

# DrX Application Note

<b>DrTilt</b>	Tilt and acute angle detector
<b>Subject</b>	Effective angular range and installation issues
<b>Note Ref.</b>	<b>AN010.9.1</b>

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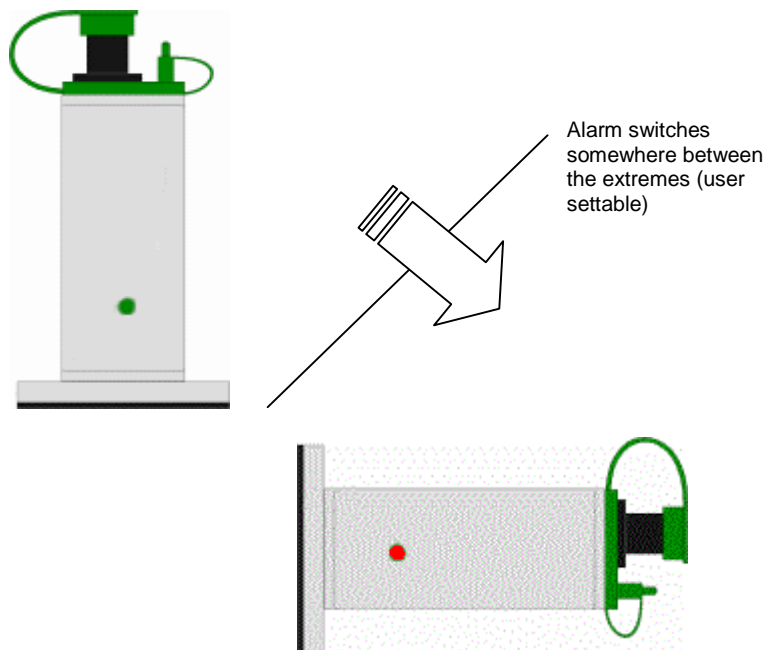
## Angular Range of DrTilt

Indication, monitoring and detecting excessive angle is useful to both the site operator and the machine operative. This information is useful for health and safety audits, structural soundness (effect of high winds), and a positive independent warning of catastrophic failure.

However the user needs to be aware of the effect range of DrTilt when they are applying the device to a structure.

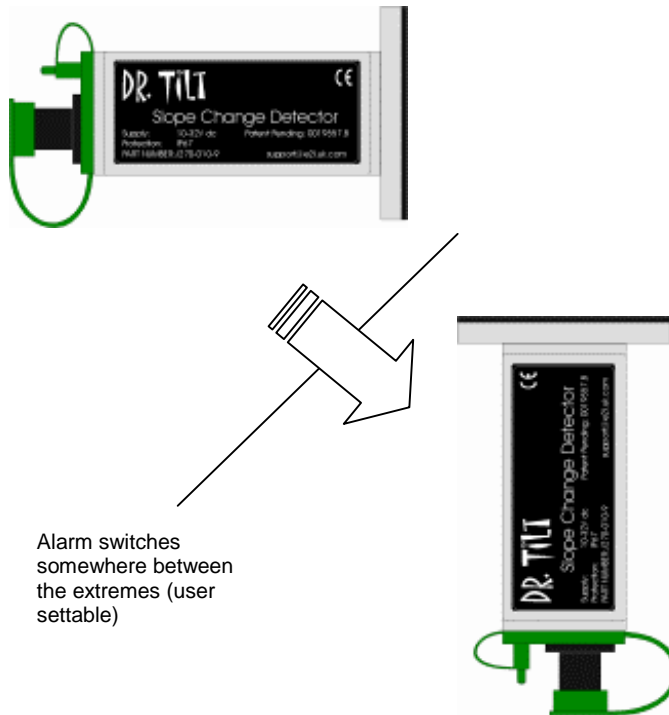
Firstly the effective measuring range of a DrTilt angle detector is 0 – 90°. By careful installation this range can fulfil most over-balance measuring tasks but due regard must be given to the plane of operation.

In the simplest case the effective range can be illustrated below:



The internal tilt sensor is a silicon cantilever which outputs an analogue signal in proportion to its angle of inclination to the vertical. Obviously once the unit passes its horizontal axis the angle to vertical starts diminishing again and using the module over this range would give false reading as it approach 180° to the vertical.

Given this 0-90° limitation the modules can be used in other configurations to fulfil angle alarm tasks. For example if the DrTilt is installed as below it effectively gains a 0 to -90° range.



Finally the alarm function can be changed from normally-open (green) to normally-closed (red) by inverting the units 180° about their major axis (N.B. as they appear in the above diagrams but the face with the LED is now the face with the label on it)