TACH100 Standalone Digital Tachometer

Datasheet

Cordant™

176063 Rev. L

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 Proximitor 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

Baker Hughes

Specifications

Inputs

Signal	From any Bently Nevada Proximitor 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.
Proximitor Power	-24 Vdc at 20 mA maximum.

Environmental Limits

For Indoor Use Only

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)*.

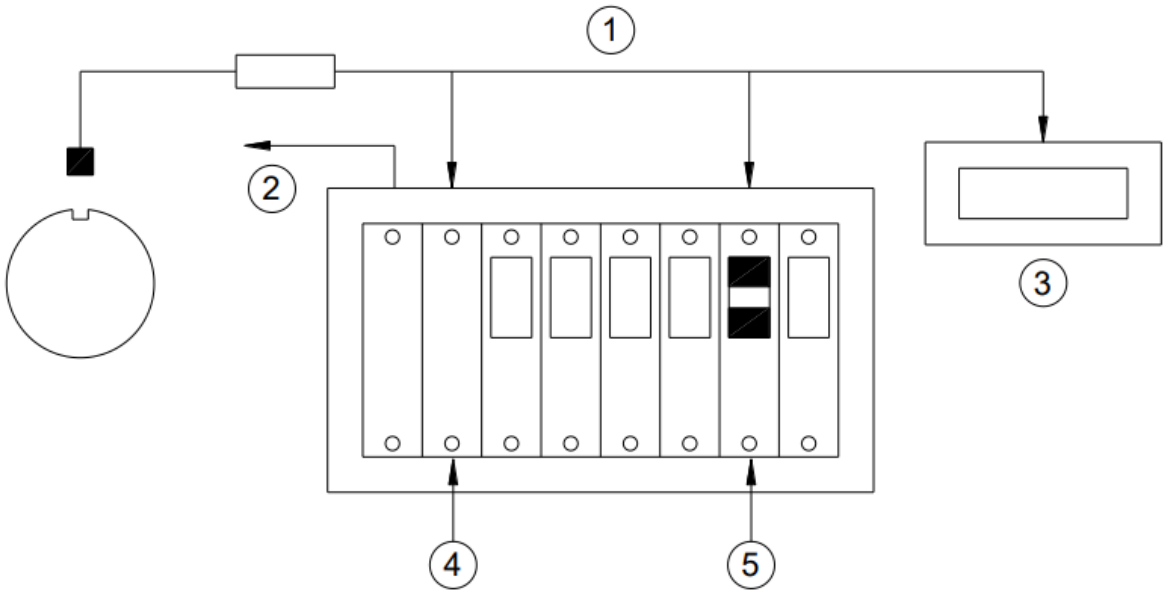
For additional technical documentation, please log in to bntechsupport.com and access the Bently Nevada Media Library.

TACH100

Standalone Digital Tachometer

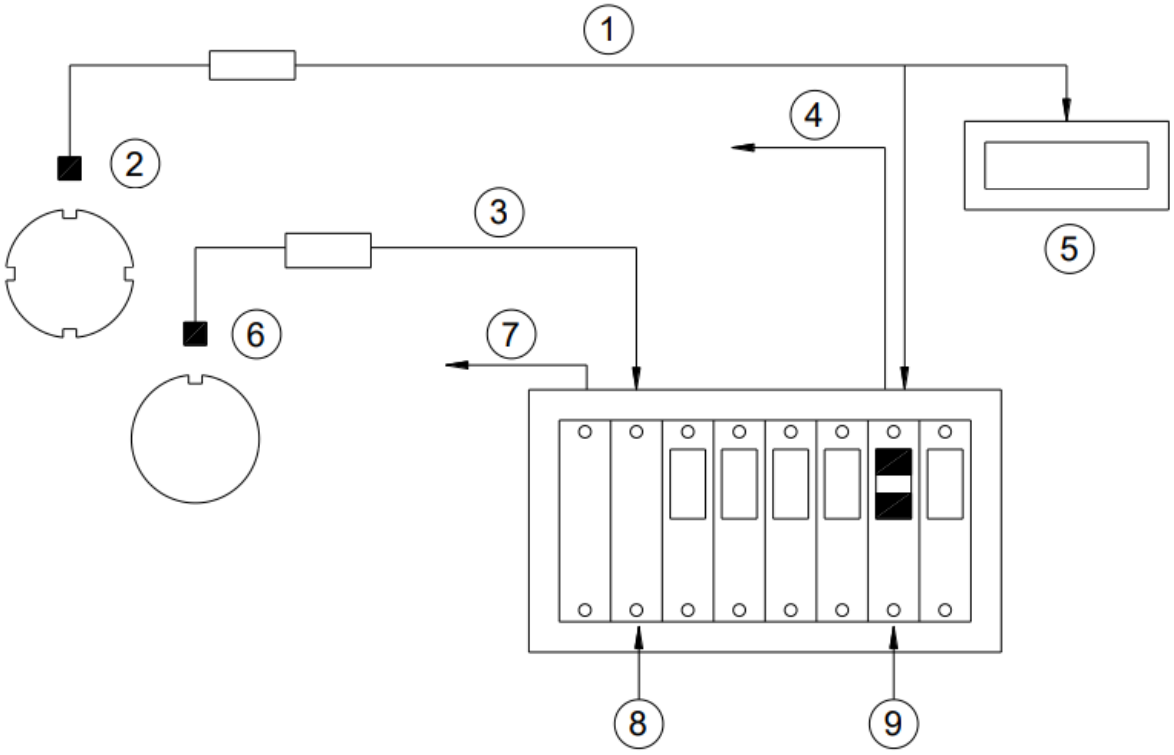
Accessories	
01701500	Fuse, 1.5 Amp, SB.
38138-01	Hood to block direct sunlight.
7072-01	Weatherproof housing with two 1/2-in NPT fittings.
7072-02	Weatherproof housing with three 1/2-in NPT fittings and a 1/2-in to 1/4-in NPT bushing.

Graphs and Figures



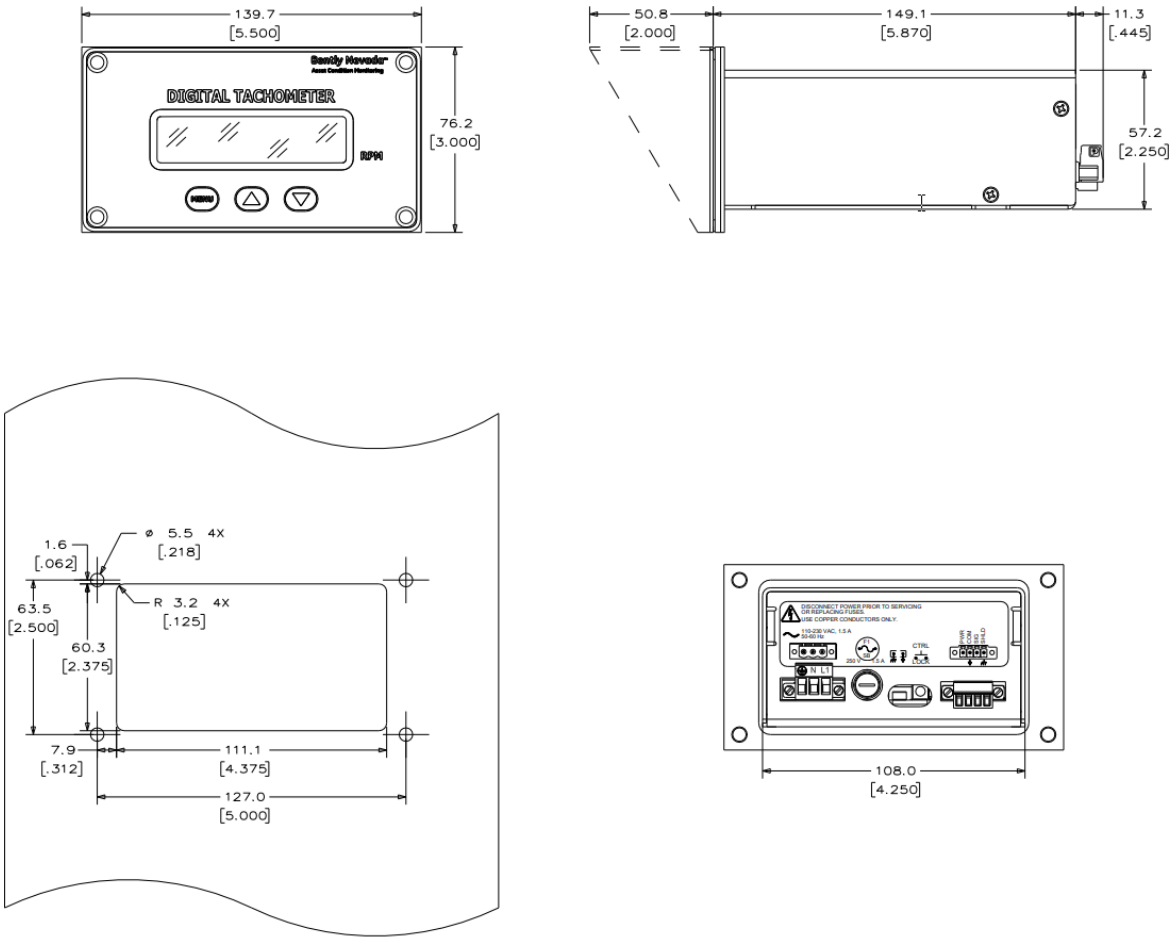
1. Keyphasor signal
2. Keyphasor sensor power
3. TACH100 Digital Tachometer (set for single event per turn)
4. Keyphasor module
5. Tachometer (set for single event per turn)

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



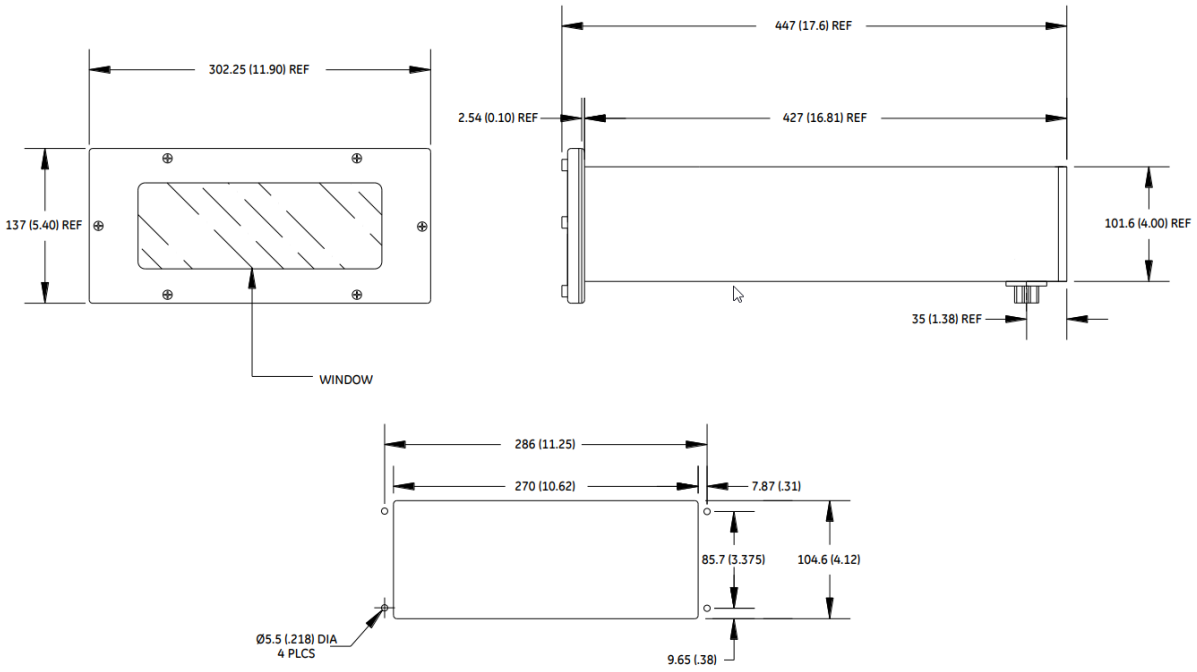
1. Multiple event per turn transducer signal
2. Transducer
3. Single event per turn Keyphasor signal
4. Transducer power
5. TACH100 Digital Tachometer (set for multiple events per turn)
6. Keyphasor sensor
7. Keyphasor sensor power
8. Keyphasor module
9. Tachometer module (set for multiple events per 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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