

3782EL trouble shooting guide



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Introduction

Since the successful release of the Lockwood Selector Series Electric Mortice Locks, a small number of installation scenarios warrant some additional information for our customers.

The Lockwood Selector Series Electric Mortice Locks present a number of feature improvements over the previous 3582 series, including a far greater number of field selectable options, inbuilt sounder, LED indicators incorporated into the lock body and a motor drive design, all best suited to 3-Wire configuration and operation.

As such, please familiarise yourself with the Instruction Manual as installation and programming procedures are different to the previous Narrow Backset Electric Mortice Lock and refer to the below FAQ section for some more specific assistance.

Lock is not-responding



Confirm lock has power by checking heartbeat LED. Remove top screw from cover (front) plate and looking for a blue LED flashing every 2 seconds

- **If the lock is powered (heartbeat is flashing) but still not responding:**

- If using 2 wire mode, confirm the red and green wires are joined together and there is 9-28VDC present between red/green and black connections depending on locking signal.
- If using 3 wire mode, confirm red wire is permanently powered (+9-28VDC) and green wire is switched (9-28VDC) on / off to send the lock/unlock signal.

- **If the lock is not powered (heartbeat is not flashing)**

- Remove lock from door and power using a micro-USB connector attached to a power bank, PC or mobile phone charger – if the heartbeat LED now operates:
- Test the cable at the door – there should be 9-28VDC present between the red and black wires.

- Test the locking signal – there should be 9-28VDC present between the green and black wires – this should change between off and on when a locking signal has been sent.

- **If the lock can be powered by USB and there is correct power on the cabling:**

- Remove all power from the lock for 2 minutes and check the setting switches on the back of the lock are set correctly (lock may have been powered in Escape-Escape and then the switches were moved)

What if I don't have enough wires for 3-Wire Control?

Most Access Control systems share Common inputs for their Monitored Inputs including Door Position, Deadlatch, Lock Status, REX & KOM. If this is the case with the Access Control system you're using and you have sufficient wires at the Lock for the Monitoring outputs, you can common together at least two of the Monitored Outputs common outputs to salvage a spare wire for 3-Wire control.

Any or all of the following Commons on the Lock Outputs can be connected together: 9, 10, 14 & 16, allowing for a minimum of 6 wires to achieve individual monitoring outputs for all functions being Door Position, Deadlatch, Lock Status, REX & Key Override.

Using this scenario, a minimum of 9 wires will enable full monitoring and control of the lock in 3-wire mode.

Additional wires could also be salvaged by placing in Series several Monitoring Outputs to a single Output, such as Deadlatch and Lock Status to provide one output to the Access Control system. Door Position may also be included in the One Output scenario, saving an additional wire.

Due to their unique functions, REX and KOM outputs should remain as individual outputs.

2-Wire Control



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We strongly recommend that 2-Wire mode is not used, specifically in PTO mode. Please see FAQ "What if I don't have enough wires for 3-Wire Control" first to determine if this scenario will assist you.

If you must use 2-Wire Control, the Red & Green wires can be connected together and switched to control the lock. This can also be achieved using the 9 – 12 adaptor (SP3782EL-251) which joins the red and green wires together and includes the new Lock Status monitor in series with the DPS reed switch and Deadlatch monitors.

In 2-Wire PTO (Fail Secure) mode, the lock will receive no power when in the Locked state. When the Access Control system sends an Unlock command to the Lock, it will send power to Unlock the door. This power must be present for at least 5 seconds to enable the energy storage capabilities within the lock to regenerate so that the Lock can Re-Lock when the power has been removed.

Therefore, when configuring the Door Unlock functions in the Access Control system programming, do NOT enable a "Door Relock on Door Open" function. This function will normally attempt to relock the Door as soon as the Door Position Input detects that the door has been opened after an Access Granted command. This will then cut power to the lock, quite possibly within one second of the door being unlocked.

The above scenario does not provide enough time for the Lock's energy storage to be recharged and the Lock will have insufficient energy to relock.

Also ensure that the programmed 'Door Unlock' period is set to a minimum of 5 Seconds. This will ensure that power is supplied for a sufficient amount of time for the Lock's energy storage to be fully charged, allowing it to successfully perform its locking functions when the power has been removed.

3-Wire and 2-Wire Control Diagrams

3-Wire Control is when the Lock receives constant power on the Positive (Red) and Negative (Black) wires and the triggering control is achieved using the Control Wire (Green) which is a Positive (+) trigger.

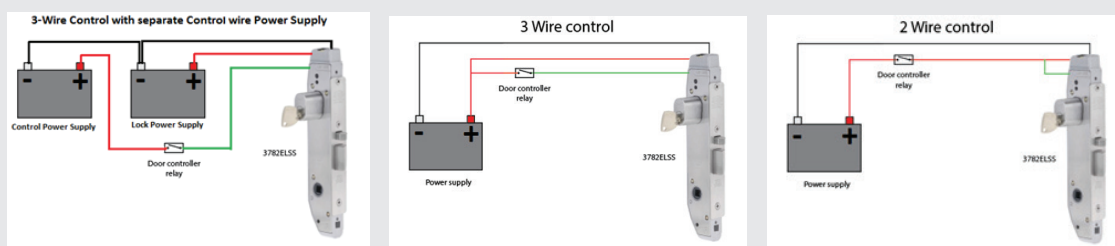
3-Wire Control using a Separate Power Supply for the Control/Trigger

When using a different Power Supply for the Control Line (Green Wire) to that of the Power Supply to the Lock (Red & Black Wires), the Common/Negative line of both Power Supplies must be tied together. This allows the Control wire to complete the circuit and actually trigger

the Lock operation. Failure to connect the two negatives will make the lock inoperable.

2-Wire Control

2-Wire Control is where the Lock receives a constant Negative (Black) and the Lock status changed using a Positive trigger on both the Positive (Red) and Control (Green) wires, which are tied together. Lock Control must be switched on Positive ONLY. As the Lock Body is grounded, if the Door Frame and Door are also Grounded and switching is performed through the Negative/Ground wire, the Lock will remain energised constantly.



Lock is not locking according to the way I have set the switches:

The setting switches will not take effect until the lock has fully powered down. Disconnect all power from the lock and wait at least 2 minutes and then retry.

- **If the problem persists, return lock for investigation**

Lock is remaining in powered state even when I send a lock / unlock signal:

The lock may function correctly outside of the door but once the lock is fitted to the door the lock will not respond to the locking signal.

- **If the red and green wires are joined and then the locking signal is supplied by switching the negative on the black wire – the lock will not see a change of voltage (as it is grounded through the door) and will then remain in the powered state.**

A positive (9-29VDC) lock / unlock signal must be supplied on the lock.

- **Wiring should be updated to ensure that the locking signal is switched on the positive side of the supply.**

I am trying to set the lock up as double access (1 side PtL, 1 side PtO) but it is not working as expected

If the lock is being used in 2 wire mode (red and green wires joined), then this mode will not operate as required – the lock must be operated in 3 wire mode for this function to operate correctly.

If the lock is operating in 3 wire mode, is the locking signal on the green wire PtL?

When entering a power failure state, the PtO side flashes green and then red – this is normal behavior and due to a minor delay in the power failure being sensed by the lock – the correct failed state is achieved.

Lock single beeps every 2 seconds:

Single beeps every 2 seconds indicates that the lock is not able to move into the locked position – something is jamming the motor.

- **Ensure users of the lock are not holding the handle down for an extended period of time when either entering or existing through the door. Example: standing in the doorway having a conversation whilst holding down the handle.**
- **If furniture is fitted, remove the furniture, with nothing in the hubs and re-try to lock the lock. If the lock works without the furniture fitted;**
 - *The furniture may be mis-aligned which is causing the hubs to not return fully.*
 - *The furniture return spring may not operate adequately which is causing the hubs to not return fully.*
 - *The door preparation may have a catch which is causing the hubs to not return fully.*
- **If no furniture is fitted, check correct voltage is being supplied to lock and power supply is able to deliver specified current.**

Lock beeps once or twice every time the lock locks:

Beeping indicates that locking is being delayed or that the motor is drawing excessive current.

- **Operate the lock at least 10 times and confirm if the problem is still present.**
- **Check furniture and voltage as above.**
- **specified current.**

Lock beeps three times on start up:

Triple beeping indicates an error with the setting switches

- **Move the setting switches out of their current position and back to required setting – taking care to ensure the switch has ‘clicked’ into the required position**
- **If the switches are in correct position but the lock still triple beeps on start-up, the setting will not change but remain in previous condition.**
 - *Setting switches may be faulty and the lock should be replaced.*

Lock double beeps every 6 seconds:

Double beeping every 6 seconds indicates that the lock cannot communicate with the motor.

- **Lock should be returned for investigation.**

Deadlatch monitor is not working:

Confirm correct wires are being used by testing with a multi-meter

- **Signal should be open when the auxiliary bolt is out and closed when auxiliary bolt is depressed**

Check the door gap does not exceed 5mm (6.5mm is absolute maximum) Check that the auxiliary bolt fully extends when the door is open

- **If not, loosen furniture, lock and cover plate mounting screws and re-adjust to ensure proper operation of the auxiliary bolt**

REX (Request to Exit) is not working:

Confirm correct wires are being used by testing with a multi-meter

- **With NO/NC switch to NC - signal should be open when the handle is turned and closed when the handle is released**

REX will not operate when the lock is set to Escape-Escape

REX operates on the handle that is set to Escape only

Confirm that the NO/NC (Normally Open / Normally Closed) switch on the side of the lock is set correctly and switch has travelled to selected side fully.

Door position switch is not working:

Confirm correct wires are being used by testing with a multi-meter

- **Signal should be closed when a magnet is placed below bottom mounting screw and open when magnet is removed.**

Confirm the door position magnet is installed at correct position below the strike.

Confirm door position magnet can attract a ferrous item.

Lock status monitor is not working:

Confirm correct wires are being used by testing with a multi-meter

- **Signal should be open when the lock is unlocked and closed when lock is locked**

Lock status monitor state will only change when the lock is powered (the lock will only change state when powered as well)

LED is not active:

Lock is supplied with LEDs de-activated. Refer to instructions on how to activate the LEDs

Having the LED's programmed as active can also assist in fault finding the installation

LEDs turn off after 10 seconds:

The LEDs will turn off after 10 seconds when being powered in 2 wire mode (red and green wires joined)

- **Wire lock in 3 wire configuration if continuous LED operation is needed**
-

LED is not visible after fitting furniture:

4800 lens furniture requires an extra hole to be drilled above top furniture mount hole – has this been drilled

- **If yes, remove furniture and confirm LEDs are operating on lock and inspect for obstructions**
-

LED shines red briefly and then green after sending unlocking signal:

The LED indicates the status of the lock and will only change to green once the lock has confirmed that it is definitely unlocked.

If the lock is being powered in 2 wire PtO – this will result in the LED being off and then when a locking signal is received, the LED will be red for a fraction of a second before changing to green once unlocked.

- **2 wire PtO is not recommended**

There is no room for the cable when installing in a timber door:

The cable boot is only intended for aluminum frame installs and can be removed for timber door installations

Ensure door preparation is correct as the 3782EL requires a lengthened mortice compared to a mechanical timber fix door preparation.

Can I leave a USB cable connected to the lock but power it via the main connector:

This is not recommended

I have old LED furniture that I would like to re-use, is there an adaptor kit:

No, new and improved 4800 lens furniture will need to be purchased.

I have an old 3582EL to replace, is this lock interchangeable:

The lock is completely backwards compatible and a 9 – 12 pin adaptor (SP3782EL-251) is available

- **2 wire PtO is not recommended**

If using LED lens furniture, additional holes will be required above the top furniture mounting hole

I have a retro-fit with LEDs (power is being sent on old green wire to continuously power LEDs), will I have to re-wire the installation:

The lock is retro-fittable to the old lock and a 9 – 12 pin adaptor (SP3782EL-251) is available.

- **The 9 – 12 pin adaptor will operate the lock in 2 wire mode and thus the LEDs however in PTO mode, the LED's will operate for a few seconds only.**
 - *2 wire PtO is not recommended*

I am trying to set the LEDs on site, how can I power the lock:

The lock can be powered via a micro-USB connector connected to a power bank, PC or mobile phone charger or it can be powered by the main connector with a 9 or 12V battery connected to the red (+) and black (-) wires

Refer to instructions for LED activation steps

I am trying to lock one side of the lock but the cabling has not been installed – how can I do this:

Set setting switches to required position (PtO will leave the lock locked once power has been removed)

The lock can be powered via a micro-USB connector connected to a power bank, PC or mobile phone charger or it can be powered by the main connector with a 9 or 12V battery connected to the red (+) and black (-) wires

- **If powering by USB, the setting will only take effect after 30 seconds or if immediate response is required – while powered, briefly press the LED and mode button and the lock will change to and remain in the failed state. When the lock is powered through the main connector, normal operation will resume**
- **If powering through the main connector, connect and remove the green wire from the positive terminal of the battery**
 - *Ensure power is supplied to the lock for at least 5 seconds*



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