SigSense

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 Pulse 1.2

With all of the features of the Captis Pulse Lite, the Captis Pulse provides the added security of tamper protection for applications where the device is situated in a high-traffic location or can be easily accessed by others.

Compatible pattern approved meters:

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

Find your local Duly Qualified Person (DQP) supplier here

www.sigsense.com.au/where-to-buy

SigSense

PRODUCT DATA SHEET

Captis Pulse 1.2

Features

- Sensor agnostic: connect to any off-the-shelf sensor to the industry standard interfaces and protocols
- Run all inputs simultaneously
- Supported Connectivity: LTE (CAT-M1, NBIoT)
- Embedded SIM
- Encrypted configuration over-the-air (COTA)
- Encrypted firmware upgrades over-the-air (FOTA)
- Telemetry data transferred over encrypted connection (SSL/TLS)
- Onboard data storage
- IP68 rated
- Battery powered
- Designed and manufactured in Australia

Edge Processing

Alarming/Fast Logging

The Captis Pulse 1.2 has on board capabilities for handling process alarms and higher resolution logging, based on measured process 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 Pulse 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.

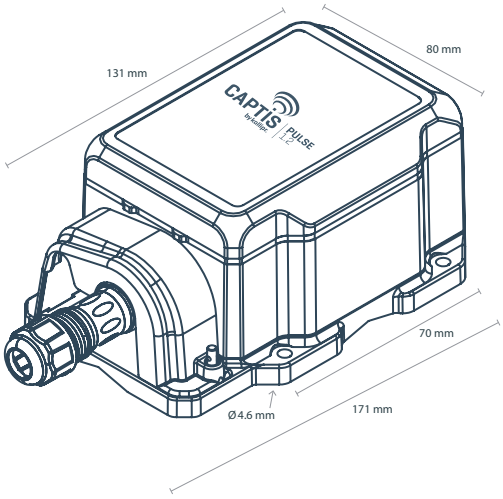
Process Alarms

The alarms will trigger based on the process 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 Pulse 1.2 supports loopback cable cut detection if required for identifying physical tamper. It is recommended that this is performed as close as possible to the sensor to ensure the cable cut functionality is effective.

Dimensions



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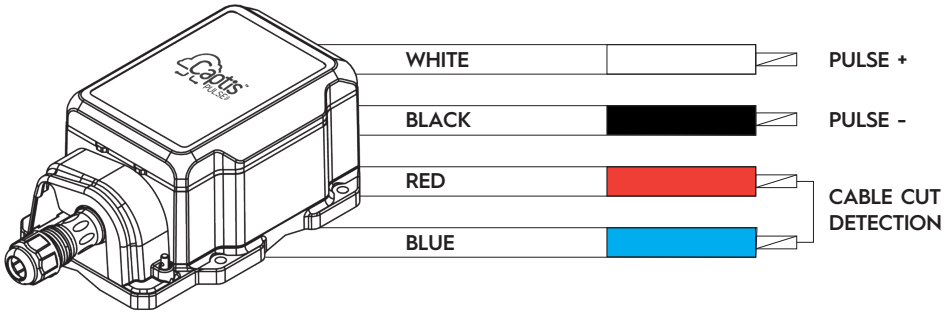
Specifications

Battery Voltage	3.6V
Battery Capacity	19000 mAh
Battery Type	Non-Rechargeable $LiSoCl_2$
Product Warranty	5 years / 5,000 transmissions
Digital Inputs (2)	Active and Passive Switch and Pulse Modes: -48v to 48v Max Pulse Rate: 1000Hz
Protocols	MQTT
Certification	RoHS, RCM
Platforms Supported	Out of the box integration with SAG's Cumulocity and Microsoft Azure
LTE Antenna	Built-in internal antenna, external antenna capability (configurable auto-switch for best signal strength, external antenna not included)
IP Rating	IP68
Log Interval – Min	10 seconds
Send Interval – Min	5 minutes
Operating Temperature	-20°C to 70°C
Unit Dimensions	131 x 90 x 61mm (LxWxD) w/connector 171mm (L)

Installation

How to connect a Captis Pulse 1.2 to a Pulse Meter



Captis LED Behaviour

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

RSRP

		RSSI	SINR (dB)	RSRQ (dB)	RSRP (dB)	SC/Io (dB)
	Technology	LTE and 3G	LTE Only	LTE Only	LTE Only	HSPA+ and EVDO
Signal Quality	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