



# EWS SWITCH

Environmental IoT Device

## 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, Swarm, Myriota) or 4GLTE.
- ✓ Reads SDI12, Modbus, 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 45mm x 55mm x 120mm.
- ✓ Rugged and robust for harsh environments - IP68.
- ✓ 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 260,000 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 - designed for harsh remote environments.
- ✓ Plug and play setup onsite.
- ✓ 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 subject to change without notice.*

**MECHANICAL**

<b>Size</b>	Width	55 mm	Length	120mm
	Height	45 mm		
<b>Weight</b>		200 g		

**ENVIRONMENTAL**

Operating Temperature	-20	-	60 °C
Storage Temperature	-40	-	65 °C
Humidity	5	-	95 % Rel

**POWER**

**External Power Supply**

**Input**

Input Voltage	12	24 V
Input Current	700 mA	

**Internal Battery (Rechargeable)**

Chemistry	Lion		
Terminal Voltage	6.8	7.8	8.4 V
Capacity	1.8/4.8 Ahr		

**Internal Battery (Non-rechargeable)**

Chemistry	LiMnO2		
Terminal Voltage	6.8	7.8	8.4 V
Capacity 4.8 Ahr			

**Sensor Power Output**

Output Voltage	11	12	13 V
Output Current	500 mA		

**Digital Output**

Output Voltage	11	12	13
Output Current	500 mA		

**STORAGE**

**Non-volatile-Log**

Size	4 MB
Events	256000 Events

**CLOCK**

**RTC**

Accuracy (-10 to 70°C)	20	70 ppm
------------------------	----	--------

**Network Time Sync Support**

Supported Networks	Iridium	Cellular
--------------------	---------	----------

**EXTERNAL SENSOR INPUTS**

**Serial - RS485 Modbus**

**RTU**

Baud Rate	300	230400 Baud
Parity	N/E/O	

**Serial - SDI12**

<b>Analogue - 4-20mA</b>	(2)
--------------------------	-----

**Current Loop**

Accuracy	0.5 % f.s.
----------	------------

**Digital - Pulse Counter**

	(2)	
Input Voltage	1	5 V
Frequency	3 kHz	

*Specifications subject to change without notice.*

**BUILT-IN SENSOR CHANNELS**

**Barometer - Pressure**

Range	10	1200 mbar
Accuracy 25°C, 750 mba	-1.5	+1.5 mbar

**Barometer - Temperature**

Range	-40	85 °C
Accuracy	-0.8	+0.8 °C

**Battery Voltage**

**Supply Voltage**

**Reference Voltage**

**Radio Signal Strength**

**Microprocessor**

**Temperature**

**TELEMETRY RADIO SUPPORT**

**Iridium**

Protocols	Short Burst Data
Coverage	Worldwide

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

Protocols	MQTT
Email	
Network Support	Telstra (Aus) and most major networks globally
Coverage	4 million Sqr km

**Myriota**

Protocol	AWS Lambda
Coverage	Australia Wide

**LoRaWAN**

Range to Gateway	10 Km
------------------	-------

**BLUETOOTH SUPPORT**

Bluetooth Standard	5.0
Data Rate	2.5 kbps