

A VERSATILE SMARTLOCK INCLUDING NFC, BLUETOOTH AND WLAN

Benefits

- Keyless access and remote opening
- Updating and sharing of access rights through cloud service
- Creating and sending e-keys through cloud service
- Wireless transfer of electricity and data information between strike plate and lock
- Rotating latch makes opening and closing the door smooth and quiet.



Solution of the smart cities of the future

Rollock is a pioneer of the next generation smart locking solutions, and is creating new kinds of standards for the industry.

Our philosophy is ease of access; we enable new innovative ways of controlling venues and buildings. With digital reservation systems, the usage of different kind of reserved spaces can be greatly increased and simplified.

Our open REST application programming interface enables outside systems, for example a HR-system to integrate with access control. Creating new services with access control, such as cleanup, security or food delivery services, opens new business opportunities.

Rollock Oy
Teknikantie 12, 02150 Espoo, Finland
Customer service: +358 50 4000 085
Email: info@rollock.fi www.rollock.fi

Completely integrated

Rollock is the only smart lock with silent dead bolting, flexible access control and modern design combined. No additional installations around the door, and no cabling in the door leaf required. The operation of the lock system is integrated between the strike plate and the lock based on unique induction of power and data transmission.

Safe and secure

All connections between the smartphone, the lock and cloud are encrypted and protected. Encryption keys are unique; therefore, the lock's internal opening messages cannot be copied. Electronic keys are better guarded than mechanical keys or PIN-codes and can be reprogrammed quickly if leaked or lost to outsiders.

Keyless and limitless

The access information, such as lock, users and keys, can all be controlled remotely through the cloud service. Creating, removing, and sending e-keys is straightforward and effortless. A one-time access, temporary or permanent e-key can all be tailored to each separate user and send directly to their smartphones. The remote opening feature removes the need for a buzzer or a door phone.

Easy access control

Rollock Access -cloud service removes the need for traditional forms of access control. Our solution enables door and access control regardless of time and place. The Rollock Access system scales with the requirements; there is no limit on how many doors it can be used to control.

Specifications	
Lock and key	
Lock types	Two: left hand (W111) and right hand (W112)
Latch	Rotating latch 14 mm
Number of keys/lock (max)	5 NFC keys in a package (max. 2047 stored in the lock, unlimited in cloud)
Power supply	24 V DC (22,8-28,8V) 0,6A
Power consumption	avg. 3W max. peak 15W
Battery back-up for the power	Depends on selected battery backup system (not included)
Power feed to lock case	Induction based power and data transfer between strike plate and lock case
Daytime operations mode (lock open)	Yes, manual switch
Lock opening during power outage	Lock can always be opened manually from inside knob or with mechanical key (if lock cylinder is installed, not included)
Supported lock cylinders	Abloy: CY001, CY002, CY016, CY021, CY037, CY071 and CY007; C,D,E,N,P,T,Z, CYL001T, CYL002T, CYL016T, CYL021T, and CYL037T Iloq: C10S.1, C10S.2, and C10S.20
Fail locked	Automatically locked during power failure
Operations during network problems	Yes, enabled by local access information stored in the lock and using physical NFC key or eKey and BLE connection on your smartphone
Firmware	Can be updated remotely from Rollock server via WLAN
Connectivity – Antennas	
Internal NFC antennas	1 included (in addition external antenna can be added for remote reading)
Internal Bluetooth antennas	2 (1 directed outdoor and 1 indoor)
External WLAN-antenna	1
NFC	
NFC Frequency	Near field communication (NFC) 13,56 MHz
Supported NFC standards	N-tag, Mifare, Mifare+, DesFire
Bluetooth	
Bluetooth version	Bluetooth 4.0 low energy (BLE)
WLAN	
Supported WLAN versions	WLAN 802.11 b/g/n 2,4 GHz
Supported WLAN authentication	WPA2-PSK
Internet protocol version	IPv4 (IPv6 not supported)
Communication port in router	8883
Transmit power	17dBm
Security	
Strong encryption in the lock	Communication between the lock case and the strike plate is authenticated using unique shared secret and SHA-256 checksum.
Bluetooth	Authentication using per session random data and a shared secret from the eKey hashed with SHA-256. Data encrypted with AES-256 using per session random data and the eKey
Communication to the server	Secure (TLS 1.2) MQTT over TCP between the strike plate and the cloud with AES-256
Lock status monitoring	
Lock and door status	Lock and door status can be checked from Access Management System or from smartphone application
Door status	Door open, door closed
Lock status	Lock locked, unlocked or in daytime mode
Other status information	Door opened mechanically (indoor knob or with mechanical key) Unauthorized opening of the door

Specifications	
Indicators	
Indicator in Escutcheon	3 colors on both sides of the door
Green (lock open)	15 secs (Solid 10 secs, blinking 5 secs)
Red (lock is being locked)	5 secs
White (lock is operational and locked)	Solid
Audio	Buzzer
Other interfaces	
Relay output	30 V, 200 mA, 6W
Opto-coupled input	24V DC, 5 mA
Installation	
Door clearance	2-5,5 mm
Minimum door	45 mm non-rebated door, 55 mm in rebated door (with 10 mm rebate)
Height alignment	+/- 2,5 mm
Tensioning with 2 mm clearance	0-2 mm
Tensioning with 5,5 mm clearance	0-3 mm
Mobile phone application	
Android	Android 5.0 API level 21, or later
IOS	IOS 9 or later
Connections	BLE, mobile data
Management interface	
Web UI	HTML 5, Chrome 56 or later, Firefox 51 or later, IE 11
Environment	
Operating environment	-25 °C ... +70 °C, 90% RH
Storage	-40 °C ... +70 °C, 90% RH
Standards	
EN 14846, EN 60068-2-(1-2,30) EN 1670:2007 IEC 60529	Environmental testing of electromechanically operated locks and striking plates Corrosion resistance of building hardware Ingress Protection, IPxx
EN 1634-1	Fire Resistance, 15 minutes
EN 14846 (5.10.1-2,4-7) & (6.10.1.3-6) EN 61000-4-(2-5,8,29)	Electromagnetic compatibility (EMC) – Immunity of electromechanically locks and striking plates Electromagnetic compatibility (EMC) - Immunity
EN 300 328 (4.3.2.9-10 v2.1.1):2016 EN 55032	Radio Equipment Directive (RE D) – Emissions Conducted emission
EN 301 489-(1,3,17 v.2.1.1)	Electromagnetic compatibility (EMC RE D) - Immunity, Emissions
EN 179	Compatible with EN179 emergency exit devices
EN 14846:2008	Electromechanically operated locks and striking plates
Package	
Consumer	Lock case, strike plate, connection plugs, Rollock handles and installation parts, documentation, activation key, 5 NFC tags
Accessories	External reader, sold separately (NFC), Hoppe handles and installation parts
Warranty	2 years (see warranty document)