

EM3500FM 280kg Electromagnetic Lock Installation Manual

Introduction:

The EM3500FM is a 280kg flush mount single magnetic lock.

The **Lock Status Switch (LSS)** indicates if the lock is powered and the magnetic bond is active using a Hall Effect crystal. The output is an onboard relay, the the output requires the lock to be powered.



Installation Tips

Armature Plate must remain flexible - 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 rubber washers will adversely affect the release of the armature plate from the magnetic lock.

Important Safety Requirements

Apply thread-locker glue (e.g. Loctite) to the thread of the Armature-Plate-Fixing Screw (Allen-Screw) to prevent from becoming loose.

Locks should be inspected at regular intervals to ascertain the safety functionality.

The supplied Allen screws cater for maximum door thickness of 45mm.

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



Default operating voltage factory set to 24 volts.

Trouble Shooting

Problem	Possible Cause	Solution
Door will not lock	No DC voltage to lock. Loose wire on	Check power supply and wiring to
	terminal strip.	magnetic lock.
Reduced holding force	Bad physical contact between armature	Ensure mating surfaces are clean and
	plate and face of magnet.	in proper alignment and the armature
	Incorrect voltage jumper setting.	plate floats freely.
		Check magnetic lock for low voltage
		or wrong voltage setting.
Delay in door release	Circuit switch is not between magnetic	Re-wire circuit switch between magnetic
	lock and power source. Secondary diode	lock and power source.
	installed across magnetic lock.	Remove any installed diode. Voltage
		spike protection is on the PCB.

Maintenance

Contacting surfaces of the electromagnet and armature plate must be kept free of contaminating materials. Surfaces should be cleaned periodically with a non-abrasive cleaner. Do not spray the electromagnet or armature plate surface with any lacquer chemical, this will create problems with the release of the magnetic lock and armature plates.