

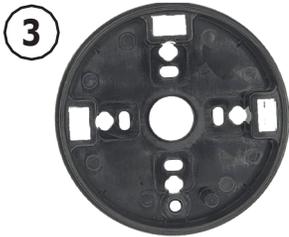
General Information

Your 6120/6123 Lock was shipped with the keypad, keypad base, and cable disconnected. If your lock is not already assembled, temporarily connect them as shown in these instructions.

You should install fresh batteries in the keypad (S&G recommends Duracell® alkaline batteries) and check the function of the lock prior to installation by pressing 123456# and observing the lock bolt retract, then extend 6 seconds later. After this check, disconnect the cables from the keypad by pulling on the connectors (**NOT on the cables themselves**).

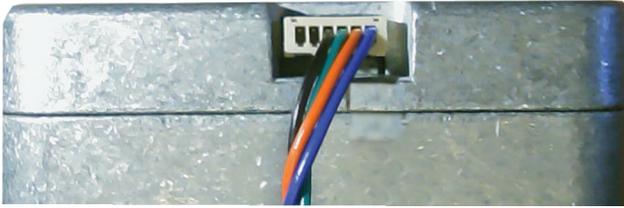


Item	Quantity	Description
1	1	Lock body
2	1	Keypad
3	1	Keypad Base
4	1	Keypad cable
5	1	Bolt Position Cable (BPI) / Door Switch
6	4	Keypad mounting screws (2 standard/2 metric)
7	6	Lock Mounting screws (3 standard/3 metric)
8	3	Lock serial number



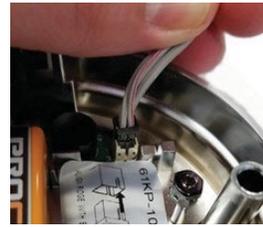
Plug in the Cables

- Plug the keypad cable into the lock body
- Plug the BPI/Door Switch cable into the lock body



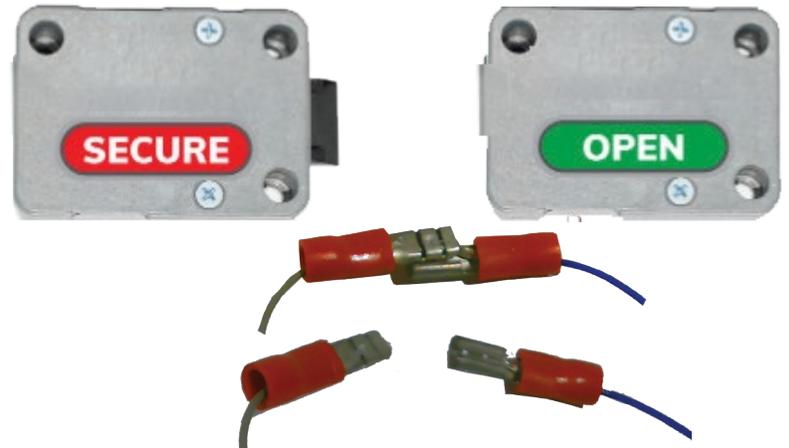
Connect the Keypad

- Plug the 4 pin connection into the keypad.
- Insert batteries



Test Lock

- Enter 123456# and verify bolt retraction
- If testing door switch link connector before entering an opening code. When bolt is retracted, unlink connector. Link connectors when ready for bolt extension.



Lock installation

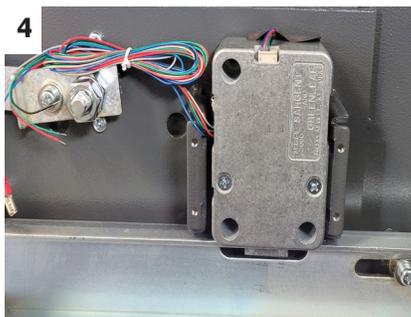
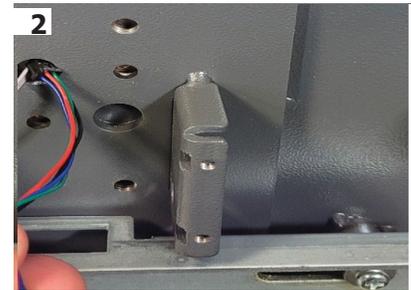
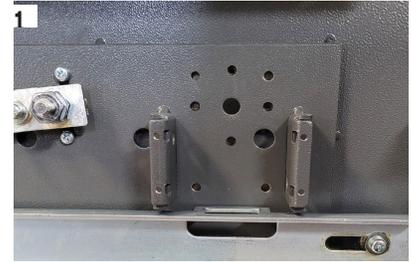
- UnPlug the 4 pin connector from the keypad.

The lock is now ready to be installed on the door.

Mounting Considerations

- Sargent & Greenleaf 6100 series Motorized Electronic Combination Locks have been designed to use the same mounting screw locations and occupy the same space as most other S&G locks, both mechanical and electronic.
- A minimum distance of .150" (3,8 mm) is required between the end of the lock case containing the bolt and the closest approach of the safe's blocking bar or cam plate which is normally blocked by the extended lock bolt. Do not allow the safe's blocking bar or cam plate to depress the electronic lock's bolt farther than it retracts during normal motor operation. This can lead to inconsistent lock operation.
- The 6100 series requires two 9-volt alkaline batteries (may or may not be included with your lock depending on the specific kit ordered). We recommend Duracell® batteries. Do not use old or partially drained batteries.

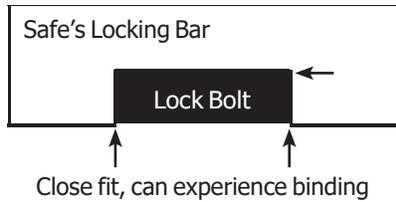
1. Remove the existing lock (if present). The mounting plate should be smooth and flat, with ¼-20 (M6) mounting screw holes. The wire channel (spindle hole) must have a diameter of at least 0.312 inch (7,9 mm). The 6100 series can be mounted right-hand, left-hand, vertical-up, or vertical-down without any modifications or adjustments.
2. Use a reamer or round file to remove any sharp edges from the wire channel (spindle hole) that might damage the wire cable. Gently pull the connectors to ease the cables through the hole. Pull 6" to 8" (15 to 20 cm) of cable to the front of the safe door. Make sure the cable is not crimped or stressed at any point.
3. Using two of the ¼-20 (or M6) screws in the kit, loosely attach the lock body to the safe's mounting plate. This is just to hold it in place during cable attachments to the keypad and keypad extension. Be very careful to avoid crushing or crimping the cables. Remove the lock mounting screws so you can carefully pull the excess extension base cable inside. It is important to make sure the keypad and extension cables are within the recessed channels underneath the lock case before the case is securely attached by the three mounting screws. Once placed in the most convenient channel, each cable should be protected. It is very important that cables are not folded, crimped, or crushed beneath the lock case.
4. If using the door switch or BPI, you will need to connect cables to lock body before installing. Follow step 3 to secure the lock to the door. Once installed route the cable appropriately to connect the BPI or the door switch cable to the appropriate connection. Avoid any bolt work movement that could cause damage to the cable or interfere with the opening and closing of the door.
 - The black/red/green wire bundle is for the bolt position indicator, a dry contact switch (24VDC, 0.5A max.). The black wire is common, the green wire completes a circuit to the black wire when the lock bolt is retracted, and the red wire completes a circuit to the black wire when the lock bolt is extended. The BPI can be used to trigger any switch-activated device.
 - The blue and grey wire is the secure loop. This closed circuit may be used in applications requiring switches or other devices to signal the lock that bolt work is thrown, the door is closed, or some other action has taken place.



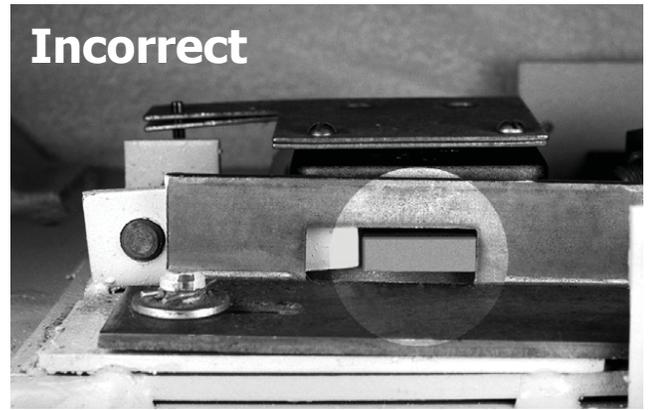
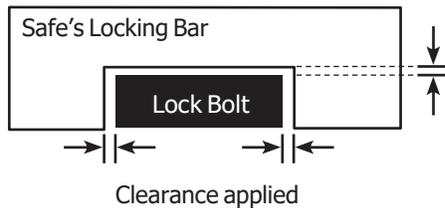
Lock installation Considerations

- A. Make sure the lock bolt doesn't bind against the safe's bolt work.

The top photo shows binding of the edge of the cutout in the safe's blocking bar, even though the bolt work is fully thrown to the locked position.



In the bottom photo, the binding has been relieved by removing a small amount of material from the side of the blocking bar cutout. It is important that there is clearance on all sides of the lock's bolt when the bolt work is in the fully locked position. Binding will impair the lock's performance. Any necessary modifications should be made to the bolt work, not the lock.



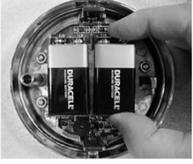
- B. If your safe incorporates a relock device, you will need to attach the plate that normally holds it in check to the lock body. This is usually done at the lock's cover screw locations. Remove the cover screws. **DO NOT REMOVE THE LOCK COVER**, as this will void the product warranty. Typically, the cover screws will be replaced with slightly longer 8-32 machine screws. Your replacement screws must engage the threaded holes in the lock body by at least four threads. Relock device designs vary from safe to safe. You must make sure the replacement cover screws hold the lock cover firmly against the lock body, and that the relock device plate holds the device securely in check. Otherwise, there is risk of a lockout. After the plate is installed, once again check to make sure wires and cables are secured so that they will not come into contact with moving bolt work or anything else that can damage them.



Keypad and Base Installation



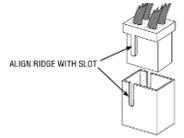
1. Run the connector and wire cable through the center hole of the mounting base. Then use the included 8-32 machine screws to attach the base to the safe door. The attaching screw holes will line up with those used for any standard S&G dial ring (excluding R132 key locking dial rings).



2. If your lock is equipped with a keypad that uses a single battery in a removable drawer, use the instructions that are packed with the keypad for its installation. The following instructions are for two battery keypads. Install a new 9-volt alkaline battery in each of the keypad's battery holders (Duracell® is recommended). Support the top of each holder as the battery is inserted. This will prevent bending or breaking the holder.



3. The wire cable connector is shaped so that it will fit into the circuit board receptacle only when aligned correctly. Insert the connector into its receptacle in the keypad housing. If it does not slide easily into place, do not force it. This means you need to turn it 180° before attempting to insert it again.



4. Make a loose coil of the excess wire cable. Hold the coil away from the three spring clips that will secure the keypad to the mounting base.



5. Place the keypad over the base. Make sure the keypad cable is clear of the pad's two spring clips as you push the keypad firmly onto the base. It should snap into place. If you need to remove the keypad, pull the bottom (area nearest the S&G logo) away from the mounting base first. Never allow the keypad to hang by the attached cable. The installation is complete, but do not close the safe door until successfully completing the following lock test.



The installation is complete, but do not close the safe door until successfully completing the following lock test.

Lock Test

The following check should be performed three times with the door remaining OPEN.

At the keypad, enter 123456 #. The lock bolt will retract. Turn the safe handle to verify that the lock is unlocked. Turn the safe handle to the locked position. The lock will give a low, high beeps when bolt has secured. The safe door should remain open for the three operational checks. You can close the safe door and turn the handle to the locked position after the third operational check. The lock will give a low, high beeps when bolt has secured. Test the safe's handle to make sure it is secure.

*S&G has include a few zip ties to bundle up any loose cable. When utilizing the ties, try not to damage the cables and provide enough slack to allow for keypad removal.

Lock setup

Interface with Bolt work:

The 6120/6123 lock is not intended for direct bolt work attachment. Before installing the lock, operate the safe opening mechanism and verify that the installed position will effectively secure the bolt works when the lock is locked. After installation, check that there is clearance between the combination lock bolt and the bolt works; as pressure on the bolt could affect the lock's ability to function properly.

Attaching Screws:

Use only the screws provided with the lock. They must engage the mounting plate by at least four full threads. Do not use lock washers or thread sealing compounds.

Recommended Attaching Screw Torque:

30 to 40 inch-pounds (33.9 to 45.2 dNm) for the lock body. No more than 15 inch-pounds (1.695 Nm) for the keypad base attaching screws.

Minimum Lock Cable (Spindle) Hole Diameter:

0.312 inch (7.9 mm)

Maximum Lock Cable (Spindle) Hole Diameter:

0.406 inch (10.3 mm)

Lock is designed to Move:

50 Grams (.49 N)

Lock Bolt Maximum Free Movement:

0.352 inch (8.95 mm) / 0.109 inch outside the edge of the lock case

Maximum Bolt End Pressure:

lock is designed to withstand at least 225 lbs. (1000 Newtons)

Maximum Bolt Side Pressure:

Safe and container boltwork or locking cam designs must never apply more than 225 lbs. (1000 Newtons) of side pressure on the lock bolt.

Mounting Environment:

The lock body is designed to be mounted inside a secure container. The container must be constructed to offer protection against physical attack directed at the lock. The amount of protection is dependent on the desired level of security for the system as a whole. Lock protection may include barrier materials, relock devices, thermal barriers, thermal relock components, or any combination of these. Relock device attaching screws must NOT be longer than the depth of the tapped hole provided in the lock case. Security relevant parts of a high security lock should not be accessible to unauthorized persons when the door of the secure storage unit to which it is fitted is open. A minimum distance of 0.150 inch (3.8 mm) is recommended between the end of the lock case and the closest approach of the safe's blocking bar or cam plate (which is normally blocked by the extended lock bolt). Maintaining this clearance will allow the lock to deliver optimum performance.

Code Restrictions:

Personal data that can be related to a code holder, such as a birth date, street number, or phone number, should not be used in creating a lock code. Avoid codes that can be easily guessed (such as 12345678 or 11111111). The lock's factory default codes should be changed when the lock is put into operation by the end user.

Note:

Every installation of this product must comply with these requirements and those in the product installation instructions to qualify for the manufacturer's warranty and to comply with EN1300 requirements. The length of any external cabling used for this product must not exceed 3 meters in length. Use of cabling exceeding 3 meters may void product certifications.

