# smart**batten** Guide

## Product Description

The smart**batten** system allows batten tension to be measured directly, in real time, to ensure repeatable batten tensions. The sensors are factory calibrated, with a wireless load output that can be read by a mobile phone or smart**fitting**s gateway.

## Installing the system



The smart**batten** and system is designed to fit directly into the CT22 batten, and may accommodate other battens if required, or the sensor can be used as a standalone compression load sensor. The supplied case and tensioner assembly requires the batten to be shortened to accommodate the sensing unit. See the smart**batten** System Dimensions drawing to remove the right amount from the batten.

## Safety

Please read all instructions before using smart**batten** to measure loads. Always perform a safety evaluation before use to ensure that use of the load pin is not dangerous to nearby people or property.

## Overload

The WLL of the smart**batten** must not be exceeded, as this may cause damage to the internal instrumentation and will invalidate the warranty.

SHOCK LOADING (i.e. stay failure) OR OVERLOADING TO 150% OF MWL WILL RESULT IN PERMANENT DAMAGE TO THE SENSOR THAT WILL REQUIRE RECALIBRATION.

A significant impact to the body of the smart**batten** can affect the calibration. This would require the device to be returned to Cyclops for inspection and re-calibration.

## Inspection and maintenance

The only maintenance needed is to charge the sensor with the provided charger. Please do not attempt to repair the sensor by removing any parts from the product. Please contact Cyclops for further information.

## smart**power** button

smart**batten** devices has 3 modes: powered on, extended use & off.

| Mode | Powered on | Extended use | Powered off |
|---|---|---|---|
| A quick button press shows | Green flash | Red flash | Red flash |
| How to activate mode | Long press to green flash | Long press to red flash | Very long press to red flash x2 |
| Frequency | 1 Hz | 0.25Hz | No data |
| Ideal for | General usage | Battery saving | Shipping/ storage |
| Battery life | 2000 hrs | 8000 hrs | 2 years |

Extended use & powered off modes can only be activated from powered on mode.

## Wireless charging ((⚡))

To charge a smart**batten** sensor, plug the supplied charger into a USB port or power pack (not supplied), a quick blue flash indicates it has been powered on. Place the smart**batten** sensor onto the charger with the wireless charging logo facing the charger.



*Figure 2: Charging Procedure*

Ensure that the smart**batten** sensor is powered on when charging, or else charging indication will not be visible. The sensor is charging when the LED constantly flashes red. The sensor is >90% charged when the LED turns green.

## LED light indication

At <20% charge, LED indications during on and extended use modes will be a double flash.

When the LED flashes red & green together, it indicates the sensor is in direct connection mode with the app or with a 3rd party device.

## Technical Data

| Frequency | 1Hz |
|---|---|
| Accuracy | ±1% of MWL (between -10 to +40$^\circ$C) |
| Body Material | Ti6Al4V |
| Housing Material | PC/ABS |
| Battery | Lithium Polymer, 0.925Wh |

Wireless load pins are not warranted to be accurate for the purposes of buying/selling products by weight.

## Displaying Load Data

For seeing the batten tension, the smart**fitting**s manager app can be used to read data from the fitting. The smart**batten** sensor can be added to the application using the data key or QR code that was supplied with the unit. Scan the applicable QR code below for instructions.

smart**fittings** manager app tutorial: