

# EWS Switch

Environmental IoT Device.



Environment • Water • Geotechnical • Data



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## Overview.

The **EWS Switch** presents a powerful yet compact multi-communication enabled IoT device designed specifically for remote environmental monitoring. The name Switch is derived from the ability to interchange between Satellite and 4G LTE communication types allowing important data to be logged and reliably transmitted from anywhere.

The versatile device allows connection to all standard sensor types offering the ability to use across a wide variety of monitoring applications. The ease of use means that field installations can be completed in a fraction of the time of other systems offering significant cost savings and minimising risk by reducing time in the field.



## Features.

- Multi-Communications options; Send data via Satellite (Iridium) or 4G LTE/NBLoT (MQTT)
- Reads SDI12, Modbus485, 4-20mA, Pulse sensor protocols.
- Relay out.
- Internal rechargeable battery pack or long-life non-rechargeable options.
- Input for external battery pack or direct to solar (Internal solar regulator).
- Ultra-Low power draw with internal battery backup.
- Configure using Bluetooth mobile app (available on Apple and Android).
- Remotely change settings with two-way communications including via Iridium.
- Compact form factor 66mm x 43mm x 126mm.
- Rugged and robust for harsh environments.
- Out-of-Cycle alarm transmission capable.
- Encoding scheme for compression of data packet size.
- Automatic data upload directly to Orion Cloud.
- Internal storage of up to 256,000 events.



## Benefits.

- Connects to all standard environmental and geotechnical sensors.
- Extremely versatile for a range of remote monitoring applications.
- Compact and discreet, reducing installation time and footprint.
- Designed and Manufactured in Australia.
- Rugged and robust - deigned for harsh remote environments.
- Plug and play setup on-site.
- Very straightforward and scalable for fast deployments and large monitoring roll outs.
- Programmable and powerful for more complex monitoring applications.
- Perfect for new and retrofit instrumentation projects.



# Specifications.

## Physical property

<b>Dimensions ( W x H x D )</b>	Rechargeable - Approx 66 x 126 x 43 mm	
	Non - rechargeable - Approx 66 x 126 x 60 mm	
	Cable length from housing - Approx 400 mm	
<b>Body weight</b>	without battery	Approx 264 g (For 18650)
		Approx 274 g (For D cell)
<b>Waterproof level</b>	IP67 rating	

## Operating environment

<b>Temperature (1, 2)</b>	-20 ... 65 °C	Storage (Without battery) -40 ... 65 °C
<b>Humidity</b>	5 ... 60% RH	

## Power source

<b>Internal power (3)</b>	2x Rechargeable 18650 battery / Suggested model: ICR18650-26JM
	1x Non-rechargeable (D cell) battery / Suggested model: ER34615M (LiSOCL2)
<b>External power</b>	DC 12 ... 24 V / 1 A
	Battery or Solar power with M8 connector

## Output Option

<b>Function / interface</b>	RS485 Modbus RTU x1	Baud rate 300 - 230400 / Parity (N, E, O)	
		12 V / 0.26 A supply with adjustable ON period	
	4-20 mA Current loop x2*	+/- 0.5% Full Scale	
	Pulse counter x2*	Dry contact	
		Frequency	1 ... 500 Hz
	SDI-12 x1	ASCII	
Relay contact x1*	12V / 0.26 A		

## Connectivity

<b>USB</b>	1x Micro USB
<b>Wireless</b>	Bluetooth 5

## System

<b>Clock</b>	RTC	Accuracy 70 ppm (20 ppm at 25 °C)
	Network time Sync support	
<b>Display</b>	LEDs indicating status	
<b>Configuration</b>	Remotely change setting with two-way communications established via an application gateway	

## Logging

<b>Number of channels</b>	60	
<b>Reading interval</b>	sec/min/hr	Max. 24:00:00
<b>Memory</b>	4MB / 256,000 Events (Non-volatile-Log)	
<b>Software</b>	EWS Logger V00.01.137 or higher	Compatible with Window 10
<b>File format</b>	.csv	

# Specifications.

## Built-in sensor / function

**Internal battery voltage** Yes

**External voltage supply** Yes

**Temperature** Yes

**Radio signal** Yes

**GPS tracking** Optional

**Barometer** Optional

Pressure	Range	10 ... 1200 mbar
	Accuracy 25 C, 750 mbar	-1.5 ... +1.5 mbar
Temperature	Range	- 40 ... 85 °C
	Accuracy	-0.8 ... +0.8 °C

## Network communication

**Iridium** Protocols Short Burst Data

Coverage Worldwide

**4G Cellular LTE-M/NB-IOT** Protocols MQTT

Network support Telstra (Australia)

Most major networks globally

Coverage 4 million Sqr km

## Antenna type

**Built-in antenna** Yes

**External antenna** Optional

# Contact us

## EWS Monitoring.

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