



## Telemetry for non-urban water metering made simple



Approved Datalogging and Telemetry devices under the NSW non-urban Water Metering Framework.

- Guaranteed for 5000 transmissions / 5 years
- Only approved LID operating on the low-cost ultra-high coverage Telstra NB-IoT network
- Suitable for outdoor installation
- Shipped pre-configured and tested to meet specific meter configuration
- IP68 rated enclosure
- External aerial to maximize range (sold separately)

### Captis Recharge 1.2



Ideal for multi-variable monitoring and more frequent log and send intervals, with the added flexibility of a rechargeable battery and optional connection to solar.

Compatible pattern approved meters:

Aquamaster3; Siemens MAG 8000CT; Euromag MUT 2200 EL;  
Rubicon Sonaray Pipe Meter; Krohne Waterflux 3070;  
Aquamonix / Pentair I500; Arad Octave; ABB AquaMaster4  
Krohne Optiflux 2300C; Siemens MAG5100W; Arad WSTsb;  
Sensus WP-Dynamic

Find your local Duly Qualified  
Person (DQP) supplier here  
[www.sigsense.com.au/where-to-buy](http://www.sigsense.com.au/where-to-buy)



# Captis Recharge 1.2

## Features

- Sensor agnostic: connect to most off-the-shelf sensor to the industry standard interfaces and protocols
- Run all inputs simultaneously
- Supported out-of-the-box connectivity: LTE (CAT-M1, NBIoT)
- Embedded SIM
- Encrypted configuration over-the-air (COTA)
- Encrypted firmware upgrades over-the-air (FOTA)
- Secure firmware downloads
- Data transferred over encrypted connection (SSL/TLS)
- Physical tamper notification
- Onboard data storage
- IP68 rated
- Battery powered
- Designed and manufactured in Australia
- Optional accessory: solar cell

## Edge Processing

### Alarming

The Captis Recharge 1.2 has on board capabilities for handling process alarms and higher resolution logging and sending, based on measured values. This feature ensures that critical alarm conditions are never missed and users are informed.

### Alternate Log/Send

The "alternate log" feature provides higher resolution data logging based on certain alarm conditions. The Captis Recharge 1.2 will swap the default log and send interval to a second set of high higher frequency logging and sending intervals on a configurable alarm value - returning to the default log interval and send interval when that state has cleared.

### Process Alarms

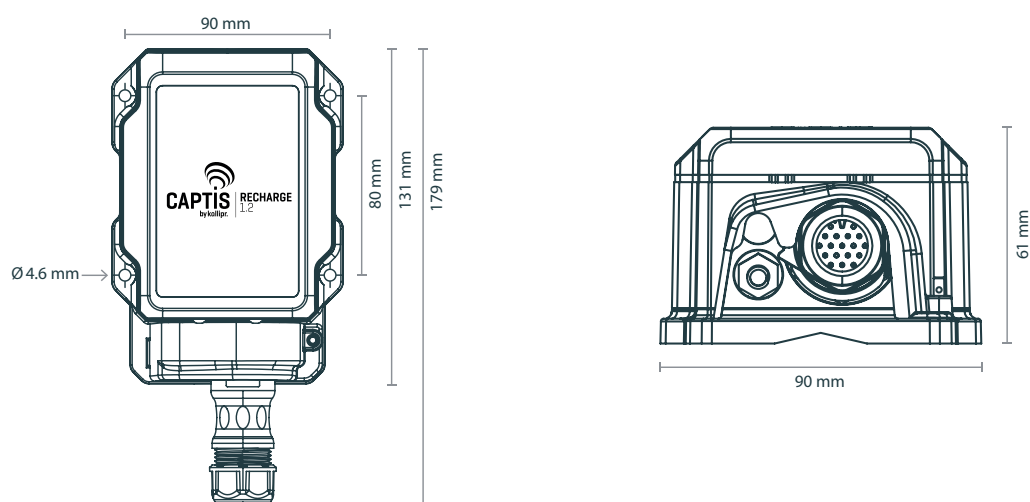
Alarms will trigger based on the processed data values at the time of logging. The alarm trigger contains a setpoint and a hysteresis value. The alarming can happen on process values above the setpoint+ hysteresis or below setpoint-hysteresis, or on both conditions.

Connection can be made to the client's selected platform on an alarm state, where the SMS and email alert functionality can be actioned.

### Cable Cut Loopback Detection

The Captis Recharge 1.2 supports a loopback cable cut detection if required for identifying physical tamper. It is recommended that the tamper loop is as close as possible to the sensor to ensure the cable cut functionality is effective.

## Dimensions

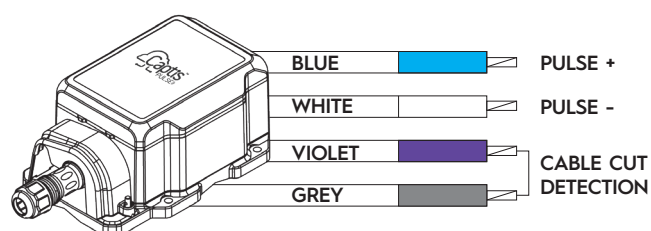


## Specifications

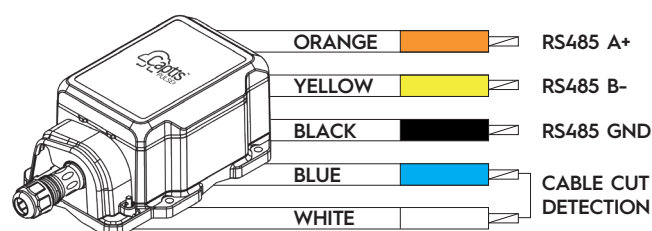
Power Source	Solar cell or mains connection
Supply Voltage	5.24VDC, 0.5A
Battery Voltage	3.6V
Battery Capacity	3350 mAh
Battery Type	Rechargeable Li-Ion 18650
Product Warranty	5 years / 5,000 transmissions
Digital Inputs (2)	Active and Passive Switch and Pulse Modes: -48v to 48v Max Pulse Rate: 1000Hz
Digital Output	Solid State Relay, max 24V 0.5A
Analogue Input 1	0-10VDC
Analogue Input 2	Temperature/Humidity Sensors
Serial Input	RS232/RS485, Modbus RTU
1-Wire Channel	Temperature/Humidity Sensors
Sensor Power Output 1	5VDC, 100mA
Sensor Power Output 2	12VDC, 40mA
Protocols	MQTT
Certification	RoHS, RCM
Platform Supported	Out of the box integration with SAG's Cumulocity and Microsoft Azure
LTE Antenna	Built-in internal antenna, external antenna capability (auto-switch for best signal strength, external antenna not included)
IP Rating	IP68
Log Interval - Min	10 seconds
Send Interval - Min	15 minutes
Operating Temperature	-20° to 70°C
Unit Dimensions	131 x 90 x 61mm (LxWxD) w/connector 179mm (L)

## Installation







### How to connect a Captis Recharge 1.2 to a Pulse Meter



### How to connect a Captis Recharge 1.2 to a Modbus Meter



## Captis LED Behaviour

SYMPTOM	MEANING	ACTION
 <b>STATUS</b> x20	Device is on / awake.	Device is working as it should, leave device to collect data.
 <b>CELLULAR</b> Solid	Device connected to LTE network.	Device is working as it should, leave device to collect data.
 <b>STATUS</b> No LED Status	The device battery may be depleted, or a device fault may have occurred.	The device battery may be depleted, or a device fault may have occurred.
 <b>STATUS</b> x2 long + x1 short	Module Not Booting Up	Check network provider coverage map to ensure the site is covered by the LTE-M or NBloT cellular network. If the area is covered, and the device cannot connect, contact the supplier.
 <b>STATUS</b> x2 long + x8 short	No Cellular Registration	Return the device to the supplier if the issue persists.
 <b>STATUS</b> x2 long + x2 short	Low battery	TBA

## RSRP

		RSSI	SINR (dB)	RSRQ (dB)	RSRP (dB)	SC/lo (dB)
	Technology	LTE and 3G	LTE Only	LTE Only	LTE Only	HSPA+ and EVDO
<b>Signal Quality</b> (((o)))	Excellent	> -65	> 12.5	> -5	> -84	> -2
	Good	-65 to -75	10 to 12.5	-6 to -10	-85 to -102	-2 to -5
	Fair	-75 to -85	7 to 10	-6 to -10	-103 to -111	-5 to -10
	Poor	<-85	<7	<-11	<-112	<-10

### Radio Frequency Parameters





# GET IN TOUCH

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