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.
## Specifications

### Inputs

<table>
<thead>
<tr>
<th>Signal</th>
<th>From any Bently Nevada Proximitor Sensor.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Threshold</td>
<td>Automatic adjustment.</td>
</tr>
<tr>
<td>Hysteresis</td>
<td>0.2 Vdc to 2.5Vdc, field-adjustable.</td>
</tr>
<tr>
<td>Events Per Turn</td>
<td>1 to 99, field-adjustable.</td>
</tr>
<tr>
<td>Electrical Supply</td>
<td>110-230 Vac, 50-60 Hz. 1.5 Amp, SB fuse. 1.01 Watts nominal power consumption with 88888 displayed.</td>
</tr>
</tbody>
</table>

### Outputs

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

### 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

<table>
<thead>
<tr>
<th>Height</th>
<th>76.2 mm (3 in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>139.7 mm (5.5 in)</td>
</tr>
<tr>
<td>Depth</td>
<td>149.1 mm (5.8 in)</td>
</tr>
<tr>
<td>Weight</td>
<td>1.13 kg (2.5 lb)</td>
</tr>
</tbody>
</table>

## 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.


### Certificate of Conformity

Registration Number: AE 72062927 0001
Ordering Information


TACH100

Standalone Digital Tachometer

<table>
<thead>
<tr>
<th>Accessories</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>01701500</td>
<td>Fuse, 1.5 Amp, SB.</td>
</tr>
<tr>
<td>38138-01</td>
<td>Hood to block direct sunlight.</td>
</tr>
<tr>
<td>7072-01</td>
<td>Weatherproof housing with two 1/2-in NPT fittings.</td>
</tr>
<tr>
<td>7072-02</td>
<td>Weatherproof housing with three 1/2-in NPT fittings and a 1/2-in to 1/4-in NPT bushing.</td>
</tr>
</tbody>
</table>
Graphs and Figures

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

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)
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**
Figure 4: 7072 Weatherproof Housing and Cutout

Dimensions are in millimeters (inches)