

ML-2M U.L. Group 2M Combination Lock Installation Instructions (U.L. Grp 2M, E-VdS)



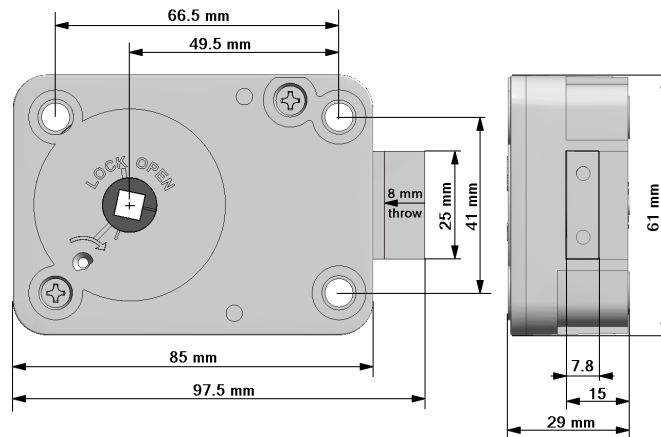
CHARACTERISTICS

The ML-2M is a manipulation resistant 3-Wheel Combination Lock and very easy to install. The lock has the standard foot print (66,7x41mm) and can be mounted in all four directions. (RH, LH, VU, VD)

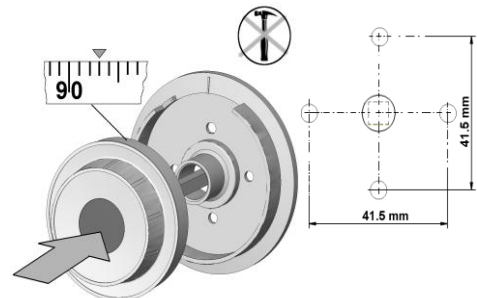
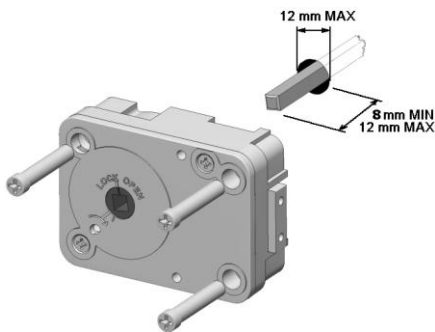
Measurements: 85 mm x 61 mm, x 29 mm. Lock bolt: 25 mm x 8mm with two M4 holes on the bolt head. Bolt Travel 8 mm.

The lock needs no Spline key and operates with a square 6x6mm shaft as the spindle.

DIMENSIONS / MOUNTING INSTRUCTIONS



The Lock is delivered with the Bolt retracted and ready for mounting. Do not move the cam (part with square hole) or the bolt. During *installation the bolt must stay in retracted position and the cam lined up as shown below.*






Use only the 3 mounting screws (US 1/4 20G BSW) and fasten as usual. (Torque approximately 3,5 Nm). With the lock in OPEN-position (bolt retracted) hold the dial in such a way that approximately "93" is lined up with the dial's opening index and push it with some pressure into the lock. The shaft cannot be pulled out.



Turn Dial LEFT to extend the bolt. The bolt must slide easily to the end position and should not be restricted by the boltwork.

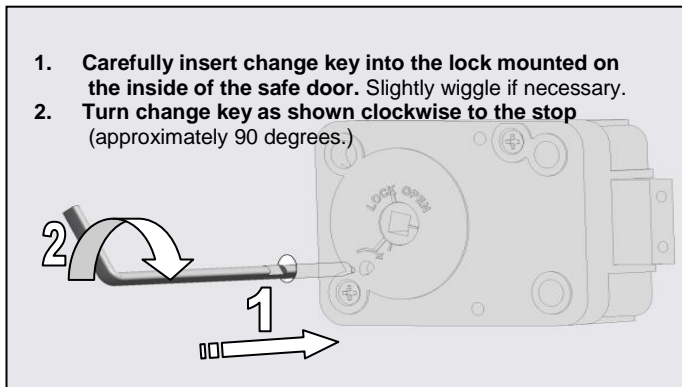
Delivered Factory Combination is "50".

4x  Turn LEFT and pass "50" three times and stop exactly on "50" on the Opening index the fourth time.

Due to installation tolerances it is possible that the Combination may have moved two numbers up or down. This movement is normal and will be eliminated once the Combination is re-set. If the lock does not open on "50", try opening at "48" then "49", "51" or "52".

Due to variances it is important to re-set the Combination after installation!

With door open, turn the bolt work and lock to locked position. Dial the Combination at which the lock opened on the CHANGING INDEX. Example: If the lock opens at "49", turn 4 x LEFT until "49" stops exactly at the Changing Index.



Change Keys

If installers use the same change key to set up several locks, it is important to inspect the change key on a regular basis.

If the change key is bent or shows signs of wear it needs to be replaced. Otherwise the new Combination will not set exactly as dialed.




Never apply excessive force

If change key cannot be inserted or turned, the correct Combination has not been dialed to the Changing Index on the dial. Take out the key and dial the valid Combination again.

Now dial your factory Combination using the CHANGING INDEX.

We suggest you set the Combination to 10-30-20 as that matches the user instructions LpLOCKS provides.

The last number must be higher than 10. For security reasons, each number should be at least 4 increments apart from the others. For example: 49-45-51 and not 51-53-52

- 4 x  Turn LEFT, pass first Combination number three times and stop exactly on the number on the **Changing Index** the fourth time.
- 3 x  Turn RIGHT, pass second Combination number twice and stop exactly on the number on the **Changing Index** the third time.
- 2 x  Turn LEFT, pass third Combination number once and stop exactly on the number on the **Changing Index** the second time.

When turning the dial, if a number is passed, start over at the beginning.

After the new Combination is entered, **turn change key LEFT and remove it**. The new Combination is installed.

Try the new Combination several times (using Opening Index) before closing the door!

DATA SHEET

<i>Mechanical Elements</i>	
Opening	Manually
Locking	Manually
Blocking Element	3 Wheels
Manipulation Protection	Yes
Mounting Dimensions	Standard Footprint
<i>Certifications</i>	
VdS	Class 2
EN 1300	Class B
U.L.	Group 2M

What if ...

...the cam accidentally moved before installation?

As long as the Combination has not been changed with the change key, the lock can be prepared for mounting following the steps below:

1. Hold the lock so that you are looking at the back cover and the bolt is to the right.
2. Turn the cam clockwise minimum 4 complete turns and stop when the cam is lined up as shown in figure 1.
3. Turn cam counterclockwise until lock opens. The cam should be lined up with the "LOCK OPEN" line on the cover (see figure 2).

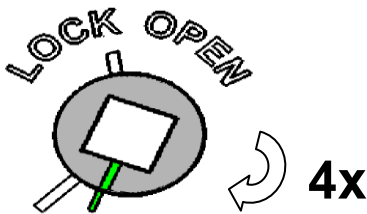


Figure 1

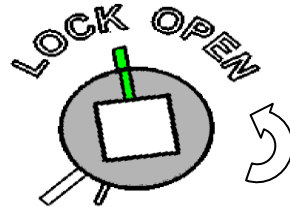


Figure 2

...the dial is hard to turn or the dial is rubbing on the dial plate?

Loosen the screw that holds the shaft in the dial and pull out the dial slightly. Then tighten the screw hand tight. Do not over tighten as that will pull the dial back in. Use a liquid thread locker like Loctite™ if required.

MECHANICAL DIALS

The Group 2M mechanical lock is compatible with the following dials from LpLOCKS:



Models and finishes available:

- | | |
|-------------|---|
| 1) MD-xx-xx | Top View Dial & Ring, ABS – Textured Black Non-Key Locking |
| 2) MD-xx-xx | Top View Dial & Ring, Metal – Matte Chrome Non-Key Locking |
| 3) MD-xx-xx | Top View Dial & Ring, Metal – Black – Non-KyLocking |
| 4) MD-xx-xx | Top View Dial & Ring, Metal – Bright Chrome - Non-Key Locking |
| 5) MD-xx-xx | Top view Dial & Ring, Metal – Bright Chrome - Key Locking |
| 6) MD-xx-xx | Top View Dial & Ring, Metal – Matte Chrome - Key Locking |
| 7) MD-xx-xx | Top View Dial & Ring, Metal – Black - Key Locking |
| 8) MD-xx-xx | Top View Dial & Ring, Metal – Black Pearl - Key Locking |

For more information, please see Top View dial and ring technical manual and mounting instructions.

Due to the use of a square shaft, the #ML-2M Group 2M Mechanical Lock is **NOT** compatible with dials that have a round, threaded spindle.