



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.

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
- 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 |