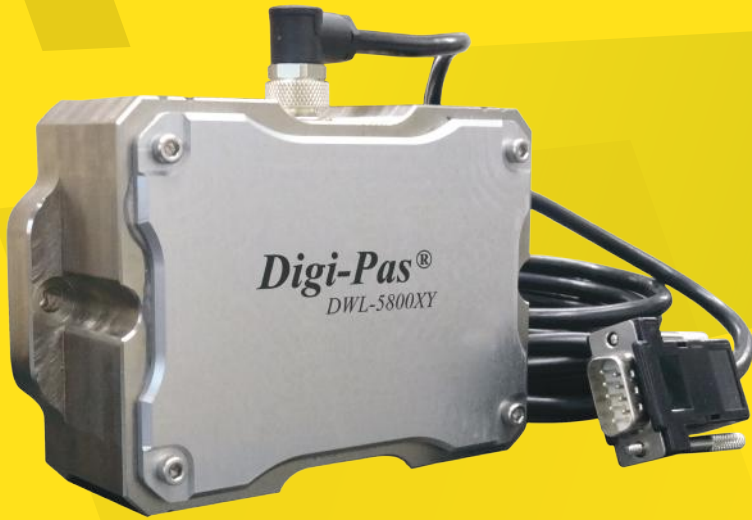


# 2-Axis Inclination Sensor Module

Model : DWL-5800XY



Inclination Sensor Modules

U.S. Pat. No: 9,459,121 B2

RS232 RS485 Bluetooth USB



Control Box



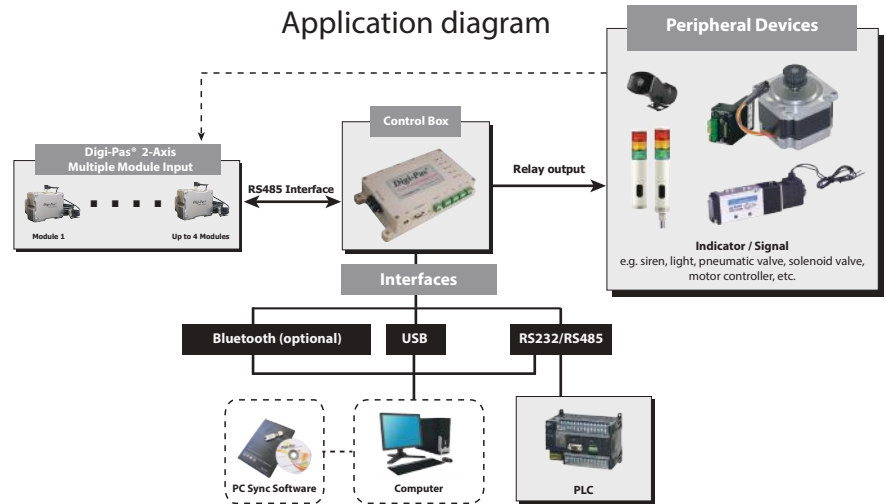
PC-Sync Software



**Accuracy**  
1 arcsec. ( $\leq 5\mu\text{m/M}$ )



## Application diagram



**Digi-Pas® DWL-5800XY** are **2-Axis Inclination Sensor Modules** that specifically designed to be integrated into machine/equipment/structure with capability of real-time simultaneous monitoring of plane levelling position, 2D tilt angles, vibration measurement and data logging function when used with the **'Plug and Play' PC Sync Software**. These intelligent modules are embedded with advanced MEMS sensor technology, developed for application engineers to ensure precision structural stability or angular position on any desired object.

These smart inclination sensor modules are tough, durable, IP65 waterproof, shock resistance, small footprint and enabled to communicate with external peripheral devices through various protocols such as **USB 2.0, RS232, RS485 & wireless Bluetooth**.

*Innovation & Technology Driven™*

Products tested by TÜV SÜD, SGS accredited body to comply with CE, FCC & RoHS, calibrated traceable to UKAS, JIS, NIST & DIN, and manufactured under SGS certified ISO quality standards:



# 2-Axis Inclination Sensor Module

## Technical Specification

Model	DWL-5800XY
Measurement Range (Single Axis Mode)	0 ~ ±14400 arcsec.
Measurement Range (Dual Axis Mode)	0 ~ ±3600 arcsec.
Resolution	1 arcsec; (≤5 μm/M)
Accuracy	± 1 arcsec. at 0 to ±1080 arcsec. ± 3 arcsec. at other angles
Repeatability	1 arcsec; (≤5 μm/M)
Cross Axis Error	Negligible (± 0.0001°)
Vibrometer (Relative g)	2.0
Response time	500ms (milliseconds)
Power Supply	9V DC
IO communication protocols	RS232/ RS485: 8 Data bits, no parity, 1 stop bits, 115200bps USB 2.0 or Wireless Bluetooth connectivity (optional)
Sensor Module Waterproof Rating	IP65
Sensor Module Base Material	Steel / Aluminium
Sensor Module Dimension (mm)	120 x 80 x 43
Sensor Module Weight (approx.)	1200g
Operating Temperature	10°C to +40°C
Storage Temperature	-30°C to +80°C

Note : Product Specification and appearance are subjected to change for product improvement without prior notice.

## ACCREDITATION

DWL-5800XY Tilt Sensor Modules accuracy is verified by accredited 3rd party independent calibration & test bodies and National Metrology Centre traceable to SI standard and NIST, JIS, UKAS & DIN under CIPM MRA.

## Advantages of Digi-Pas® 2-Axis Inclination Sensor Module

- **PLANAR & WIDE ANGLE RANGE MEASUREMENT**  
Precision levelling and tilt angles measurement essentially involve simultaneous 2-dimensional planes rather than single-axis. Digi-Pas® 2-axis intelligent tilt sensor modules having high precision and wide measurement range are capable of providing real-time levelling & vibration readings that empower application engineers to continuously monitor machine/equipment/structure angular positional status precisely and speedily.

These small footprint MEMS driven 2-axis tilt sensor modules effectively eliminate the limitations of using multiple single-axis sensors or bulky pendulum based sensors to achieve 2D levelling and planar angular measurements.

- **PROGRAMMABLE & USER-DEFINABLE SYSTEM**  
Digi-Pas® 2-axis tilt sensor module system is designed to be integrated into precision machine/equipment/structure enabling application engineers to instantly access angular positional status without the need for tedious and time-consuming programming.  
The angular measurement system enables user-defined settings to activate any external connected peripheral devices at ease.

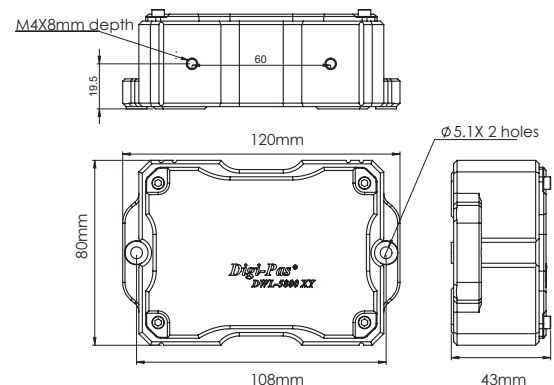
## Control Box Overview

- Programmable Relay Contacts Outputs:  
Enables user-defined tilt angle/vibration range limits settings to trigger peripheral devices (e.g. siren/alarm, valve, motor, strobe lights, etc.)
- Multiple I/O communication protocols  
i.e. USB, RS232, RS485 & Wireless Bluetooth connectivity (optional)



**Control Box**

## Sensor Module Dimension



Authorised Distributor:

DIGIPAS TECHNOLOGIES INC.  
**www.digipas.com**

200 Spectrum Center Drive, Suite 300,  
Irvine, CA 92618 U.S.A



Scan QR code or visit  
**www.digipas.com**

JCL-2-05801-99-01

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