





V1ER V3E V3ER V3ER V3E35R V4E V4E V4E V4ER V5E Mortice Electromagnets









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Thank you for buying our products and for the confidence you placed in our company.

# **1] PRODUCT PRESENTATION**

## Mortice.

- Monitored\*.
- Holding force: 180, 300, 400 or 500kg\*.
- Side load.
- High corrosion resistance.
- Delivered with armature plate.
- No mechanical wear.
- Ease of installation.
- Recommended for indoor use.
- Fail safe (Door unlocked when power off).
- No residual magnetism.
- **Buit-in varistor:** Electronic protection to eliminate back EMF.
- Electromagnetic lock dimensions (L x W x D):
   V1ER = 221 x 34 x 21mm.
  - V3E series = 228 x 38 x 27mm,
  - V3E35R = 228 x 35.5 x 24.5mm,
  - V4E series = 229 x 43 x 27mm,
  - V5E = 287 x 64 x 40mm.
- Armature dimensions (I x w x d):
  - 180kg = 130 x 32 x 9mm,
  - 300kg = 185 x 38 x 11mm,
  - -400kg = 185 x 45 x 12mm,
  - 500kg = 185 x 60 x 12mm.
- Silent operation.
- Power supply: 12/24V dc.
- Power absorption:
  - 12 V DC = 500mA, - 24 V DC = 250mA.



# Holding References Monitored force V1ER 180kg V3E 300kg V3ER 300ka V3E35R 300kg V4E 400kg V4ER 400kg V5E 500ka EC certification WEEE IP42 RoHS

# 2] REMINDERS AND RECOMMENDATIONS

The function of an electromagnetic lock is to ensure the locking of an access point. This document is a guide of installation which will allow you to secure the installation according to the characteristics of the product, the site and the environmental requirements.

## APPROVAL RELATIVE TO EMERGENCY EXITS

In the case of an installation of electromagnetic lock on emergency exits, it is imperative to make sure that these exit points will be automatically free in case of fire alarm, to open in the event of a fire alarm to allow evacuation of the premises. The electromagnetic lock installed on emergency exits must be in accordance with the fire approval department (Ex: In France = NF 61-937).

For more information, contact CDVI, the local fire officer or the safety officer responsible for the building..

## **POWER SUPPLY**

An electromagnetic lock always operates in DC current, a very low safety voltage. The Diax<sup>®</sup> electromagnetic lock is recommended for use with power supplies manufactured by CDVI, however, other power supplies may be used on condition that they are of equivalent quality and characteristics rectified, filtered, regulated and protected by fuse in primary and secondary sectors.

## MOUNTING RECOMMENDATIONS

- Define the level of security of the access.
- Determine the maximum strength of holding force to this level of security.
- Select the Diax<sup>®</sup> electromagnetic lock according to the environment, the inside, the outside, the climatic constraints, (For example: stainless steel dedicated to an outside use).
- Always install the electromagnetic lock on the secure side of the place to be secured.
- Indeed make sure that the frame and opening, receiving or supporting the electromagnetic lock, armature plate and their accessories, are solid and resistant to damage or wear over a period of time.
- Consider any bracketry required for the assembly according to the type of support receiving the electromagnetic lock and armature plate.
- Define the passage of cables to ensure the protection against the vandalism and the environmental requirements (in particular through flexible hoses of door, glands, gutters, cross cables, plastic tubes).



## Armature plate

- It is vital to fix the electromagnetic lock and armature plate solidly on their supports.
- Make sure that the magnet and the armature meet evenly over their entire mating surfaces.
- The Armature plate must be able to pivot slightly about its center mounting screw to compensate for any door misalignment.

## MAINTENANCE

The Electro magnet and armature plate have a specific treatment which strengthens the protection against wear and corrosion. These products do not require high maintenance. Nevertheless to ensure optimum performance, it is recommended to clean regularly the surfaces in contact of the electro magnet and armature plate with a cloth and non abrasive products. If traces of corrosion appear, it is recommended to clean and oil the contact surfaces. Check and tighten regularly all the fixings of the Electro magnet and ensure that while the armature is able to pivot on its mounting, the fixing bolt is not liable to loosen (we recommend thread-lock for all fixing bolts).

# **3] PACKAGE CONTENTS**

## ELECTROMAGNETIC LOCK V1ER

|                             | •                 |                  | 0                          |            | $\bigcirc$     | S          | $\Box$                 |                | (Je           | 0               | 000               |
|-----------------------------|-------------------|------------------|----------------------------|------------|----------------|------------|------------------------|----------------|---------------|-----------------|-------------------|
| Mortice<br>magnetic<br>lock | Armature<br>plate | Roll pin<br>5x16 | Rubber<br>washer<br>10x6x4 | Key<br>3mm | Guide<br>piece | Cap<br>nut | Installation<br>manual | M5x20<br>screw | M5x8<br>screw | Steel<br>washer | Joggle<br>bracket |
|                             |                   | _                |                            |            |                |            |                        |                |               |                 | 2                 |

| i i i i i i i i i i i i i i i i i i i |                   |                  | 0               |   | A.                     |            |
|---------------------------------------|-------------------|------------------|-----------------|---|------------------------|------------|
| Mortice<br>magnetic<br>lock           | Armature<br>plate | Roll pin<br>5x16 | Steel<br>washer | Joggle<br>bracket (excepted<br>for the V5E) | M5x8<br>screw          | Key<br>5mm |
| 1                                     | 1                 | 2                | 2               | 2   | 8                      | 1          |
| MA                                    | and a             | $\bigcirc$       | 0               | Ø   |                        |            |
| M8x35<br>screw                        | M8x25<br>screw    | Guide<br>piece   | Cap<br>nut      | Rubber<br>washer<br>15x9x4                  | Installation<br>manual |            |
| 1                                     | 1                 | 1                | 1               | 1   | 1                      |            |

## ELECTROMAGNETIC LOCK V3E - V3ER - V3E35R - V4E - V4ER - V5E

# 4] OPTIONAL ACCESSORIES



# 5] ELECTRICAL CONNECTIONS

| TERMINAL<br>BLOCK | CORRESPONDENCE       | V3E - V4E<br>V5E | V1ER - V3ER<br>V3E35R - V4ER |
|-------------------|----------------------|------------------|------------------------------|
| +                 | 12 or 24V dc         |                  |                              |
| -                 | - 0 V                |                  |                              |
| N.C               | NC (Normally closed) | -                | •                            |
| сом               | СОМ                  | -                |                              |
| N.O               | NO (Normally open)   | -                |                              |

The NO/NC signal only switches when the door is closed with the power to it on.

# IMPORTANT NOTE

# 12V dc factory setup

Check the jumper position before connecting the lock to the input current. A wrong position could damage the lock. This type of damage is not covered by the warranty.



# 6] INSTALLATION (WITH AMCCHANFR20 OR AMCCHANFR16)



# 7] FAULT FINDING

| PROBLEM                    | POSSIBLE CAUSE  | SOLUTION   |  |  |  |
|----------------------------|---|--|--|--|--|
| Door locking<br>impossible | The lock is not receiving<br>DC current.                    | <ul> <li>Check that the wires are connected to the right terminals.</li> <li>Check that the power supply is compatible.</li> <li>Check that the lock is connected to the circuit correctly.</li> </ul>   |  |  |  |
| Holding force              | The lock and the armature are not lined up with each other. | <ul> <li>Check that the lock is connected to the circuit correctly.</li> <li>Check that the electromagnet and the armature are properly aligned.</li> <li>Check that the contact faces are free from dirt and rust.</li> <li>Check that the armature is soft mounted.</li> </ul> |  |  |  |
| reduced                    | Low voltage or armature jammed.                             | <ul> <li>Check that the lock is receiving the correct power<br/>supply satisfactorily.</li> <li>check the tightening of the armature<br/>and the condition of the rubber.</li> </ul>   |  |  |  |
| Faulty reed<br>switch      | Voltage too low. Misalignment.                              | <ul> <li>Check the power supply.</li> <li>Cable cross section to be determined according to the power supply and the locking.</li> <li>e.g.: 2 x 1.5mm2 ≥ 10m.</li> </ul>  |  |  |  |

# 8] NOTES

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# **V1ER - V3E - V3ER - V3E35R - V4E - V4ER - V5E** *Ventouse électromagnétiques encastrées*

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## Reference : G0301EN0458V01 Extranet : EXE-CDVI\_IM MORTICE MAGLOCKS CMYK A5 EN 01

# \* G 0 3 0 1 E N 0 4 5 8 V 0 1 \*

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