



DOCUMENTATION APARTMENT LOCKS
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 **SWISS MADE**

WWW.BB-LOCKS.COM

With almost 25 years experience in developing and producing electro-mechanical locks for banks and prisons, B&B Locks is presenting you now the ideal lock for apartment entrances.

You all know the common problems with these entrances :

- The locks are only locked on the latch during the daytime and do not offer any kind of security at all.
- People forget to lock the door on the deadbolt at night (by key), which again means no security at all, this time during the whole night.
- Somebody has already locked the door by key when you are still expecting visitors. Which means you have to go down to open the door with the key – later, when your visitors leave, you have to go down again with them to close the door on the deadbolt once they are out.
- Because there is a little wind on your door or because your guests push against the door too early, the lock does not have enough strength to unlock electrically.

All these situations bring you lot of annoyance and unnecessary concerns without giving you any kind of security.

We have the solution to secure your entrance door on a high security level as well as to guarantee the consumer convenience and life span of the lock!

HIGH SECURITY for your property, absolute SAFETY for the people in the building, COMPLETE COMFORT and CONVENIENCE for the owners and visitors.

You are inhabitant :

- 24/7 a safe feeling because you know that the entrance door is always closed and locked with a high security lock
- A self-locking mechanism where the bolt is thrown out automatically as soon as the lock is in front of the striker plate. It is therefore impossible to forget to lock the door.
- The lock can always be opened electrically from your apartment.
- The electrical unlocking is still possible even when there is a considerable lateral force on the door.
- You can always leave the building mechanically by using the handle on the inside of the door (also during a power failure) so the door can be used as an emergency exit (fire, panic,...)
- From outside to inside you can use any kind of access control: mechanically with a key, electrically with a digital keypad , fingerprint, cardreader etc.
- The door can also be kept open for a certain laps of time using a time control system (because of the low holding current you do not have to worry about heating).
- Door and bolt signalization are already build in the lock and can be easily shown in every apartment. That way you don't need to leave your apartment to make sure that your entrance door is closed and/or locked.

You are architect or contractor :

- The possibility to offer a high security lock (with references in the bank and prison sector) to distinguish yourself from your competitors in means of quality and convenience.
- The lock can be built into wooden doors as well as metal profile doors so that any architectural style can be maintained.

You are an installer :

You have the chance to install a electro-mechanical lock that does not require painful and time consuming interventions, because possible movements of the door can be compensated by simply positioning the adjustable striker plate.

A1 ELECTRO-MECHANICAL SECURITY LOCK

High-quality electro-mechanical security lock, model 'A1-HX', working according the fail secure principle (=locked without current). Unlocking by giving an electrical impulse that activates a solenoid or mechanically by using a key. From the secure side this lock can also be unlocked mechanically using the handle (or push bar). Therefore one can always leave the building according to EN179 or EN1125. Locking by spring force when no power is supplied. Due to its solid construction (massive casted base plate and case-hardened locking components) and to the fact the lock is permanently secured when the bolt is thrown out, the lock offers high resistance against all kinds of burglar attempts.

OPERATION:

After the door has been closed, the lock will detect the striker plate using a hall sensor on the PCB. Then the bolt is thrown out by spring force and immediately blocked by means of a deadlock. In order to unlock the door, 2 terminal clamps (n° 2 and 3) must be connected by means of a switch, following which an electronic control print will activate the solenoid, which pulls in the bolt. The lock will now switch from activation to holding current. Using a cylinder (from either side), handle or push bar (from the secure side) the lock can also be released mechanically after which the solenoid is also activated. After the door has been opened, the key must be turned back and removed from the cylinder. The lock will remain electronically unlocked until the door again closes (when there is no permanent contact between the 2 terminal clamps mentioned before). When the door does not open after the unlocking impulse has been given the lock will relock automatically after 5 seconds.

MATERIALS:

- Base plate : stainless steel AISI 304 (investment casting) – 10mm thick
- Bolt and locking mechanism : case hardened (45 RC) chromium-nickel steel (investment casting)
- Cylinder block : stainless steel AISI 304 (investment casting) – solid block
- Housing, cover plates and striker plate : stainless steel AISI 304 (partly laser cut, partly investment casting)

FEATURES:

- electro-mechanical security lock working with 24 V and low consumption (using a custom made solenoid for fast action and low heating):
 - o 2,2 A activation current (moment of unlocking)
 - o 130 mA holding current (permanent unlocking)
- controlled and manageable access
- unlucking by impuls
- locked without power
- automatic locking when the door closes
- always locked with the main bolt when the door is closed (bolt is ejected 20 mm)
- mechanical opening with the cylinder is always possible from either side of the door
- mechanical opening with the handle or push bar is always possible from the secure side
- integrated signalisation of the bolt position (unlocked/locked) and the door position (open/closed) which can signal the status of the lock at a remote control room
- stainless steel locking components, cylinder block, baseplate and striker plate
- the locking components are mounted on the solid, 10mm thick, baseplate using M6 axes, which improves the free movement of the components and the lifespan of the lock
- integrated microprocessor controlled intelligence
- symmetrical bolt with anti-saw pin, for both bumper doors and revolving (180°) doors.
- standaard striker (3mm) plate with casted on striker cup included
- adjustable striker plate (6mm) with re-enforced striker cup (optional)

- possibility to have the PCB protected in a polyurethane casted resin (optional)
- doordetection by 3 Hall-sensors instead of 1 (optional)
- tested to achieve 1.000.000 cycles
- tested to a frequency of 600 cycles a day
- resistance up to 25.000 N lateral pressure
- opening under lateral pressure still possible up to 500 N (depending on installation)
- specially designed security escutcheon with handle (SEH-17 of SEH-22)
- available for both 17mm and 22mm cylinders
- available in backsets of 35mm and 60 mm
- restart : the lock will re-do 3 attempts to close after the first attempt when not properly locked
- power supply PS24D52 : 24V = direct current +/- 5%. Warranty of lock invalid if this power supply is not used !
- connection via removable plugs with screw clamps (wire section 1,5 mm²)
- B&B Locks Cable (2 x 1,5 mm² + 3 x 0,22mm²) – Warranty of lock invalid if this cable is not used !

APPLICATIONS:

Doors that require permanent locking : banks, prisons, post offices, jewelry shops, computer departments, laboratories, exchange offices, etc., but where a mechanical exit using a handle or panic bar should always be possible.

INSTALLATION:

Installation instructions and connection diagram : see documentation.

When installing the lock, make sure there is a proper and spotless recess. The cylinder recess must allow easy installation of the cylinder even after the lock has been mounted. This way, there will be no tension on the base plate when the cylinder is tightened. Furthermore, make sure the clearance between the cover plate of the lock and the striker plate is at least 2mm and maximum 6mm.

In case of a revolving (180°) door, it must perfectly stop in the 0-position; a door which is not in the exact position cannot be locked. A proper floor spring with adjustable stop and 0-position is a good solution. With these doors it is advisable to provide more lateral clearance. It also goes without saying that both door and doorframe must be sufficiently rigid and that the lock must be firmly installed for correct operation.

OPTIONS:

- Solid striker plate (6mm thick) with adjustable striker cup (a movable insert that allows adjustments : 2mm to the left and 2mm to the right).
- PCB protected in polyurethane casted resin against humidity, etc. & door detection by 3 Hall-sensors instead of 1 Hall-sensor.
- Security escutcheon with handle SEH-17 or SEH-22 (solid casted piece) fixed with 2 x M8 screws, offers a strong protection against aggression on the cylinder and gives an extra anchoring for the lock.
- BFB-1: Baseplate fixation blocks
- SMB: Surface mount bracket
- REL-1: Printed circuit board to transform the bolt and door signals coming from the A1-BASIC lock into potential free outputs.
- SRC-1: Din rail box, which translates the information coming from the A1-SRC lock and turns them into potential free outputs (position of the bolt and the door, use of the key and the handle).

A1 ELECTRO-MECHANICAL SECURITY LOCK



B&B SEH17 (for models HA, HX & HE)

Security escutcheon with handle for 17mm europrofile cylinder.



B&B 24V DC STABILIZED POWER SUPPLY - PS24D52

- 24V Power Supply for 2 locks with back-up battery connexion
CON1 = INPUT 220V/50Hz 120VA
CON2 = connection to back-up batteries (3 x 12V)
CON3 = Extra output 12V/DC maximum 0,2A
CON4 = Output 24V/DC, 4A peak, 1A continuous (LOCK1)
CON5 = Output 24V/DC, 4A peak, 1A continuous (LOCK2)
- All outputs have a short-circuit protection, in case of a short circuit on the 24V, LED1 will illuminate.
- In case of overheating because of a surcharge, LED1 will also indicate an error.
- A possible voltage drop (which is possible over a long line) can partially be compensated by adjusting the TRIM2 (current compensation in power supply). The principle is such that the outgoing voltage only increases when a voltage peak is needed (not continuously).



B&B A1-BASIC CABLE

Cable with 2 x ϕ 1,5mm and 3 x ϕ 0,22mm wires + shielding

RED	: power +24V
BLUE	: GND (0V)
BLACK	: unlucking impulse (to GND)
BROWN	: bolt signal
YELLOW	: door signal



CB1 - PUSH BUTTON WITH BOLT & DOOR SIGNALIZATION

The CB1 control box has the following functions:

- push button (1 time opening)
- rocker switch (continuous opening)
- bolt status signalization LED's
- door status signalization LED's



REL-1 (POTENTIAL FREE CONTACTS BOLT & DOOR)

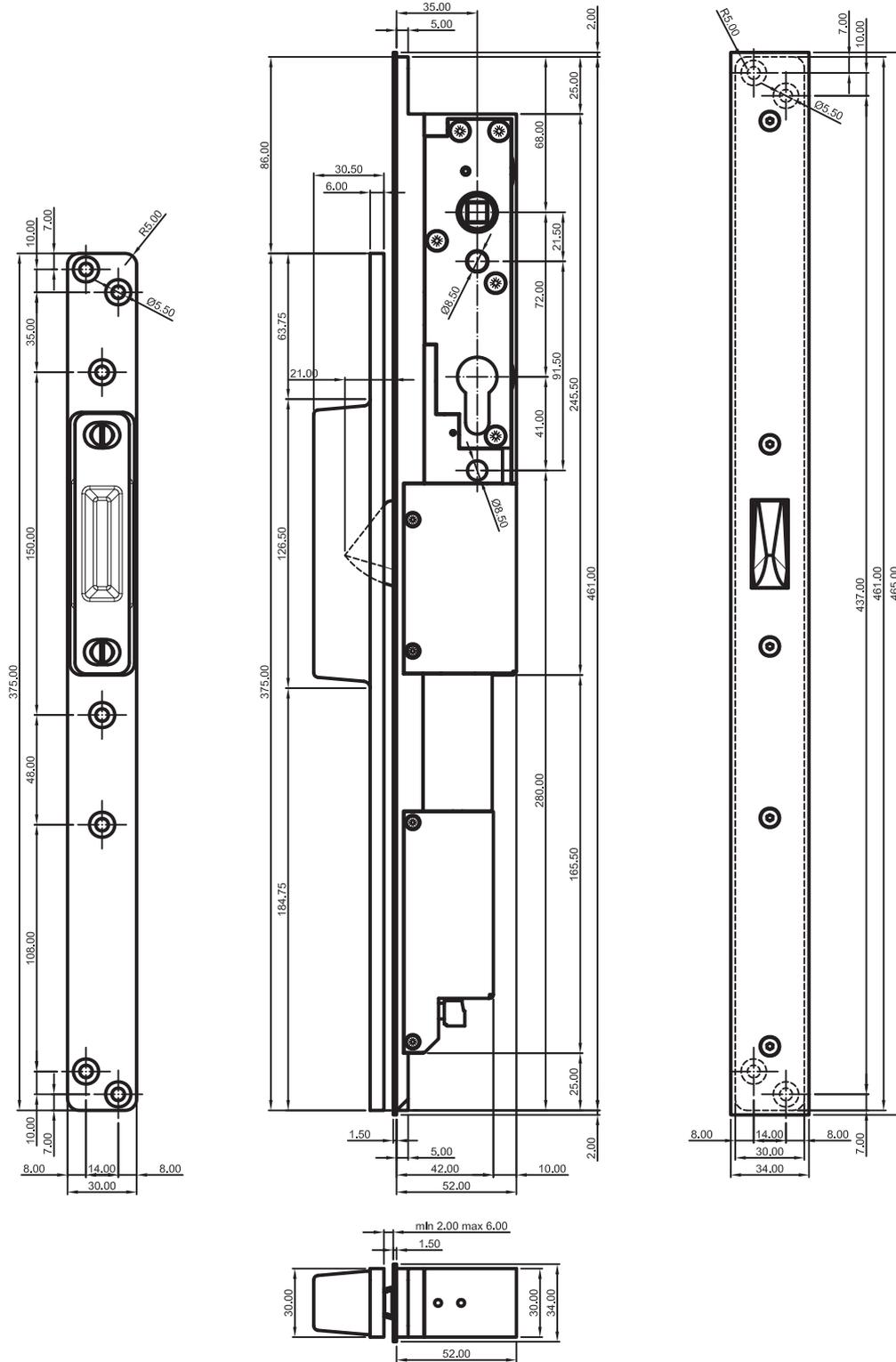
Turns the bolt and door signals coming from the A1-BASIC into potential free outputs.



SRC-1 (POTENTIAL FREE CONTACTS BOLT, DOOR, KEY & HANDLE)

Turns signal-A and signal-B lines coming from the A1-SRC into potential free outputs.

A1 ELECTRO-MECHANICAL SECURITY LOCK



A1 3517 + ASP

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