



# SmartLock

access control for industrial electronic enclosures

# TST SmartLock System

access control for industrial electronic enclosures

**TST SmartLock** can be used in numerous industrial situations: Traffic signal control cabinets, rail, power, water, gas distribution networks Replacing conventional padlock security on perimeter fences for remote telecommunications, pumping, substation and storage facilities monitoring chain of custody process for shipping containers and other high value storage modules.

## Functional Capabilities

An electronic access control system for industrial cabinets that:

- Prevents and detects unauthorised access to cabinets
- Monitors and manages when a cabinet can be accessed and by whom
- Records and communicates authorised and unauthorised access to a cabinet
- Can be provided as a simple field retrofit to existing cabinets
- Can operate with any smartphone
- Is simple to use by personnel
- Is centrally managed with high levels of process automation
- Has appropriate levels of security to prevent tampering and protect information



## Operating Assumptions:

- To access a cabinet a user requires both a SmartLock digital key and a cabinet key
- DC power and TCP/IP Network access are available in each cabinet for the SmartLock as a hardwire connection
- TST SmartLock Has battery backup in case of external power failure
- Can be retrofitted to existing cabinets
- Can be manually overridden in case of failure
- Operating temperature range: 0°C to +45°C
- Can provide an alarm for over temperature conditions
- Has inbuilt tamper detection
- Uses low energy Bluetooth (BLE) to communicate with smartphone App(s)



## User App Overview

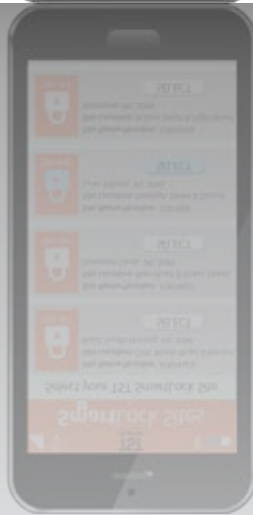
Welcome Screen

Login Screen  
(Also supports  
phone biometrics)

View and  
Select Site

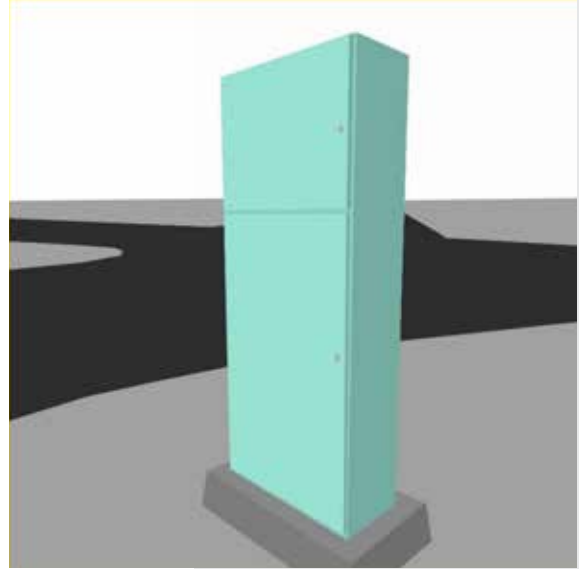
Selected Cabinet  
Currently Locked  
(Press Red Button)

Selected Cabinet  
Now Unlocked  
(SmartLock Beeps)



## Authorised User

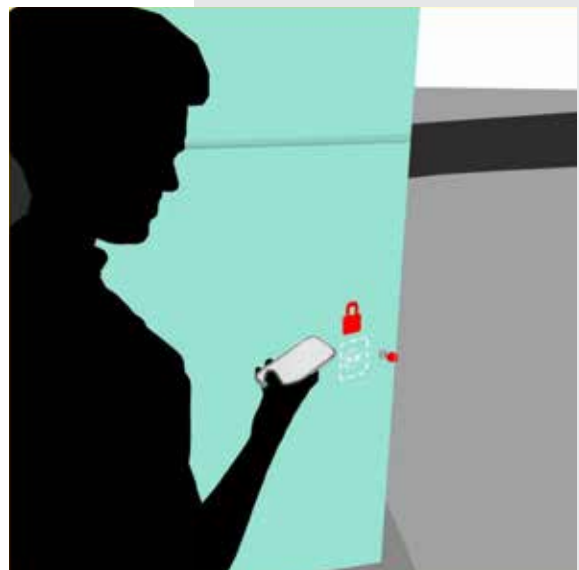
- 1 Technician locates appropriate cabinet on-site



- 2 Technician inserts manual key into keylock

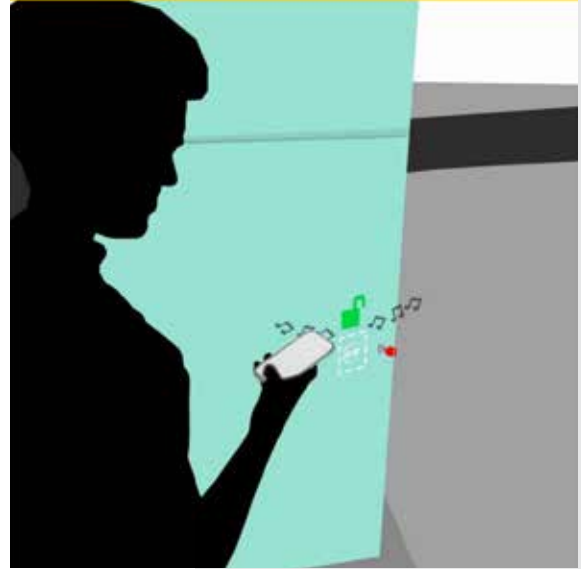


- 3 Technician uses the digital access key within the App to open the SmartLock

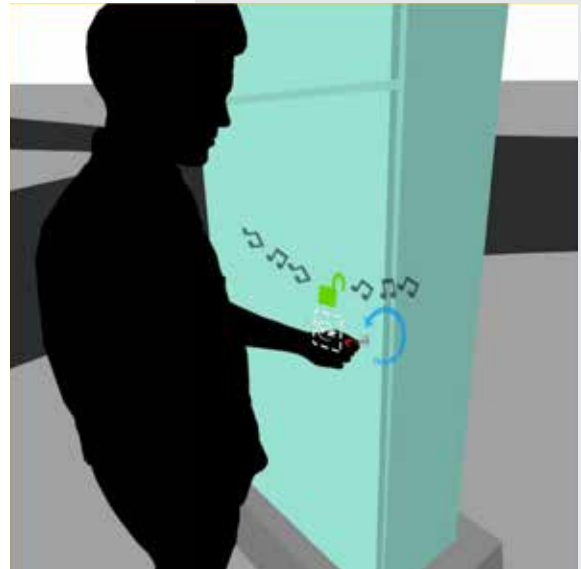


## Authorised User

- 4 The SmartLock beeps when the SmartLock is unlocked



- 5 In the unlock mode, the contractor can turn the manual keylock to open the door



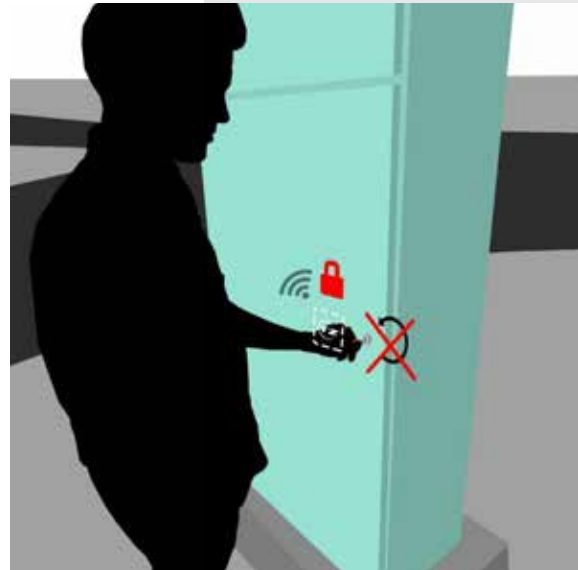
- 3 The technician now has access to the cabinet, the SmartLock records the activity and communicates it back to the enterprise system.



## Unauthorised User

A person attempts to access the cabinet without authorisation...

- 1 SmartLock remains in locked position preventing the key from rotating
- 2 SmartLock Detects unauthorised attempted use, (combination of vibration and movement without prior authorisation via App)
- 3 If sufficient force is applied to break the SmartLock cam then the SmartLock detects an open door event and generates an alarm event

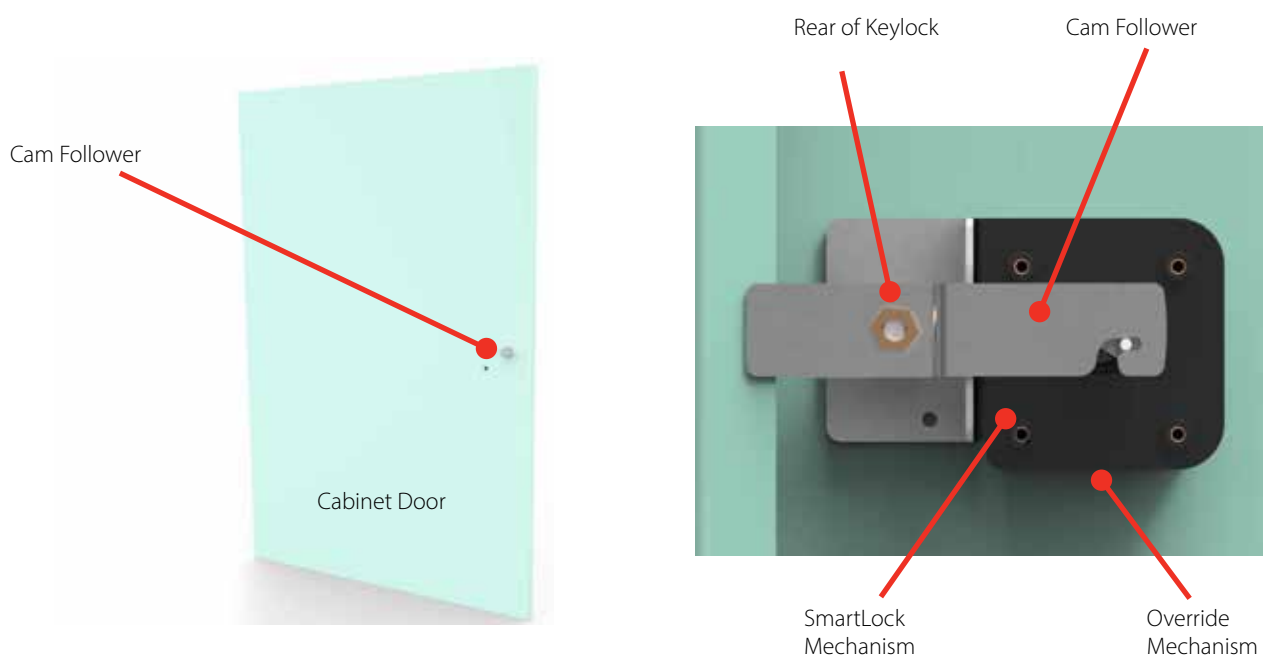


## Three major elements of the SmartLock system

- An electronic SmartLock fitted to each cabinet in an existing lock position
- A smartphone App used by technicians to request digital keys for a specific lock
- An enterprise system to
  - Manage SmartLocks (enrollment, diagnostics, updates etc.)
  - Manage authorised contractors (onboard/offboard)
  - Manage smartphone Apps (enrollment, updates, registration)
  - Generate digital keys as required (for use via the App)
  - Provide escalation and management of alarms and events generated by SmartLocks
  - Provide reports and analysis

## How it Works

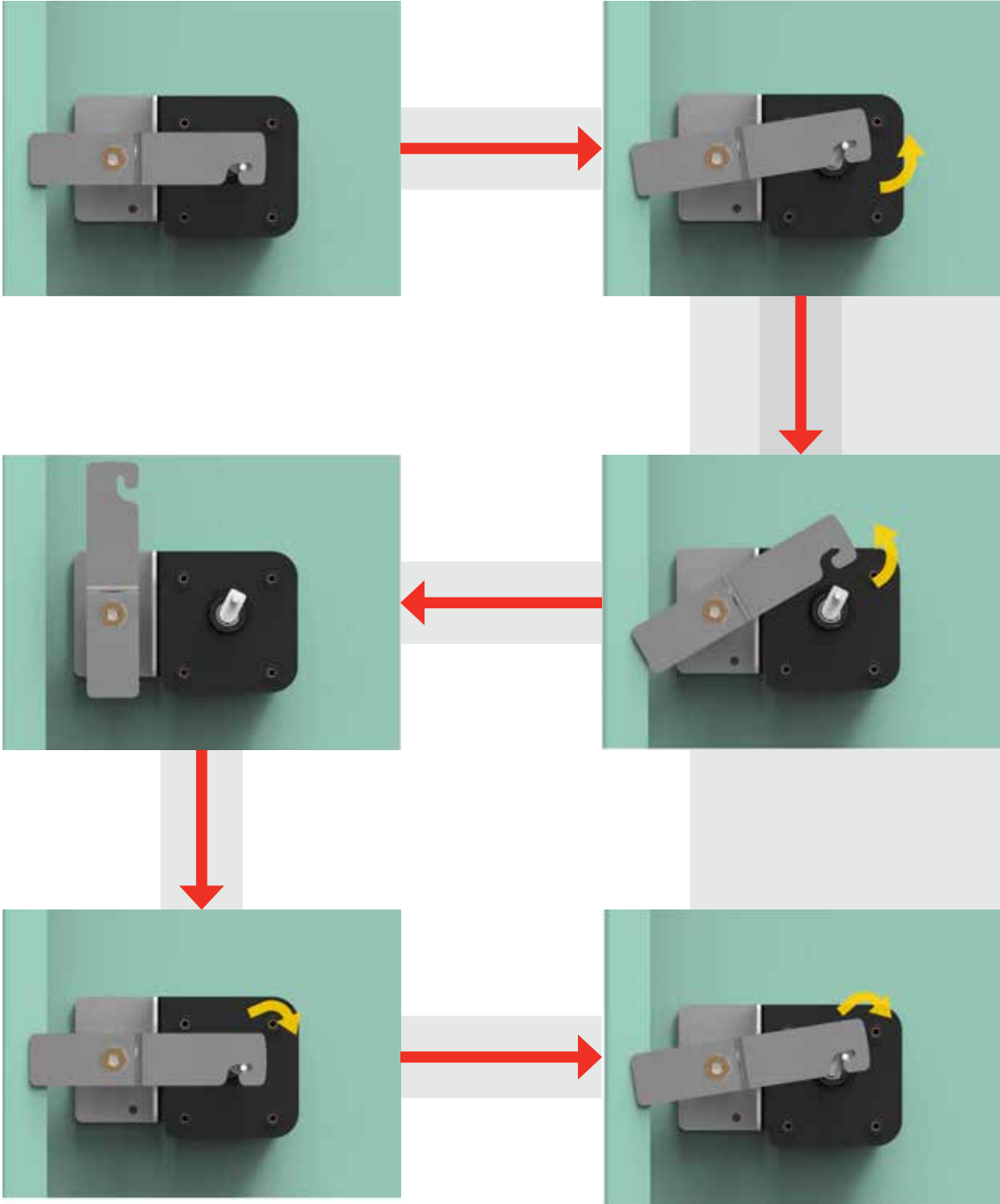
The TST SmartLock interferes with a conventional manual keylock, preventing it from being rotated.



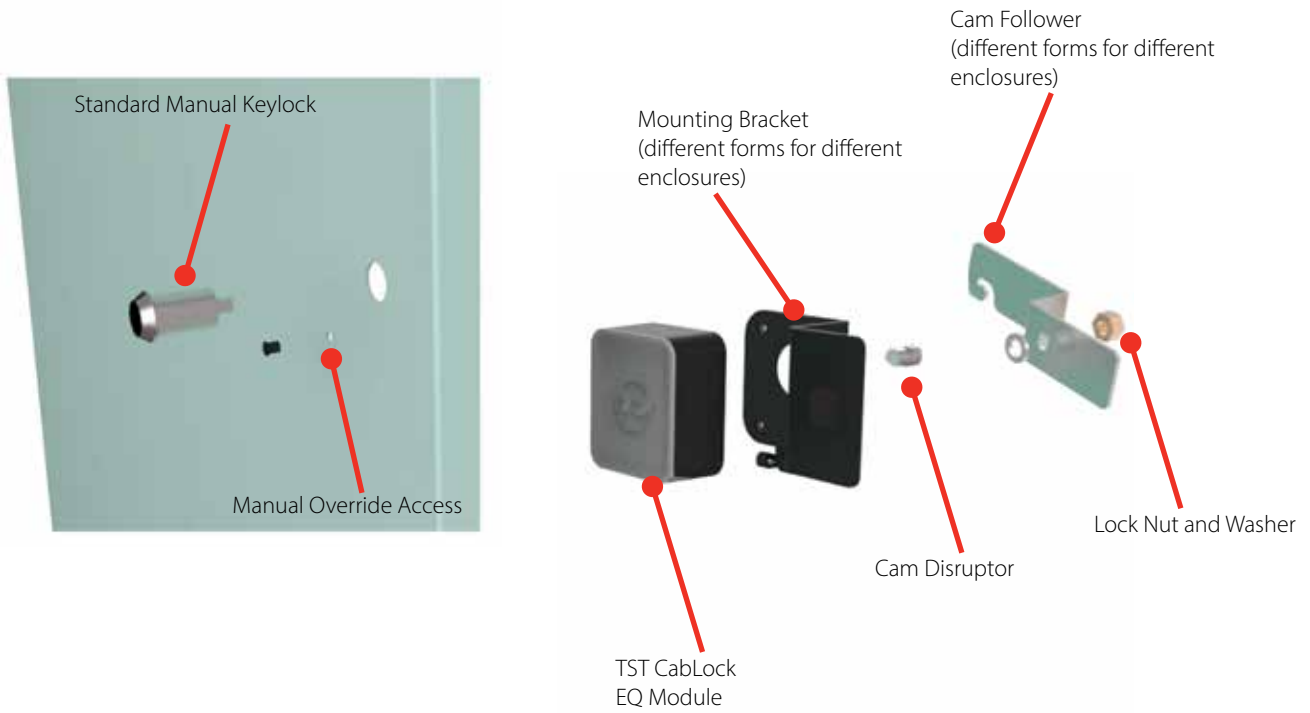


# The Mechanics

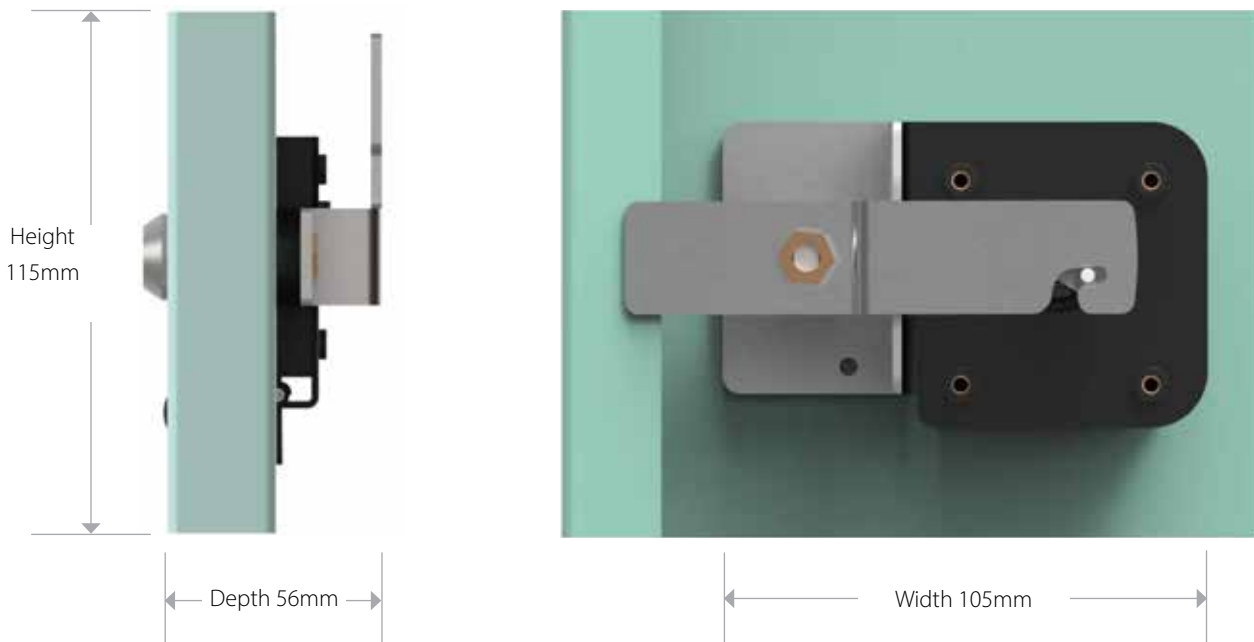
TST SmartLock causes interference and only allows the cam to rotate once unlocked.



## The components of the SmartLock system



## Dimensions



## Manual Override

A mechanism is included to manually override a SmartLock for maintenance.



- 1 Remove the plastic cap on the front of the cabinet door

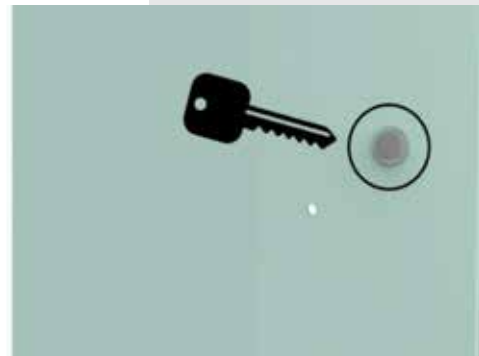


- 2 Insert tool through the hole



- 3 Using the tool push the lever - this movement will override the lock disruptor

Note: this triggers an alarm event 'back to base'



- 4 While pushing the override with the tool, use the key to rotate the CAM to open the door



## TST

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