

## New Product - Li-ion Tamer Battery Rack Monitor

May 2020

### Overview

Xtralis has now released the Li-ion Tamer Rack Monitor gas detection solution that enhances the safety of li-ion batteries.

The Li-ion Tamer Rack Monitor system can provide an alert to “off- gas” events that occur early in the failure mode of li-ion batteries, well in advance of smoke detection and traditional LFL gas detection.

Early warning of off-gas events enable proper mitigation steps to be taken to avoid progression to a catastrophic thermal runaway failure.

The Li-ion Tamer Rack Monitoring system is designed to be plug-and-play, easy to install and consists of two primary components, (i) off-gas sensors and (ii) controllers.



- I. Off-gas sensors are very sensitive to li-ion battery off-gassing compounds, do not require calibration, are compatible with all forms of li-ion battery form factors / chemistries and have a lifetime comparable to a typical li-ion battery system. There are two types of off-gas sensors:
  - *Monitoring sensors* installed at the battery racks – downstream convective airstreams – to monitor off-gas events
  - *Reference sensors* installed to monitor the ambient environment and air inlets to cancel common mode signals to avoid nuisance alarms
- II. Controllers process and manage the sensor signal, providing digital and Modbus serial outputs for networking to fire control panels, building systems, etc.

The Li-ion Tamer Rack Monitor system requires minimal operation and maintenance procedures as the off-gas sensors are designed to be calibration-free and have comparable lifetime to that of the ESS battery system.

The off-gas sensors can be easily deployed throughout the space and detect failures without electrical or mechanical contact of battery cells. Sensor response can be easily verified with a bump test kit without the need of specialised gas test equipment and test gases.

The Li-ion Tamer Battery Rack Monitor provides an essential early warning signal that is used to integrate with other safety systems to initiate appropriate response processes to reduce the risk from thermal runaway.

### Why would customers be interested in Li-ion Tamer Rack Monitor?

- Provides the earliest possible warning of li-ion battery failure by detecting off-gassing prior to thermal runaway to minimize losses/damage, and ensure business continuity
- Delivers lower installation cost via plug and play functionality, versatile sensor placement and high sensitivity multi-gas detection capability allowing one sensor placement per rack
- Provides pinpoint Addressability for li-ion battery off-gassing detection allowing targeted response and improved situational awareness
- Maintains reliable performance and reduces facility operational cost by minimizing downtime due to nuisance alarms via deploying the Referencing technique
- Delivers lower maintenance cost due to calibration-free sensors, extended sensor life, and simplified bump testing regime

## Applications

- Any containerized or purpose build Battery Energy Storage Systems (ESS)
- Data Centers where reliable power sources are essential
- Marine
- Commercial environments where lithium-ion storage is applied

## What materials are available for Launch of Li-ion Tamer?

- Technical Data Sheet (Doc 35792\_00)
- User Manual (Doc 35793\_00)
- Engineering Specifications (35905\_00)
- Xtralis Li-ion Tamer Partners with aentron Customer Success Story (Doc 35783\_00)
- Xtralis Li-ion Tamer Product Training Presentation (Doc 35925\_00)
- Xtralis Li-ion Tamer Sales Presentation (35920\_00)
- Xtralis Li-ion Tamer Battle Card (35930\_00)

Check out the online landing page here: <https://xtralis.com/product/203/li-ion-tamer-monitoring-system>

## Product Range

For further information regarding Li-ion Tamer, please contact your regional Xtralis Sales and technical teams.

## Ordering Information

Ordering Code	Description
LT-SEN-M	Monitoring Sensor
LT-SEN-R	Reference Sensor
LT-CTR-C	Combined Controller
LT-ACC-OEM	OEM Board
LT-ACC-PCL	10' Power Cable
LT-ACC-DCL	10' Digital Output Cable
LT-ACC-MCL-25	25' Monitoring Sensor Cable (RJ45 Black)
LT-ACC-MCL-50	50' Monitoring Sensor Cable (RJ45 Black)
LT-ACC-MCL-100	100' Monitoring Sensor Cable (RJ45 Black)
LT-ACC-RCL-25	25' Reference Sensor Cable (RJ45 Blue)
LT-ACC-RCL-50	50' Reference Sensor Cable (RJ45 Blue)
LT-ACC-RCL-100	100' Reference Sensor Cable (RJ45 Blue)
LT-ACC-CCL-1	1' Controller Daisy Chain Cable (RJ45 Grey)
LT-ACC-CCL-3	3' Controller Daisy Chain Cable (RJ45 Grey)
LT-ACC-CCL-25	25' Controller Daisy Chain Cable (RJ45 Grey)
LT-ACC-IPA	MODBUS TCP/IP Adapter
LT-ACC-SCL	MODBUS Serial Cable
LT-ACC-RLY	Form C Relay
LT-ACC-TST	DEC Bump Test Bottle