

TILT SWITCH with GYROSCOPE

FEATURES

- Single or Dual Axis
- Configurable Data Rates up to 50 Hz
- Resolution of 0.01°
- Fast Response Time
- Stability over Time and Temperature range
- Compact
- Environmentally Robust
- Low Power

APPLICATIONS

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

VEGA TSWG



DESCRIPTION

The VEGA family comprises of dual-axis, compact and robust industrial grade (performance) tilt sensors and tilt switches that are insensitive to vibration and can sustain harsh environments as factories, automotive or construction sites. Products in the VEGA family focus primarily on industrial and automotive domain applications.

The devices in the family employ MEMS accelerometers; advanced statistical filtering algorithm and digital signal processing that enhances the system performance to deliver precise angle data about both the axes (roll and pitch).

Due to the fast response time, good resolution, accuracy and low dependency on temperature changes the devices are an ideal choice for OEM applications. The output is available in flexible selectable data rate. The devices are factory calibrated over the entire temperature range. The devices are suitable for applications in the fields of solar tracking, boom angle of cranes, robotics, marine, construction, and automotive.

VEGA TSWG 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, 50Hz
Roll angle limit ³	±2°(default)
Pitch angle limit ³	±5°(default)
Electrical	
Power Supply	+9 to +28 VDC
Current consumption	< 200 mA @ 12V
Interfaces	
Serial	RS232, RS485
Protocols	MODBUS RTU
Baud Rate	9600, 19200, 38400, 57600, 115200
Relay Output	2
Environmental	
Shock Survival	20 g [#]
Environmental Sealing	IP65
Operating Temperature	-30°C to +85°C
Mechanical	
Size	98 mm (L) X 64 mm (W) x 36 mm (H)
Weight	< 500 gms
Casing Material	Aluminum

1 - Full accuracy range

2 - Calibrated @ 25° C, Temperature Characteristics: ± 0.05° / °C

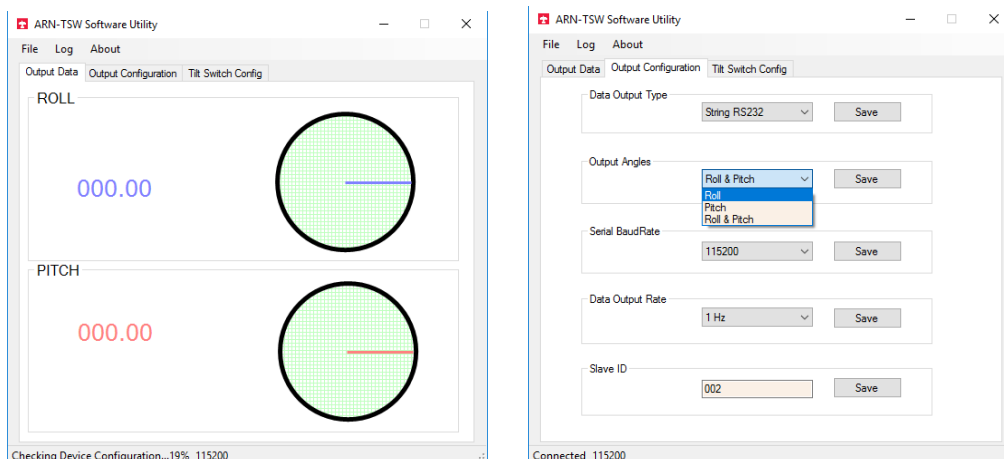
3 - Configurable

- Acceleration due to gravity

DESKTOP APPLICATION

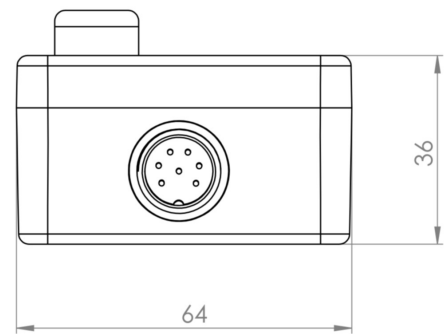
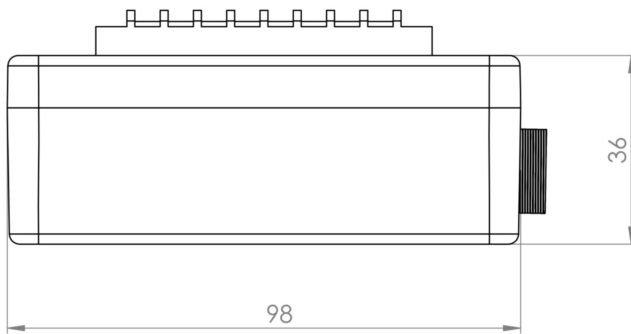
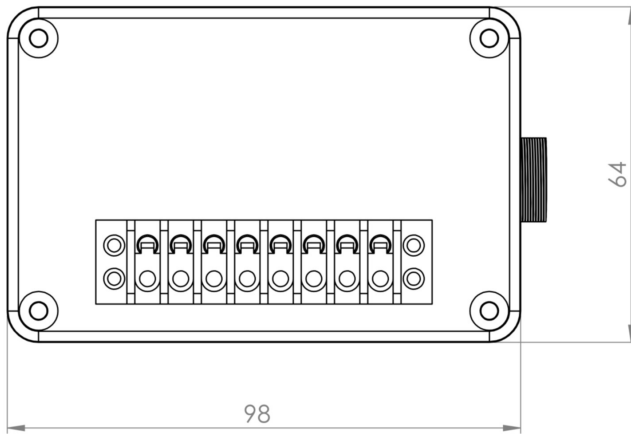
A user friendly Desktop Application is also available for the VEGA TSWG, so as to ease data observation and data retrieval. Below are the representative images of the application.

Note: These images are for reference. Updates take place from time to time; hence there is a possibility of modification in the application. Various tabs are provided that allow angle configuration, output configuration and display the output.



MECHANICAL DIMENSIONS

All dimensions in mm



ORDERING INFORMATION

Ordering Part No.: VEGA - TSWG