AETILT245
Tilt Sensor and Switch

RoHS Compliant

PRODUCT DESCRIPTION

The AETILT245 Tilt Sensor and Switch is a customer configurable angle sensor and switch, which will generate an alarm signal when a user defined threshold angle, referenced to level, is exceeded in either the X-axis or Y-axis (pitch or roll). This threshold angle can be set via RS232. The alarm signal can drive a wide variety of relays.

A accelerometer with resolution better then 0.1 arc-degrees is used to determine the angle in the X-axis and Y-axis. Using the MEMS accelerometer and eliminating the viscously damped mechanism found in most competitive devices, provides a number of advantages. The AETILT245 has no mechanical resonant frequency because it has no moving parts. Higher frequency vibrations generated by running engines or impact events are attenuated by the MEMS accelerometer and do not affect the operation of the AETILT245. The robust sensor is rated to withstand greater then a 1,000 g mechanical shock when operating.

The AETILT245 has a unique and proprietary auto-zero function that eases field installation. Simply mount the AETILT245 to your level vehicle or platform and press the recessed auto-zero button to tell the unit to use its current position as the "zero" reference point (can also be done via the RS232 connection). No more adjusting leveling nuts!

Features and Benefits

- **Fully programmable**
- **dual axis**
- **Auto-zero function for easy installation**
- **8 - 30VDC operation**
- **Over voltage and reverse polarity protection**
- **Short circuit protection**
- **Selectable time constant (delay)**

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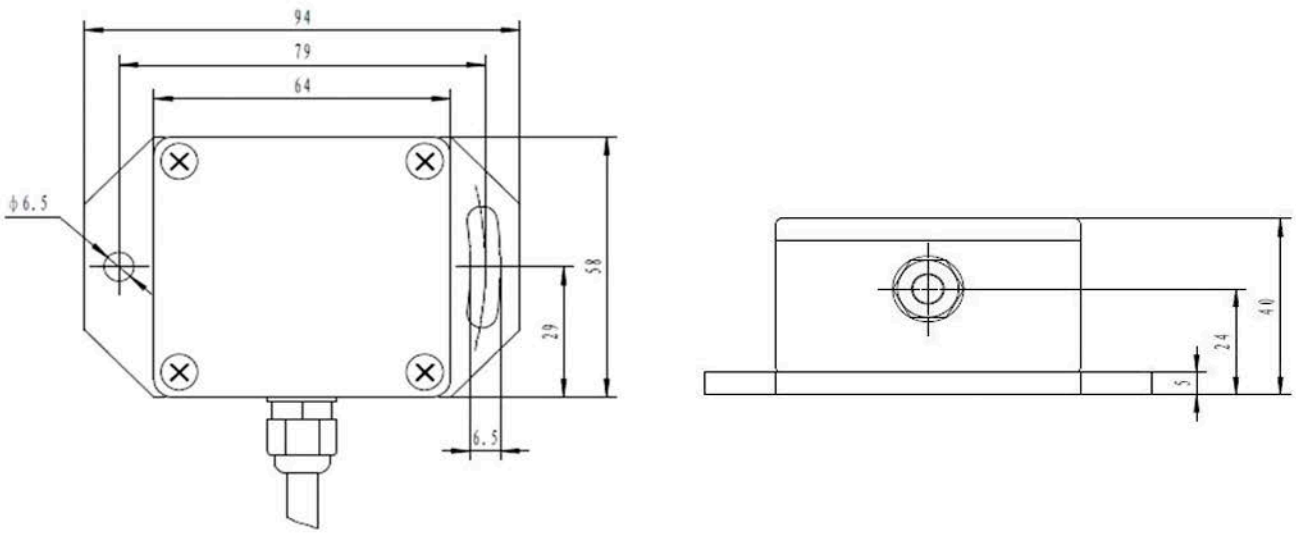
SPECIFICATIONS

Operation			Units
Accuracy		± 0.4	arc-degrs
Electrical	**Min**	**Max**	**Units**
Supply voltage (V_S)	9	30	volts
Static operating current		35	mA
Output current (when in or over setpoint alarm)		500	mA
Programmable Features	**Min**	**Max**	**Units**
X-axis threshold angle (0.1 arc-degree increments)	0.1	45	arc-dgrs
Y-axis threshold angle (0.1 arc-degree increments)	0.1	45	arc-dgrs
Time constant (0.4 second increments)	0.4	40	seconds
X and Y-axis have the same threshold and only 1 output			
Environmental	**Min**	**Max**	**Units**
Operating temperature	-40	85	C
Storage temperature	-40	85	C
Relative humidity		100	%
Mechanical shock survivablity (operational)	1000		g
Physical		**Nominal**	**Units**
Length		64	mm
Width		58	mm
Height		35	mm

CONNECTIONS

Black = Ground
Red = Supply (8...30VDC)
Yellow = Alarm
Blue = RS232 transmit (Tx)
1,5m cable partially stripped



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