



## Overview

The PDTS-LCH-45 is a dual axis inclinometer sensor with a high-quality, low-cost display unit for displaying angle in both the X and Y axis (pitch and roll). With connection via a standard RS232 communication protocol, the high contrast LED display is designed to be panel mounted and is supplied with a sealing gasket and hardware.

As well as displaying angle, it also has built-in tilt switch functionality. The two on-board relays can be configured to operate when a certain angle is exceeded in the X and/or Y axis, in either the positive and/or negative direction. When connected, the USB interface allows logging of the data and will supply power to the display and sensor. Manufactured and calibrated in our UK factory to ensure high-quality.



## Features

### High Accuracy

- Dual axis measurement range:  $\pm 45^\circ$
- Solid state MEMS sensor
- Programmable filter between 0.125 and 32Hz

### Highly Configurable

- Adjustable threshold, hysteresis and delay
- Display resolution adjustable to 0, 1, 2 or 3 d.p.
- Easy programming and storage of zero offset position
- Cable lengths of 2m and 10m available

### Standardised Connectivity

- RS232 full duplex communication
- USB interface with Windows-based application for monitoring angle and configuration

### User Friendly

- 4 Digit simultaneous dual axis LED Display
- High contrast with wide viewing angle and adjustable brightness
- Programmable alarm function with 2 individually programmable relay outputs

### Robust Design

- Operating temperature  $-40$  to  $+85^\circ\text{C}$
- Sensor contains aluminium housing
- Compact design of both sensor and display unit
- Designed for panel mounting - IP65 sealed from front when mounted with gasket and clamps supplied.
- ROHS and CE Compliant

## Applications

Example applications for this product's use include:

- Platform levelling and monitoring
- Pipeline construction and maintenance
- Geotechnical and ground displacement applications
- Agricultural and industrial vehicle tilt monitoring
- Telescopic and scissor lift platform monitoring
- Platform scales and weigh bridge levelling
- Fuel and hydraulic system installation

The system can be readily customised to suit most applications for both hardware and software requirements. Please contact us to discuss your OEM needs.





**Specifications**

General		
<b>Voltage Supply</b>	12-30Vdc	Supply voltage is protected internally against reverse polarity, and supply transients.
<b>Measuring range</b>	±45	Direction of measurement can be reversed and zero position can be reset anywhere in range. Settings are stored in non volatile memory so are remembered after power down.
<b>Resolution (@1Hz BW)</b>	0.05	Resolution is the smallest measurable change in output.
<b>Zero Bias Error</b>	±0.1°	This is the maximum error when the device is mounted on a level surface when the device is at room temperature (20°C)
<b>Accuracy (@20°C)</b>	±0.3	This is the maximum error between the measured and displayed value at any point in the measurement range when the device is at room temperature (20°C)
<b>Temperature Error</b>	0.01	This is the maximum change in output per °C change of temperature.
<b>Accuracy (-20 to 70°C)</b>	±1	This is the maximum error between the measured and displayed value at any point in the measurement range at any temperature over the specified temperature range.
<b>Sensor Interface</b>	RS232 Full Duplex 38400 bps (adjustable)	Bit rate is adjustable between 115.2k, 57.6k, 38.4k, 19.2k and 9.6k, 4.8k and 2.4k via the digital interface
<b>Supply to Sensor</b>	14Vdc 50mA (max)	
Relay Outputs (Tilt Switch Function)		
<b>Number of Relays</b>	2	
<b>Switching Voltage</b>	220Vdc (max) 250Vac (max)	
<b>Switching Current</b>	2A Max	Large switching currents will reduce the relay contact life
<b>Switching Power</b>	60W (max)	

More information and detailed specifications on both the LCH-45 and PDTS can be found via the links on the right. Visit our website or contact us to make an order.

<b>PDTS</b>	<a href="#">Product Page</a>	<a href="#">Datasheet</a>
<b>LCH-45</b>	<a href="#">Product Page</a>	<a href="#">Datasheet</a>

**Connection & Mounting**

