INTELLIKEY®

GENIUS AT YOUR FINGERTIPS

Mini-DCU Installation Manual

Contents

Introduction

Mini-DCU shown with security cover removed
Part number 102151

Congratulations you have just purchased the INTELLIKEY Mini-Door Control Unit or Mini-DCU for short, INTELLIKEY part number 102151.   The INTELLIKEY Mini-DCU has been designed for controlling a magnetic lock, an electric strike, electrified hardware or almost any other type of electrified device. Not included with the Mini-DCU are the needed locking devices or the regulated power supply with battery back up. The Mini-DCU comes with a controller & wired relay with a fixed cylinder in a narrow style mounting plate.

The Mini-DCU must be programmed before installation.   Please read the instructions completely before trying to program or install the Mini-DCU. Once the instructions have been read follow the proper steps for programming. Please refer to the drawings on pages 7-14 for suggested wiring diagrams. **For specific hardware applications please refer to that manufacturer for wiring details.**

To program a Mini-DCU it must be connected to a 12 Vdc regulated power supply or, if programming on your bench, temporarily connected to one of the INTELLIKEY battery packs. Next connect the fixed cylinder to the lock electronics board. Now you are ready to program the Mini-DCU.

EZ123 Software Programming

The EZ123 software has three operating modes: Momentary, Alternate Action and Timed Unlock. Momentary Action is when the device is always locked such as storeroom function. Alternate Action is used when you want to turn a device on or off such as an alarm system or lights. And Timed Unlock is when the device must be automatically unlocked and relocked at a predefined time.

Once the proper operating mode has been decided upon you can then program the controller and install. Select the proper operating mode and follow the steps to set up and program.

Momentary Operating Mode

For new systems,with no keys or locks programmed, go to "*Add Controller*". Fill in the building and door information. Drop down the window under operating mode and select *"Momentary"*. Next adjust the desired unlock time , normally it is set at 5 to 8 seconds. Then click OK and use the default access as being OK. When you see the screen " *Insert LPU*" click cancel as the lock isn't being programmed at this time. If adding more Mini-DCUs please follow the same steps as the first one. After all the units have been added to system go to "*Users add*" and add all needed users to system, programming the keys as you proceed. When all users have been added then you can program the Mini-DCUs and install.

If this is an existing site, after selecting Momentary Action and setting the desired unlock time, go to "*Access*" and select the desired users for that Mini-DCU. When all the users have been added click OK and program DCU. You can now install the unit. Please refer to the drawings on pages 6-8 for suggested wiring diagrams.

Alternate Action Operating Mode

For new installations, with no keys or locks programmed, go to "*Add Controller*". Fill in the building and door information. Drop down the window under operating mode and select "*Alternate Action*". Then click OK and use the default access as being OK. When you see the screen "*Insert LPU*" click cancel as the lock isn't being programmed at this time. If adding more Mini-DCUs please follow the same steps as the first one. After all the units have been added to system go to "*Users add*" and add all needed users to system, programming the keys as you proceed. When all users have been added then you can program the Mini-DCUs and install.

If this is an existing site, after selecting Alternate Action, go to "*Access*" and select the users for that Mini-DCU. When all the users have been added click OK and program DCU. You can now install the unit. Please refer to the drawings on pages 6-8 for suggested wiring diagrams.

Timed Unlock Operating Mode

First go to "*Utility*" Time Zones and complete a time zone(s) for the Mini-DCU(s). Then go to "*Add Controller*". Fill in the building and door information. Go to operating mode and select "*Timed Unlock*". Next select the time zone for that Mini-DCU. Then if needed select first man in. This feature keeps door locked until a legal key has been used that morning. Holidays can be selected if you want the door to stay locked during a holiday period. Note: you must add the correct holiday periods for Mini-DCU to work properly. If the 2 second unlock time for after hours is not sufficient you can extend the time by completing the following steps. Drop down the window under operating mode and select "*Momentary*". Next adjust the unlock time needed for after hour use, normally it set at 5 to 8 seconds. Go back to operating mode and select "*Timed Unlocked*". If this is a new installation, with no keys or locks programmed. Then click OK and use the default access as being OK. When you see the screen "*Insert LPU*" click cancel as the lock isn't being programmed at this time. If adding more Mini-DCUs please follow the same steps as the first one. After all the units have been added to system go to Users add and add all needed users to system, programming the keys as you proceed. When all users have been added then you can program the Mini-DCUs and install.

If this is an existing site, after selecting Timed Unlock and setting the desired unlock times, go to "*Access*" and select the users for that Mini-DCU. When all the users have been added click OK and program. Now you can install the unit. Please refer to the drawings on pages 6-8 for suggested wiring diagrams.

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Quantum Software Programming

The Quantum software has two operating modes Relock and Toggle. For storeroom function, always locked, use the Relock mode. For auto unlock or to turn a device on and off you would use the Toggle mode.

Once the proper operating mode has been decided upon you can then program the controller and install. Select the proper operating mode and follow the steps to set up and program.

Relock

Go to "*Add Controller*". Fill in the building and door information and click OK. Select controller features. Under operating mode select "*Relock*". Next adjust the unlock time needed, normally it is set at 5 to 8 seconds.

If this is a new installation, with no keys or locks programmed. Then click OK and use the default access as being OK. When you see the screen "*Insert LPU*" click cancel as the lock isn't being programmed at this time. If adding more Mini-DCUs please follow the same steps as the first one. After all the units have been added to system go to "*Users Add*" and add all needed users to system, programming the keys as you proceed. When all users have been added you can then program the Mini-DCUs and install.

If this is an existing site, after selecting Relock and setting the desired unlock time, site go to "*Users*" and select the users for that Mini-DCU. When all the users have been added click OK and program. Now you can install the unit. Please refer to the drawings on pages 6-8 for suggested wiring diagrams.
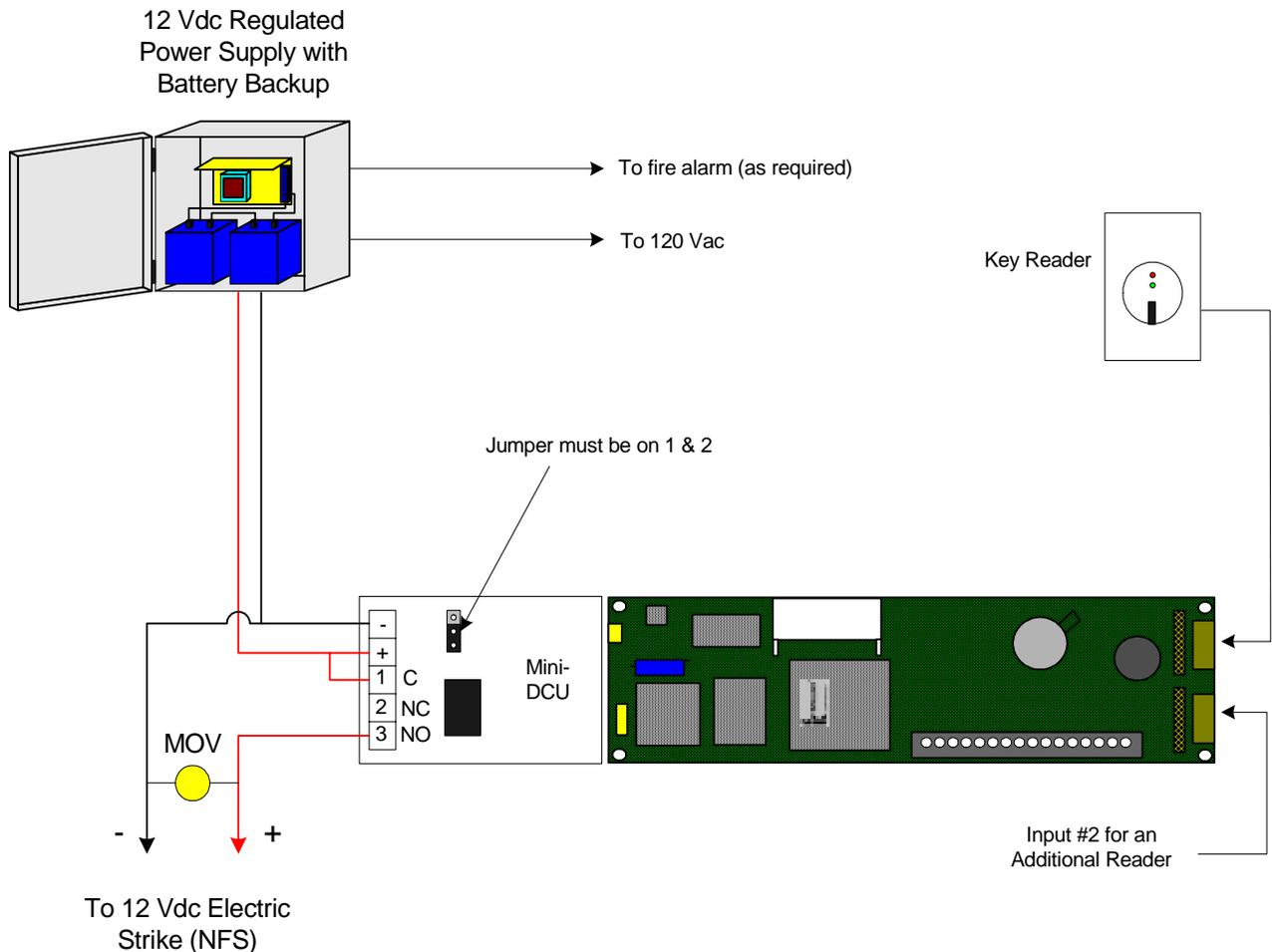
Toggle and or Timed Unlock

First go to "*Utility*" time zones and complete a time zone(s) for the DCU(s). Next go to "*Add Controller*". Fill in the building and door information and click OK. Select controller features. Under operating mode select toggle. Next adjust the unlock time needed, normally it is set at 5 to 8 seconds. If automatic unlock is desired, select "*Activate*" under Automatic Unlock then add time zone. And first man in if desired. If the toggle while unlocked is selected then door can be locked during the normal unlock time. If a door is not to be auto unlocked during a holiday period then select holidays and add the correct holiday dates. Select options to disable the auto unlock feature. Click OK. If the automatic unlock is not activated then the Mini-DCU will work only in toggle mode. If this is a new installation, with no keys or locks programmed. Then click OK and use the default access as being OK. When you see the screen "*Insert LPU*" click cancel as the lock isn't being programmed at this time. If adding more Mini-DCUs please follow the same steps as the first one. After all the units have been added to system go to "*Users add*" and add all needed users to system, programming the keys as you proceed. When all users have been added you can then program the Mini-DCUs and install.

If this is an existing site, after selecting Toggle and setting the desired unlock times, go to "*Users*" and select the users for that Mini-DCU. When all the users have been added click OK and program. Now you can install the unit. Please refer to the drawings on pages 6-8 for suggested wiring diagrams.

Suggested Wiring diagrams

Fail secure lock locking device
(electric strike)
powered output when relay is activated

The MOV installed across the output can be purchased from Radio Shack
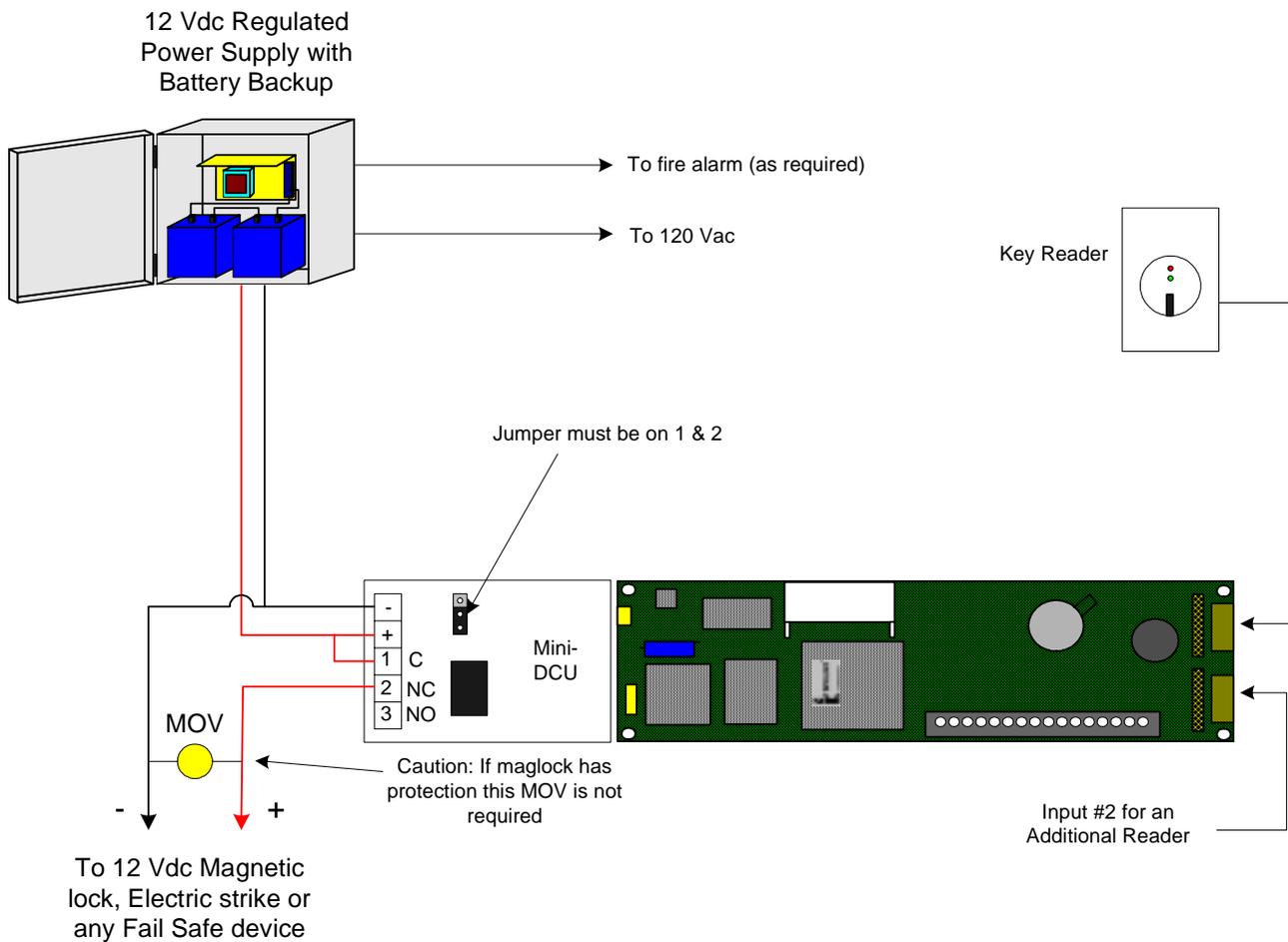Part number 276-568

12 Vdc Regulated
Power Supply with
Battery Backup

To fire alarm (as required)

To 120 Vac

Key Reader

Jumper must be on 1 & 2

Mini-
DCU

- +
1 C
2 NC
3 NO

MOV

-          +

To 12 Vdc Electric
Strike (NFS)

Input #2 for an
Additional Reader

Nomenclature

- = 12 Vdc negative input from power supply
+ = 12 Vdc positive input from power supply
Relay (SPDT)
1 = (C) common contact
2 = (NC) normally closed contact
3 = (NO) normally open contact

contact rating
2amp - 30Vdc Resistive

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Fail safe locking device
(magnetic lock or electric strike)
nopower output
when relay is activated

12 Vdc Regulated
Power Supply with
Battery Backup

To fire alarm (as required)

To 120 Vac

Key Reader

Jumper must be on 1 & 2

Mini-DCU

-
+
1 C
2 NC
3 NO

MOV

Caution: If maglock has
protection this MOV is not
required

Input #2 for an
Additional Reader

-      +

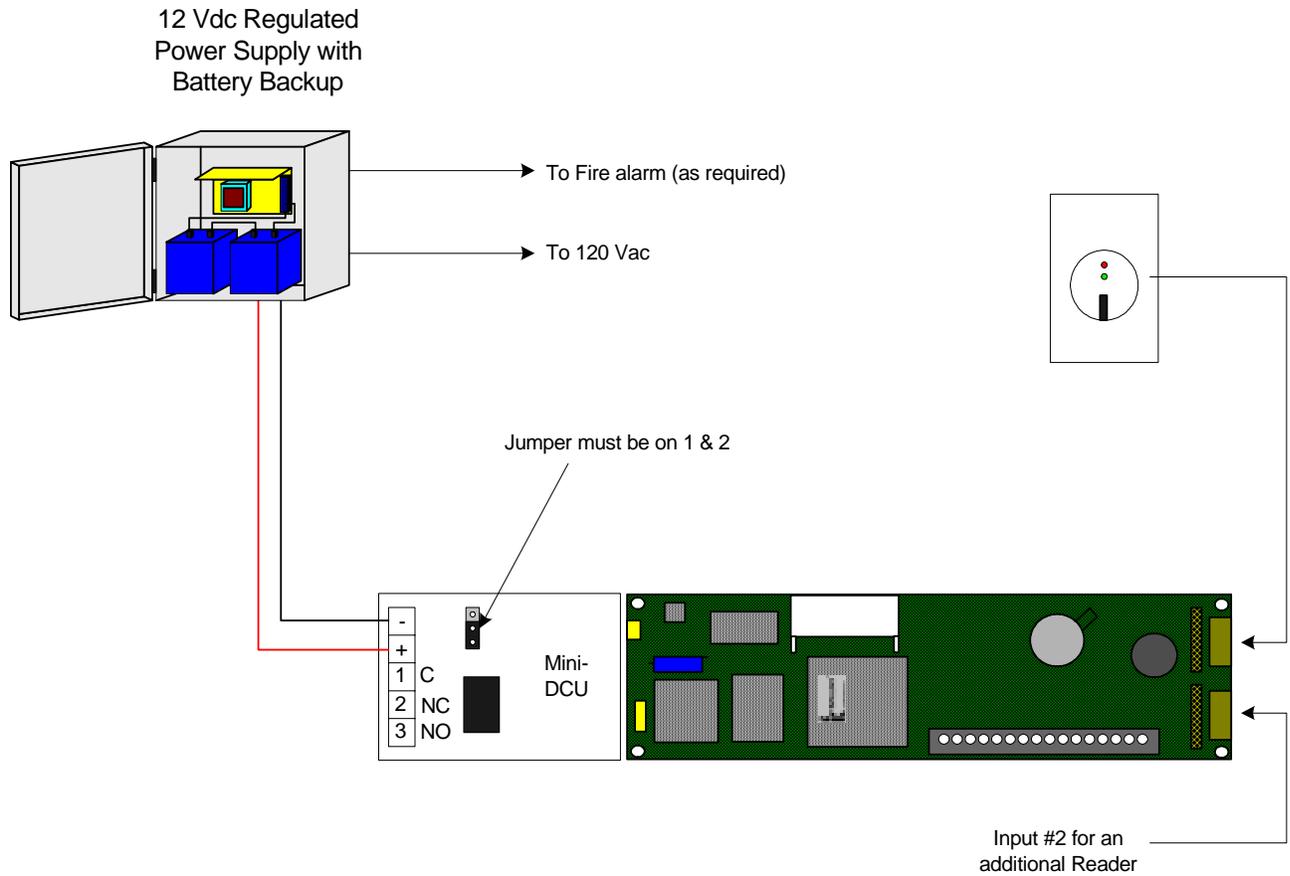To 12 Vdc Magnetic
lock, Electric strike or
any Fail Safe device

Nomenclature

- = 12 Vdc negative input from power supply
+ = 12 Vdc positive input from power supply
Relay (SPDT)
1 = (C) common contact
2 = (NC) normally closed contact
3 = (NO) normally open contact

contact rating
2amp - 30Vdc Resistive

Wiring for
unpowered output
(Dry contacts)

12 Vdc Regulated
Power Supply with
Battery Backup

To Fire alarm (as required)

To 120 Vac

Jumper must be on 1 & 2

```
-
+
1  C
2  NC
3  NO
```
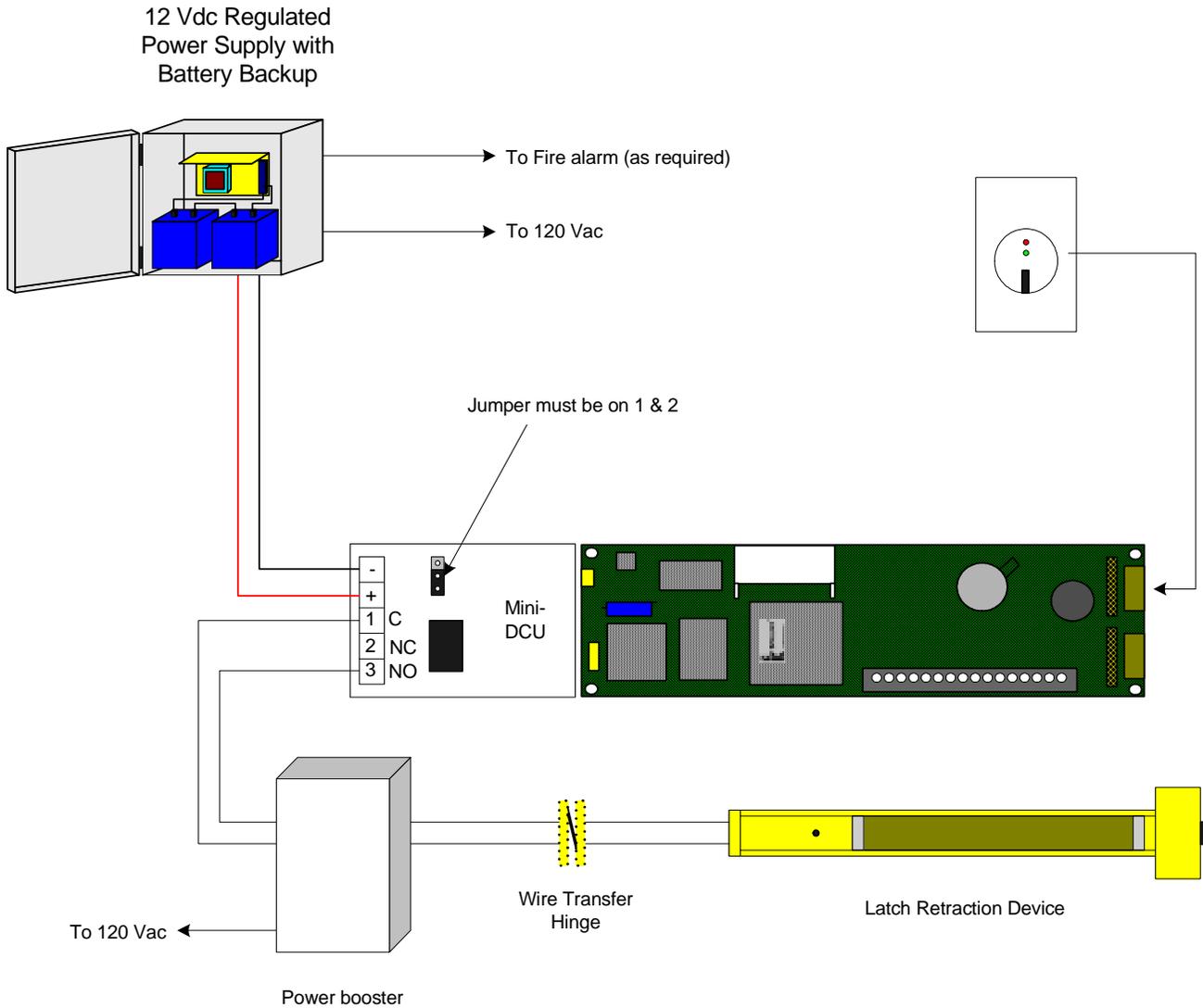
Mini-
DCU

Input #2 for an
additional Reader

Nomenclature

- = 12 Vdc negative input from power supply
+ = 12 Vdc positive input from power supply

Relay (SPDT)

1 = common contact
2 = normally closed contact
3 = normally open contact

contact rating
2amp - 30Vdc Resistive

rev-082803

Wiring for
unpowered output
(Dry contacts)
Example of latch retraction

12 Vdc Regulated
Power Supply with
Battery Backup

To Fire alarm (as required)

To 120 Vac

Jumper must be on 1 & 2

-
+
1 C
2 NC
3 NO

Mini-
DCU

Wire Transfer
Hinge
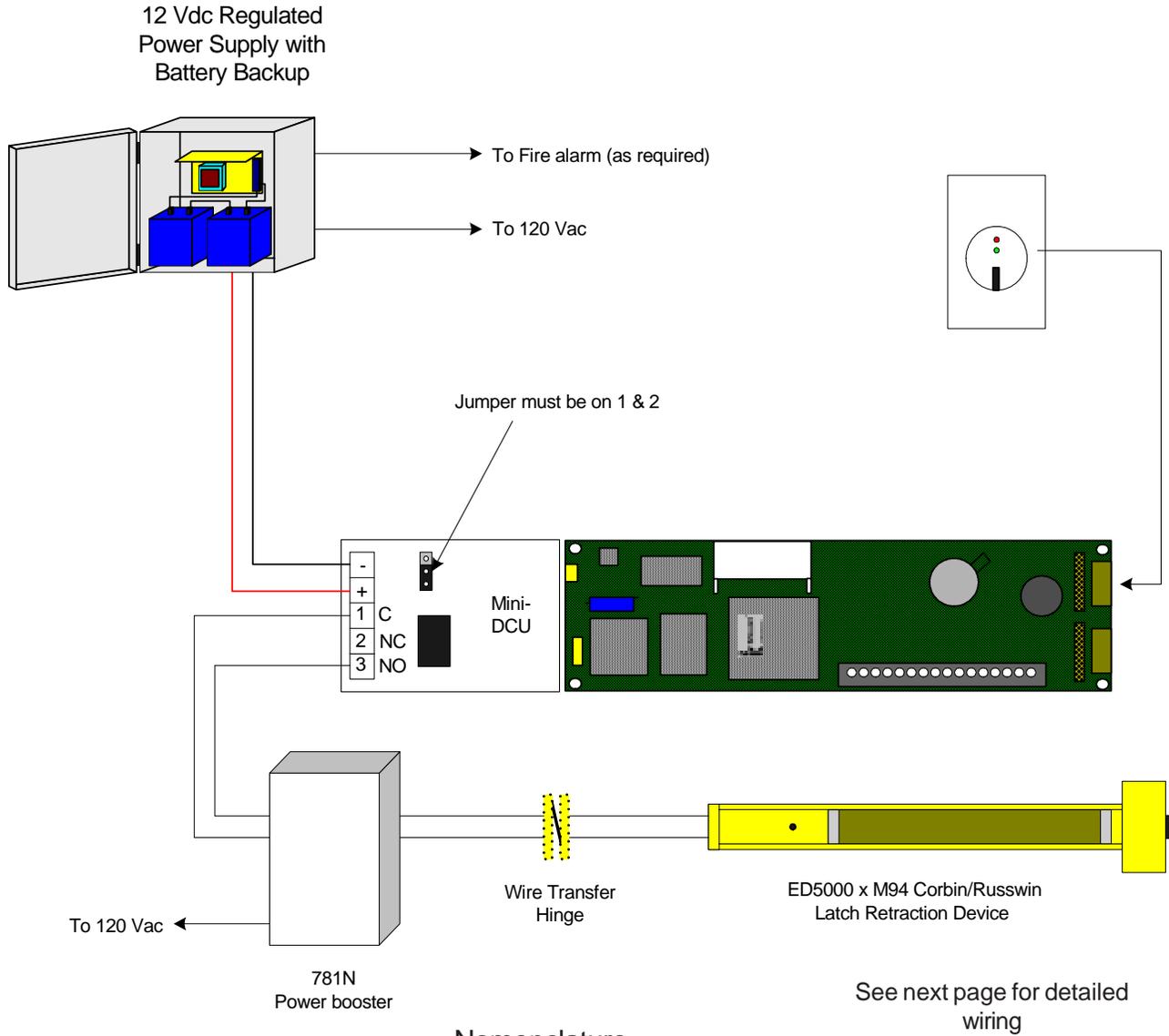
Latch Retraction Device

To 120 Vac

Power booster

Nomenclature

- = 12 Vdc negative input from power supply
+ = 12 Vdc positive input from power supply
        Relay (SPDT)
1 = common contact
2 = normally closed contact
3 = normally open contact

contact rating
2amp - 30Vdc Resistive

Wiring for
unpowered output
(Dry contacts)
Example of a Corbin/Russwin latch retraction panic device

12 Vdc Regulated
Power Supply with
Battery Backup

To Fire alarm (as required)

To 120 Vac

Jumper must be on 1 & 2

```
-
+
1  C
2  NC
3  NO
```

Mini-DCU

Wire Transfer
Hinge

ED5000 x M94 Corbin/Russwin
Latch Retraction Device

To 120 Vac

781N
Power booster

See next page for detailed
wiring

Nomenclature

- = 12 Vdc negative input from power supply
+ = 12 Vdc positive input from power supply
   Relay (SPDT)
1 = common contact
2 = normally closed contact
3 = normally open contact

contact rating
2amp - 30Vdc Resistive

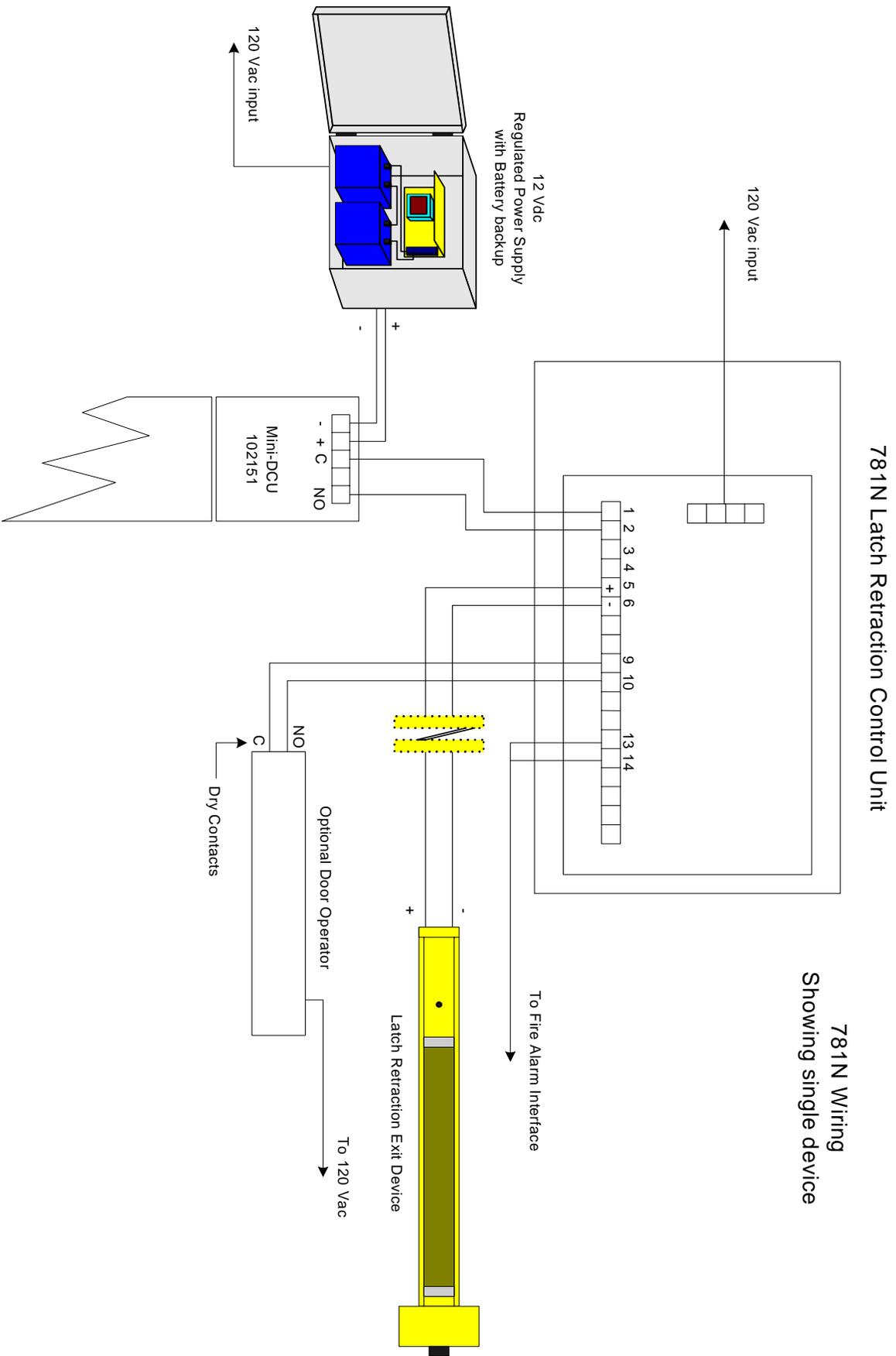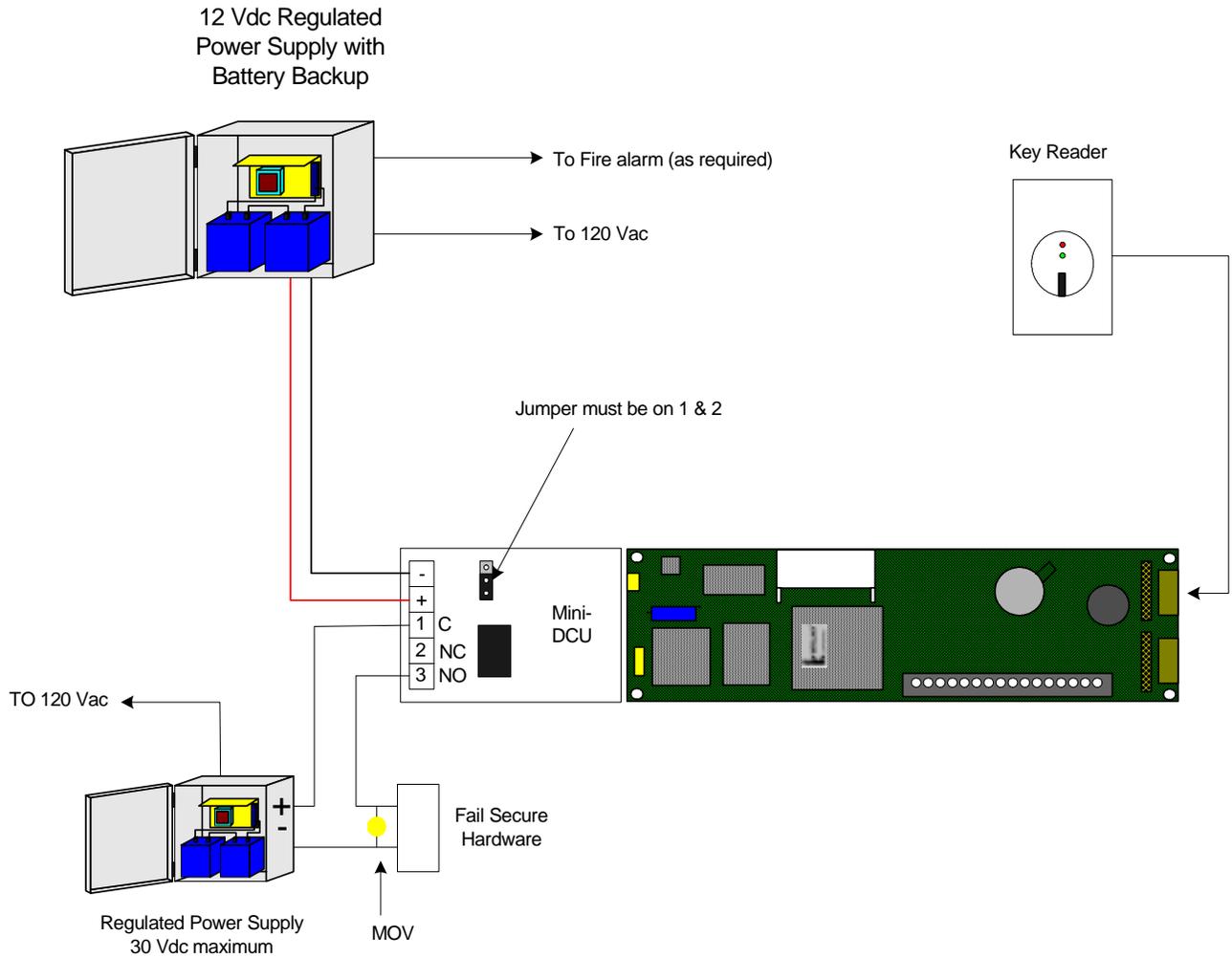rev-082803

781N Latch Retraction Control Unit

781N Wiring
Showing single device

120 Vac input

12 Vdc
Regulated Power Supply
with Battery backup

120 Vac input

Mini-DCU
102151

- + C NO

1 2 3 4 5 6 9 10 13 14

+ -

To Fire Alarm Interface

Dry Contacts

C NO

Optional Door Operator

To 120 Vac

Latch Retraction Exit Device

+ -

Wiring for
unpowered output
(Dry contacts)
For use with Fail Secure
24Vdc powered devices

12 Vdc Regulated
Power Supply with
Battery Backup

To Fire alarm (as required)

To 120 Vac

Key Reader

Jumper must be on 1 & 2

- +
1 C
2 NC
3 NO

Mini-
DCU

TO 120 Vac

Fail Secure
Hardware

Regulated Power Supply
30 Vdc maximum

MOV

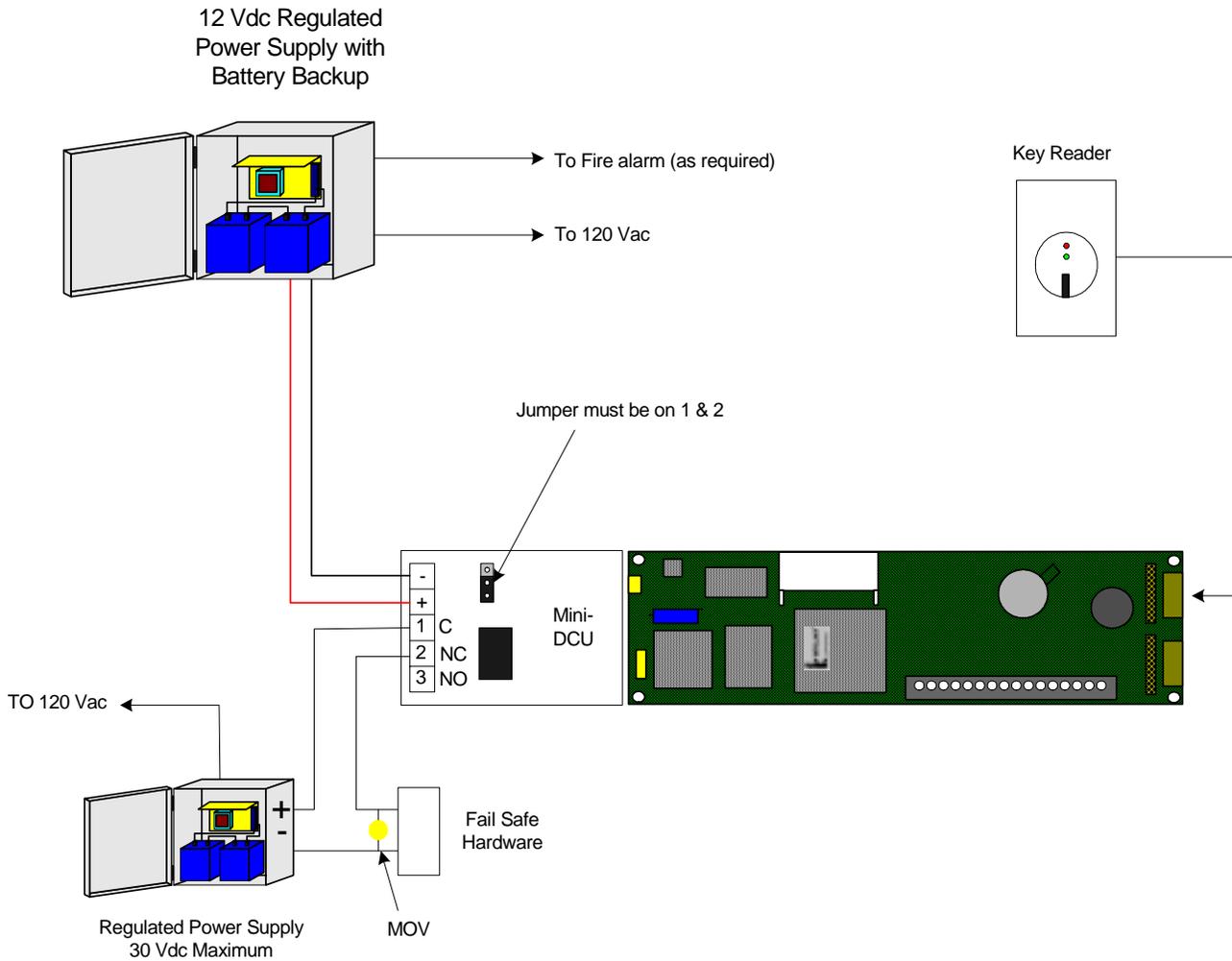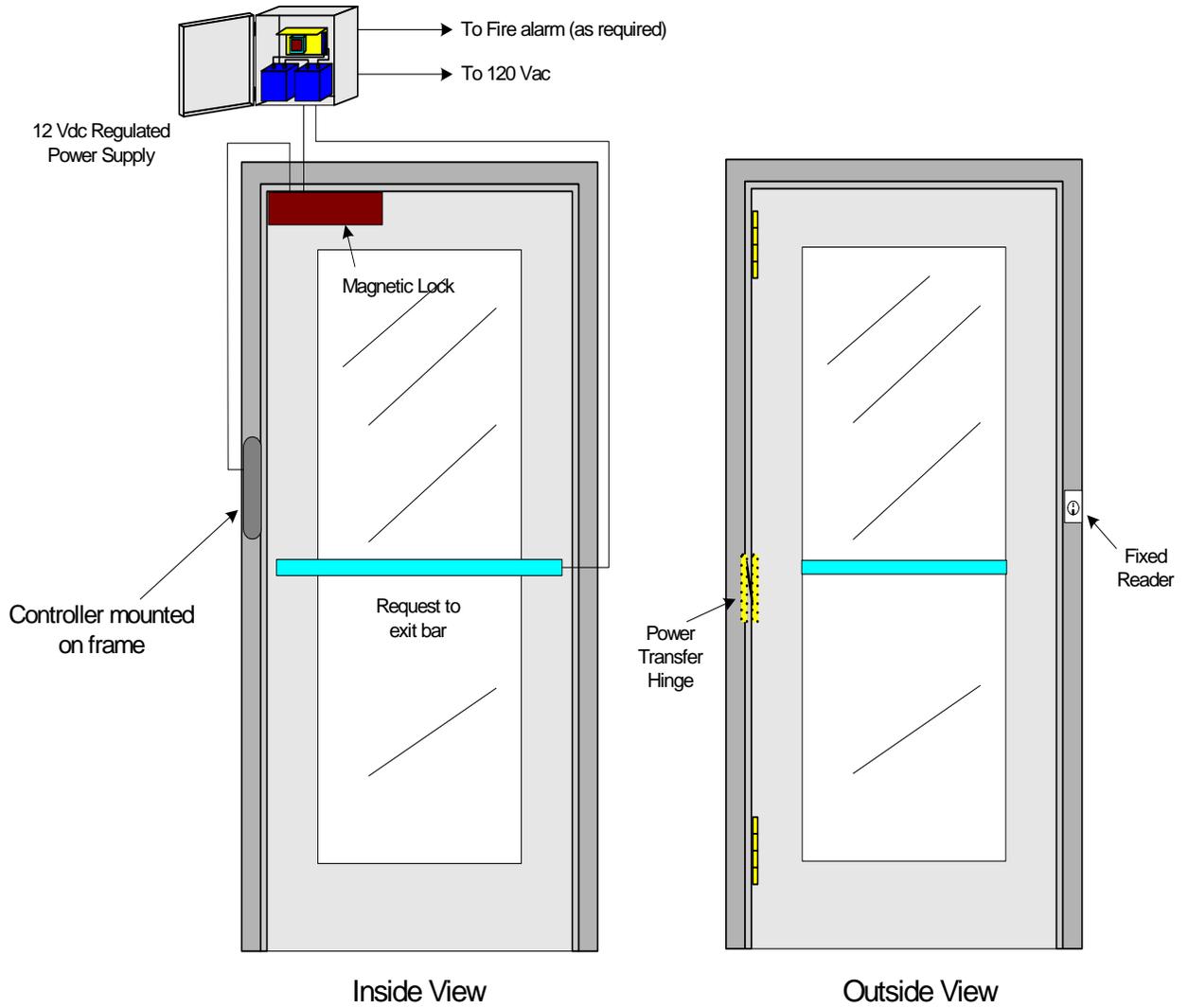## Nomenclature

- = 12 Vdc negative input from power supply
+ = 12 Vdc positive input from power supply
              Relay (SPDT)
1 = common contact
2 = normally closed contact
3 = normally open contact

contact rating
2amp - 30Vdc Resistive

rev-082803

Wiring for
unpowered output
(Dry contacts)
For use with Fail Secure
24Vdc powered devices

12 Vdc Regulated
Power Supply with
Battery Backup

Key Reader

To Fire alarm (as required)

To 120 Vac

Jumper must be on 1 & 2

-
+
1 C
2 NC
3 NO

Mini-DCU

TO 120 Vac

Fail Safe
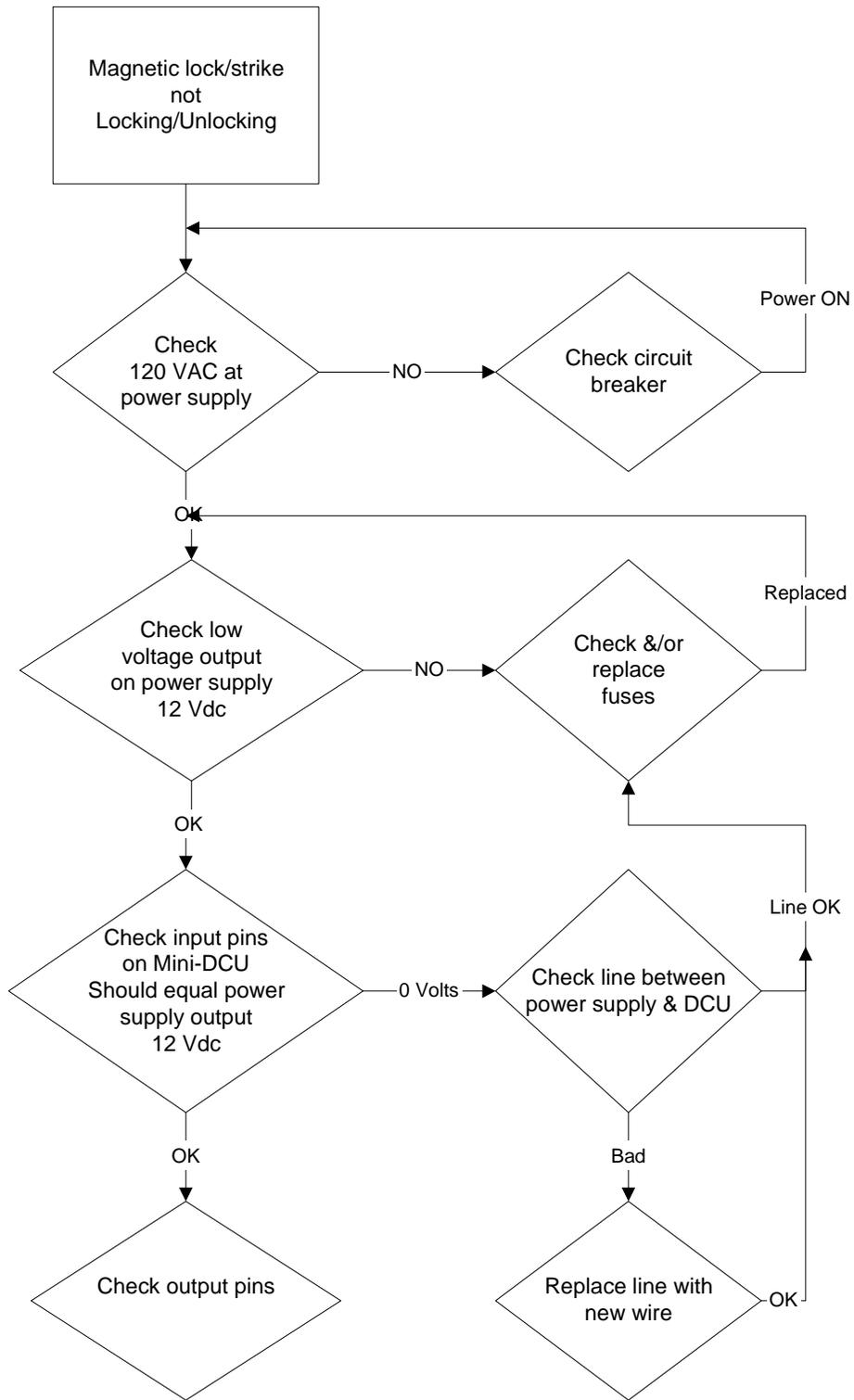Hardware

Regulated Power Supply
30 Vdc Maximum

MOV

Nomenclature

- = 12 Vdc negative input from power supply
+ = 12 Vdc positive input from power supply
Relay (SPDT)
1 = common contact
2 = normally closed contact
3 = normally open contact

contact rating
2amp - 30Vdc Resistive

Elevation view
Suggested magnetic lock installation

To Fire alarm (as required)

To 120 Vac

12 Vdc Regulated
Power Supply

Magnetic Lock

Controller mounted
on frame

Request to
exit bar

Power
Transfer
Hinge

Fixed
Reader

Inside View

Outside View

Trouble shooting Mini-DCU

Magnetic lock/strike not Locking/Unlocking

Check 120 VAC at power supply

— NO → Check circuit breaker — Power ON

OK

Check low voltage output on power supply 12 Vdc

— NO → Check &/or replace fuses — Replaced

OK

Check input pins on Mini-DCU Should equal power supply output 12 Vdc

— 0 Volts → Check line between power supply & DCU — Line OK

OK

Check output pins

Bad

Replace line with new wire — OK

Installation Notes

Installation Notes

Contact Information

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