The GUARDIAL DTS
Digital Tilt Sensor

Digital Tilt Sensor is sophisticated electronic device works by detecting the vehicle or motorbike inclination. The principle of operation is dual axis (X-axis and along Y-axis) maintenance-free earth's gravity accelerometer. Any change of the car inclination causes change of acceleration detected by the sensor and combined with microcontroller allows to use it in either car or motorbike security systems.
The great advantage of the GUARDIAL tilt sensor is high sensivity, noise and temperature immunity, randomly selected installation direction preserving very good performance.

No adjustable parts and self-calibration facility for any car inclination make the instalation very easy and reliable. The sensing of the car inclination begins either 60s after switching the power on or the ignition was switched off (if ignition input was used). The tilt sensor automatically resets its inclination angle during that time.

Mounting recomendations:
For best result mount the tilt sensor in the center of the vehicle at an angle no greater than 40 deg to the level. If the tilt sensors works together with alarm then do not connect the white wire (ignition sensing input) or if the tilt cooperates with monitoring system only connect the white wire to +12V when ignition is on.

Technical dates:

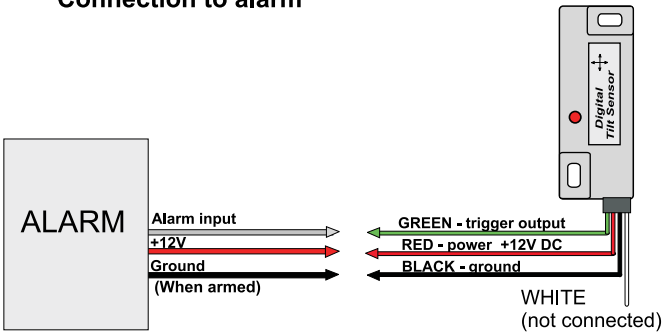
Operation voltage	9V to 16V DC
Current consumption	< 4,5mA
Sensitivity	< 1,5 deg
Temperature range	-35 - +85 C
Response time	< 1,3s
Time to sensing (after switching on)	60s
Trigger output time	1s
Dead time after trigger	2s
Alarm output load capacity	Max. 100mA
Dimensions	55x21x7 mm

Wiring harness description:

RED	Constant +12V DC
BLACK	Ground (when armed)
GREEN	Alarm trigger output
WHITE	+12V DC (when ignition ON)

WIRING DIAGRAM

Connection to alarm



Connection to monitoring (GSM,GPS)

