Bently Nevada 330706-005-046-10-02-00

01 Function and selected configuration

Product function

Bently Nevada 330706-005-046-10-02-00 places an 11 mm sensing tip at the target through a metric reverse-mount arrangement. The probe, extension cable and Proximitor work together to measure static position and dynamic shaft vibration.

Selected configuration

M10 x 1 reverse mounting, fixed 5 mm / 46 mm case geometry, a 1 m lead and miniature ClickLoc connector. This fixed reverse-mount configuration uses a PPS tip and AISI 304 stainless-steel case. The integral 75-ohm triaxial cable has FEP insulation and must remain part of the calibrated electrical-length combination.

Functional path

Conductive target	Metric reverse probe	Matched extension	11 mm Proximitor

Metric case	M10 x 1 reverse mount, 5 mm unthreaded length, 46 mm case length
Electrical lead	1.0 m with miniature ClickLoc connector
Matched-system output	3.94 V/mm nominal scale factor

An appropriate 4 m or 8 m extension combines with this 1 m lead for a 5 m or 9 m system. The 4 mm linear range and 2.5 mm nominal gap are system characteristics measured under the specified target and calibration conditions.

330706-005-046-10-02-00 / Technical operating envelope

02 Technical operating envelope

Sensing principle	Non-contact eddy current
Sensing tip	11 mm nominal, PPS
Case thread	M10 x 1, reverse mount
Unthreaded length	5 mm
Case length	46 mm
Integral lead length	1.0 m
Connector	Miniature ClickLoc coaxial
Cable impedance	75 ohms triaxial
Cable insulation	FEP
Probe resistance	5.9 ±0.5 ohms at 1 m

System scale factor	3.94 V/mm (100 mV/mil) nominal
System linear range	4 mm; 0.5 to 4.5 mm gap
Recommended nominal gap	2.5 mm
Compatible system lengths	5 m or 9 m with matching components
Probe temperature	-52 to +177 °C
Recommended case torque	7.5 N·m for reverse-mount probe
Maximum case torque	22.6 N·m
Minimum cable bend radius	25.4 mm
Minimum flat target diameter	30.5 mm
Minimum shaft diameter	152 mm for specified performance

System reference conditions include an AISI 4140 steel target, -24 V DC supply, 10 kohm load and 2.5 mm gap. Installation and target changes can alter the actual response.

330706-005-046-10-02-00 / System integration and applications

03 System integration and applications

Metric reverse-mount measurement points

Fit the M10 x 1 reverse case in a matching mechanical arrangement while retaining access to the connector.

Shaft-relative vibration channels

Measure dynamic motion with a matched 11 mm transducer chain and an appropriate monitor input.

Static shaft position measurement

Use the system DC gap response for position tracking within the qualified linear region.

Longer-range proximity systems

Apply the 4 mm system range where target geometry and electrical-length matching support the required measurement.

System and supply context

The listed item is the probe. A matching extension, 11 mm Proximitor and mounting hardware are required for the measurement system and are supplied only when itemized.

Application boundary

The application descriptions concern a complete calibrated chain. Target material, shaft diameter, clearance and installation temperature all affect suitability.

Which extension lengths pair with the 1 m lead of 330706-005-046-10-02-00?

A matching 4 m extension makes a 5 m system, while a matching 8 m extension makes a 9 m system. Use the corresponding 3300 XL 11 mm Proximitor calibration.

330706-005-046-10-02-00 / Engineering selection decisions

04 Engineering selection decisions

Which part of 330706-005-046-10-02-00 distinguishes it from an imperial reverse probe?

The 330706 reverse-mount case uses an M10 x 1 metric thread and fixed 5 mm unthreaded / 46 mm case geometry. Do not install it into a 3/8-24 UNF mounting hole.

Is the 3.94 V/mm output generated directly by 330706-005-046-10-02-00?

No. That scale factor belongs to the complete probe, extension cable and Proximitor system. The probe must be connected to the matching conditioner.

Can the lead of 330706-005-046-10-02-00 be shortened to remove slack?

Keep the integral lead intact. Altering the cable changes the calibrated electrical system; route spare length without bending below the 25.4 mm minimum radius.

Does the temperature limit of 330706-005-046-10-02-00 apply to its Proximitor?

No. Probe and extension operation extends to +177 °C, while the Proximitor upper limit is +100 °C. Keep each component within its own temperature rating.

Control case torque	Use the reverse-mount recommendation; do not apply case torque to the connector.
Assess adjacent metal	Provide suitable target area and separation to avoid disturbed probe response.

330706-005-046-10-02-00 / Configuration boundary and references

05 Configuration boundary and references

Lifecycle and support

The current manufacturing and OEM support stages for 330706-005-046-10-02-00 require confirmation from Bently Nevada. Apter Power availability is confirmed separately.

Replacement assessment

Match the metric reverse-mount geometry, 1 m electrical lead, connector and complete 11 mm system calibration. Do not substitute an 8 mm system component.

Document roles

Use the original manufacturer excerpt for its preserved technical tables and drawings. This product brief explains configuration and selection boundaries. The independent installation guide organizes preparation, connection, testing and handover. It does not replace the applicable manufacturer installation instructions.

Technical basis

Bently Nevada 3300 XL 11 mm Proximity Transducer System, 146256 Rev. T.

Related product navigation

- Bently Nevada 330730-080-00-05
- Bently Nevada 330730-080-03-05
- Bently Nevada 330780-50-CN

These are related references, not confirmed substitutes or an automatically approved assembly.

Product enquiries