

# Low Power Datalogger



## Description

The PCTDA04x data logger is a small, ultra low power, cost effective datalogger with built-in 4G or NB-IoT cellular modem. This small datalogger, is further provided with an internal temperature sensor, 4GB micro SD card (extendable) and a 2FF SIM card slot.

The datalogger is available with several power provisions: 3.6 volt lithium battery, 8 ... 30Vdc input or integrated solar panel with LiFePO4 charger.

The data logger can acquire physical signals by 2 current loop inputs, 2 voltage inputs, 1 potentiometer input and 3 digital inputs. More or special inputs can be added by means of internal stackable option boards / converters.

The data logger is provided with one serial port to capture measurements from ASCII, MODBUS, NMEA or SDI-12 compatible sensors.

External sensors can be powered by the data logger itself, to prevent them to consume power while the data logger is a sleep.

Up to 8 mathematical channels are available to calculate meaningful engineering values derived from sensor input values (e.g. a polynomial to calculate a flow from a stream level). Supports up to 8 aggregation channels (e.g. to record 10 minute windspeed averages sampled at 1Hz).

Logged data can be pushed to a central host by HTTP (S), FTP(S), e-mail (SMTP), secure TCP or MQTT at configurable intervals. Optionally logged data can be transmitted by satellite as well (Iridium SBD).

When equipped with the integrated solar panel a complete self providing remote monitoring station can be arranged, all you need is a logger and applicable sensor (s). This self providing 3G logger is costs saving, because you don't need: a) external solar panels, b) big batteries, and c) encapsulating cabinet.

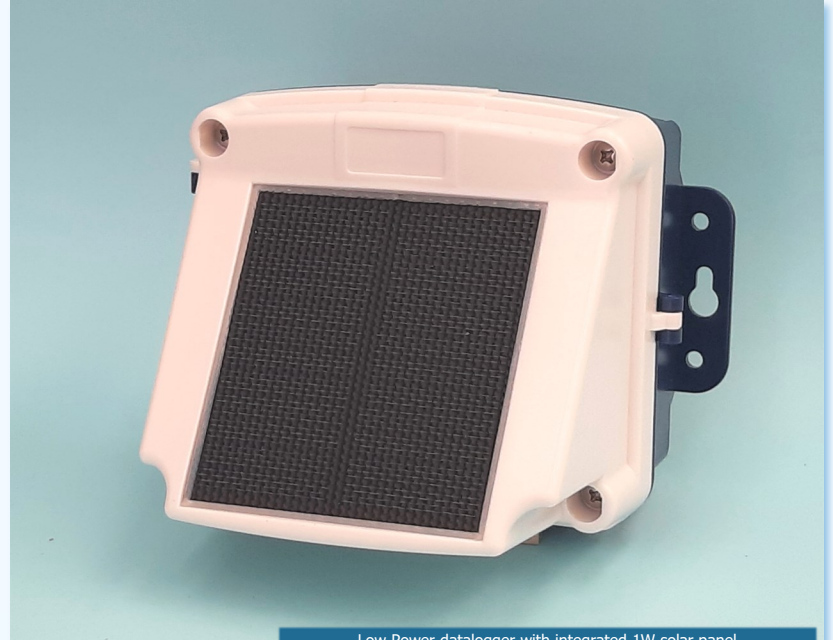
The logger is rugged and delivered with a waterproof IP67 enclosure (130x120x75mm).

Configuration programming can be done through the USB port by using hyperterminal. As alternative an app Android can be used to configure the datalogger with the Bluetooth option board installed.

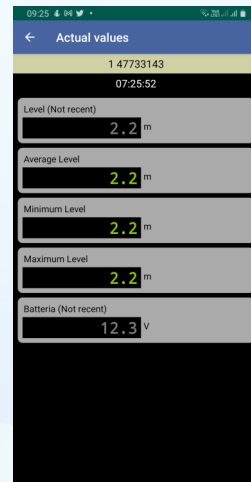
A low power weatherproof 2.0 Mp camera can be connected to a solar powered datalogger. The system can be configured to record snapshots at regular intervals (once or multiple times a day) and at alarm raise and fall conditions (e.g. at flooding a river).

The data logger can deliver JPG pictures in your e-mail box, to an HTTP- or FTP-server.

The camera has an image sensor and lens for taking color pictures during daylight and IR LEDs to take B/W pictures at night. It has a 60° angle of view and a night vision of max 6m.



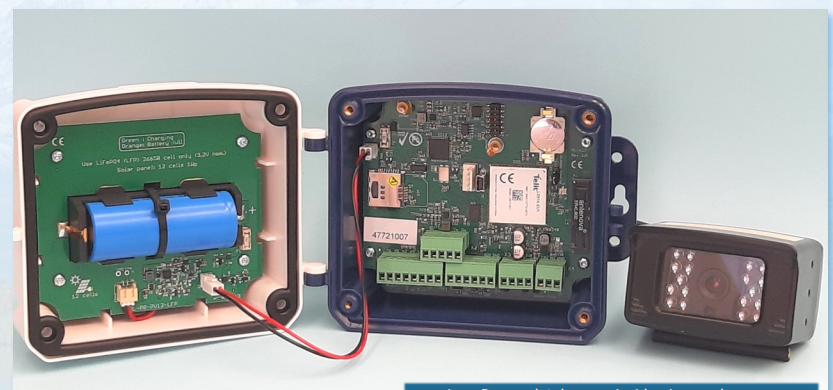
Low Power datalogger with integrated 1W solar panel



App Android



Low Power datalogger with TFT display



Low Power datalogger: inside view and camera

Technical specifications may be varied without prior notice

## Technical features

<b>CPU</b>	ARM Cortex M3
<b>Flash memory</b>	512 KB
<b>Data logging</b>	1 second to 1 day interval
<b>Memory card</b>	micro SD-Card 4GB (min.)
<b>Data push</b>	1 minute to 1 day interval
<b>Data protocols</b>	HTTP(S), FTP(S), e-mail, secure FTP, MQTT
<b>Built-in modem</b>	4G or NB-IoT / LTE-M
<b>Analog inputs</b>	2 current loop inputs (0/4...20mA), 2 voltage inputs (0...10V), 1 potentiometer input
<b>Digital inputs</b>	3 pulse or counter
<b>Digital output</b>	1 open collector alarm output
<b>Serial input</b>	1 x RS232, 1 x RS485 (Modbus) or SDI-12
<b>A/D Converter</b>	A/D 12-bit
<b>Operator interface</b>	USB 2.0 Display TFT (option)
<b>Power consumption</b>	100mA@3.6V operating mode 250mA@3.6V data transmission 100uA@3.6V standby mode
<b>Operating conditions</b>	Temperature: -30 ... +75°C Relative humidity: 5 ... 100%RH
<b>Power supply</b>	3.6V lithium batteries, 8...30Vdc input, Integrated solar panel with LiFePO4 battery charger Auxiliary solar power source with 12 V Sealed Lead Acid Battery or LiFe-PO4 battery

## Ordering code

Low Power Datalogger with built-in 4G modem, integrated 1W solar panel and LiFePO4 charger	<b>PCTDA089</b>
Low Power Datalogger with built-in 4G modem and 3x D-Size batteries	<b>PCTDA058</b>
Low Power Datalogger with built-in 4G and integrated LiFePO4 cell charger for external solar panel	<b>PCTDA092</b>
Low Power Datalogger with built-in 4G modem and integrated 12V Sealed Lead Acid battery charger for external solar panel.	<b>PCTDA080</b>
Low Power Datalogger con modem 4G e regolatore di carica integrato per ingresso 8...30V DC e display TFT	<b>PCTDA051</b>
Low Power Datalogger with built-in 4G modem external power 8...30V DC, without battery	<b>PCTDA097</b>
Low Power Datalogger with built-in NB-IoT / LTE-M modem, integrated 1W solar panel and LiFePO4 charger	<b>PCTDA104</b>
Low Power Datalogger with built-in NB-IoT / LTE-M modem external power 8...30V DC, without battery	<b>PCTDA100</b>
Low Power Datalogger with built-in NB-IoT / LTE-M modem external power 8...30V DC and NiMH backup batteries	<b>PCTDA113</b>
Low Power Datalogger with built-in NB-IoT / LTE-M and integrated LiFePO4 cell charger for external solar panel	<b>PCTDA105</b>
Low Power Datalogger with built-in NB-IoT / LTE-M modem and integrated 12V Sealed Lead Acid battery charger for external solar panel.	<b>PCTDA106</b>
Low Power Datalogger with built-in NB-IoT / LTE-M modem and 3x D-Size batteries	<b>PCTDA116</b>
Module for atmospheric pressure 300...1200hPa	<b>PCTDA052</b>
Bluetooth low energy wireless user interface (Android)	<b>PCTDA074</b>
Color camera 2.0Mp with night vision of max. 6m	<b>PCTDA046</b>
WIFI module for low power datalogger	<b>PCTDA081</b>

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