

# FEM3500FM

## Electromagnetic Lock

### Introduction:

- The **FEM3500FM** is a mini mortise mount electromagnetic lock that operates on dual 12 or 24 VDC.
- The magnetic lock has a built-in remote monitoring lock status switch (Normally open or Normally closed). The unit must be filtered and regulated with a DC Power source for optimal performance.

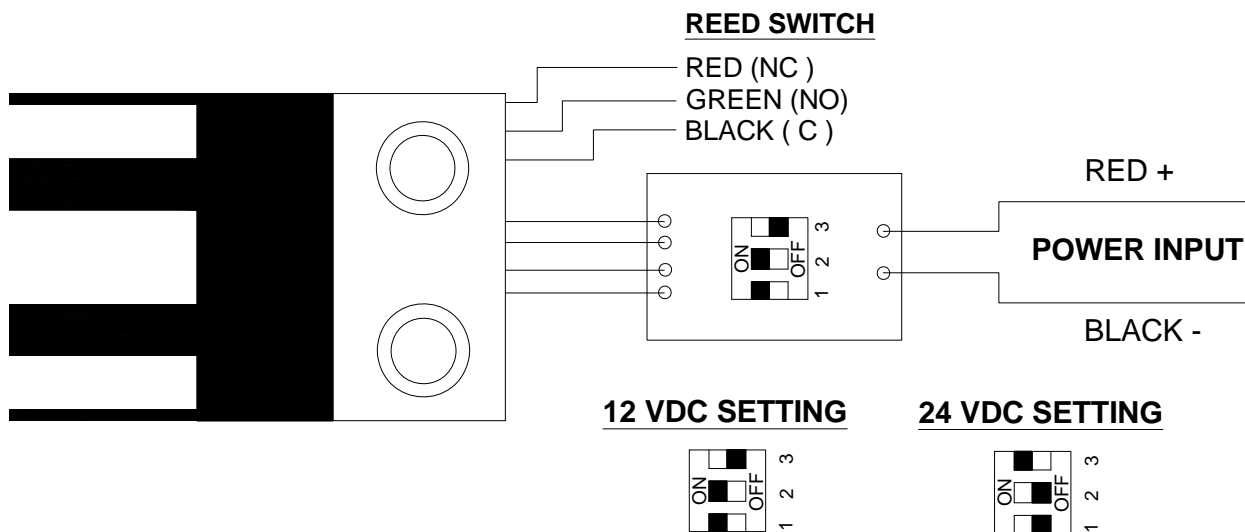
Lock monitoring on 3 output wire	Black wire Common	Red wire Normally closed	Green wire Normally open
Reed switch not operated	No Power on Magnetic Lock.	Power on Magnetic Lock and Door Open	
Reed Switch Operated	Power on Magnetic Lock and Door Closed.		
Reed switch contact rated	30 VDC, 0.2 A max.		

### Wiring and Power input requirements:

12 VDC    0.42 A max  
 24 VDC    0.21 A max

The (+) lead of the Power Source is connected to **RED** lead of the PCB and the (-) lead is connected to **BLACK** lead of the PCB. The operating switch or controlling contacts must be installed between the power source and the Magnetic Lock to reduce operating time of the magnetic lock to a minimum.

Dip switch settings: Switch positions 1 and 2 to **ON** and switch position 3 to **OFF** for 12 VDC operation.  
 Switch position 3 to **ON** and switch positions 1 and 2 to **OFF** for 24 VDC operation.



**WARNING:** The PCB Dip switch pin position must be set correctly before applying power to the lock, wrong pin setting will cause the PCB to fail. This will not be covered under warranty.

## Maintenance

Contacting surface of the Electromagnet and Armature plate must be kept free of dirt and foreign matters. Surfaces should be cleaned periodically with a non-abrasive cleaner. Do not spray the Electromagnet and Armature plate surface with any chemicals such as lacquer, etc. This will cause serious problems with the release of the magnetic lock and its armature plate resulting in serious safety problems.

## Installation Tips

The **FEM3500FM** has unlimited operating life and receives a great number of shocks from door closing and opening, so it is important to secure the magnetic lock firmly in place.

### **Do not tighten the armature plate tight against the door.**

The armature plate must be remained movable to allow surface alignment with the magnet face. The magnetic lock will lose holding force without this floating alignment.

### **Do not trim the rubber washer mounted on the head of the armature center bolt**

Trimming this rubber will adversely affect the release of the armature plate from the magnetic lock.

## Trouble Shooting

Problem	Possible Cause	Solution
Door will not lock	No DC voltage to lock.	Check power supply and wiring to magnetic lock.
Reduced holding force	Bad physical contact between armature plate and face of magnet.	Ensure mating surfaces are clean and in proper alignment and the armature plate floats freely.
	Low voltage or wrong voltage setting	Check magnetic lock for low voltage or wrong voltage setting.
Delay in door release	Circuit switch is not between magnetic lock and power source.	Re-wire circuit switch between magnetic lock and power source.
	Secondary diode installed across magnetic lock.	Remove this diode, The PCB is equipped with Voltage spike protection.
Reed switch status is incorrect	Misalignment of armature plate. Reed switch has displaced inside the magnetic block.	Check alignment of armature plate. Reposition Reed switch. Contact manufacturer for instruction.