

# **Amsec KPL 2000 electronic digital safe combination lock Changing from mechanical safe lock to electronic keypad safe lock**

The digital or electronic combination lock has often replaced the mechanical combination lock in new safes as standard equipment. The digital combination lock eliminates the need to rotate the dial to align the wheels of a mechanical safe combination lock and removes any need to remember which direction to turn a dial type safe combination lock. While mechanical safe combination locks will undoubtedly continue to be used for many years to come, the Amsec KPL 2000 series offers features which make combination entry far easier for most users of safes. Changing from a mechanical safe lock to an electronic keypad offers convenience and flexibility of combinations available to the end user.

AMSEC introduced the KPL2000 series digital combination Lock in 1990. These locks have evolved over the years, adding more features as the electronics have become available. The KPL2000 series locks include three basic components. The lock, keypad assembly and electronics module. The KPL2000 electronic safe locks have a footprint similar to standard mechanical combination locks.

The AMSEC KPL2000 series digital combination locks are available in two basic configurations-the KPL2000 lock equipped with the standard bolt and the KPL2000S lock equipped with the slambolt. The KPL2000S slambolt is designed for wall safes and similar types of safes where there is no boltwork. To prevent bouncing or vibrating the bolt open on a locked safe, the KPL2000 series locks have a patented inertial counterweight mechanism.

The electronics module contains the functional circuitry for the digital combination locks. It is located inside the safe within a plastic case. An 8 conductor modular phone cable connects the keypad with the electronics module.

The two part keypad enclosure assembly is installed into the safe door using the existing safe dial ring screw holes. The keypad is an industrial controls-type overlay with stainless steel contacts. A red LED indicates operation of the keypad. The keypad enclosure is secured to the assembly using two 3/16" allen screws. Four AA batteries are used to power the KPL2000 and are located on the bracket assembly of the keypad enclosure assembly.

The following instructions describe a retrofit of the KPL2000S slambolt into an AMSEC WS1514 wall safe with an existing mechanical safe combination lock. The solid steel 3/16" thick door is mounted to the safe body with a continuous non-removable hinge. The lock bolt acts as the locking mechanism and no additional boltwork is required in the door.

## **Replacing dial type, mechanical safe combination lock with an Amsec KPL 2000 S electronic keypad safe combination lock Removing The Existing Mechanical Safe Lock, Dial and Ring**

Step 1. Remove the back cover of the mechanical combination lock.

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Step 2. Remove the spline key using a pair of pliers or side cutter.

Step 3. Unscrew the drive cam.

Step 4. Remove the dial and spindle.

Step 5. Unscrew the four Phillips screws securing the combination lock onto the door.

Step 6. Remove the dial ring.

NOTE: the sample WS 1514 wall safe has the dial ring attached to the safe door with double stick tape. There were no dial ring screw holes. Two #8 x 32 threads per inch tapped holes are required to install the KPL2000S digital lock. Do not drill through the door.

### Installing The Amsec KPL 2000 S Electronic Keypad Safe Lock

The installation of the KPL2000S Digital Lock in a wall safe is pretty straight forward. There is no bolt work, insulation, or other components to interfere with this installation.

Step 1. Use a file to remove any burrs or sharp edges from inside the spindle hole.

Step 2. Loosen the two screws on the sides of the keypad enclosure using the 3/16" Allen wrench. Slide the keypad enclosure from the keypad bracket.

Step 4. Slide one end of the 8 conductor modular telephone plug connector through the spindle hole. If the plug will not slide through, the opening must be enlarged or the 8 conductor plug must be removed to feed the wire through the spindle hole. If the safe is equipped with hardplate and the spindle opening is too small for the plug to slide through, the modular phone plug must be cut from the end of the cable and a new modular connector installed after passing the cable through the spindle hole. This type of connector is readily available at local electronics supply stores or larger, well stocked home improvement stores.

Step 5. Install the keypad bracket over the spindle and dial ring openings using the two 8-32 x 3/8" Phillips head screws.

Step 6. Insert the 8 conductor modular telephone plug through the spindle hole leaving enough cable on each side of the door to complete the installation. If one of the 8 conductor plugs was removed, install a new plug. There is a small rib on one side of the cable. Use this rib as a guide to position the plug.

Step 7. Slide the cable through the door without twisting or binding. Route the cable within the slotted groove in the lock body. Mount the lock onto the door using the four 1/4"-20 x 3/8" screws. Nylon washers are supplied for installation where the mounting plate is less than 1/4" thick.

Where applicable, re-attach any relock mechanisms built into the door.

Step 8. Attach the telephone cable plug into the socket in the electronics assembly.

Step 9. Mount the electronic assembly onto the safe door using double stick tape. NOTE: For the WS 1514 wall safe, locate the electronics assembly away from the shelves, as the door will not close.

Step 10. Connect the 8 conductor modular telephone plug and the power connector into the keypad bracket. Wrap any excess wire and slide the keypad enclosure onto the keypad bracket. Snug the two Allen screws.

Step 11. Test the operation of the KPL2000S with the *door open*.

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### Programming the Amsec KPL 2000 Electronic Safe Combination Lock

The KPL2000 series digital combination lock operates using the keypad as the input device. A six to eight digit combination is programmed. The "C" key provides two functions: It activates the circuitry and clears the system when an improper keystroke sequence is entered. The factory set combination is C-1-2-3-4-5-6#. With the door open, test the operation four to six times to be certain the solenoid retracts and holds for 3 seconds.

To change the combination:

Step 1. With the *safe door open*, remove the rubber cap and depress the change button in the electronics module using the eraser end of a pencil. The red LED on the keypad cover will illuminate.

*NOTE: Do not use the writing end of the pencil as the graphite tip may break off and cause electrical problems*

Step 2. Dial the six to eight digit combination beginning with the first digit and finish by depressing the "#" key.

Step 3. Record this new combination and test the operation of the lock at least three times with the safe door open.

To resist manipulation attempts to unlock the AMSEC electronic digital combination locks, the units are programmed with a timed lockout feature. Once four incorrect attempts have been entered, the electronics lock out any further attempts to enter a combination for fifteen minutes. During this time period, any keystroke restarts the fifteen minute time delay.