

# TACH100 Standalone Digital Tachometer

## Datasheet

Bently Nevada Machinery Condition Monitoring

176063 Rev. K



## Description

The Bently Nevada TACH100\_Digital\_Tachometer can be used as a stand-alone unit for speed indication or in conjunction with any permanently installed monitoring system as a remote speed indicator. It is often used when a permanent monitoring system is located some distance away (e.g. in a control room) or when no permanent monitoring system is installed and speed indication is required at the machine.

The digital tachometer is a compact unit, containing its own power supply that can power a Proximitors sensor (-24 Vdc). The tachometer also accepts signal and common wires from an externally-powered Keyphasor Proximity Probe (such as may be available when a permanent monitoring system is installed). The wires can be connected in parallel with the Keyphasor input on the monitor rack or to the Keyphasor probe itself.

CE

## Specifications

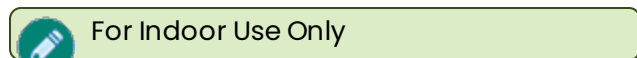
### Inputs

Signal	From any Bently Nevada Proximator Sensor.
Threshold	Automatic adjustment.
Hysteresis	0.2 Vdc to 2.5Vdc, field-adjustable.
Events Per Turn	1 to 99, field-adjustable.
Electrical Supply	110–230 Vac, 50–60 Hz. 1.5 Amp, SB fuse. 1.01 Watts nominal power consumption with 88888 displayed.

### Outputs

Display Type	6–digit LED, 7 segments per digit. Digit height is 13.2 mm (0.52 in)
Measurement Range	1 to 999,999 rpm.
Measurement Resolution	1 rpm
Measurement Accuracy	Accurate to within 0.015% of input speed displayed in RPM.
Display Hysteresis	Input signal must change by 0.003% minimum to display a new output value.
Proximator Power	–24 Vdc at 20 mA maximum.

### Environmental Limits



Pollution Degree	2
Installation Category	II

Altitude	2000 m
Operating Temperature	0°C to +60°C (+32°F to +140°F)
Storage Temperature	–40°C to +85°C (–40°F to +185°F)
Relative Humidity	95% max, noncondensing

### Physical Size

Height	76.2 mm (3 in)
Width	139.7 mm (5.5 in)
Depth	149.1 mm (5.8 in)
Weight	1.13 kg (2.5 lb)

## Directives (CE and EMC)

### CE Mark Directive

The TACH100\_Digital\_Tachometer has been tested and approved for installation within the European Union and European Environmental Agency regions. This device has been designed and tested to meet the following directives.

### EMC Directives

Radiated Emissions	EN5501, Group 1 Class A
Conducted Emissions	EN5501, Group 1 Class A
EN61000–6–2 Electrostatic Discharge	IEC 61000–4–2, Criteria B
Radiated Susceptibility	IEC 61000–4–3, Criteria A
Electrical Fast Transient	IEC 61000–4–4, Criteria B
AC Power Surge Susceptibility	IEC 61000–4–5, Criteria B

AC Power Flicker Emissions	IEC 61000-3-3, Criteria A
RF Conducted Susceptibility	IEC 61000-4-6, Criteria A
Voltage Interrupt Susceptibility	IEC 61000-4-11, Criteria B
Voltage Dip Susceptibility	IEC 61000-4-11, Criteria A

## EMC Standards

This product is tested to meet Council Directive 89/336/EEC Electromagnetic Compatibility (EMC) as last amended by EC Directive 93/68/EEC.

EN61000-6-4 Generic emission standard, Part 2, Industrial Environment. EN61000-6-2 EMC Generic Immunity standard, Part 2, Industrial Environment.

## Certificate of Conformity

Registration Number: AE 72062927 0001

## Ordering Information



For the detailed listing of country and product specific approvals, refer to the *Approvals Quick Reference Guide* (108M1756) available from [Bently.com](http://Bently.com).

### TACH100

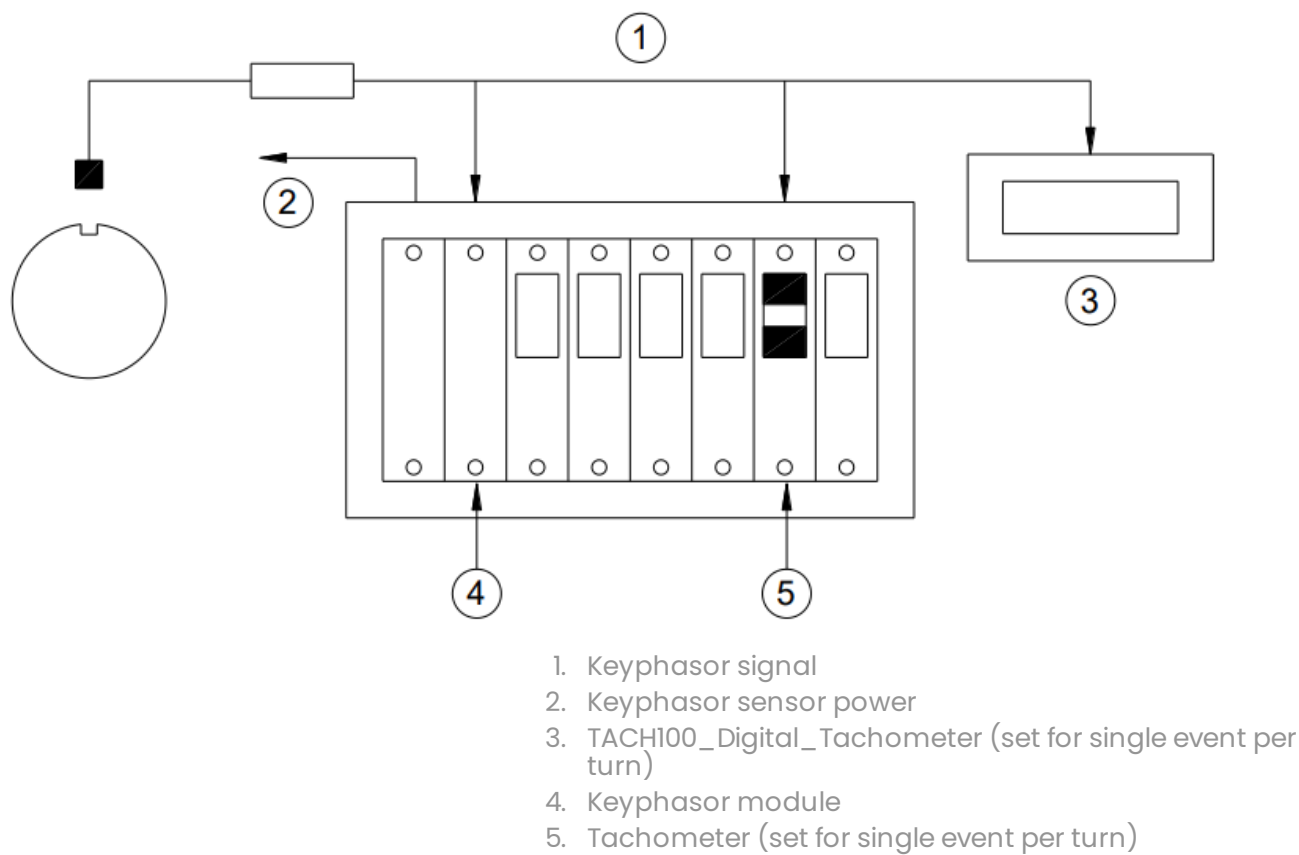
#### Standalone Digital Tachometer

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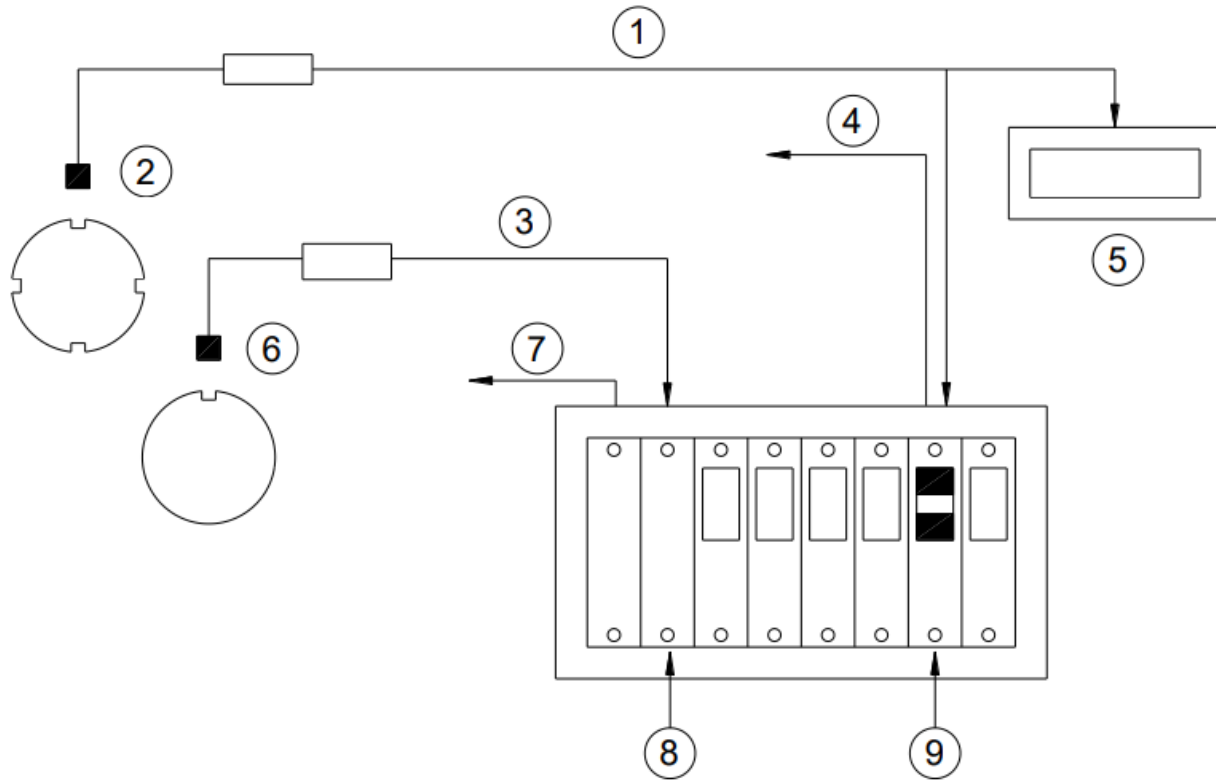
##### Accessories

01701500	Fuse, 1.5 Amp, SB.
38138-01	Hood to block direct sunlight.
7072-01	Weatherproof housing with two 1/2-in NPT fittings.
7072-02	Weatherproof housing with three 1/2-in NPT fittings and a 1/2-in to 1/4-in NPT bushing.

## Graphs and Figures

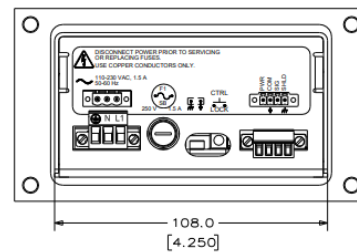
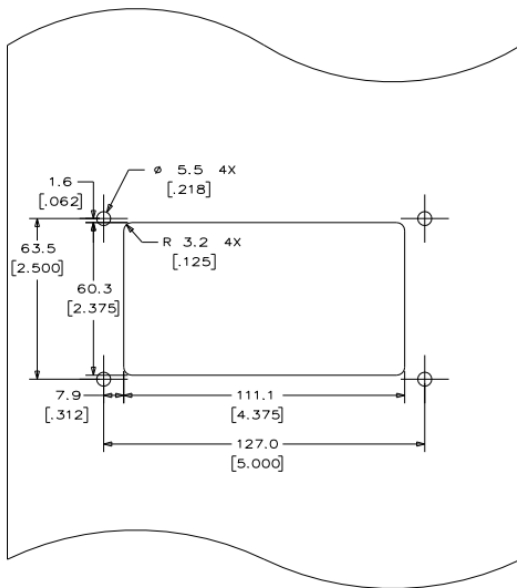
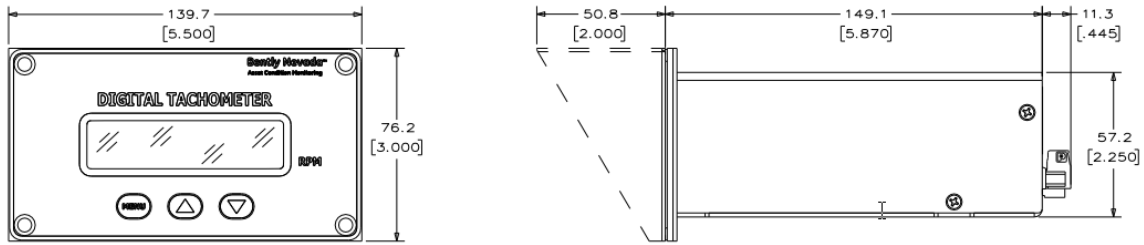


**Figure 1: Connection for Single Event per Turn Keyphasor and Single Event per Turn Tachometer**



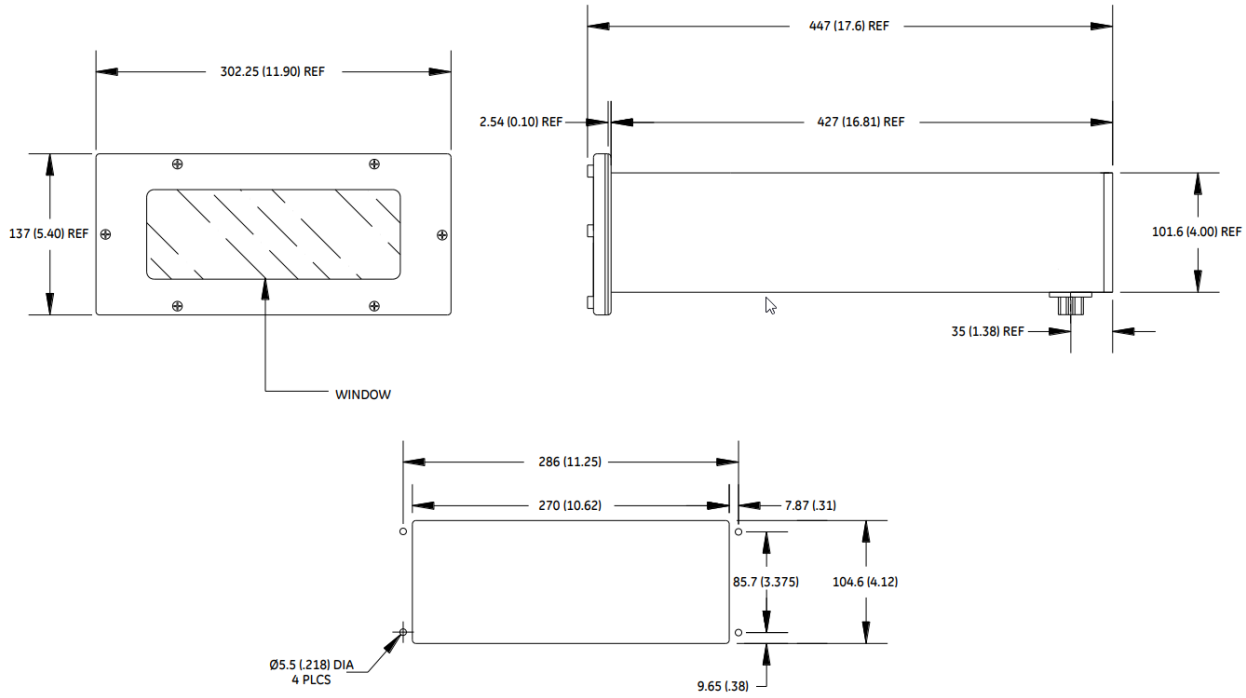
1. Multiple event per turn transducer signal
2. Transducer
3. Single event per turn Keyphasor signal
4. Transducer power
5. TACHI100\_Digital\_Tachometer (set for multiple events per turn)
6. Keyphasor sensor
7. Keyphasor sensor power
8. Keyphasor module
9. Tachometer module (set for multiple events per turn)

**Figure 2: Connection for a Single Event per Turn Keyphasor and Multiple Events per Turn Transducer Signal**



Dimensions are in millimeters (inches)

**Figure 3: Dimensional Drawings for Digital Tachometer and Cutout**



Dimensions are in millimeters (inches)

**Figure 4: 7072 Weatherproof Housing and Cutout**



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