Professional Mobile Sync Apps

The user-friendly Digi-Pas® Level Mobile Sync Apps can be easily installed in smartphone or tablet to fully utilize the remote wireless Bluetooth mobile connectivity to the Digi-Pas® DWL-8500XY 2-axis Ultra Precision Inclinometer, providing amazing user experience of "one-man-operation" for machine installers to perform remote 2-axis simultaneous levelling & alignment task conveniently and speedily.

Android & iOS Apps Features

SMART 2D BUBBLE®

This feature enables user to view 2-axis angle/levelling measurement simultaneously in graphical bull's eye (with auto range feature) and numeric formats in arcsec & mm/M units.

Quality and productive works can be achieved by completely eliminating the hassles of levelling one-axis-at-a-time (trial-and-error) experienced when using conventional single-axis levels.

Single-Axis & Dual-Axis Angle Meters

This feature enables user to view single-axis or dual-axis angle/levelling measurement in numerical and graphical display i.e. arcsecond & mm/M units.

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Features comparison

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>3D Surface Flatness Graph</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>SMART 2D BUBBLE®</td>
<td>✓</td>
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<td>✓</td>
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<tr>
<td>Single-Axis Angle Meter</td>
<td>✓</td>
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<tr>
<td>Dual-Axis Angle Meter</td>
<td>✓</td>
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<td>Dual-Axis Angle Graph</td>
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<tr>
<td>Vibrometer Graph</td>
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<td>✓</td>
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<tr>
<td>USB Connectivity</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Bluetooth Connectivity</td>
<td>✓</td>
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PC System Requirements

Learn PC is recommended the following Items to be installed for using the PC Sync Software:

- Microsoft framework 3.5 for 32bit Windows OS or
- Microsoft framework 4.0 for 64bit Windows OS
- Windows XP Service pack 3 / Windows Vista / Windows 7
- At least 1 GB Ram
- At least 100MB free disk space on hard drive
- Microsoft Excel 2007 and above
- USB 2.0 Port
- Bluetooth adapter (For Bluetooth Connection)

Supported Software Versions

- Android 4.0 Ice Cream Sandwich & 4.1 Jelly Bean
- iOS 8.0 & above

Note: Please check for latest version at www.digipas.com

Digi-Pas® DWL-8500XY is a 2-Axis Ultra Precision Inclinometer with built-in Vibrometer, having resolution and accuracy of 1 arcsec (5µm/M) and wide measuring range of 14400 arcsec or 70mm/M for precision leveling, tilted-plane angles measurements, 2D surface-plane profiling & precision alignment tasks, and capable of real-time wireless Bluetooth/USB remote measuring & data logging when used with PC Sync Software/ Mobile Sync App.

This instrument is exceptionally engineered to greatly simplifying the task of engineering professionals & scientists in installation, setting up, maintenance and characterization of very large-sized CNC machines, plane-surface flatness profiling, precision test/measuring instruments & 2D alignment-sensitive equipment.

Innovation & Technology Driven™

Manufactured under SGS certified ISO quality standards:
- ISO 14001:2004
- ISO 9001:2008

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2-Axis Ultra Precision Inclinometer

Instrument Overview
- 2-Axis colour graphic simultaneous display of levelling reading & surface geometry profile measurements
- Accuracy of 1 arcsec (5µm/M)
- Built-in Vibrometer for real-time vibration measurement
- Real-time digital & analogue display
- Wireless Bluetooth/USB connectivity for remote data logging & analysis
- 3-points contact base for stable surface-to-surface contact to prevent "rocking"

Instrument Features

Technical Specification - DWL-8500XY

<table>
<thead>
<tr>
<th>Specification</th>
<th>DWL-8500XY</th>
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<tbody>
<tr>
<td>Measurement Range (Single Axis Mode)</td>
<td>0.0 to 14400 arcsec (0.0000° to ± 4.0000°)</td>
</tr>
<tr>
<td>Measurement Range (Dual Axis Mode)</td>
<td>0.0 to 7200 arcsec (0.0000° to ± 2.0000°)</td>
</tr>
<tr>
<td>Resolution</td>
<td>1 arcsec (5µm/M)</td>
</tr>
<tr>
<td>Accuracy</td>
<td>± 1 arcsec; at 0 ~ 1080 arcsec; ± 5 arcsec at other angles</td>
</tr>
<tr>
<td>Repeatability</td>
<td>± 1 arcsec (5µm/M)</td>
</tr>
<tr>
<td>Measurement Speed</td>
<td>± 1 Sec</td>
</tr>
<tr>
<td>Display</td>
<td>Colour TFT LCD</td>
</tr>
<tr>
<td>Power Supply</td>
<td>4 x AAA / Li-Ion / USB Power source</td>
</tr>
<tr>
<td>Connectivity</td>
<td>Bluetooth Industrial Class 1 (≤ 30 metres) &amp; USB 2.0 Cable (≤ 5 metres)</td>
</tr>
<tr>
<td>PC SYNC Software</td>
<td>Professional Edition (included)</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>+20°C to +60°C (Calibrated for the entire temperature range)</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>+10°C to +40°C</td>
</tr>
<tr>
<td>Dimension (mm)</td>
<td>138 x 82 x 57</td>
</tr>
<tr>
<td>Nett Weight (Approximate)</td>
<td>1150 gram</td>
</tr>
</tbody>
</table>

Note: Product specification and appearance are subject to change for improvement without prior notice.

Accreditation

Digi-Pas® 2-Axis DWL-8500XY instrument accuracy is verified by accredited 3rd party independent calibration & test bodies and National Metrology Centre traceable to SI standard and NIST, IJS, UKAS & DIN under CIPM MRA.

Advantages of 2-Axis Ultra Precision Inclinometer

SPEED, PRECISION & EFFECTIVENESS

Precision levelling, angle measurement/alignment and surface flatness profiling tasks essentially involve 2-dimensional planes rather than single-axis. Thus, 2-axis simultaneous display of surface plane angles readings are required to effectively guide engineers in adjusting precision object/machine to a targeted position accurately and speedily.

Digi-Pas® pioneered world’s first 2-axis simultaneous angles display instrument (U.S. patented) embedded with vibrometer which offers superior performance. It empowers engineers in eradicating constraints associated with using traditional single-axis ‘bubble’ or digital levels that require them to conduct those time-consuming tasks ‘one axis at a time’ with tedious trial-and-error iterations.

Professional PC Sync Software

Digi-Pas® Professional PC Sync is a ‘plug & play’ user-friendly interface software (embedded with National Instrument software) specifically designed for ultra-precision application to enable remote real-time measurement, user-definable data acquisition & logging through wireless Bluetooth connectivity/USB cable with DWL-8500XY 2-Axis Ultra Precision Inclinometer.

PC Sync Software Features

3D Surface Flatness Graph
- Enable 3D surface flatness geometry measurement, profiling and characterization
- 3D visual graph and numeric data can be saved in Excel file

SMART 2D BUBBLE®
- Simultaneous graphical bull’s eye (with auto range feature) and numeric display of 2-axis angle/levelling measurement
- Clear indication of a plane surface’s elevation point simplifies 2D alignment tasks

Single-Axis & Dual-Axis Angle Graphs
- Line graph display and numerical readings for single-axis or dual-axis angle/levelling measurement
- Enables recording of machine’s levelling status changes over a period of time

VibroMeter Graph
- Numerical and graphical display of vibration magnitude and pattern/graph for effective assessment of vibration conditions
- Fast sampling rate at 10ms (milliseconds) per data capture
- Vibration data can be saved in Excel file for production yield improvement and scraps reduction analysis

Single-Axis & Dual-Axis Angle Meters
- Real-time single-axis or dual-axis angle/levelling measurement in graphical and numerical display
- Large, easy-to-read display with units include arcsecond & mm/M