

Standalone Digital Tachometer

Bently Nevada* Asset Condition Monitoring

Description



The 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 Proximito* 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 Proximity Probe input on the monitor rack or to the Keyphasor Proximity Probe itself.

Specifications

Inputs

Signal:

From any Bently Nevada Proximito Sensor.

Threshold:

Automatic adjustment.

Hysteresis:

0.2 Vdc to 2.5Vdc, field-adjustable.

Events Per Turn:

1 to 99, field-adjustable.

Power:

110-230 Vac, 50-60 Hz. 1.5Amps.

Outputs

Display Type:

6-digit LED, 7 segments per digit. Digit height is 14.22 mm (0.56 in)

Measurement Range:

1 to 999,999 rpm.

Measurement Resolution:

1 rpm

Measurement Accuracy:

Accurate to within 0.015% of true RPM.

Proximito* Power:

-24 Vdc at 20 mA maximum.

Environmental Limits

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:

To 95%, 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)

CE Mark Directives

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

EN61000-6-4

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

Part Numbers

TACH100

Standalone Digital Tachometer

Accessories

38138-01

Hood to block direct sunlight.

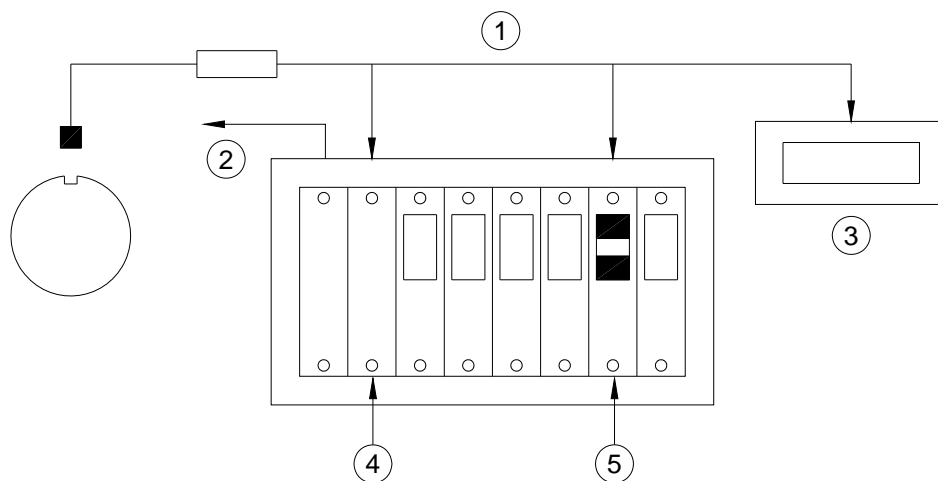
7072-01

Weatherproof housing with two 1/2-in NPT fittings.

7072-02

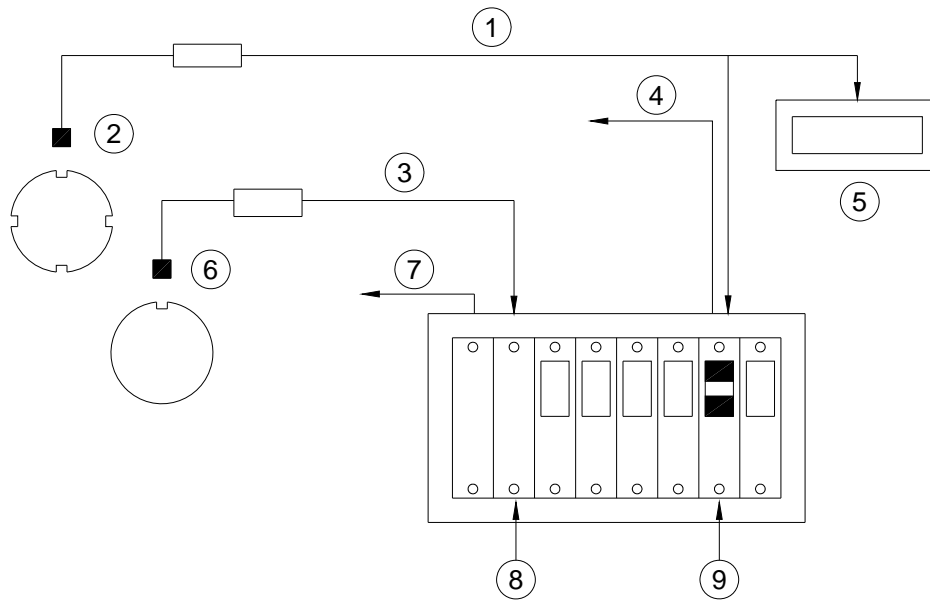
Weatherproof housing with three 1/2-in NPT fittings and a 1/2-in to 1/4-in NPT bushing.

Application Diagrams



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

Figure 2: Connection for a single event per turn Keyphasor and multiple event per turn transducer signal

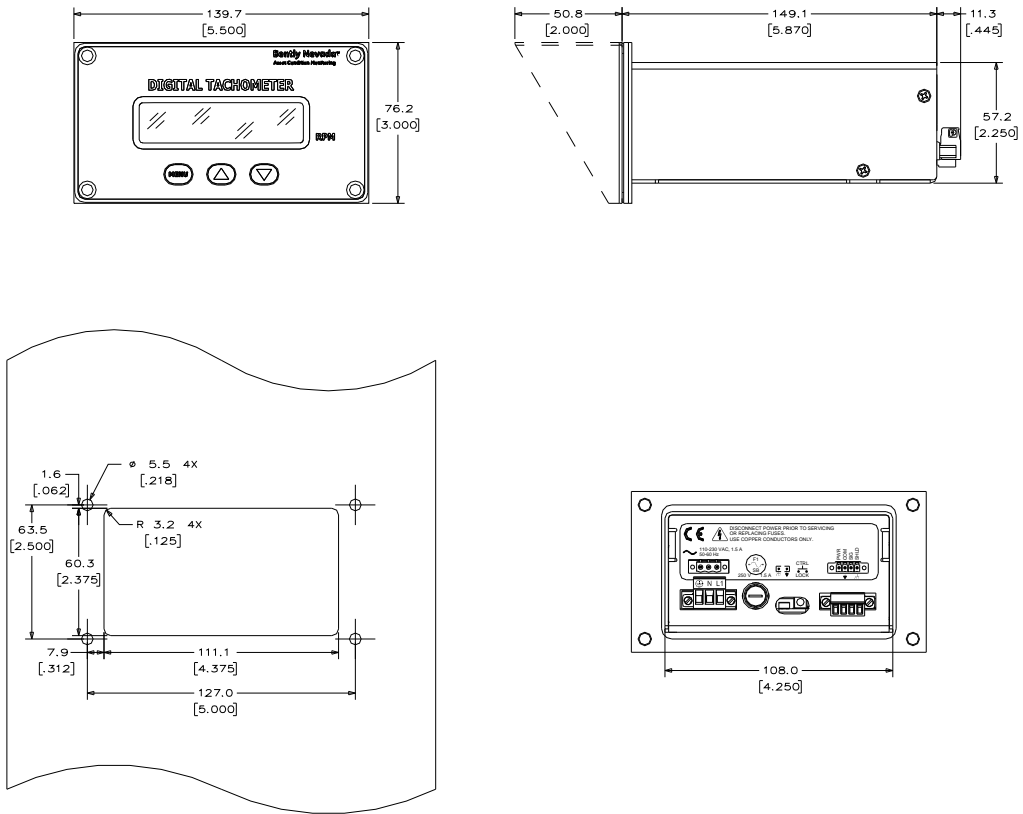


Figure 3: Dimensional Drawings for Digital Tachometer

Dimensions are in millimeters (inches)

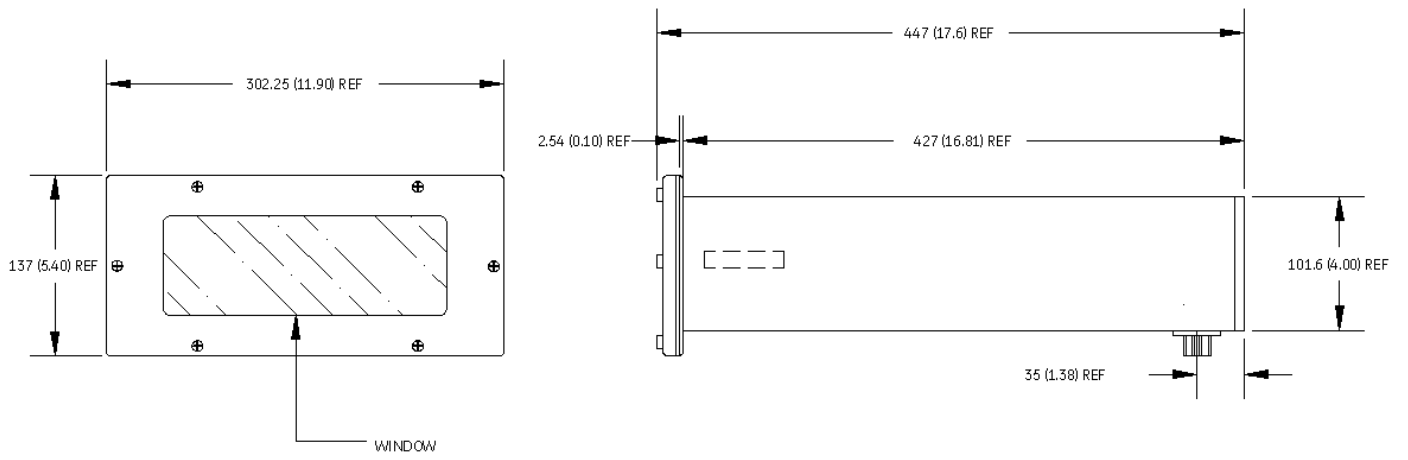
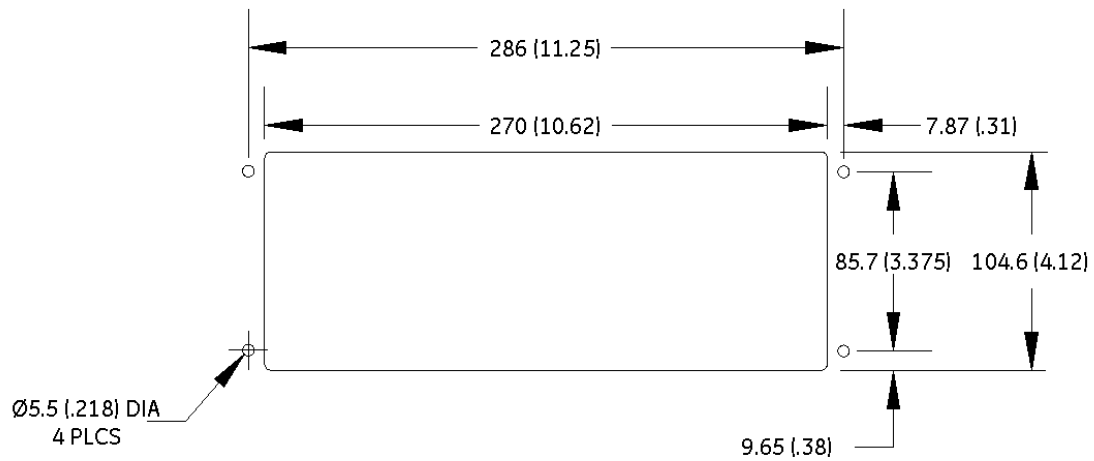


Figure 4: Dimensional Drawings for Weatherproof Housing



Dimensions are in millimeters (inches)

Figure 5: Dimensional Drawings for Weatherproof Housing Cutout

Dimensions are in millimeters (inches)

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