





Example of theft attempt (Zambia)



The thieves broke in the cabinet but did not steal the sodium batteries



ANTI THEFT SOLUTIONS FOR TELECOM

Example of theft attempt (Botswana)



The thieves broke in the cabinet but did not steal the sodium batteries



Example of theft attempt (South Africa)



The thieves broke in the cabinet, took a battery and abandoned it close to the site.



FZSonick installed more than **5000** batteries blocks in **high theft risk areas** like Central America and Africa **since 2015**.

Less than 0,2% have been stolen, and most of them abandoned close to the site after they realized that it is not a Lead Acid or Lithium Ion battery.

WHY?

SONICK BATTERY **DOES NOT CONTAIN EXPENSIVE MATERIAL**

SONICK BATTERY **CANNOT BE USED IN SOLAR** APPLICATION (a specific FW is needed to work with solar)

SONICK BATTERY **DOES NOT LOOK LIKE A BATTERY**

**EVEN HIGHER THEFT SECURITY IS POSSIBLE:
THROUGH DIFFERENT LEVELS OF ADDITIONAL AND UNIQUE FEATURES**

- 1. REMOVABLE HANDLES AND LABEL-FREE BATTERIES**
- 2. ANTI THEFT FIRMWARE AND SOFTWARE**
- 3. CONCRETED CABINET**

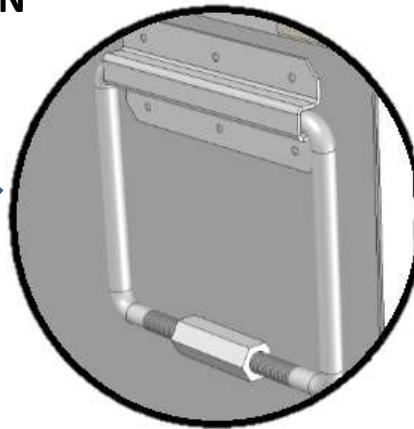


REMOVABLE HANDLES - LABELS



EASY TO INTALL BUT DIFFICULT TO REMOVE

4 HANDLES FACILITATE THE INSTALLATION



HANDLES CAN BE EASILY REMOVED AFTER THE INSTALLATION BY UNSCREWING THE CENTRAL JUNCTION

DOES NOT LOOK LIKE A BATTERY

FRONT LABEL CAN BE REMOVED.

SPECIAL LABELS CAN ALSO BE APPLIED
(e.g. RADIO EQUIPMENT, WARNING, ..)



LABEL-FREE 48TL200 (suitable with 23" cabinets)
It's a 48V 200Ah battery block (9,6kWh)



SONICK BATTERY SENSES THE THEFT!



WHEN THE BLOCK CAN BE ACTIVATED?

1- if occurs a self discharge longer than 24 hours (time can be decided by the customer). This happens if they cut the power connection cables

OR

2- when the battery is switched off using the main switch

TYPE OF BLOCK: charge / discharge disabled

BATTERY UNLOCK:

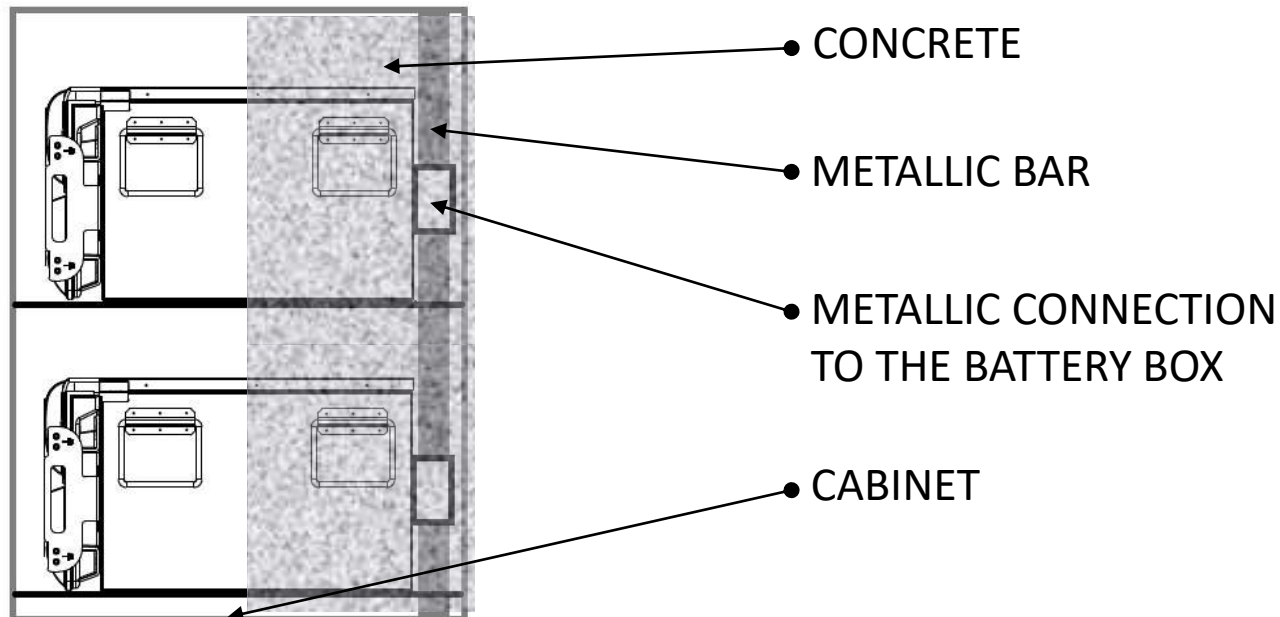
based on a “time based dynamic password”. Password generator code will be provided to the customer.

Furthermore, user can record the customer name and also the site name in the battery memory.



CONCRETED CABINET

The Sodium cell pack is enclosed into a steel case. The battery is connected to the cabinet with a metallic bar and afterwards covered with cement. No other battery technology can do this because they would be killed prematurely by extreme temperature or simply because they have plastic cases.



FZSONICK has consolidated a wide list of high standing clients in its reference markets



Energy Backup

Sustainable Mobility

Energy Storage



Some Clients





Location: Botswana



BEFORE



AFTER

- Anti theft solution
- Longer life. 15-20 years vs 2 years of lead acid
- Space reduction
- Weight reduction
- No air conditioning
- Smart communication



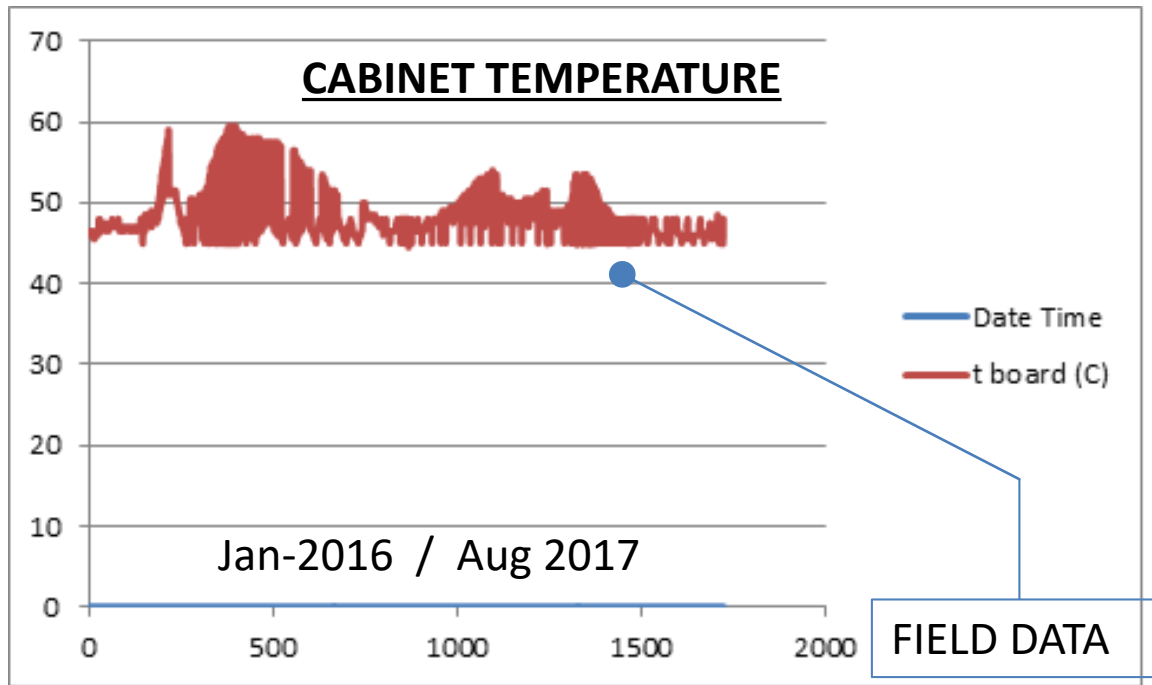
Telecommunication



Location: Central America

UNIT: 4600 - 48TL200 (48V 200 Ah)
ENERGY: 45 MWh
CAPACITY: 920.000 Ah

- Powering Telecom backup systems without air conditioning and free of any maintenance



This graph shows the temperature measured from the battery inside the cabinet. Lead acid or Lithium Ion batteries life is dramatically reduced in such environment.



Location: Central America

TARGETS ACHIEVED

- ✓ STOP THEFTS
- ✓ REMOVE AIR CONDITIONING
- ✓ MAINTENANCE FREE SYSTEM
- ✓ 20 YEAR DESIGN LIFE

With TELCEL



Telecommunication



Location: Southern Africa

UNIT: 400 - 48TL200 (48V 200 Ah)
ENERGY: 4 MWh
CAPACITY: 80.000 Ah

- Powering Telecom backup systems



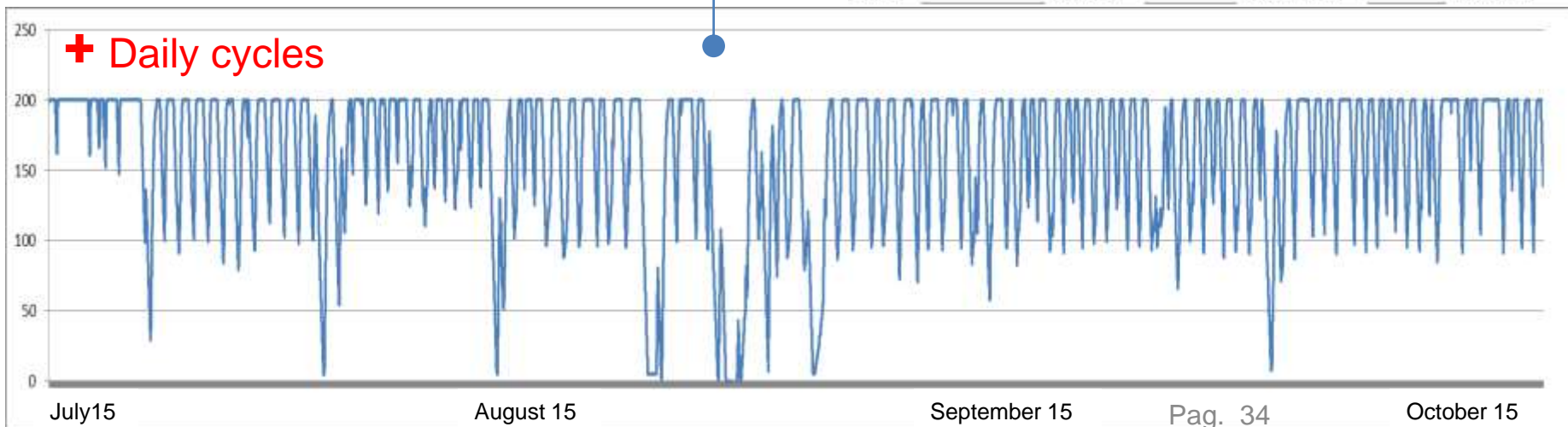
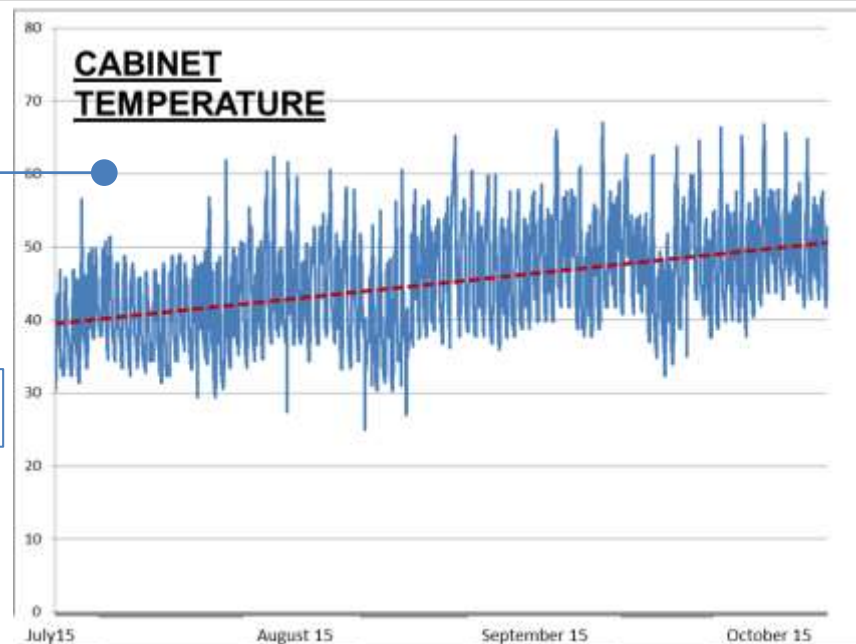
+ Cabinet temperature

Thousands sites installed since 2015

TARGETS ACHIEVED

- ✓ REMOVED GENSET
- ✓ REMOVE AIR CONDITIONING
- ✓ STOP THEFTS
- ✓ MAINTENANCE FREE SYSTEM

FIELD DATA





Telecom Central offices



Location: USA



UNIT: 2800 - 48TL200 (48V 9,6 kWh) . 17 sites
ENERGY: 30 MWh
CAPACITY: 600.000 Ah

- High Density Facility Design
- Stand-alone System

With T-Mobile and AT&T