

TILT SWITCH with GYROSCOPE - AUTOMOTIVE

FEATURES

- Single or Dual Axis
- Refresh Rates - 1 / 10 / 20 Hz
- Gyro compensated for dynamic applications
- Fast Response Time
- Stability over Time and Temperature range
- Environmentally Robust
- Automotive Qualified
- Compact & Low Power

APPLICATIONS

- Dumper Inclination Measurement
- Heavy Equipment
- Platform Stabilization
- Platform Leveling
- Man-Lift Safety
- Safe Load Indicators, Crane Boom Angle Indicators

VEGA TSWG AG



DESCRIPTION

The VEGA TSWG AG is a dual-axis, compact and robust automotive grade tilt switch with gyroscope which is insensitive to vibration and can sustain harsh environments as factories, automotive or construction sites. TSWG AG focuses primarily on automotive OEM applications.

TSWG AG is a solid state accelerometer based gravity sensing and switching device. It also has a tri-axial gyroscope for angle measurement in vibrating or dynamic conditions. TSWG AG has a high speed 32-bit processor architecture that runs advanced statistical filtering algorithm for estimating roll (X) and pitch (Y) angles in dynamic conditions. It has an integrated relay for control output, which switches when the user configured threshold angles are exceeded. The device performs continuous built-in tests and indicates status using an external health lamp. TSWG AG has a fast update rate of up to 20 Hz. The TSWG AG is factory calibrated over the entire temperature range.

VEGA TSWG AG is qualified as per automotive standards and has isolated interfaces to operate in extreme automotive conditions. TSWG AG can be used in both static as well as dynamic applications such as heavy equipment, dumper trucks, cranes, man-lifts, scissor lifts.

TECHNICAL SPECIFICATIONS

Parameter Name	Parameter Value
	VEGA
	TSWG AG
Performance	
Measurement Range	±60° (pitch) ¹ ±180° (roll)
Resolution	0.01°
Accuracy ²	±0.5° (1σ) (static) ±1° (1σ) (dynamic)
Update Rate ³	1 Hz, 10 Hz, 20Hz
Roll Angle Limit ³	±40° (default)
Pitch Angle Limit ³	±7° (default)
Electrical	
Power Supply	+9 to +32 VDC
Power Consumption	180 mA @ 12V
Interfaces	
Serial	RS232
Protocols	ASCII, MODBUS RTU
Baud Rate	9600, 19200, 38400, 57600, 115200
Relay Output	1
Indicator	Device Health Indication
Environmental	
Shock Survival ⁴	20 g
Environmental Sealing	IP67
Operating Temperature	-40°C to +85°C
Mechanical	
Size	117 mm (L) X 64 mm (W) x 39 mm (H)
Weight	< 500 gms
Casing Material	Aluminum

1 - Full accuracy range

2 - Calibrated @ 25° C, Temperature Characteristics: ± 0.01° / °C

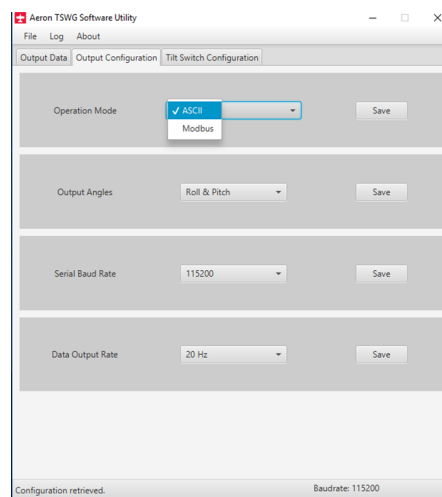
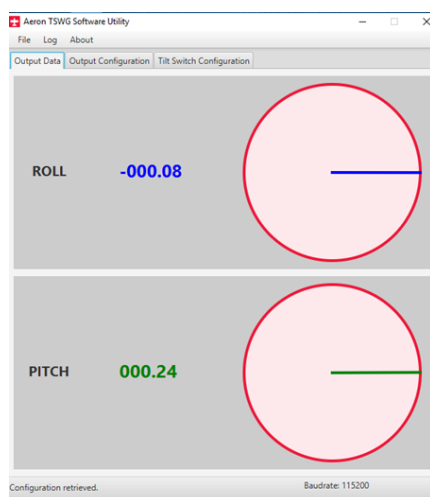
3 - Configurable

4 - Acceleration due to gravity

DESKTOP SOFTWARE SUITE

TSWG AG comes with a desktop software suite, for configuration, data display and data logging.

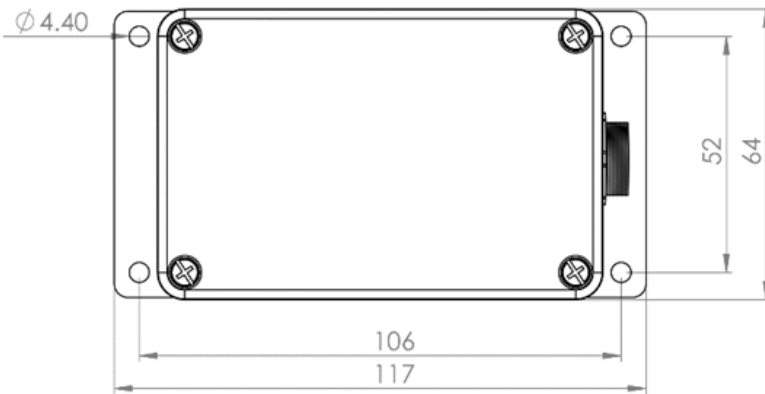
Note: These images of the software suite are for reference.



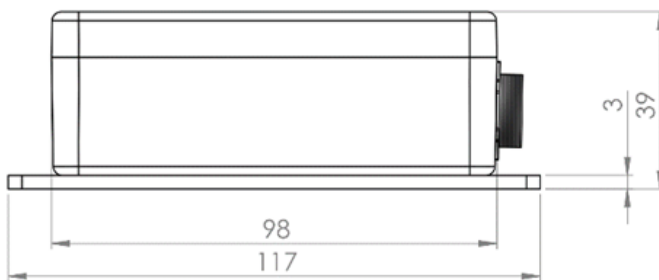
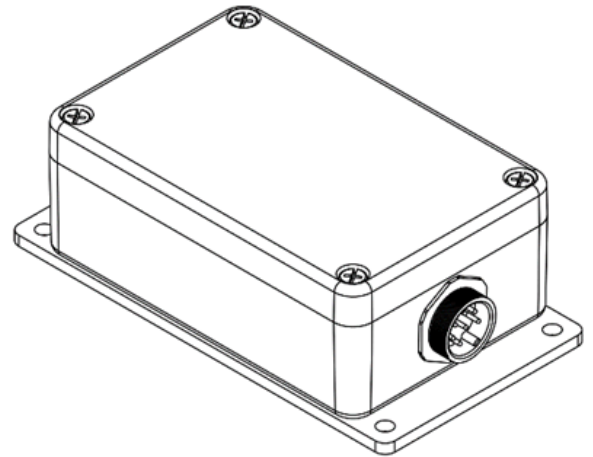
MECHANICAL DIMENSIONS

All dimensions in mm

Top View



Isometric View



Side View

ORDERING INFORMATION

VEGA - TSWG - AG (Product Code: 14010)