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01 Plan the mounting and measurement boundary

Installation scope

Install the complete PROXPAC XL arrangement at the assigned machine measurement point. Confirm that the housing location, standoff and probe penetration suit the available space and target. Preserve the receiving monitor configuration before disturbing an existing channel.

Selected installation features

Feature	Required arrangement
Probe	3300 XL 8 mm
Standoff adapter	70 mm
Probe penetration	155 mm
Fittings kit	One 3/4-14 NPT fitting, one stainless 3/4-14 to 1/2-14 NPT reducer, two plugs
Mounting thread	3/4-14 NPT
Proximitor location	Integrated in the housing cover
Extension cable	Not required between the internal probe and conditioner

Before work starts

01	Identify the shaft target and monitored channel, including the required static gap and dynamic quantity.
02	Check the mounting thread, standoff clearance and probe reach independently.
03	Trace the field power and signal route from the monitor to the housing.
04	Confirm isolation, environmental exposure and the containment plan before opening the assembly.

Protect the internal measurement chain

The one-metre probe circuit is part of the integrated transducer. Keep the sleeve, probe and cover-mounted conditioner associated with the correct assembly. Do not add an extension cable simply because a conventional remote Proximitor installation used one.

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02 Secure the sleeve and route the conduit

Mechanical and entry checks

Check	Requirement
Retaining nut	29.5 N·m recommended torque
Probe sleeve locknut	39.3 N·m recommended torque
Standoff mounting	3/4-14 NPT thread
Selected fitting	3/4-14 NPT
Selected reducer	3/4-14 NPT to 1/2-14 NPT, stainless steel
Unused entries	Two plugs supplied with the selected kit
Sleeve seal	Neoprene O-ring

Use the fittings for the actual conduit arrangement

The selected kit provides a fitting, reducer and two plugs. Assess which entries the installed route uses and seal the remaining entries correctly. Do not assume every fitting in the kit must be installed in series or that an unused opening can remain unsealed.

Mechanical completion checks

01	Verify the sleeve and mounting engagement before tightening.
02	Keep the probe penetration aligned with the intended target location.
03	Tighten the identified nut and locknut to their own recommended values.
04	Inspect the cover seating, seals and protected field entry after the route is complete.

Control water along the whole route

Moisture can travel through conduit into an otherwise sealed housing. Review conduit orientation and water paths as part of the installation. IP66 protection does not make the assembly submersible or eliminate the need to protect cable and conduit entries.

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03 Connect the field circuit and check power

Field connection data

Connection item	Value
Conductor size	0.2–1.5 mm² (16–24 AWG)
Cable	Shielded three-conductor cable
Field conductor preparation	Tinned field wiring recommended
Maximum field route	305 m
Output resistance	50 Ω
Conditioner consumption	12 mA maximum
Supply without barriers	-17.5 to -26 V DC
Supply with barriers	-23 to -26 V DC

Keep the signal and power functions identified

Label the existing supply, common and output assignments before disconnection. Restore the correct terminals for the installed conditioner; physical conductor colour alone is not evidence of the terminal function. Preserve the intended shield and grounding arrangement.

Electrical readiness

Polarity
Verify the required negative supply at the conditioner.

Voltage under load
Check the installed terminal voltage, including any barrier drop.

Cable route
Confirm field wiring is distinct from the internal probe circuit.

Signal loading
Check the receiving monitor connection before evaluating the output.

Do not stop at a power indication

A powered conditioner may still be connected to an unsuitable gap, damaged probe or incorrect receiving channel. Confirm voltage-to-displacement response after establishing supply and field wiring.

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04 Set gap and verify displacement response

Acceptance reference

Measurement	Reference
Linear range	2 mm (80 mils)
Approximate gap interval	0.25 to 2.3 mm
Approximate output interval	-1 to -17 V DC
Recommended gap	1.27 mm
Nominal scale factor	7.87 V/mm (200 mV/mil)
Incremental scale-factor tolerance	±5%, including interchangeability error
Scale-factor test conditions	0–45 °C, altitude up to 2000 m, 0.25 mm increments
Straight-line deviation	Less than ±0.025 mm with components at 0–45 °C

Controlled response test

01	Connect the intended receiving channel and measure the static output.
02	Adjust the probe position to the required operating gap.
03	Apply controlled target movement and compare output change with displacement.
04	Recheck the operating gap after securing the sleeve and mounting hardware.

Check the usable travel envelope

The nominal 1.27 mm gap is an operating reference, not permission for unlimited shaft motion. Ensure that the expected movement remains within the usable interval toward and away from the tip. Check nearby metal and adjacent probes when the response differs from the expected scale.

Verify the monitor separately

Confirm receiving-channel units, scale factor, filtering and applicable alarm functions. The local transducer response and the monitor interpretation are separate acceptance steps. A correct output voltage does not guarantee correct alarm thresholds or channel assignment.

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05 Environmental acceptance and fault isolation

Symptoms and checks

Observation	Investigation
Unstable gap after tightening	Inspect sleeve security and repeat the gap measurement.
Reduced usable range	Check installed supply voltage, barriers and actual target gap.
Moisture inside housing	Inspect conduit water paths, unused entries, cover and connector protection.
Unexpected scale factor	Check shaft size, target geometry and adjacent-probe interaction.
No proportional response	Check internal probe continuity and the complete conditioner circuit.
Excess temperature	Compare local housing temperature with its +100 °C operating limit.

Apply the lower relevant temperature limit

The probe can operate up to +177 °C, while the housing and Proximitor limit is +100 °C. The higher probe limit does not apply to the electronics. Exposure below -34 °C may also cause premature probe pressure-seal failure, which needs separate assessment from the general low-temperature range.

Release checks

Measurement
Confirm final gap, displacement response and correct channel.

Mechanical
Verify sleeve retention and sealed field entries.

Environment
Confirm non-submersible use and the containment arrangement.

Protection
Complete the required alarm and signal-failure tests.

Other PROXPAC XL configurations

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