

TILT SWITCH with GYROSCOPE

FEATURES

- Single or Dual Axis
- Configurable Data Rates up to 20 Hz
- Gyro compensated for dynamic applications
- Fast Response Time
- Stability over Time and Temperature range
- Environmentally Robust
- Compact & Low Power

APPLICATIONS

- Angle and Tilt Sensing
- Solar Tracking
- Robotics
- Dumper Inclination Measurement
- Platform Stabilization
- Platform Leveling
- ATM machines , Man-Lift Safety
- Safe Load Indicators, Crane Boom Angle Indicators

VEGA TSWG



DESCRIPTION

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

TSWG 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 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. TSWG has integrated relays for switching output, which can be made to operate when the user configured threshold angles are exceeded. TSWG has a fast update rate of up to 20 Hz. The TSWG is factory calibrated over the entire temperature range.

VEGA TSWG (Product Code: 14004) is a tilt switch (TSW) with a Gyroscope which facilitates the device to support both static as well as dynamic applications such as heavy equipment, dumper trucks, cranes, scissor lifts and for systems with severe vibrating environments.

TECHNICAL SPECIFICATIONS

Parameter Name	Parameter Value
	VEGA
	TSWG
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, 20 Hz
Roll angle limit	Configurable
Pitch angle limit	Configurable
Electrical	
Power Supply	+9 to +28 VDC
Power Consumption	180 mA @ 12V
Interfaces	
Serial	RS232
Protocols	ASCII, MODBUS RTU
Baud Rate	9600, 19200, 38400, 57600, 115200
Relay Outputs	2
Environmental	
Shock Survival ⁴	20 g
Environmental Sealing	IP65
Operating Temperature	-40°C to +85°C
Mechanical	
Size	98 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: ± 0.05° / °C

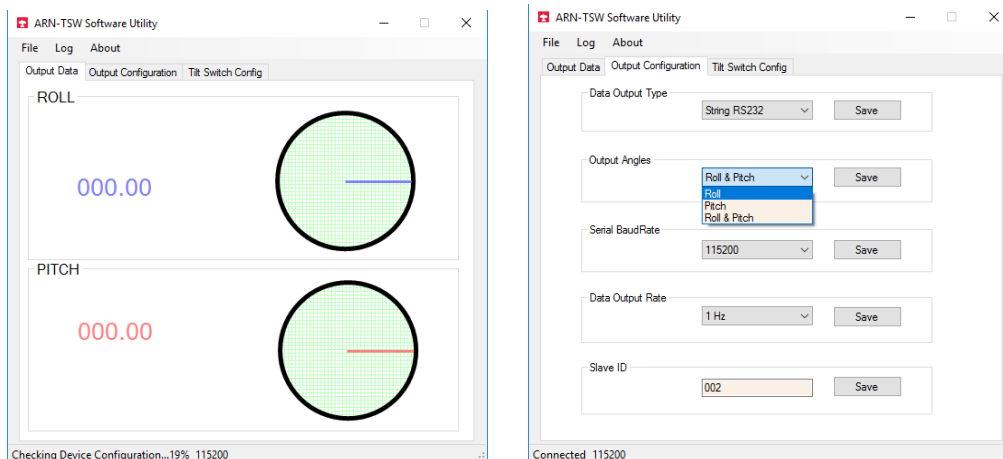
3 - Configurable

4 - 'g' is acceleration due to gravity

DESKTOP APPLICATION

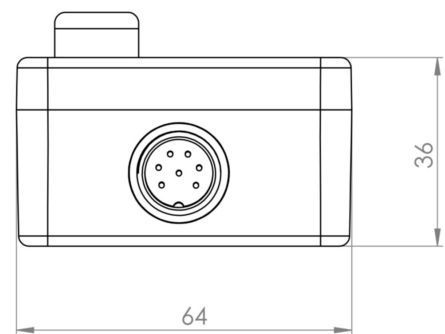
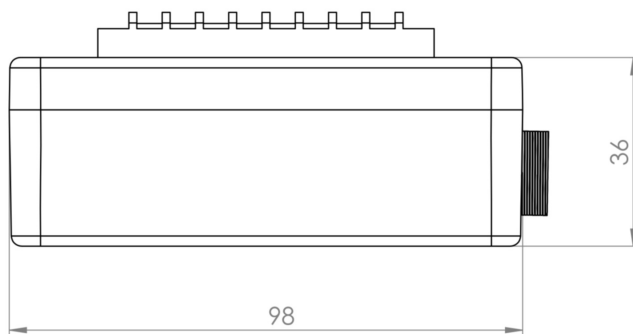
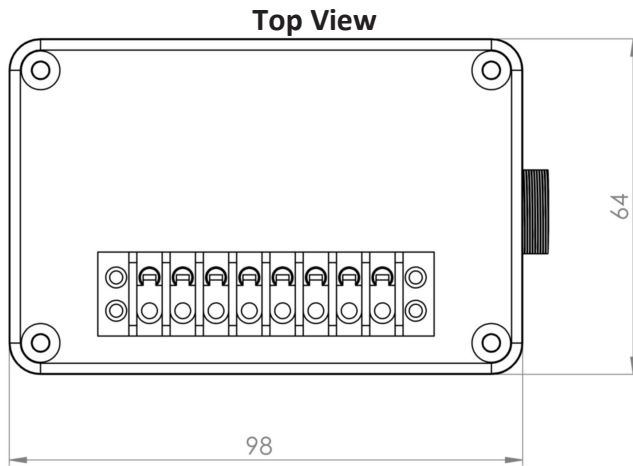
TSWG comes with a desktop software suite, for configuration, data display and data logging.

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



MECHANICAL DIMENSIONS

All dimensions in mm



ORDERING INFORMATION

VEGA - TSWG (Product Code: 14004)