 21504-00-48-10-02
- 04 Bently Nevada 21504-00-20-10-02
- 05 Bently Nevada 21505-00-44-10-02
- 06 Bently Nevada 21504-00-24-10-02
- 07 Bently Nevada 330500-07-00
- 08 Bently Nevada 330705-02-18-10-02-00
- 09 Bently Nevada 330701-00-10-10-02-00

MANUFACTURER SOURCE RECORD

Bently Nevada 7200 Proximity Transducer Systems, 5 mm and 8 mm, Technical/Ordering Information (archived NASA NTRS 19960001274).

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