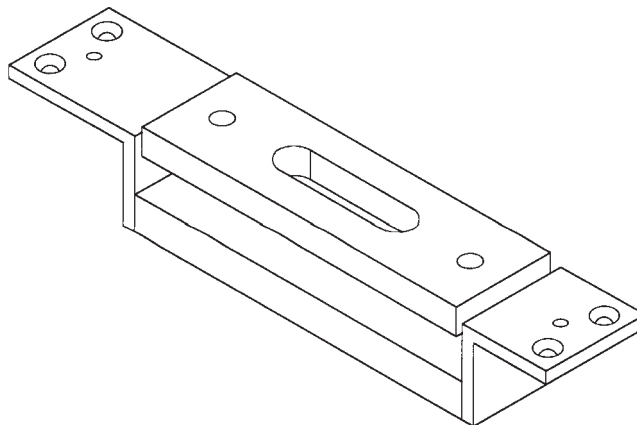
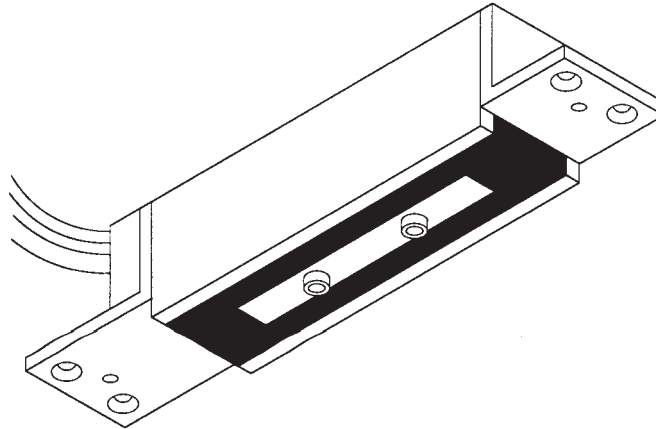


## Armlock® 1354 Mini Electro-Shearmagnet (Surface)



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## Before You Start

Before commencing the installation of the Armlock® 1354 Mini ShearMagnet (Surface) please check the following:

- The power supply intended for the application provides smooth DC and will supply sufficient amperage to accommodate the peak draw of the shear magnet(s) together with the needs of any other hardware in the system. For the electrical requirements of the Armlock® 1354 refer to page 4.
- Use the diameter and type of cable that is suitable for the product and the length of the run. Line drop is one of the most common causes of operating problems with electrical locking devices.
- It is generally good practice when fitting electro-magnetic locks that they should not be located in proximity to any other product that may cause interference; for example AC power cable, CAT5 cable and transformers (this list is not exhaustive).

Although in the design of this product every precaution has been taken to reduce the effect of interference the following recommendations should be followed to limit any problems: -

1. The recommended position for the PCB is as close as possible to the magnet assembly; ideally within one metre.
  2. For applications where the supplied cable is to be extended up to 20 metres (maximum provided the same gauge of cable is used) please ensure that the 100 nf ceramic capacitor is fitted across the green and blue wires at the cable extension join.
  3. We recommend a minimum gauge of 7 strands of 0.2 cable is used when extending the run.
- Study the fitting instructions carefully and relate them to the proposed application. Time taken here could help eliminate potential installation problems before it is too late.
  - Inspect the application to ensure it offers sufficient strength to support the shear magnet installation.
  - In situations where the installation and the wiring are the responsibility of separate companies, ensure that you have received all of the components necessary to complete the installation. A component checklist is provided for reference.
  - It is recommended that a good quality door closer be used to control the closing action of the door. Check that the door closes against the doorstop in the case of a single application and centres accurately on a double action door.
  - Remove the armature from its assembly and apply the 'threadlock' provided sparingly to the threads of the armature bolts and re-assemble.

### Checklist

- |   |       |
|---|-------|
| • Magnet Assembly .....   | 1     |
| • Armature Assembly .....   | 1     |
| • PCB.....  | 1     |
| • PCB Mounting Box c/w Cable Glands.....  | 1     |
| • Fixing kit containing machine and wood screws, bottle of threadlock,<br>Allen key for armature adjustment ..... | 1 Set |

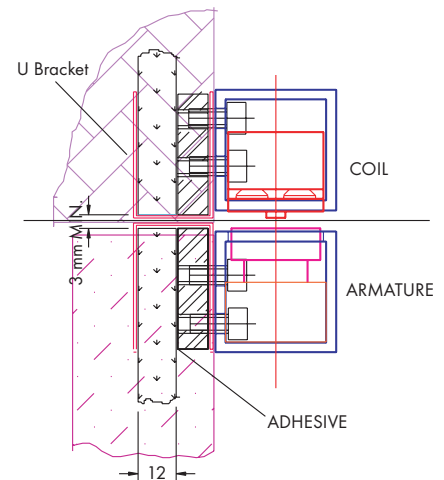
## Armlock® 1354 Mini Electro-Shearmagnet (Surface)

### Installation Instructions for Wood, Aluminium and Glass

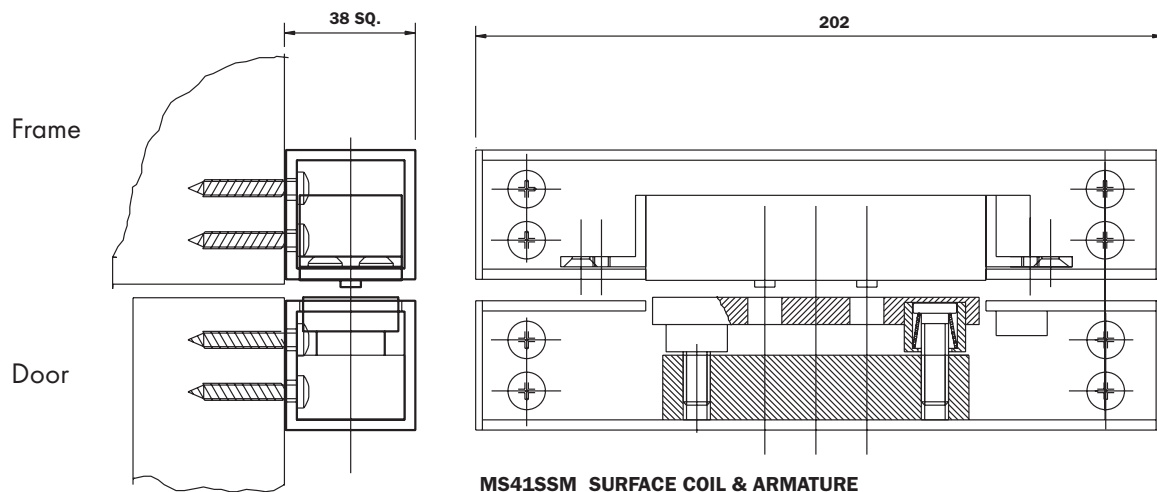
1) Check GAP between DOOR & FRAME - should be minimum 3mm & maximum 8mm. Sufficient material strength at the point of fixing is essential. The housing should be approximately 200mm to centre of magnet from leading edge of door.

2) Check that the **FACES of DOOR and FRAME** (or glass header) are **FLUSH with EACH OTHER**. If they are not, some means must be taken such as packing out or removing material to achieve it.

3) Position the **MAGNET** housing on the frame or header such that the magnet face is **flush** or protruding below door frame but ensure pins do not interfere with door movement. The **ARMATURE** housing can then be fitted to the door, parallel and as close as possible to the Magnet housing. Adjust Armature height with the hex key such that it is approximately **1mm clear** of shearpins.



4) Cable route can be achieved by carefully drilling through the rear of the Magnet housing to line up with any cable runs along the frame. Wire up to PCB and test. Secure at all fixing points, remove armature adjustment screws and **apply threadlock**, then reassemble. The cable may also exit through the plastic end cap, however the exit hole in the plastic end cap must be provided by the installer.



5) When installing glass door fixing kit to either housing, firstly offer up the assembled components to check for fit (12mm without packer, or 10mm with packer) and what gap will be needed between mounting plates. Mark positions by using masking tape or similar.

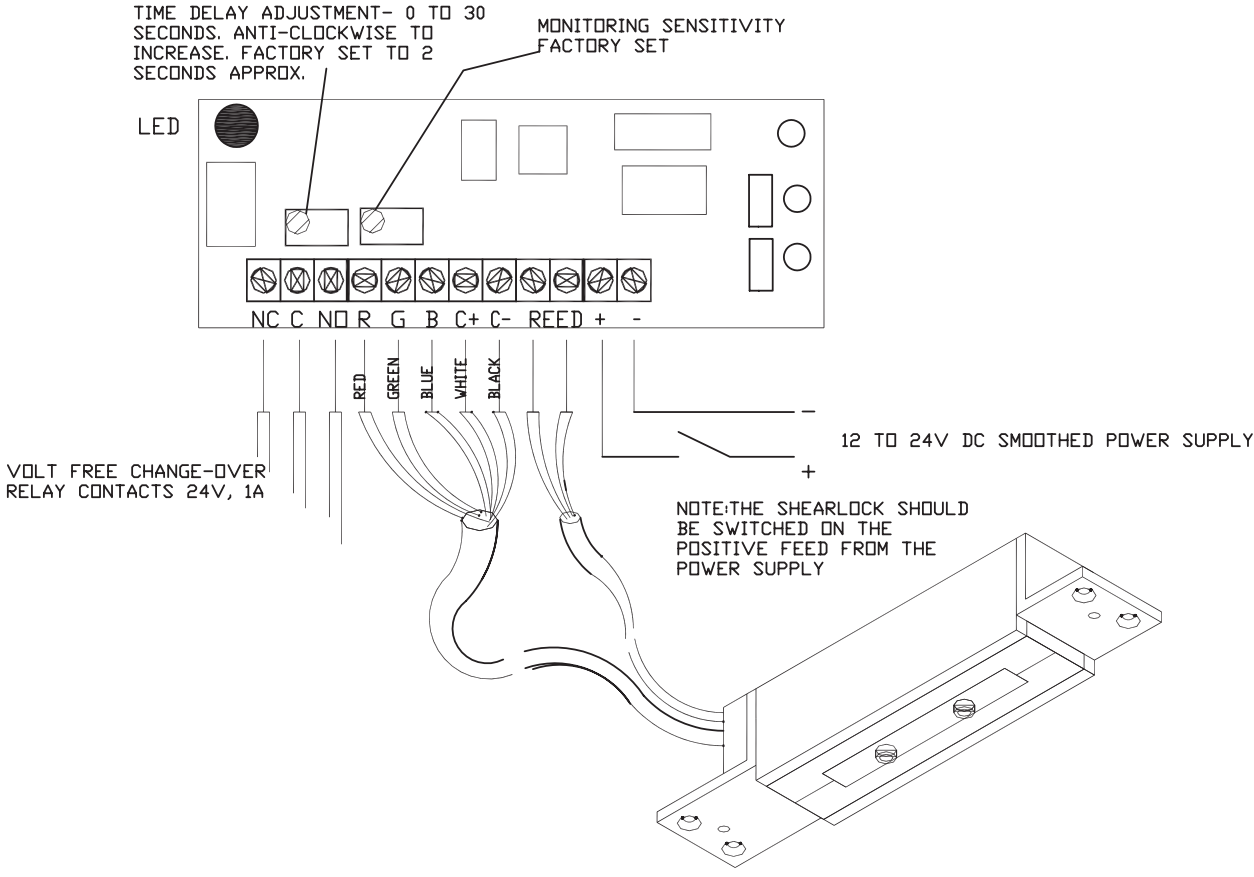
6) Degrease and clean both surfaces using methylated spirit or similar by firstly disassembling glass fix bracket. Spray activator to glass over full contact surface and allow to dry. Spread adhesive evenly on the aluminium mounting plate for the header, offer into position and clamp over length. Note! This must be correctly positioned within 5 sec. handling strength after 30 sec. Now fit glass door mounting plate using same procedure.

**Please note:** The supplier accepts no responsibility or liability for damage or injury caused as a result of a badly fitted glass fixing bracket when either a) the bracket has been incorrectly installed or b) a non-approved adhesive has been used. We recommend Loctite type 317 Adhesive with type 734 Activator or MS PENLOC two part adhesive.

7) Fit Magnet housing first and then follow steps 3 & 4 to complete.

8) Timber fixings included. Metal door fixings i.e. rivnut are not supplied in fixing kit.

# Wiring Diagram



# Armlock® 1354 Wiring and Troubleshooting

## Wiring

1. Wire the Armlock® 1354 as shown in the diagram. The voltage supply can be anywhere between 12V and 24V smoothed DC.

2. Closing the door contacts will activate the auto relock facility and instigate the time delay, which may be set between 0 and 30 seconds. The factory setting of 2-3 seconds should suit most applications.

After the time delay voltage and full current will be applied to pull the armature onto the magnet face.

The current position will then lower to a holding level to reduce heat output and power consumption.

If the magnetic circuit is closed i.e. the lock is secure, then the LED on the PCB will change from red to green. This will also change the Volt-free contacts of the PCB relay, rated at 24 Volt, 1 amp, allowing remote monitoring of the lock status.

3. If the Armlock® 1354 tries to lock but fails due to misalignment it will retry 100 times before stopping.

Although persistent misalignment should be remedied by adjusting the door positioning, this facility should deal with situations where the position of the door has been temporarily misalignment and is now correctly positioned in time to be successfully secured by the activation of the retry facility.

Consistent misalignment caused by incorrect door positioning is unlikely to be resolved by the facility but it will provide an audible indication that the unit has not been successfully locked. If the monitoring is used this will give remote indication of the Armlock® 1354's status.

After the retry facility has completed the 100 cycles the shearlock will remain in the open position. To restart its operation, align the door correctly and reset the system by operating the switch, card reader etc.

4.

Supply Voltage	Pull-in Current	Hold Current	Air Gap Mag/Armature	Air Gap Mag/Cradle Face
12VDC	1.5A(2 sec)	0.5A cont.	3-5mm	8mm max.
24VDC	1.5A(2 sec)	0.45A cont.	3-5mm	8mm max

## Troubleshooting

1. If the Armlock® 1354 shearlock fails to function please check the following:

Check the power supply is sufficient and that the polarity is correct.

Check the door contacts are 'making' when the door is closed. Test by putting a 'jumper' across the REED terminals.

Check the air gaps are in accordance with the table above.

If the door and frame is steel, that a separate door contact suitable for steel applications has been used.

2. If the Armlock® 1354 shearlock tries to lock 100 times but fails:

Check the polarity of the coil connections c+ and c-.

Check the faces of the magnet and armature are free from contamination and are correctly aligned both laterally and longitudinally.

Check the centring of the door closer for misalignment.

3. If the 1354 shearlock works intermittently:

Ensure all guidelines have been followed within these instructions and check that the 1354 is not being affected by another source that could cause interference.

If the cable run has been extended ensure the correct gauge of cable has been used and the 100 nf ceramic capacitor has been fitted across the green and blue wires at the cable join.