

# EWS WELL CAP

## DATA LOGGER AND TRANSMITTER IN ONE

### Overview

EWS's Groundwater Well Cap leverages the power and reliability of our Switch Data logger family to deliver a cost-effective, self-contained package to monitor groundwater and any other environmental applications. Made from extremely robust glass filled nylon with a lockable hasp, the telemetry electronics sit safely within the IP68 top section and can be easily configured via our bluetooth mobile app.

Hassle-free and quick installation - the Well-Cap is simply connected to the sensor, placed over the monitoring bore and fixed in place with grub screws. Different adaptors allow it flexibility to fit to any bore diameter. Easily gain access to the bore for pump sampling or calibration dips by simply flipping back the lid.

### Features

The EWS Well Cap Groundwater Monitoring Station makes it easy to automate measurement of groundwater wells. The cap has the following features:

- Built-in EWS logger/transmitter
- Satellite, Cellular or LoraWAN communications options
- Robust, glass filled nylon material construction UV rated to more than 10 years
- Lockable Hasp for added security
- Flip top lid for easy access to well for calibration dips or water sampling events
- Tamper-proof packaging securing your wells
- Compatible with most common sensor outputs such as 4-20mA, SDI-12, Modbus, Pulse or Vibrating Wire output
- Custom housing colours available
- Lithium battery for long term reliable operation (3-5 years)
- FTP/SFTP data to any client database
- Mounts on any diameter pipe
- IP68 housing for battery/electronics/antennawith screwless access

- Simple design provides easy access to sensors
- Sensor hanger hooks to support weight of sensor
- Concealed bolts to fasten the cap to the well casing
- Optional solar panel for continuous operation
- Weight including battery & logger (900 grams)
- Dimensions: Diameter: 160mm Height: 180mm



# SPECIFICATIONS

Specifications subject to change without notice.

PARAMETER	MIN	TYP	MAX	UNIT
<b>MECHANICAL</b>				
<b>Size</b>				
Width		53		mm
Length		114		mm
Height		43		mm
<b>Weight</b>				
Unpotted		200		g
Potted		350		g
<b>ENVIRONMENTAL</b>				
Operating Temperature	-20		60	°C
Storage Temperature	-40		65	°C
Humidity	5		95	% Rel
<b>POWER</b>				
<b>External Power Supply</b>				
<b>Input</b>				
Input Voltage	12		24	V
Input Current			700	mA
<b>Internal Battery (Rechargeable)</b>				
Chemistry		Lion		
Terminal Voltage	6.8	7.8	8.4	V
Capacity		1.8/4.8		Ahr
<b>Internal Battery (Non-rechargeable)</b>				
Chemistry		LiMnO2		
Terminal Voltage	6.8	7.8	8.4	V
Capacity		4.8		Ahr
<b>Sensor Power Output</b>				
Output Voltage	11	12	13	V
Output Current			500	mA
<b>Digital Output</b>				
Output Voltage	11	12	13	
Output Current			500	mA
<b>STORAGE</b>				
<b>Non-volatile-Log</b>				
Size		4		MB
Events		256000		Events
<b>CLOCK</b>				
<b>RTC</b>				
Accuracy (-10 to 70°C)		20	70	ppm
<b>Network Time Sync Support</b>				
Supported Networks		Iridium		
Cellular				
Parameter	Min	Typ	Max	Unit

PARAMETER	MIN	TYP	MAX	UNIT
<b>EXTERNAL SENSOR INPUTS</b>				
<b>Serial - RS485 Modbus RTU</b>				
Baud Rate	300		230400	Baud
Parity		N/E/O		
<b>Serial – SDI12</b>				
<b>Analogue – 4-20mA Current Loop (2)</b>				
Accuracy		0.5		% f.s.
<b>Digital – Pulse Counter (2)</b>				
Input Voltage	1		5	V
Frequency			3	kHz
<b>BUILT-IN SENSOR CHANNELS</b>				
<b>Barometer – Pressure</b>				
Range	10		1200	mbar
Accuracy 25°C, 750 mba	-1.5		+1.5	mbar
<b>Barometer – Temperature</b>				
Range	-40		85	°C
Accuracy	-0.8		+0.8	°C
<b>Battery Voltage</b>				
<b>Supply Voltage</b>				
<b>Reference Voltage</b>				
<b>Radio Signal Strength</b>				
<b>Microprocessor Temperature</b>				
<b>TELEMETRY RADIO SUPPORT</b>				
<b>Iridium</b>				
Protocols		Short Burst Data		
Coverage		Worldwide		
<b>4G Cellular LTE-M/NB-IOT</b>				
Protocols		MQTT		
<b>Email</b>				
Network Support		Telstra		
Coverage		4 million		Sqr km
<b>Myriota</b>				
Protocol		AWS Lambda		
Coverage		Australia Wide		
<b>LoRaWAN</b>				
Range to Gateway		10		Km
<b>BLUETOOTH SUPPORT</b>				
Bluetooth Standard		5.0		
Data Rate		2.5		kbps