Bently Nevada TACH100-01 174652-01

Engineering Installation, Diagnostic and Acceptance Guide

Bently Nevada TACH100-01 174652-01 is a tach100 standalone digital tachometer for the Bently Nevada speed-indication and Keyphasor measurement platform. The complete marking must be matched to the installed hardware, wiring and configuration before replacement.

01 Work package

Complete model	TACH100-01 174652-01
Product type	TACH100 standalone digital tachometer
Manufacturer	Bently Nevada
Technical source	Bently Nevada TACH100 Standalone Digital Tachometer Datasheet 176063 Rev. L

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 TACH100-01 174652-01.
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.

02 Interface and configuration map

Input source	Bently Nevada Proximitor Sensor signal
Input threshold	Automatic adjustment
Input hysteresis	0.2 to 2.5 V DC, field adjustable
Events per turn	1 to 99, field adjustable
AC supply	110 to 230 V AC, 50/60 Hz
Fuse	1.5 A slow-blow
Nominal power consumption	1.01 W with 888888 displayed
Display	6-digit, 7-segment LED
Digit height	13.2 mm
Measurement range	1 to 999,999 rpm
Resolution	1 rpm
Accuracy	Within 0.015% of displayed input speed
Display update hysteresis	0.003% minimum input change
Proximitor power	-24 V DC at 20 mA maximum
Operating temperature	0 to 60 deg C
Relative humidity	95% maximum, noncondensing

Chain controls

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.

03 Installation workflow

Confirm the complete identity

Match every field of TACH100-01 174652-01 with the approved spare-parts record before installation.

Control electrostatic exposure

Use grounded handling, antistatic packaging and protected work surfaces for exposed electronics.

Verify the host interface

Confirm connector keying, slot assignment, supply and companion hardware before energizing.

Preserve configuration evidence

Record switches, firmware, parameters, terminal assignments and as-found diagnostics before removal.

Inspect environmental condition

Check contamination, corrosion, ventilation, vibration and cabinet temperature before fitting the replacement.

Prove the installed function

Complete the manufacturer and site acceptance procedure, then retain the as-left result with the maintenance record.

Application checks

Local machine speed display

Provide RPM indication close to rotating equipment.

Remote control-room indication

Repeat a permanently installed monitoring-system speed signal at a remote location.

Standalone Proximitor-powered channel

Supply one compatible Proximitor and display its speed signal.

Multiple-events-per-turn sensing

Scale speed from a documented multi-event target using the configured event count.

Controlled sequence

01 Isolate	Place the monitored machine and channel in the approved maintenance state; prove the required isolation.
02 Photograph	Capture TACH100-01 174652-01, 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.

04 Diagnostic decision table

How should events per turn be set on TACH100-01 174652-01?	Count the physical target events per shaft revolution from the machine drawing and set the tachometer to the same value before comparing speed.
What should be checked if TACH100-01 174652-01 displays a stable but incorrect speed?	Review events-per-turn setting, target geometry, signal polarity, threshold behavior and the independent reference used for comparison.
How can TACH100-01 174652-01 be connected to an externally powered Keyphasor signal?	Follow the manufacturer wiring arrangement for signal and common in parallel with the monitor input without connecting the internal sensor supply to the external source.
What causes an unstable reading on TACH100-01 174652-01?	Inspect probe gap, target runout, connector noise, shield/common wiring, hysteresis setting and signal amplitude through the full speed range.
What evidence should be recorded before replacing TACH100-01 174652-01?	Capture the complete nameplate, installed slot or mounting position, companion hardware, wiring identifiers and the accepted operating baseline for the tach100 standalone digital tachometer.
How should an intermittent fault around TACH100-01 174652-01 be isolated?	Separate field wiring, connector, supply, grounding, configuration and host-system causes. Reproduce the symptom under a controlled test and change only one variable at a time.

What configuration evidence should be retained after commissioning TACH100-01 174652-01?	Retain the hardware identity, firmware or parameter record where applicable, channel assignment, as-left measurements, alarm or diagnostic state and the approved functional-test result.
When should TACH100-01 174652-01 be rejected during incoming inspection?	Quarantine the item if the complete marking, connector keying, board revision, protective coating, terminal condition or required companion hardware differs from the approved replacement record.

Release review

Installation relationship	Use the manufacturer panel cutout, protected AC supply and documented signal/common wiring.
Scaling boundary	The events-per-turn setting must equal the actual machine target events per revolution.
Technical reference	Bently Nevada TACH100 Standalone Digital Tachometer Datasheet 176063 Rev. L.

Engineering questions

How should events per turn be set on TACH100-01 174652-01?	Count the physical target events per shaft revolution from the machine drawing and set the tachometer to the same value before comparing speed.
What should be checked if TACH100-01 174652-01 displays a stable but incorrect speed?	Review events-per-turn setting, target geometry, signal polarity, threshold behavior and the independent reference used for comparison.
How can TACH100-01 174652-01 be connected to an externally powered Keyphasor signal?	Follow the manufacturer wiring arrangement for signal and common in parallel with the monitor input without connecting the internal sensor supply to the external source.
What causes an unstable reading on TACH100-01 174652-01?	Inspect probe gap, target runout, connector noise, shield/common wiring, hysteresis setting and signal amplitude through the full speed range.
What evidence should be recorded before replacing TACH100-01 174652-01?	Capture the complete nameplate, installed slot or mounting position, companion hardware, wiring identifiers and the accepted operating baseline for the tach100 standalone digital tachometer.
How should an intermittent fault around TACH100-01 174652-01 be isolated?	Separate field wiring, connector, supply, grounding, configuration and host-system causes. Reproduce the symptom under a controlled test and change only one variable at a time.
What configuration evidence should be retained after commissioning TACH100-01 174652-01?	Retain the hardware identity, firmware or parameter record where applicable, channel assignment, as-left measurements, alarm or diagnostic state and the approved functional-test result.
When should TACH100-01 174652-01 be rejected during incoming inspection?	Quarantine the item if the complete marking, connector keying, board revision, protective coating, terminal condition or required companion hardware differs from the approved replacement record.

Acceptance and support

Retain the full marking, installed-chain identities, test readings and approved machine configuration. Confirm the exact offered item and included scope in the written quotation.

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

Verified related product references

Related product	330930-040-03-00
Related product	84661-96
Related product	330102-00-28-10-02-05
Related product	330104-00-16-10-02-00

Commissioning record template

Installed asset	Machine, bearing, channel or cabinet reference
Companion identities	Probe, cable, sensor, interface or monitor markings
Mechanical datum	Mounting reference, reach, alignment or sealing condition
Electrical datum	Chain length, connector, shield, supply or input assignment

Before-work baseline	Gap, bias, vibration, continuity or channel observation
As-left result	Final measured value and functional proof
Approval basis	Applicable drawing, control requirement or site procedure
Handover	Technician, date, revision and maintenance-record location

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 TACH100-01 174652-01.
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 package

Nameplate evidence	Overall and close photographs showing TACH100-01 174652-01, 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.

Evidence quality controls

Traceability	Each value is tied to TACH100-01 174652-01, 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.