

EWS

SWITCH-VWT

Overview

The Switch-VWT (Vibrating Wire Telemetry) is a compact, low power, multi comms data transmitter and VWP convertor in one. It reads vibrating wire and temperature sensors and transmits frequency and temperature measurements wirelessly over either Iridium or LTE to the EWS web portal for storage, processing and display. The same web portal is used to export data into client databases via FTP, SFTP, XML, CSV or email.

The Switch-VWT can read 4 VWP and 4 temperature sensors, and can power and control up to 8 VWP sensors when coupled with the VW expansion unit. The datalogger component communicates with the VWP convertor using the SDI-12 protocol. There are multiple enclosure types available including an IP68 potted panel mount plug version, for use under gatic covers and in areas prone to flooding.

For ease of installation the Switch-VWT is pre-programmed for simple plug and play onsite. The VWP sensors are connected to the Switch-VWT via a simple pluggable screw terminal block. The user then connects via Bluetooth to the unit to take a manual reading to confirm the installation.

The Australian manufactured Switch-VWT is ideal for new and retro-fit instrumentation projects where unattended collection of readings from VWP sensors is required.

Features

- Interchangeable comms options; Send data via Iridium or LTE
- Low power draw with internal battery backup
- 12-24v external power or direct solar panel input
- Separate terminal block for multiple additional sensor inputs (Modbus, counter SDI-12, 4-20mA)
- Bluetooth embedded for local app connection and programming
- Remotely change settings with two-way communications including via iridium
- Small compact form factor — approx. 150x60x60mm
- Lightweight — 250g
 - IP66/67/68 potted options available

- LED's for external verification/diagnostics
- Reads up to 4 x VWP sensors with thermistors (4 x sensors per Switch-VWT, expandable to 8)
- Auto sweep frequency scanning configuration (450-6000Hz)
- Auto configured excitation voltage (5v/12v)
- Automatic data upload directly to the dedicated EWS web portal

Benefits

- Works with most VWP sensors
- Locally manufactured in Australia
- Extremely compact and rugged compared to other options
- Locally supported
- Plug and play setup onsite
- Ideal for short or long-term, unattended deployments
- Easy to relocate
- Quick and easy to install
- Perfect for new and retrofit instrumentation projects
- Switch and software are supported worldwide and is tested and proven in the Pilbara region



SPECIFICATIONS

Specifications subject to change without notice

COMMUNICATIONS INTERFACE	
Telemetry	
Number Available	Single channel either Iridium SBD or LTE Cat NB1
MODBUS	
Number Available	Single powered bus with up to 10 addressable devices
4-20mA Analogue	
Number Available	Up to 1 (shared with pulse on same port)
Range	0mA to 25mA
Sensitivity	7 μ A
Accuracy	0.50%
Pulse Input	
Number Available	Up to 1 (shared with 4/20mA on same port)
Pulse Width	5ms to 1 sec
Polarity	Active low
CONVERTOR INTERFACE	
Measurement Interval	1 second to 24 hours
Sensor Type	Vibrating wire and thermistor (for temperature)
Channels	4 x VWP and 4 x temperature, option of additional 4 VWP's
Accuracy (VW)	\pm 0.1% of full scale
Accuracy (temperature)	\pm 0.1 $^{\circ}$ C
Excitation voltage for VW sensor	Automatically set 5V or 12V
Sweeping frequency range	Automatically configured 450-6000 Hz
Temperature sensor	Thermistor (3K Ω resistance)
Connections	Phoenix Contact COMBICON MSTB, 10 Way Pluggable Terminal Block
COMMUNICATIONS	
4G / Iridium Satellite	LTE, Iridium Sat freq
Internal antenna (external option available)	MINI 3G/4G/Iridium PCB
OTHER FEATURES	
Processor	32 bit Arm Cortex M4 processor
Clock	Internal real-time clock w/battery backup
Reed Switch	Swipe to activate
Connectivity	USB/Blue Tooth
ELECTRICAL	
Input Voltage	+12.5V to +24V
Battery	Rechargeable +7.4V, 1.8A/hr or non-rechargeable +9.2V, 1.4A/hr *Extender pack available
Current Consumption	0.4mA standby type (all sensors unpowered)
Iridium Transmission	0.7A @ +12 Volts
Power Connection	M8 connector
SDI-12 Port	3 position terminal strip
Modbus	2 position terminal strip
Red Warning LED	Indicates operation error
Green Heartbeat LED	Indicates unit operating properly
Blue Interface LED	Indicates interface communication
MECHANICAL	
Dimensions	L 150mm x W 60mm x D 60mm
Weight	250 grams
ENVIRONMENTAL	
Temperature	-20 $^{\circ}$ C to +60 $^{\circ}$ C functionality
Humidity	0-95% Non-condensing