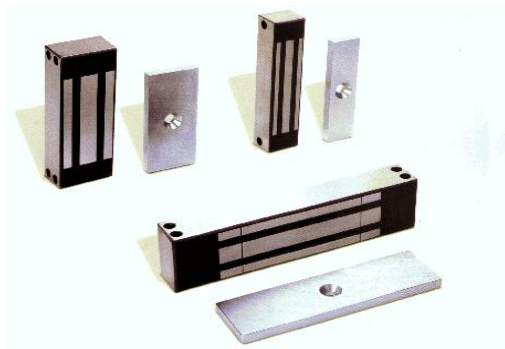


Magnetic Locks



EASYSpec -The Automation Specification Service for Professionals

Magnetic Locks



OVERVIEW

An electromagnetic lock, magnetic lock, or maglock is a locking device that consists of an electromagnet and an armature plate. By attaching the electromagnet to the door frame and the armature plate to the door, a current passing through the electromagnet attracts the armature plate, holding the door shut. Unlike an electric strike lock a magnetic lock has no interconnecting parts and is therefore not suitable for high security applications because it is possible to bypass the lock by disrupting the power supply. The possibility exists to add a battery back-up if required. Power supplies incorporating a trickle-charged lead-acid battery pack can be used to retain security for short term power outages. Nevertheless, the strength of today's magnetic locks compares well with that of conventional door locks and they cost less than a conventional light bulb to operate. Magnetic locks are always DC devices and maybe be 12 or 24vDC.

Magnetic Locks

EXAMPLE

This specification allows for a single maglock which controls an entrance door. A separate push button will release the lock when pressed.

GENERAL

The maglock will be surface mounted and suitable for both inswing and outswing doors. Brackets (L bracket, Z bracket, U bracket) are used to adjust the space between the door and lock. The principle behind the electromagnetic lock is to use electromagnetism to maintain the lock after energising. The electromagnetism exploits the advantage of a solenoid. The holding force should be a collinear load and the lock and armature plate should be face-to-face in the correct position to achieve optimal operation.

- Up 1200 pounds of holding power
- Only 3 watt power consumption
- Vandal and weather resistant
- Stainless steel
- Low Maintenance - no moving parts
- Good choice in a cold climate, always warm when powered and locked
- Easier installation, no mortising or door modification for most installations when using maglocks
- Lock fails OPEN when power supply is interrupted
- 12 or 24 volts DC self sensing - will accept either
- Each magnetic lock comes with an armature and full mounting hardware and template. The magnet and armature are two separate pieces. Usually the magnet is mounted to the top of the door frame and the armature is mounted to the top of the door.

INSTALLATION

The magnetic lock should always be installed on the inside (secure side) of the door. Installation is as simple as installing the header of the door frame for outswinging doors or using a Z bracket for inswinging doors. It is important to make sure the armature plate and the electromagnet align as closely as possible to ensure efficient operation. Magnetic locks are almost always part of a complete electronic security system. Such a system may simply consist of an attached keycard reader or may be more complex, involving connection to a central computer that monitors the building's security. Whatever the choice of locking system, fire safety is an important consideration.

VOLTAGE

The power for an electromagnet lock is DC (Direct Current), around 6W. The current is around 0.5A when the power is 12vDC. Generally, the specification of the electromagnet locks is dual voltages 12/24vDC. Single voltage output can be required for 12vDC or 24vDC applications. The figure presents the relationship between voltage and holding force. When the current is fixed, voltage is proportional to power consumption.

Magnetic Locks

Dimensions: 265mm long X 70mm high X 40mm deep

Current: 250mA @ 12vDC 125mA @ 24vDC

CONTENT:

- 1 No. Maglock
- 1 No. Z&L Brackets for Maglock
- 1 No. CV12 Power Supply for Maglock
- 1 No. Push Button Control

All materials and specialist advice can be obtained from:

Electro Automation (NI) Ltd

21 Crescent Business Park
Lisburn BT28 2GN

Tel: 028 9266 4583

Local Contact: David Cobain

Email: davidcobain@electroautomation.co.uk

Mobile: 07841 802801