Lock Electronic Module

Technical Data Sheet

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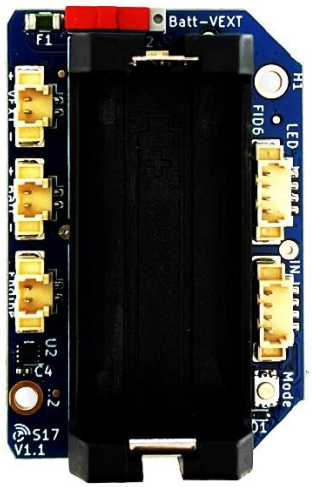
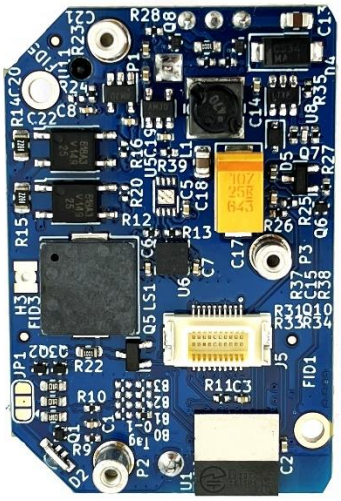
Short Description:	ultra-compact, versatile lock electronics module for Bluetooth-control via smartphone app of electronic standard locks
Item Number:	SAS-LE01 Smart Access Solutions - Lock Electronics 01





Scope of delivery:	Lock Electronics
	Enclosed battery, type CR123A
available as spare parts:	Cable sets for various controllers
	Ultra-power battery for low temperature environments

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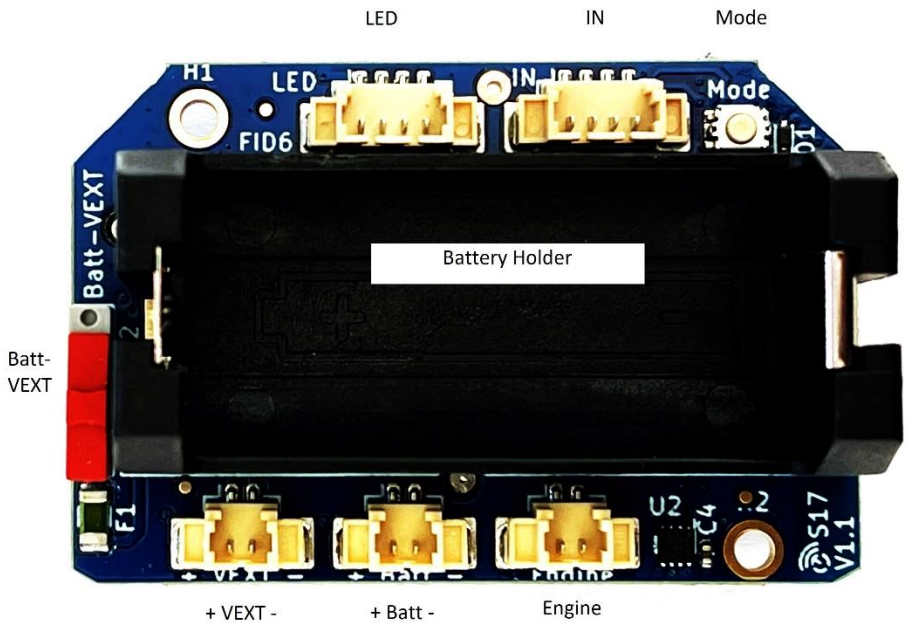
Technical Data:	SAS-LE01
Weight without Battery:	14.1 gr.
Weight (incl. Battery):	30.5 gr.
Dimensions (L, W, H)	46.5 mm, 31.0 mm, 24.0 mm
Operating temperature:	-20 °C to +60 °C at maximum 90 % humidity
Operating voltage:	3 Volt with internal Battery
Internal Battery:	CR123A
Hardware Type:	System on a Chip
Processor:	Nordic nRF52832 system
Memory:	512 K Flash / 64 K Ram
Core:	32-bitARM Cortex M4F
Interfaces:	Bluetooth with 5.0 BLE frequency 2.44 GHz
Software:	SAS Secure OS based on free RTOS (Real Time OS)

Features

Locking and unlocking	Integrated in Smart Access Solutions Secure Cloud Core framework, the lock electronics is operated with the okey smartphone app via Bluetooth Low Energy. The okey smartphone app is the user interface to control the locks and the link to the Secure Cloud Core framework.
Battery management	When operating the lock electronics with the okey smartphone app, data from the lock is collected in the background by the app and sent from the app to the central Secure Cloud Core platform. Thus, the battery levels of all lock electronics are stored and displayed centrally in Secure Cloud Core each time the keysafe is used. If battery levels fall below defined thresholds, notifications (information, warnings, alarms) can be sent. For more information.
Location tracking	When opening and closing the lock electtronics the okey smartphone App transmits the actual geolocation to the cloud system. This feature can be turned off.
Security	The connection between the Keysafe and the okey smartphone app is encrypted and both devices must authenticate themselves in advance.
Optional Senor Data	Due to the various expansion options, the connection of external sensors is easily possible with little effort.

Connectors and Switches



Connector: **LED**	3 separate LEDs or RGB LED
Connector: **IN**	2 separate inputs
Connector: **+ VEXT -**	External power source up to 11V DC **Pay attention to the correct polarity (+ / -)**
Connector: **+ VBatt -**	"External power" from external battery holder – **never use with external power > 3.3V DC or when CR123 Battery is in the battery holder** **Pay attention to the correct polarity (+ / -)**
Connector: **Engine**	Connect electrical or magnetic locks
Battery Holder	for internal power supply – used for a CR123A Battery

Switch **BATT-VEXT**:

switch is left: the device is powered by the internal **CR123A Battery**

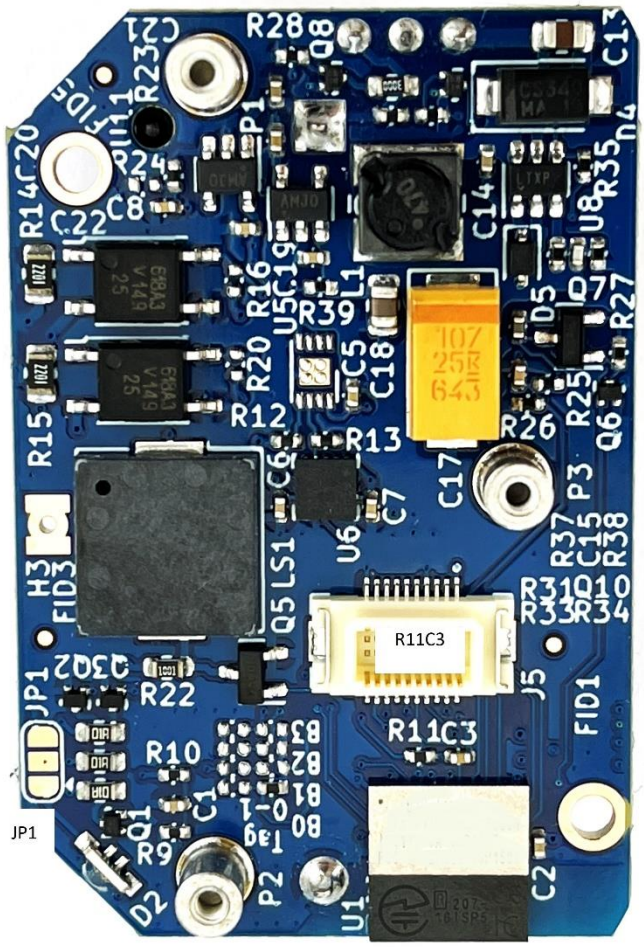
switch is right: the device is powered by **+ VEXT –** Connector

The Switch may disappear in future hardware versions.

Never use the **Mode** button. It's only used for production purposes of hardware. You can potentially delete the devices firmware by pressing the mode button.

The product will be delivered with a customer specific configuration within the firmware. So, the usage of hardware connectors may differ from this description depending on customer use.

Customers will get a detailed onboarding workshop for the usage of the product, before starting production.



Connector: **R11C3**	for future expansion boards of the lock electronics
Jumper: **JP1**	**do not use**, used for internal testing and production