Description

The Snapshot™ for Windows® CE handheld portable data collection and analysis instrument is intended for periodic manual collection of data in a predictive maintenance program. It has been specifically designed for use by both machinery specialists and operations personnel, and provides features specific to portable data collection and analysis applications, such as:

- Two fully functional channels support data acquisition.
- A separate dedicated channel supports phase and speed input.
- Lightweight design that allows single-handed use for extended periods of time with minimal physical effort.
- IP54 rating permits use in harsh environments.
- Removable lithium ion battery provides a minimum usage of 10 hours between charges.
- Polycarbonate/ABS case design provides high impact resistance and durability.
- Quarter-size VGA display (backlit) and integral touchscreen provide a convenient user interface in a compact package.
- Ergonomically designed keypad permits simple operation with either the left or right hand, even with gloves on.
- Intuitive user interface provides ease of use.
- 32 MB of standard on-board memory accommodates large data collection schedules.
- Optional Snapshot Balance software provides on-board one- and two-plane balancing.
- Integrated communications provides high speed Ethernet remote data exchange with System 1®.

Unit supports a wide variety of measurement types and signal processing options including:

- Proximity probes
- Velocity transducers
- Accelerometers
- Temperature measurements
- Numeric data
- Manually keyed notes
- User-configurable dynamic inputs
- REBAM® transducers

The Snapshot for Windows® CE data collector uses System 1 host software (refer to System 1 Specifications and Ordering Information, p/n 145146-01) for permanent storage of all collected data and for system configuration functions. For detailed performance specifications refer to data sheet p/n 147934-01.
Specifications

Operating System
Microsoft Windows® CE

System Features

Battery Power:
10 hours minimum, in use

Battery Type:
Lithium Ion

Memory:
32 MB on board.

Local Display
Plots Supported
Current value/bar graph
Trend
Direct and Filtered
Orbit/Timebase
Direct and Filtered Timebase
Direct and Filtered Orbit
Full spectrum
Half spectrum
1/1 and 1/3 Octave Filter

Spectrum configurations
Frequency resolution, user-selectable from 100, 200, 400, 800, 1600, 3200, 6400 lines

Frequency span, user-selectable ranges between 0-25Hz and 0-40 kHz.

Inputs Supported
Proximity transducers
REBAM transducers
Velocity Seismoprobe® transducers
Velomitor® transducers
Accelerometers

Measurements Supported
Optical and Proximity Phase
Infrared (IR) Temperature Probe (optional item)
Proportional Voltage
Dynamic inputs

Note: Internal transducer power is available for –24Vdc and constant current devices.

Environmental Limits

Operating Temperature:
-20°C to +55°C (-4°F to +131°F)

Relative Humidity:
To 95%, non-condensing
Electromagnetic compatibility:

Complies with EN50081-2 (emission) and EN50082-2 (susceptibility)

Rating:

IP54

Physical

Length: 250 mm (10.0 in)

Width: 163 mm (6.4 in)

Depth: 60 mm (2.3 in)

All values are specified over the full operating temperature range unless stated otherwise. All voltages are specified with respect to 0V.

Environmental Specification

Temperature & Humidity

Operating Temperature range: -20 to +55 °C (-4 to +131 °C)

Storage Temperature Range: -30 to +85 °C (-22 to +185 °C)

Relative humidity: 95 % condensing.

Ingress Protection

The Snapshot has been designed and tested to meet the requirements of IP54.

Mechanical Shock & Vibration

Unpackaged shock: EN 68000-2-27

Unpackaged Vibration: EN 68000-2-6

Unpackaged Random Vibration: BS 2011 Pt. 2.1

Packaged Shock:

ISTA 1 & 1A (April 1996)

Packaged Vibration:

ISTA 1 & 1A (April 1996)

Packaged Random Vibration:

BS 2011 Pt. 2

Drop test – free fall

IEC 68-2-32

Impact test

BS 50021

Electromagnetic Compatibility

Emissions: EN 50081-2

Immunity: EN 61000-6-2

Hazardous Area Approvals

CSA/NRTL/C:

Class 1, Division 2
Groups A, B, C & D, T4

External Power Input and Battery

Power Input

Nominal Input Voltage: +15 Vdc ± 2 %

Specifications and Ordering Information
Port Number 143338-01
Rev. N (03/07)
### Battery
- **Type:** ME202 Li-ion
- **Capacity:** 4500 mAh
- **Time Between Charges:** 8 Hrs.
- **Charge Time:** 2 Hrs.

### Transducer Power Supplies
**Point ID +5 V Power**
- **Voltage:** 4.725 to 5.100 Vdc
- **Current:** 0 to 440 mA

**Phase Reference Power +5 V**
- **Voltage:** 4.731 to 5.100 Vdc
- **Current:** 0 to 120 mA

**Phase Reference Power, Transducer Power Channel A & Channel B –24 V**
- **Voltage:** -23.160 to -25.725 Vdc
- **Current:** 0 to 25 mA

**Velomitor® & Constant Current Transducers**

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**Power Channel A & Channel B**
- **Voltage:** -19.17 to -22.10 Vdc
- **Current:** 2.44 to 4.97 mA

### Signal Inputs
**Displacement Input**
- **Impedance:** 122.5 kΩ
- **Input Voltage Range:** 0 to -24.25 V
- **DC Accuracy:** ± 50 mVdc
- **AC Accuracy:**
  - Minimum: [100 – Filter attenuation (see p. 7)] % of input signal amplitude
  - Maximum: [101 % of input signal amplitude + noise offset (see below)] / Scale Factor

**AC Accuracy (1X & 2X Vectors):**

- **Note:** These specifications apply over the valid input frequency range of the Phase Reference (10-100,000 rpm).
  - Minimum: 98 % of input signal amplitude for inputs greater/equal to 0.2 Vpp.
  - 95 % of input signal amplitude for inputs less than 0.2 Vpp.
  - Maximum: 102 % of input signal amplitude + 1.2 mV

**Noise Offsets:**
Minimum noise offsets in all cases are zero. All values are based on Snapshot operating from its own battery.

<table>
<thead>
<tr>
<th>Frequency Range</th>
<th>Displacement</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 to 5,000 Hz</td>
<td>4.0 mV pk</td>
</tr>
<tr>
<td>10 to 10,000 Hz</td>
<td>5.6 mV pk</td>
</tr>
</tbody>
</table>

**Velomitor & Other Constant Current Velocity Transducers**

**Input Impedance:**

10 MΩ minimum

**Input Voltage Range:**

0 to –19.17 V

**Analysis Application OK Limits:**

-4.15 to –19.85 V

**AC Accuracy (Non-Integrated):**

Minimum: [100 – Filter Attenuation (see p. 7)] % of input signal amplitude

Maximum: [101 % of input signal amplitude + noise offset (see below)] / Scale Factor

**AC Accuracy (Integrated, for signals ≥ 10Hz):**

Minimum: [100 – 4 – Filter attenuation (see p. 7)] % of signal amplitude.

Maximum: 102 % of input signal amplitude + noise offset (see below)

**AC Accuracy (1X & 2X Vectors)**

**Note:** These specifications apply over the valid input frequency range of the Phase Reference (10-100,000 rpm).

Minimum: 98 % of input signal amplitude for inputs greater/equal to 0.2 Vpp.

95 % of input signal amplitude for inputs less than 0.2 Vpp.

Maximum: 102 % of input signal amplitude + 1.2 mV

**Noise Offsets:**

Minimum noise offsets in all cases are zero. All values are based on Snapshot operating from its own battery.

<table>
<thead>
<tr>
<th>Frequency Range</th>
<th>Non-Integrated</th>
<th>Intg mil &amp; μm pp 100 mV/in/s transducer</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 to 3,000 Hz</td>
<td>4.6 mV pk</td>
<td>0.33 mil (8.38 μm)</td>
</tr>
<tr>
<td>5 to 5,000 Hz</td>
<td>4.6 mV pk</td>
<td>0.23 mil (5.84 μm)</td>
</tr>
<tr>
<td>10 to 10,000 Hz</td>
<td>5.4 mV pk</td>
<td>0.23 mil (5.84 μm)</td>
</tr>
</tbody>
</table>

**9200, 147633 and Other Seismoprobe**

**Input Impedance:**

122.5 kΩ

**Input Voltage Range:**

-10.1 to + 10.2 V

**Analysis Application OK Limits:**

± 4.00 V

**AC Accuracy (Non-Integrated):**

Minimum: [100 – Filter attenuation (see p. 7)] % of input signal amplitude

Maximum: [101 % of input signal amplitude + noise offset (see below)] / Scale Factor

**AC Accuracy (Integrated, for signals ≥ 10Hz):**

Minimum: [100 – 4 – Filter attenuation (see p. 7)] % of signal amplitude.

Maximum: 102 % of input signal amplitude + noise offset (see below) / Scale Factor
Maximum: 102% of input signal amplitude + noise offset (see below).

AC Accuracy [1X & 2X Vectors]:

Note: These specifications apply over the valid input frequency range of the Phase Reference (10-100,000 rpm).

Minimum: 98% of input signal amplitude for inputs greater/equal to 0.2 Vpp.
95% of input signal amplitude for inputs less than 0.2 Vpp.

Maximum: 102% of input signal amplitude + 1.2 mV

Noise Offsets:

Minimum noise offsets in all cases are zero. All values are based on Snapshot operating from its own battery.

<table>
<thead>
<tr>
<th>Frequency Range</th>
<th>Non-Integrated</th>
<th>Intg mil &amp; µm pp 500 mV/in/s &amp; µm/s transducer</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 to 3,000 Hz</td>
<td>3.2 mV pk</td>
<td>0.07 mil [1.78 µm]</td>
</tr>
<tr>
<td>5 to 5,000 Hz</td>
<td>3.2 mV pk</td>
<td>0.03 mil [0.76 µm]</td>
</tr>
<tr>
<td>10 to 10,000 Hz</td>
<td>3.9 mV pk</td>
<td>0.03 mil [0.76 µm]</td>
</tr>
</tbody>
</table>

Accelerometer
Input Impedance: 122.5 kΩ

Input Voltage Range: 0 to –24.25 V.

Analysis Application OK Limits: -2.75 to –15.05 V

AC Accuracy (Non-Integrated):

Minimum: [100 – Filter attenuation (see p. 7)]% of input signal amplitude

Maximum: (101% of input signal amplitude + noise offset [see below]) / Scale Factor

AC Accuracy (Integrated, for signals ≥ 10Hz):

Minimum: 98% of input signal amplitude for inputs greater/equal to 0.2 Vpp.
95% of input signal amplitude for inputs less than 0.2 Vpp.

Maximum: 102% of input signal amplitude + noise offset (see below).

Noise Offsets:

Minimum noise offsets in all cases are zero. All values are based on Snapshot operating from its own battery.

<table>
<thead>
<tr>
<th>Frequency Range</th>
<th>Non-Integrated</th>
<th>Intg in/s &amp; mm/s pk 100 mV/g transducer</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 to 5,000 Hz</td>
<td>4.0 mV pk</td>
<td>0.05 in/s (1.16 mm/s)</td>
</tr>
<tr>
<td>10 to 10,000 Hz</td>
<td>5.6 mV pk</td>
<td>0.05 in/s (1.16 mm/s)</td>
</tr>
<tr>
<td>20 to 20,000 Hz</td>
<td>6.4 mV pk</td>
<td>0.02 in/s (0.58 mm/s)</td>
</tr>
<tr>
<td>30 to 30,000 Hz</td>
<td>6.4 mV pk</td>
<td>0.02 in/s (0.58 mm/s)</td>
</tr>
<tr>
<td>40 to 40,000 Hz</td>
<td>9.5 mV pk</td>
<td>0.02 in/s (0.58 mm/s)</td>
</tr>
</tbody>
</table>

Constant Current Acceleration Transducer
Input Impedance: 10 MΩ minimum
**Input Voltage Range:**

0 to -19.17 V

**Analysis Application OK Limits:**

-2.75 to -15.05 V

**AC Accuracy (Non-Integrated):**

Minimum: \([100 - \text{Filter attenuation (see p. 7)}]\) % of input signal amplitude

Maximum: \([101 \% \text{ of input signal amplitude} + \text{ noise offset (see below)}] / \text{Scale Factor}\)

**AC Accuracy (Integrated, for signals } ³ 10Hz):**

Minimum: \([100 - 4 - \text{Filter attenuation (see p. 7)}]\) % of signal amplitude.

Maximum: 102 % of input signal amplitude + noise offset (see below).

**AC Accuracy (1X & 2X Vectors)**

**Note:** These specifications apply over the valid input frequency range of the Phase Reference (10-100,000 rpm).

Minimum: 98 % of input signal amplitude for inputs greater/equal to 0.2 Vpp. 95 % of input signal amplitude for inputs less than 0.2 Vpp.

Maximum: 102 % of input signal amplitude + 1.2 mV

**Noise Offsets:**

Minimum noise offsets in all cases are zero. All values are based on Snapshot operating from its own battery.

<table>
<thead>
<tr>
<th>Frequency Range</th>
<th>Non-Integrated</th>
<th>Intg in/s &amp; mm/s pk 100 mV/g transducer</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 to 5,000 Hz</td>
<td>3.8 mV pk</td>
<td>0.06 in/s (1.47 mm/s)</td>
</tr>
<tr>
<td>10 to 10,000 Hz</td>
<td></td>
<td>6.9 mV pk</td>
</tr>
<tr>
<td>20 to 20,000 Hz</td>
<td></td>
<td>3.1 mV pk</td>
</tr>
<tr>
<td>30 to 30,000 Hz</td>
<td></td>
<td>4.6 mV pk</td>
</tr>
<tr>
<td>40 to 40,000 Hz</td>
<td></td>
<td>6.1 mV pk</td>
</tr>
</tbody>
</table>

**Temperature Input Impedance:**

122.5 kΩ

**Input Voltage Range:**

-10.1 to +10.2 V

**DC Accuracy:**

± 10 mV for inputs between ± 2 Vdc

**Generic Vibration ± 10 V, 0 to ~24 V Input Impedance:**

122.5 kΩ

**Input Voltage Range:**

-10.1 to +10.2 V (± 10 V)

0 to -24.25 V. (0 to -24 V)

**Analysis Application OK Limits:**

± 10V, 0 to -24V

**DC Accuracy:**

± 80 mVdc (± 10 Vdc)

± 80 mVdc (0 to -24 Vdc)

**AC Accuracy:**

Minimum: \([100 - \text{Filter attenuation (see p. 7)}]\) % of input signal amplitude

Maximum: \([101 \% \text{ of input signal amplitude} + \text{ noise offset (see below)}] / \text{Scale Factor}\)
Note: These specifications apply over the valid input frequency range of the Phase Reference (10-100,000 rpm).

Minimum: 98% of input signal amplitude for inputs greater/equal to 0.2 Vpp.
95% of input signal amplitude for inputs less than 0.2 Vpp.
Maximum: 102% of input signal amplitude + 1.2 mV.

Noise Offsets:
Minimum noise offsets in all cases are zero. All values are based on Snapshot operating from its own battery.

<table>
<thead>
<tr>
<th>Frequency Range</th>
<th>± 10 V Input Range</th>
<th>0 to –24 V Input Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 to 5,000 Hz</td>
<td>3.5 mV pk</td>
<td>4.0 mV pk</td>
</tr>
<tr>
<td>10 to 10,000 Hz</td>
<td>4.2 mV pk</td>
<td>5.6 mV pk</td>
</tr>
<tr>
<td>20 to 20,000 Hz</td>
<td>3.8 mV pk</td>
<td>4.8 mV pk</td>
</tr>
<tr>
<td>30 to 30,000 Hz</td>
<td>4.6 mV pk</td>
<td>5.6 mV pk</td>
</tr>
<tr>
<td>40 to 40,000 Hz</td>
<td>6.4 mV pk</td>
<td>8.4 mV pk</td>
</tr>
</tbody>
</table>

Input Voltage Range: -24 to +10.0 V
Minimum Input Amplitude: 2.0 Vpp
Minimum Input Pulse Width: 1 % or 50 ms, whichever is greater.

Speed Response: 10 to 100,000 rpm
Speed Accuracy: ± 1 rpm or 0.1 % whichever is greater

Threshold Voltage Accuracy:
Hysteresis Setting Accuracy:
-865 mV, +861 mV
0.348 V Max (0.25 V)
0.693 V Max (0.5 V)
1.878 V Max (1.25 V)
3.684 V Max (2.5 V)

RMS Measurements
Snapshot uses two methods to perform RMS measurements. The choice of method depends on the low pass filter used, as does the performance of the measurement.

For configurations where the low pass filter is not greater than 7.5 kHz the RMS performance meets the ac accuracy specifications stated earlier.

For configurations where the low pass filter is greater than 7.5 kHz the RMS performance is as follows:

AC Accuracy:
Signal Conditioning

Filter Specifications

High Pass Filters

**Type:**

4 Pole, Butterworth

**Attenuation at corner Frequency:**

-2.665 to –3.356 dB for Frequencies above 50 Hz

( & RMS with low pass 7.5 kHz or less)

0 to –8.9 dB for Frequencies below 50 Hz

RMS Measurements:

-1.050 to –5.520 dB for frequencies greater than 7.5 kHz

-2.665 to –3.356 dB for frequencies from 50 Hz to 7.5 kHz

0 to –8.9 dB for frequencies below 50 Hz

Passband Attenuation:

≤1.5 % of input signal amplitude max.

(Input frequency < 0.55 * Corner Frequency).

For configurations where the low pass filter is disabled, the passband frequencies (≤1.5 % attenuation) are 30 kHz for synchronous or integrated measurements and 40 kHz for other measurements.

Low Pass Filters

**Type:**

4 Pole, Butterworth

**Attenuation at corner Frequency:**

-2.665 to –3.356 dB for Frequencies above 50 Hz

0 to –8.9 dB for Frequencies below 50 Hz

RMS Measurements:

-1.050 to –5.520 dB for frequencies greater than 7.5 kHz

-2.665 to –3.356 dB for frequencies from 50 Hz to 7.5 kHz

0 to –8.9 dB for frequencies below 50 Hz

Passband Attenuation:

≤1.5 % of input signal amplitude max.

(Input frequency > 2.10 * Corner Frequency)

The midband frequency = $\sqrt{F_{HP} \times F_{LP}}$

Vector Measurements.

1X Vector Phase Accuracy:

±3° for speeds up to 50,000 rpm

1X Vector Phase Accuracy:

±5° for speeds from 50,000 to 100,000 rpm
2X Vector Phase Accuracy:

± 6° for speeds up to 50,000 rpm

2X Vector Phase Accuracy:

± 10° for speeds from 50,000 to 100,000 rpm

Minimum 1X & 2X Rejection:

30 dB

Frequency Spectrum

Snapshot provides a simple frequency spectrum display to aid with machinery condition evaluation. Cursors allow the user to determine the amplitude and frequency of any particular vibration component.

Frequency Resolution:

Spectrum Frequency Span / Number of lines

Frequency Accuracy:

± 0.01 %

Amplitude Accuracy:

± 2 % of input signal amplitude (For input signal frequency = Cursor frequency ± 5 % of frequency resolution)

Signal to noise ratio (SNR):

30 dB minimum (Signals > 10 mV pk)

Accuracy Calculation Example

Configuration:

Velomitor, Integrated mm pp, Low Pass = 5,000 Hz, High Pass = 5 Hz

Signal frequency:

10.5 Hz (630 rpm)

Error Below Nominal

[100 – 4 – Filter Attenuation] % of input signal amplitude (filter attenuation = 1.5 %)

94.5 % of input signal amplitude.

Error Above Nominal

102 % of input signal amplitude + Noise offset

102 % of input signal amplitude + 14.9 mm pp

Therefore the accuracy for this configuration is: Signal Amplitude – 5.5 % / + (2 % + 14.9 mm pp)

Ordering Information

Snapshot for Windows® CE

PDC550-AXX-BXX-CXX

A: Accessory Package:

0 0 Snapshot for Windows®CE with Cable Kit (See notes 1 and 2 for list of components)

0 1 Snapshot for Windows®CE with Accelerometer Kit (See notes 1, 2 and 4 for list of components)

0 2 Snapshot for Windows®CE with Velomitor® Kit (See notes 1, 2 and 3 for list of components)
04  Snapshot TIM Tester* with Cable Kit (See notes 1, 2 and 5 for list of components)
05  Snapshot TIM Tester* with Accelerometer Kit (See notes 1, 2, 4 and 5 for list of components)
06  Snapshot TIM Tester* with Velomitor Kit (See notes 1, 2, 3 and 5 for list of components)
20  Snapshot for Windows®CE with Velomitor and Accelerometer Kits (See notes 1 through 4 for list of components)
30  Snapshot TIM Tester* with Velomitor and Accelerometer Kits (See notes 1 through 5 for list of components)
99  Snapshot for Windows®CE only (See note 1 for list of components)

B: Approvals
00  No approvals
01  CSA/NRTL/C, IEC79-15

C: Language
01  English

* For details about Snapshot TIM Tester refer to data sheet p/n 162514-01.

Snapshot Balance Software
PDC200-AXX-BXX-CXX

A: License
01  Single user license

B: Language
01  English

C: Installation
01  User installation
02  Factory installed. (Option is valid only when ordering a Snapshot

For details about Snapshot Balance software refer to data sheet p/n 147933-01.

Notes:
1. PDC550-99 components list:
   - Snapshot for Windows®CE Assembly
   - Battery & Power Adapters
   - Manual & (3) Stylus
   - RS232 Lap-link & Ethernet Cable
2. Snapshot Cable Kit

   - Transport Case
   - (3) BNC Cable
   - (3) Proximitor® Cable
   - (2) 330500 Velomitor Cable
   - (2) 330400 Accelerometer Cable
   - (3) Banana Adapter
   - (3) Test Clip Adapter
   - (1) Stereo Plug Adapter
   - Optical tachometer

3. Snapshot Velomitor Kit: *
   - (2) 330500 Velomitor
   - (2) 330500 Velomitor Cable
   - (2) Magnetic Base
   - (1 each) Long & Short Stinger
   - (2) Quick Connection Adapter
   - (2) Stud Adapter 1/4-28

4. Snapshot Accelerometer Kit: *
   - (2) 330400 Accelerometer
   - (2) 330400 Accelerometer Cable
   - (2) Magnetic Base
   - (1 each) Long & Short Stinger
   - (2) Quick Connection Adapter

5. Snapshot TIM Tester Kit:
   - TIM Utilities Manual
   - (1) TIM Tester Cable
   - (1) TIM Tester Loopback Tester
   - (3) TIM Tester Splice
   - (3 each) Pro TIM-C,-R Connector
   - (3) Flexi-TIM, Legacy TIM Connector

* Parts are added if they are not already part of an ordered Kit.

Accessories
140867-01  Snapshot for Windows®CE Quick Start Guide
01800000  Spare battery
02200210  Spare mains adapter (for bench-top use without battery)
02200253  External battery charger
140870-01  Transport Case
147892-01  Snapshot protective bag
<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>143307-01</td>
<td>Snapshot replacement hand strap</td>
<td></td>
</tr>
<tr>
<td>143308-01</td>
<td>Snapshot shoulder strap</td>
<td></td>
</tr>
<tr>
<td>143309-01</td>
<td>Snapshot belt kit</td>
<td></td>
</tr>
</tbody>
</table>

**Interface Kits**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>141663-01</td>
<td>Accelerometer Starter Kit</td>
<td>(2) 330400 Accelerometers, (2) Magnetic Bases, Long Stinger, Short Stinger, (2) 330400 Accelerometer Interface Cable</td>
</tr>
<tr>
<td>141664-01</td>
<td>Velomitor® Starter Kit</td>
<td>(2) 330500 Velomitor, (2) Magnetic Bases, Long Stinger, Short Stinger, (2) 330500 Velomitor Interface Cable</td>
</tr>
<tr>
<td>141665-01</td>
<td>Strobe Kit, 110Vac</td>
<td>110Vac handheld strobe, BNC to stereo adapter</td>
</tr>
<tr>
<td>141687-01</td>
<td>Strobe Kit, 220Vac</td>
<td>220Vac handheld strobe, BNC to stereo adapter</td>
</tr>
<tr>
<td>141666-01</td>
<td>IR Thermometer Kit</td>
<td></td>
</tr>
</tbody>
</table>

**Data Collection Accessories**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>143310-01</td>
<td>3300, 8mm Proximitor Kit</td>
<td>3300XL 5 meter Proximitor, 3300XL probe, 3300XL extension cable</td>
</tr>
<tr>
<td>143311-01</td>
<td>3300 REBAM 1V/mil Kit</td>
<td>3300 REBAM Proximitor, 3300 REBAM probe, 3300 extension cable</td>
</tr>
<tr>
<td>147922-01</td>
<td>Snapshot to printer interface kit, for use with Snapshot Balance only.</td>
<td>Serial to parallel converter, Snapshot printer interface cable</td>
</tr>
<tr>
<td>166812-01</td>
<td>2m Laser Speed Sensor Kit</td>
<td>Laser optical speed sensor, Mounting bracket for laser sensor, 2m Snapshot to laser sensor cable</td>
</tr>
<tr>
<td>166813-01</td>
<td>5m Laser Speed Sensor Kit</td>
<td>Laser optical speed sensor, Mounting bracket for laser sensor, 5m Snapshot to laser sensor cable</td>
</tr>
<tr>
<td>02270181</td>
<td>Optical Tachometer</td>
<td></td>
</tr>
</tbody>
</table>
Specifications and Ordering Information

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145474-01
Mounting bracket for optical tachometer.

02200375
Quick Connect Stud w/ ¼-28 UNF thread to machine

145473-01
¼-28 UNF set screw to attach Quick Connect Stud to machine

02200508
Quick Connect Stud w/ M8x1 thread to machine

145472-01
M8x1 set screw to attach Quick Connect Stud to machine

02200371
Magnetic Base

02200374
Quick Connect Base (for transducer)

141259-01
Short Stinger (for transducer)

141260-01
Long Stinger (for transducer)

141686-01
BNC-to-Stereo Adapter

01609137
BNC-to-Banana Adapter

145518-01
2-Pin Mil-C Cable, for Velomitor®, Coiled.

02180060
2-Pin Mil-C Cable, for Velomitor®, Straight.

02180061
3-Pin Mil-C Cable, for 330400 accelerometer, Coiled.

145519-01
3-Pin Mil-C Cable, for 330400 accelerometer, Straight.

145520-01
BNC Straight cable.

147856-01
Proximitor Straight Cable.

162491
2m Snapshot to Laser Sensor cable, Straight.

166814
5m Snapshot to Laser Sensor cable, Straight.

Cables

02200283
RS232 10ft Laplink Cable.

02200230
CAT-5 6ft Ethernet Cable.

02180060
2-Pin Mil-C Cable, for Velomitor®, Coiled.

02180061
3-Pin Mil-C Cable, for 330400 accelerometer, Coiled.

145518-01
2-Pin Mil-C Cable, for Velomitor®, Straight.

145519-01
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147856-01
Proximitor Straight Cable.

162491
2m Snapshot to Laser Sensor cable, Straight.

166814
5m Snapshot to Laser Sensor cable, Straight.
Figure 1 Snapshot for Windows® CE physical dimensions
External power socket

RS232 communication connector

External keyboard connector

Ethernet connector

Two dynamic and proportional voltage input

Keyphasor® input channel for phase and speed

Automatic point ID
Polycarbonate membrane keypad. Keys are embossed and have metal domes for tactile feel.

Figure 3 Snapshot for Windows®CE membrane keypad details
### Serial Communications Cable Pin Assignments

<table>
<thead>
<tr>
<th>Pin #</th>
<th>Channel A</th>
<th>Channel B</th>
<th>Phase Ref</th>
<th>Point ID*</th>
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<tbody>
<tr>
<td>1</td>
<td>-Vt</td>
<td>-Vt</td>
<td>-Vt</td>
<td>COM</td>
</tr>
<tr>
<td>2</td>
<td>COM</td>
<td>COM</td>
<td>+5V</td>
<td>COM</td>
</tr>
<tr>
<td>3</td>
<td>COM</td>
<td>COM</td>
<td>COM</td>
<td>COM</td>
</tr>
<tr>
<td>4</td>
<td>ICP(X)</td>
<td>ICP(X)</td>
<td>NC</td>
<td>TIM COM</td>
</tr>
<tr>
<td>5</td>
<td>ICP(Y)</td>
<td>NC</td>
<td>NC</td>
<td>TIM SIG+</td>
</tr>
<tr>
<td>6</td>
<td>ICP(Z)</td>
<td>NC</td>
<td>NC</td>
<td>TIM SIG-</td>
</tr>
<tr>
<td>7</td>
<td>COM</td>
<td>COM</td>
<td>COM</td>
<td>+5V PWR</td>
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<tr>
<td>8</td>
<td>SIG</td>
<td>SIG</td>
<td>SIG</td>
<td>RxD IN</td>
</tr>
<tr>
<td>9</td>
<td>NC</td>
<td>NC</td>
<td>ENCODER 1</td>
<td>TxD OUT</td>
</tr>
<tr>
<td>10</td>
<td>NC</td>
<td>NC</td>
<td>ENCODER 2</td>
<td>SEL uM</td>
</tr>
<tr>
<td>11</td>
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<td>N/A</td>
<td>N/A</td>
<td>SEL TT</td>
</tr>
<tr>
<td>12</td>
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<td>N/A</td>
<td>N/A</td>
<td>TIM PWR</td>
</tr>
</tbody>
</table>

*Point ID connection is only used with the Snapshot TIM Tester

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Specifications and Ordering Information
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