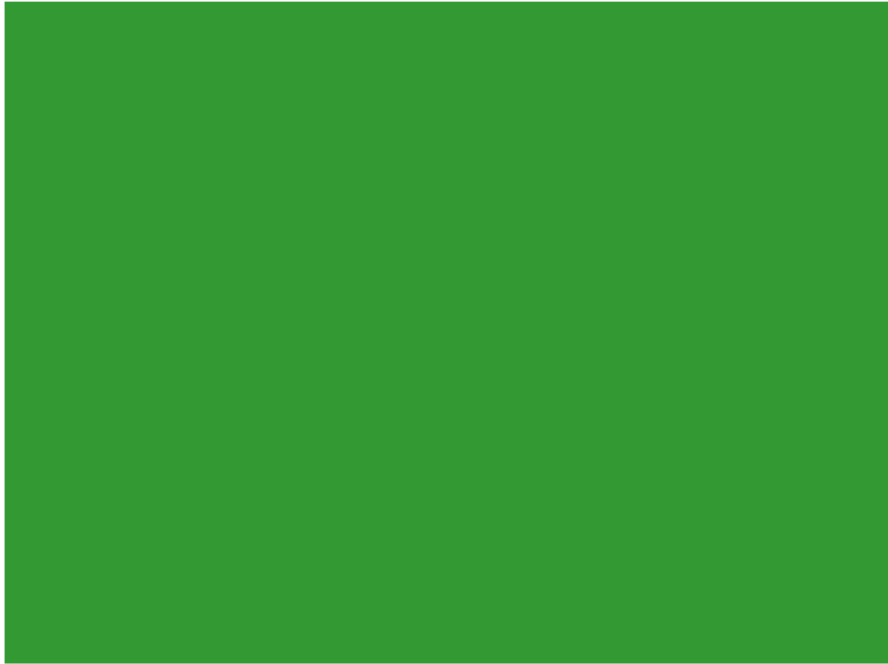




Member Update

NAATBatt Annual Meeting

Donald Karner



WE MAKE BATTERIES WORK

**Testing &
Certification**

**Battery
Applications**

**Research &
Development**

EAI Overview

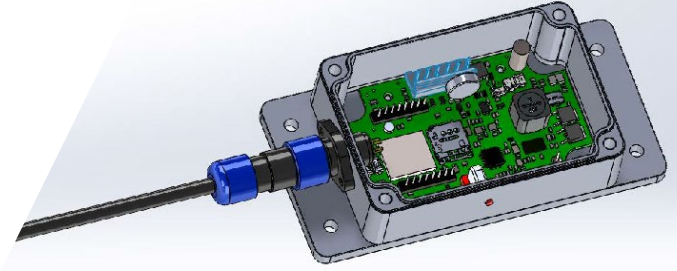


WatchDog[®]
International

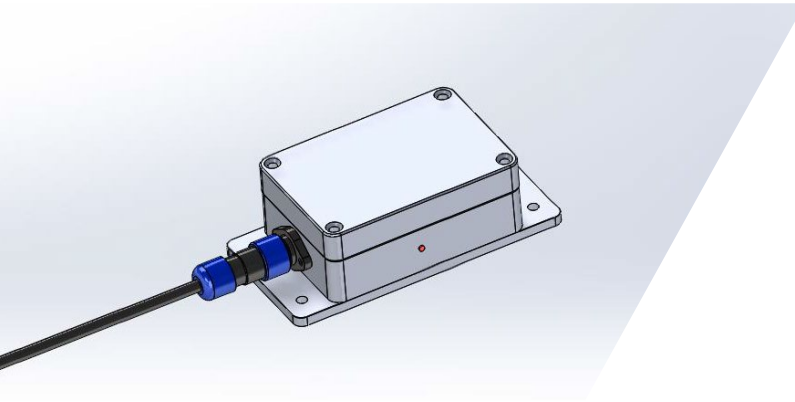
IoT Enabled Expert Battery Monitoring



WatchDog® International



Key Elements



WatchDog® Hardware

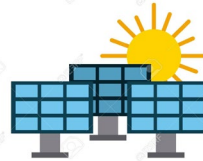
- battery voltage & temperature
- geo-location data & time
- secure Cloud data transmission
- simple non-intrusive installation



WatchDog[®] International

Key Elements

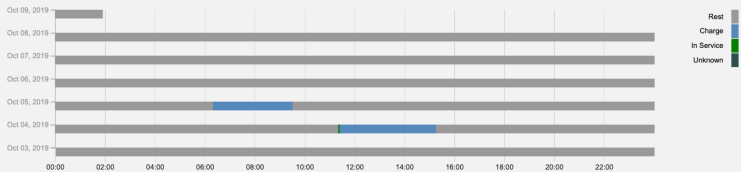
- **WatchDog[®] Analytics**
 - application specific
 - machine learning expert analyses
 - battery conditions & threats
 - operational metrics
 - group & exogenous data analysis
 - worldwide patent coverage



Operating History

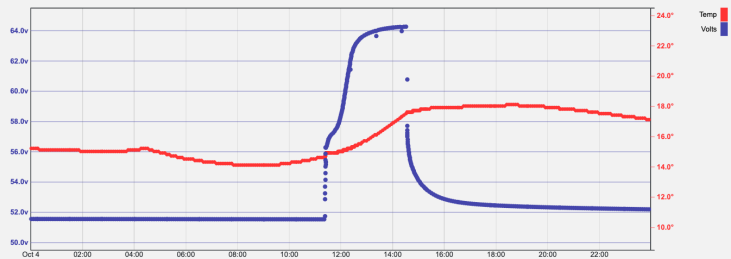
Voltage / Temperature	<24.0v	>24.0 to 36.0v	>36.0 to 40.0v	>40.0 to 44.0v	>44.0 to 52.0v	>52.0 to 54.0v	>54.0 to 56.0v	>56.0 to 58.0v	>58.0 to 60.0v	>60.0v
>10.0 to 20.0°C	0	0	0	0	709	152	4	23	7	43
>20.0 to 30.0°C	0	0	0	5	854	323	76	247	29	61
>30.0 to 40.0°C	0	0	0	0	32	5	3	1	0	0

Operating Mode



Operating Data

Day: **Fri Oct 04 2019 00:02:39 GMT-0700** ↕



Key Elements



WatchDog® International

WatchDog® User Interface

- WatchDog provisioning
- secure access to complete history
- configurable analytics
- e-mail & text Alert notification
- geo-location tracking



**WatchDog[®]
International**



βeta Test

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