Multi Floor Controller - MFC

Installation instructions

EN

dormakaba

Elevator Control Unit

Prior to the installation of the dormakaba Elevator Control Unit, please take note of the following

- dormakaba does not install ECU's
- Please contact your elevator company to schedule the install
- Install documentation can be found at the following locations
- Website **www.dormakabalodgingsupport.com**
- Your system 6000 USB drive
- Contact your project coordinator
- Questions can be sent to the following email address: **techsupport.lgs.us@dormakaba.com**
- or call dormakaba tech support at **(800) 999-6213**

Contents

1.0 Introduction and Disclaimers

Please read and follow all directions carefully.

These instructions are designed for use by qualified installers or individuals with knowledge of common safety practices and the competence to perform the steps described herein.

Saflok is not responsible for damage or malfunction due to incorrect installation.

⚠ CAUTION

Carefully inspect windows, doorframes, doors, etc. to ensure that the installation procedures will not cause any damage. Kaba Saflok's standard warranty does not cover damages caused by installation.

The MFC should always be installed in a secured room or facility with controlled access.

⚠ WARNING

Installation of card readers or other peripherals within elevators must only be done with prior consultation of the elevator manufacturer. A technician from the elevator manufacturer should be present at all times for installation.

If installing the MFC in an elevator cage environment, or in proximity to any other equipment that may generate high levels of electromagnetic interference, follow the installation requirements as indicated in Annex C to prevent any operational instability.

Safety Procedures

Installation is to be done following standard safety procedures, and using adequate equipment and protection as prescribed. Power is to be off during the installation process as well as for any maintenance procedures.

⚠ CAUTION

Wear safety glasses when using any tools.

Technical Support

For technical assistance, call:
(800) 999-6213

or

Visit the dormakaba Lodging support website:

www.dormakabalodgingsupport.com

NOTE: This equipment has been tested and found to comply with Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Statement according to FCC part 15.21

Modifications not expressly approved by dormakaba could void the user's authority to operate the equipment.

Statement according to FCC part 15.19

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

2.0 Product Description

2.1 Features

The MFC-X is designed to operate either on-line or stand alone elevator control units (ECU). It provides access control and secure stops for multiple floors and functions with RFID contactless lock models and System 6000 features.

The system can control any RFID ECU up to 500 feet (150m) away when using the MFC system.

NOTE: For installation of the contactless reader of distances greater than 500 feet (150m) please contact dormakaba Technical Support.

The Contactless Card Reader can be mounted directly on the inside of the elevator car, typically on the elevator call button panel. For surface mount, the surface area required for the contactless reader is 5"W x 5"H x 2"D (12.7 x 12.7 x XXcm) *2" depth behind panel required)

The MFC is an access control solution that can operate 2 individual card readers, provides multiple relays, and much more as per the feature list below. See figure 1 for a typical configuration.

Figure 1

MFC-X

Power Adapter

Up to 2 Readers*

Up to 32
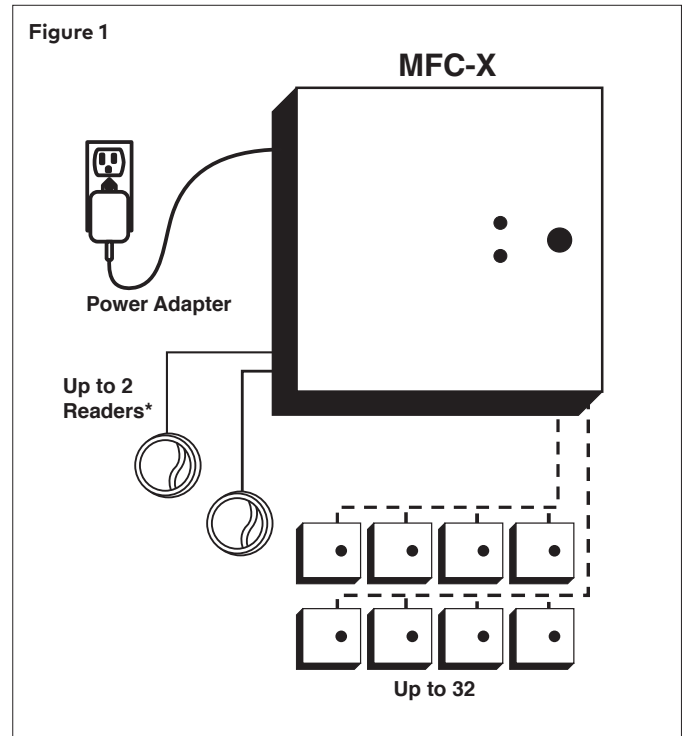
Feature	MFC
Variable access delay	Standard
Power failure 3-day auto-recovery; real time clock (RTC)	Standard
Relay bypassing (passage function)	Standard
Control up to two card readers	Standard
Unlock delay programmable by Dip Switches	Standard
Fire Alarm Input	Standard
Tamper Alarm Input	Standard
Power Status LEDs feedback	Standard
Relay Expansion Board (Up to 4) with up to 8 relays each	Standard

2.0 Product Description

2.2 Components

Refer to Annex E for MFC component breakdown

2.2.1 Controller box

Figure 2
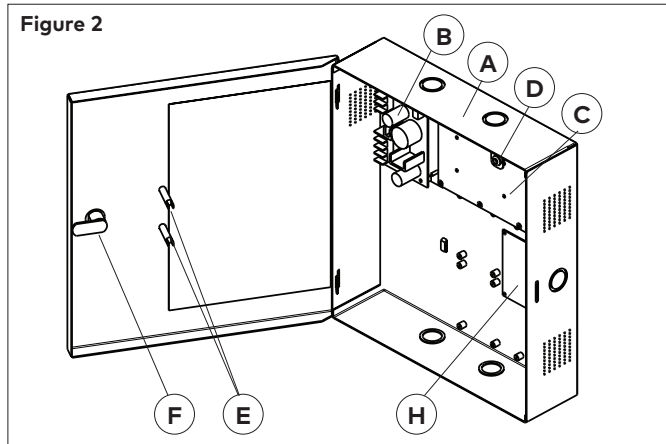
(A)   MFC Enclosure & Access Door: holds the controller board (PCB), power supply, relay expansion board. Knockouts are available on 3 sides for routing of peripheral cables.

(B)   Power Supply: provides the DC power required for operation of the controller PCB and all peripherals.

(C)   Controller Board: controls all the features of the MFC system.

(D)   Tamper Switch: attached to the MFC enclosure to generate an alarm if the box is opened during operation.

(E)   Power & Battery Status LEDs: provides visual indication of the operational status of the MFC system. Battery status LED is only used on battery back-up equipped systems.

(F)   Cam-lock with Key: to provide secure locking and to control access to the MFC enclosure.

Optional components:

(H)   Relay Expansion Board: Interface board providing 8 relay outputs that can be used to control relay-equiped equipment . As example, it can be used with an elevator to call the elevator or to provide access only to specific floors for certain guest and staff.

Up to 4 expansion boards of 8 relays each giving up to 32 individual control relays can be added.

Not shown:

(I)   Cables: cables required for connections of the LEDs, power supply and controller PCB. If equipped, will also include cable for connection of relay expansion board.

2.2.2 Contactless Card Reader

The Contactless Card Reader is a small mounted unit that protrudes from the wall and is used with RFID-based keycards

Figure 3
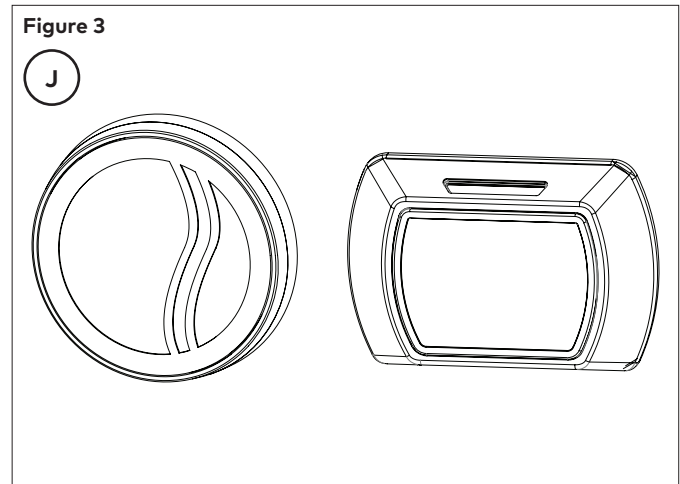
3.0 Checklist and Exploded Views

3.1 Parts and Tools List

NOTE:
- Some items are dependant on the options or configuration purchased. Please ensure all parts ordered & required for installation are available before beginning.
- Parts are subject to change without notice.
- For letter designations refer to Figure 9.

MFC Enclosure:

NOTE: All items below come factory installed.

(A) MFC enclosure with access door

(B) Power supply: 24 VAC / 24 VDC input, 12 VDC output

(C) Controller PCB

(D) Tamper switch

(E) 2 panel-mounted LEDs (green) for power & battery status

(F) Cam-lock

Relay Expansion Board:

(G) Relay expansion PCB board including 4x 6-32 x 3/8" SS screw with washer & controller PCB connection cable (not shown)

Cables (not shown):

NOTE: All items come factory installed.

(H) System cables:
- Power supply to LEDs
- Power supply to controller PCB
- Controller PCB jumpers

Card Reader(s):

(J)   Contactless reader (see Figure 7)

Power Adapter includes:

NOTE: Dependent on country's electrical power requirements.

(M) 1x International 24 VDC output Adapter with integrated 6 foot (1.8 m) power cable and interchangeable AC outlet prongs. Input power requirements of 100-240 VAC, 50-60 Hz, 1.0A.

or

(N) 1x North America 24 VAC output power adapter, with 2 separate 10 foot (3 m) power cable assembly (2x 18 AWG cables terminated on one end with fork terminals). Input power requirements of 110-120 VAC, 60 Hz.

Installation Hardware Bag:

(S) 4x Philips wood screw, #8 x 1–1/4"

(T) 4x Nylon anchor, #6–10

(U) 4x Concrete anchor, #7–9

(V) 2x Strain relief connector with locking nut

(W) Ring terminal connector

(X) 5x Steel flat washer, #8

(Y) 2x Crimp fork terminals, 18–22 AWG
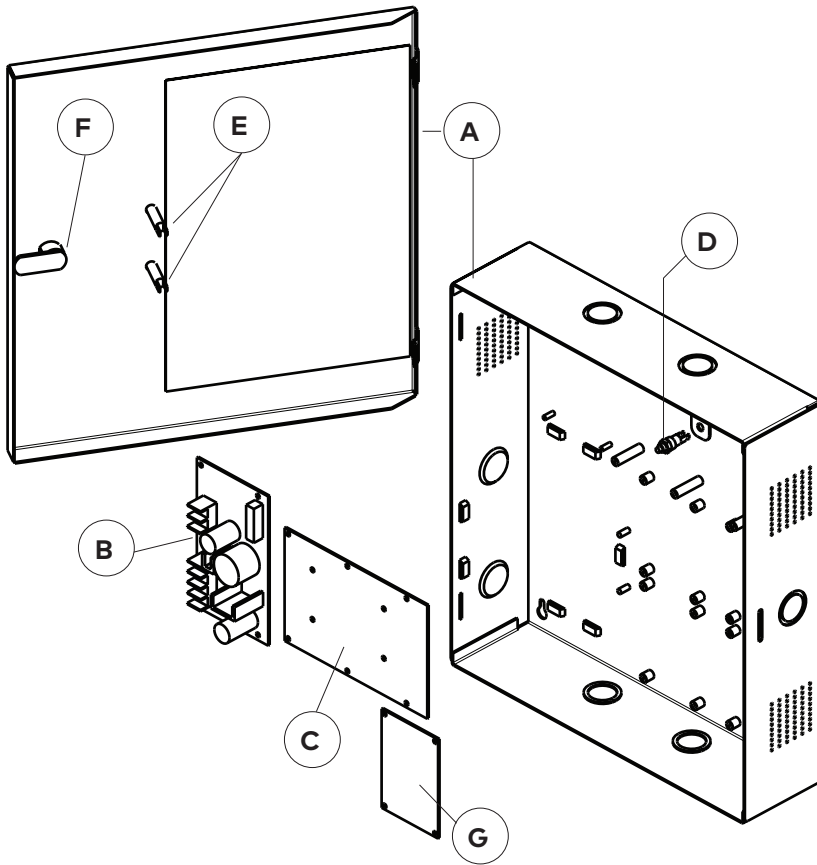
Tools required (not supplied):

Additional tools may be required dependent on the peripherals being installed. The list below covers the installation of the MFC enclosure only.

- Safety glasses
- Ink marker
- Electric drill
- 9/64" (3.5 mm) drill bit
- 7/32" (5.5 mm) drill bit
- 1/4" (6.5 mm) drill bit
- 3/8" (9.5 mm) drill bit
- Philips screwdriver – #2
- Slotted screwdriver – 3/32" tip width
- Adjustable wrenches
- Crimp tool – 18-22 AWG
- Pliers
- Wire cutter / stripper
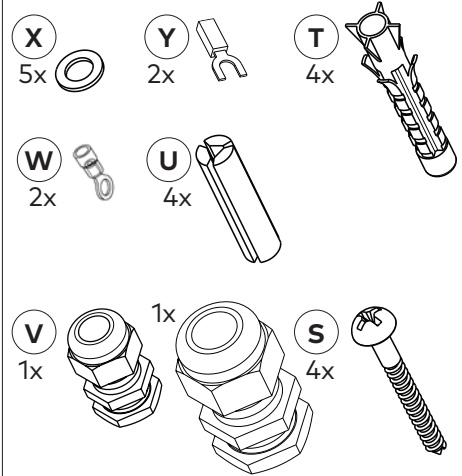- Hammer or rubber mallet
- Awl or center punch

3.0 Checklist and Exploded Views

3.2 Exploded View
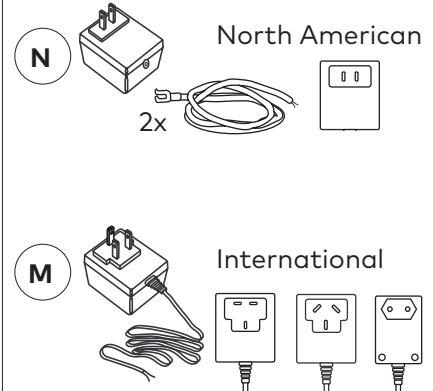
Figure 4

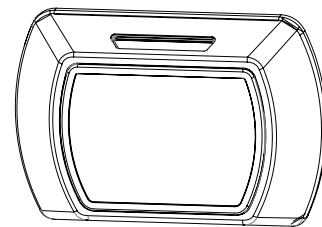### Controller Box

Hardware Bag

X 5x	Y 2x	T 4x
W 2x	U 4x	
V 1x	1x	S 4x

Power Adapter

N — North American 2x

M — International

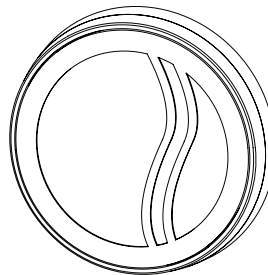### RFID Readers (QTM and QTM II)

J

4.0 System Installation Overview

Before starting installation:

- Ensure all components ordered and materials / tools required are available.
- Ensure all cabling is available for the peripherals / components being installed.

IMPORTANT

All installations & wiring of MFC enclosure and peripherals must comply with all applicable local building codes and regulations

⚠ CAUTION

Do not connect power to the enclosure until the end of the installation.

4.1 Pre-Installation Procedures

Step 1: Identify a secure location for the MFC enclosure

IMPORTANT

- Access to the MFC enclosure must be restricted to authorized personnel.
- AC power must be available within 6 feet (1.8 m) of the MFC enclosure.
- The location temperature must be from 32°F to 120°F (0°C to 49°C) and sheltered against weather hazards and dripping water.
- The enclosure must be installed using the hardware supplied.

Identify the location for the MFC enclosure based on the following:

- Enclosure should be mounted at a workable height with clearance to completely open the access door.
- The enclosure can be placed either horizontally in the ceiling or vertically on a concrete, wood, or plaster wall.

Step 2: Identify location(s) for contacless readers

Card readers must be placed within 500 feet (150 m) from the MFC enclosure.

Readers should be installed in an obvious location at an ergonomic height near the access door or elevator being controlled.

Contactless card reader:

The space to use the contactless reader must be large enough to allow for adequate clearance for the card being presented to the reader.

Step 3: Install strain relief

Strain reliefs are provided in the hardware bag to secure the wires leading into the enclosure and to help prevent the possibility of wire tampering.

1. Determine the routing needed for all wiring of the MFC-X card readers and peripherals and select the enclosure knock-out(s) to be removed for installation of the strain relief(s).

2. Remove the selected knock-out(s) using a hammer & screwdriver / awl, and from the inner side of the enclosure tap out the small metal disk.

3. Based on the amount of wires to be routed, attach the appropriate strain relief to the enclosure as shown in Figure 10. Do not attempt to route an excessive amount of wires. If extra strain reliefs are required please contact Kaba.
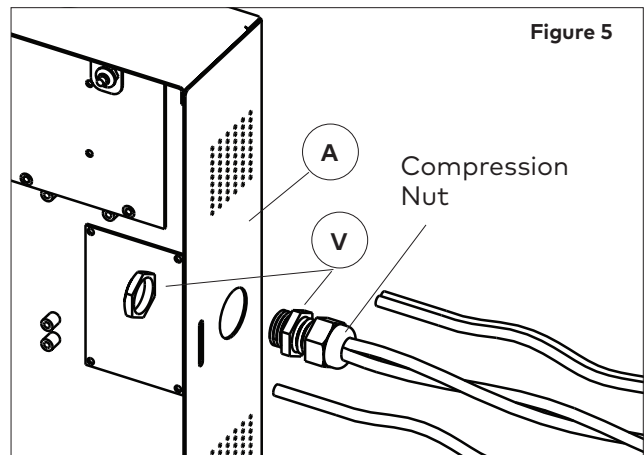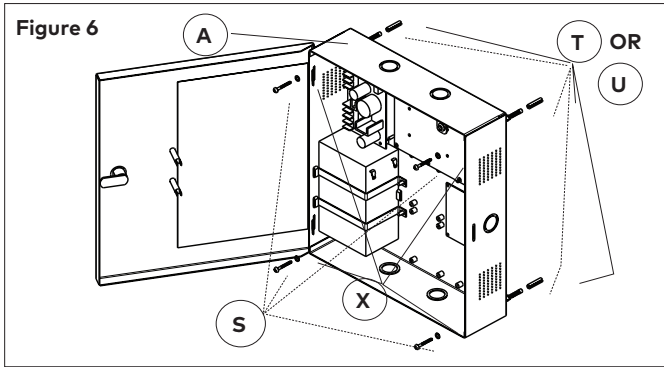

Figure 5

A
V
Compression Nut

4.2 Installation & Wiring Procedures

Step 4: Mounting the MFC enclosure

Install the enclosure in the desired location using the appropriate items from the hardware bag.

NOTE: For easier access it is recommended to remove the access door before installation.

4.0 System Installation Overview

Figure 6

Step 5: Mounting the Quantum RFID ECU reader

Figure 7

1. Remove the back plate and use it to mark the holes for the cables and screws.

NOTE: Refer to annex H of this manual for elevator panel preparation for mounting reader.

2. Drill the holes in the wall according to the diameters indicated on the drilling template in Annex H, based on the type of surface the reader is being installed on.

Refer to RCU/ECU installation instructions

Step 6: Connect peripheral wiring

⚠ CAUTION

Do not exceed the maximum cable length indicated by the manufacturer of the products being connected. In addition, the wire used to connect the peripherals to controller PCB must be of the proper gauge and type as specified by the manufacturer.

IMPORTANT

Every wire must pass through a strain relief as connected in step 3

IMPORTANT

dormakaba does not provide technical or field support for 3rd party locking devices. Please consult the device manufacturer for support.

NOTE: The Maximum Recommended Wire Length is the approximate wire length that causes a 5% voltage loss in the wire, using a 12-volt locking device at the rated current included.
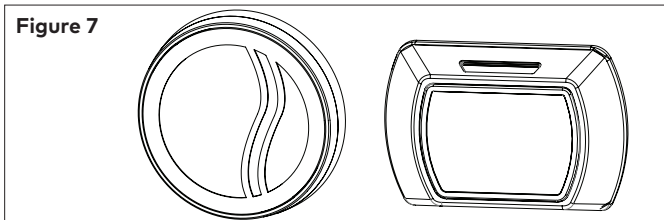
1. Fire Alarm Panel

   Refer to Annex A, Figure 10 for detailed wiring.

   Remove the jumper wire connected between pins 3 and 4 of connector J18 on the controller PCB and complete the fire panel installation as per manufacturer's indications.

2. Tamper Switch to Premise Alarm System

To wire the tamper switch to the premise alarm system disconnect the wires on controller PCB connector J7 pins 1 & 2, and run a 2-connector cable from the switch to the premise alarm system.

IMPORTANT

The tamper alarm switch's polarity is such that when the door is closed the switch itself is also in a closed state. Ensure that the wiring to the premise alarm system is done accordingly to prevent false alarms.

Step 7: Relay Expansion Board outputs wiring

Refer to Annex B, for sample wiring diagram.

The relay expansion board provides 8 relay contacts for wiring & control of relay-enabled elevator. The board only provides normally open or normally closed dry contacts, so no power is provided by the board.

As wiring of relay-controlled equipment may vary between products please refer to the product manufacturer's instruction booklet for proper instructions.

NOTE: Refer to Annex B, table 4 for specific relay expansion board bypass switches.

- If bypass switches are 'ON', the relays are bypassed and the green LED associated with that relay is turned OFF.

- If bypass switches are 'OFF' the controller PCB can activate the relays. The associated LEDs turn OFF during relay activation.

NOTE: When the power to the MFC-X is too low (power failure, the controller PCB stops functioning and the relays on the controller PCB or the expansion board will return to their normal state. Any peripheral connected to the relays will then be either in a normally open (NO) or normally closed (NC) state, dependent on the wiring.

4.0 System Installation Overview

Elevator Controller Installation:

Each Expansion board contains 8 dry relay contacts. Up to 4 expansion boards can be used for total control of 32 common areas. The relay outputs are at the wiring input of each three terminal connector (NO, COM, NC) on the expansion PCB as well as being indicated on the label on the inside of the door. Several floors can be controlled by one relay (one common area).

The relays in the MFC are UL rated and are capable of a maximum switching of 30 VDC @ 1A.

For time duration of relay state change, please refer to Annex B, Table 2.

Step 8: Power Adapter Connection

NOTE: Dependent on country's electrical power requirements follow the directions below for the power Adapter required.

Refer to Annex B, Table 8 for detailed wiring.

International Power Adapter

1. Attach the appropriate AC outlet prong to the power adapter.
2. Route the power adapter wires into the enclosure and secure the wire (recommended with tie wraps).
3. From the inside of the enclosure, crimp the fork terminals supplied in the hardware bag to the end of each wire.
4. Connect the fork-terminated wires to the power supply inputs as shown in Annex B, Table 8.

North America Power Adapter

1. From the inside of the enclosure, connect one end of the fork-terminated wires to the power supply inputs as shown in Annex B, Table 8.
2. Route the wires out of the enclosure to the AC power source and secure the wires (recommended with tie wraps).
3. Crimp the fork terminals supplied in the hardware bag to the end of the wires and connect them to the power adapter screw terminals.

Step 9: Completing the installation

1. If the access door was removed, reinstall the door to the MFC enclosure.
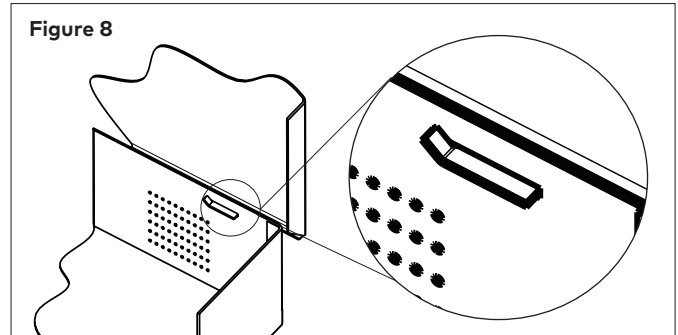2. Bend the two tabs on door to a maximum of 30 degrees as shown in Figure 8.

Figure 8

3. Connect the LED wire harness from the power supply to the access door LEDs as indicated below and in Annex B, Table 7.

NOTE: The wires must be connected with the proper polarity. Once the terminals are installed they are designed to have a tight fit so removal may damage the LEDs.

LED Description	Location on door	'+' terminal connection	'-' terminal connection
Power status	Top	Red	Orange
Battery status	Bottom	Red	Yellow

IMPORTANT

Ensure that the proper connections are made (ie: red to red, black to black).

4. Plug the power adapter into the AC power source and / or turn on the main AC power to the system.

5.0 Annex A Quick Troubleshooting Guide

The following sections show basic troubleshooting for some common problems that may occur during installation. Each section relates to a specific type of problem, namely:

- Power Troubleshooting
- Card Reading Troubleshooting
- External Inputs Troubleshooting
- Locking Device Troubleshooting
- Relay Expansion Board Troubleshooting
- Programming and Auditing Troubleshooting

For detailed assistance, please contact Technical Support as indicated at the start of this manual.

1. Power Troubleshooting

Symptom	Action
Power Adapter LED is OFF	- Verify that the AC supply is not turned off. - Verify that the Adapter output is not shorted.
Power supply AC ON green LED is OFF	- Verify that the wiring to the power wall-mount Adapter is correct. - If using the 24 VDC international Adapter, verify that the polarity is correct.
Power supply DC ON red LED is OFF	- Verify the wiring between the power supply and the MFC controller. - Verify that the power supply output is not shorted.
MFC enclosure's panel door "Power Status" LED is OFF	- Verify that the power supply is powered (both AC ON and DC ON LEDs are on). - Verify the LED wiring to the power supply.
All MFC LEDs are OFF	- Verify that the DC ON LED on the power supply is on. - Verify that the AC power is active for the wall mount power Adapter. - Verify that the MFC controller is connected properly to the power supply as per Annex B, Table 6. - If qualified, with a multi-meter verify that 24 VAC (North American power Adapter) or 24 VDC (international power Adapter) is present across power supply terminal block XFMR_1 and XFMR_2 as per Annex B, Table 8.

2. Card Reading Troubleshooting

Symptom	Action
No response to valid contactless keycard.	Verify that the contactless reader is wired properly including the required jumper wires as per Annex F or GF depending on amount of readers used.

3. External Inputs Troubleshooting

Symptom	Action
Tamper Alarm is not activating the premise alarm	Verify that the Tamper Alarm LED (D53) on the MFC controller turns on when the button is pressed. If not, verify the wiring to the Tamper Switch.

5.0 Annex A Quick Troubleshooting Guide

4. Relay Expansion Board Troubleshooting

⚠ **CAUTION**

The power for the MFC must be turned off before connecting or disconnecting the Relay Expansion Board.

NOTE: The Relay Expansion Board relay outputs are designed to be "Fail Safe" during a power failure or fire alarm: the Normally Open contact will be closed, and the Normally Closed contact will be open.

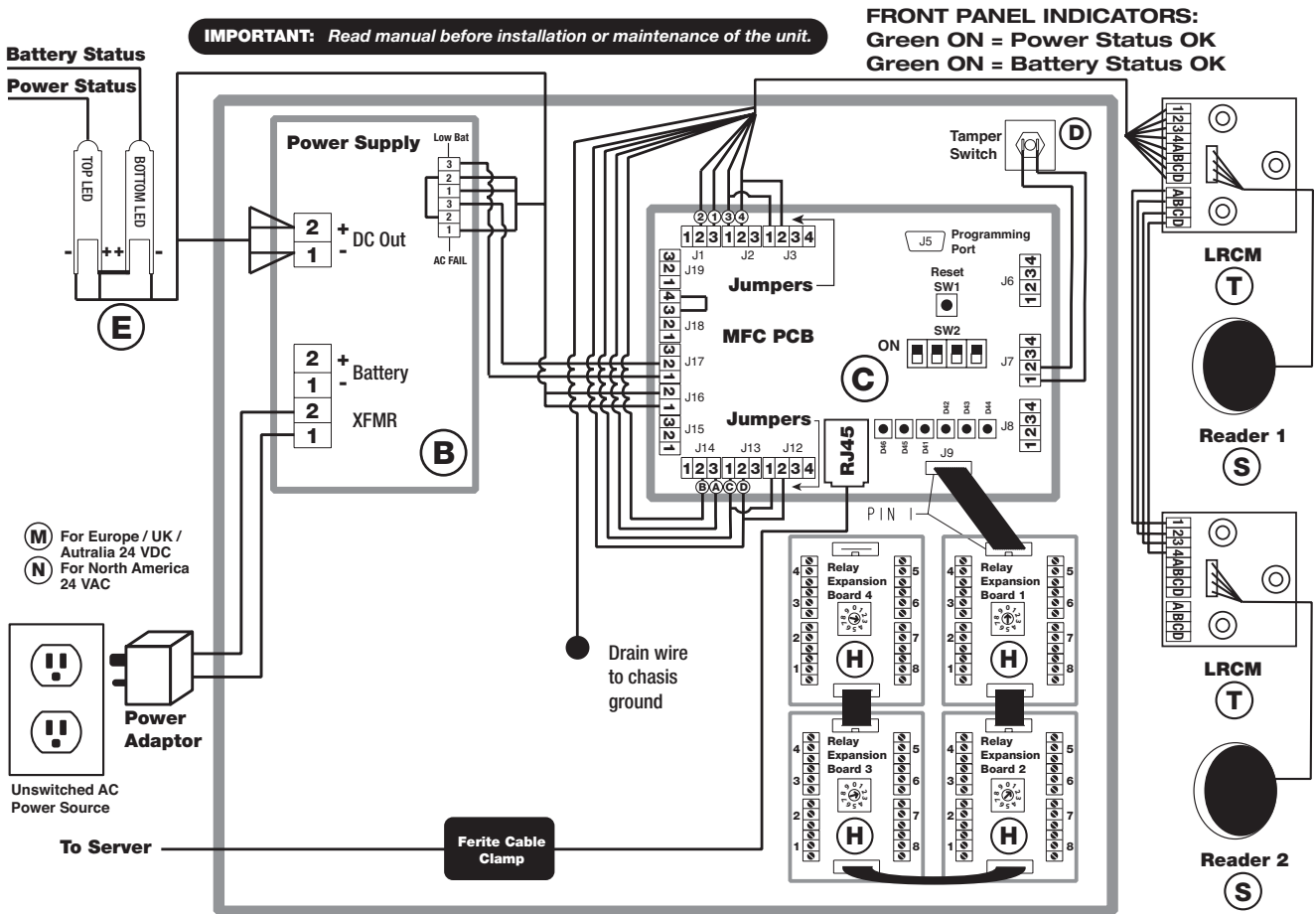| Symptom	Action
LEDs on the Relay Expansion Board are off	- Verify that the ribbon cable between the MFC controller and the Relay Expansion Board is connected properly. If it is not connected, turn the power off, connect the cable, and turn the power back on. - Verify that the Fire Alarm input is not active (Input contact closed, Fire Alarm LED, D47, is on). - Verify that the relays are not bypassed (the bypass switches SW1 and SW4 on the Relay Expansion Board should be off). - Verify that the MFC is not in passage mode.
Relay Expansion Board relays do not activate	- Activate the manual bypass switches SW1 and SW3 on the Relay Expansion Board and verify that the relays are activated and the corresponding LEDs turn off. De-activate the manual bypass. - Verify that the address of the Relay Expansion Board selected by the rotary switch SW2 is correct (The default should be at position 0). - Verify that the MFC controller is active: the Functionality 1 (D45) and Functionality 2 (D46) LEDs should blink. If not, reset the MFC Controller: press the Reset switch (SW1) or disconnect and reconnect the power. - Activate the Request to Exit by shorting J8-3 to J8-4. All the relays on the Relay Expansion Board should activate. If not, reset the MFC Controller: press the Reset switch (SW1) or disconnect and reconnect the power. - Verify that the MFC controller is programmed properly. - Verify that the card is encoded properly.
Fire Alarm does not Unlock door	- Verify that the Fire Alarm input is connected to a Normally Closed contact. - Verify that the Fire Alarm LED (D47) is normally on and turns off when the Fire Alarm is present. - Verify that the 12V_Lock output of the MFC controller is connected to the COMMON of the locking device relay.
MFC Controller PCB resets when relay is activated	- Verify that there is no short-circuit on the locking device wiring. - If a diode is installed on the locking device, verify the polarity.

5.0 Annex B Multi Floor Controller - MFC

IMPORTANT: *Read manual before installation or maintenance of the unit.*

FRONT PANEL INDICATORS:
Green ON = Power Status OK
Green ON = Battery Status OK

Table 1

Multi-Floor Controller Reader Connections		
Signal	**MFC PCB**	**LRCM**
GND	J1 pin 2	2
12V	J1 pin 3	1
Data +	J2 pin 1	3
Data -	J2 pin 2	4
GND	J3 pin 1	B
12V	J3 pin 2	A
Data +	J3 pin 3	C
Data -	J3 pin 4	D

Reader jumper wires must be installed as per wiring diagram:
J2 pin 1 to J3 pin 1 & J2 pin 2 to J3 pin 2 for Reader 1
J12 pin 1 to J13 pin 1 & J12 pin 2 to J13 pin 2 for Reader 2
Wire connection to back of contactless card reader.

Table 2

Access Delay (SW2 on Controller Board)					
CFG	**1**	**2**	**3**	**4**	**Sec.**
1	ON	ON	ON	ON	8
2	OFF	ON	ON	ON	1
3	ON	OFF	ON	ON	3
4	OFF	OFF	ON	ON	5
5	ON	ON	OFF	ON	10
6	OFF	ON	OFF	ON	15
7	ON	OFF	OFF	ON	20
8	OFF	OFF	OFF	ON	25
9	ON	ON	ON	OFF	30
10	OFF	ON	ON	OFF	35
11	ON	OFF	ON	OFF	40
12	OFF	OFF	ON	OFF	50
13	ON	ON	OFF	OFF	60
14	OFF	ON	OFF	OFF	90
15	ON	OFF	OFF	OFF	120
16	OFF	OFF	OFF	OFF	150

Table 3

MFC PCB Peripherals Connections				
Peripheral			**Controller Board**	
Wire / Conn.	**Description**	**Item***	**Signal**	**PCB Conn.**
-	Relay Exp. Bd.	(H)		
Black	Fire Alarm	-	Fire Alarm	J18 pin 3
Black			GND	J18 pin 4
-	SERVER	-	-	J10

See Annex I on Fire Alarm Wire

Table 4

Relay Expansion Board					
Terminal	**State**	**Bypass**	**Terminal**	**State**	**Bypass**
1-1	NC		5-1	NC	
1-2	COM	SW1-1	5-2	COM	SW3-1
1-3	NO		5-3	NO	
2-1	NC		6-1	NC	
2-2	COM	SW1-2	6-2	COM	SW3-2
2-3	NO		6-3	NO	
3-1	NC		7-1	NC	
3-2	COM	SW1-3	7-2	COM	SW3-3
3-3	NO		7-3	NO	
4-1	NC		8-1	NC	
4-2	COM	SW1-4	8-2	COM	SW3-4
4-3	NO		8-3	NO	

Caution: If bypass switches are "ON" - Relays are bypassed & GREEN LEDs are "OFF".
If bypass switches are "OFF" - GREEN LEDs are "ON" & Controller Board can activate relays.

Table 5

PCB Status LEDs	
LED	**Description**
D45	Reader 2 Online
D46	Reader 1 Online

Table 6

MFC PCB to Power Supply					
Description	**Controller Board**			**Power Supply**	
	Wire Color	**Connector**	**ID**	**Signal**	**ID**
DC Power	RED	J16 pin 1	12V	DC OUT-2	+
	BLACK	J16 pin 2	GND	DC OUT-1	-
AC Fail	BROWN	J17 pin 1	Low Batt	Low BAT-3	NO
	WHITE	J17 pin 2	AC Fail	AC Fail-3	NO
	-	J17 pin 3	GND	-	-

Table 7

Power Supply to MFC LEDs				
Description	**Power Supply**		**LEDs**	
	Signal	**ID**	**Wire Color**	**Signal**
Power Status	AC Fail-1	NC	ORANGE	(-)
	-	-	RED*	(+)
Battery Status	LOW BAT-1	NC	YELLOW	(-)
	DC OUT-2	(+)	RED	(+)
	-	-	RED*	(+)

Table 8

Power Supply to Power Adaptor			
	Adaptor		**P. Supply**
Type	**Wire Color**	**Signal**	**ID**
International	BLACK	XFMR-1	1
	BLACK / WHITE	XFMR-2	2
North America	-	XFMR-1	1
	-	XFMR-2	2

5.0 Annex C Protection from Electromagnetic Interference

As per any other electronic equipment, the MFC-X can be affected by electromagnetic interference caused by industrial electrical equipment such as elevator motors.

To prevent the unit from operational instability such as "freezing" or losing programming, sheilded cables should be used and connections made as per the diagram below.
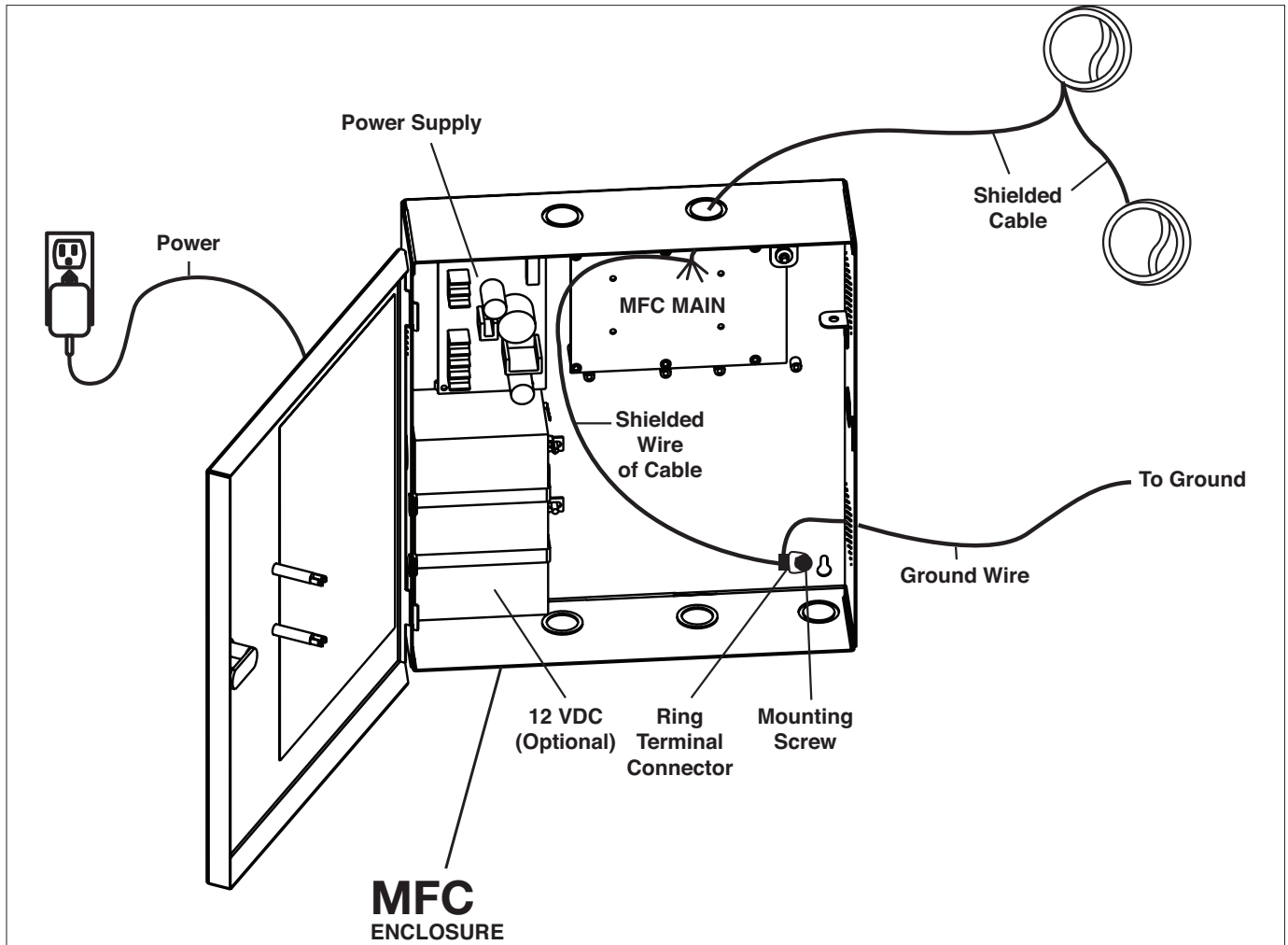

1- Use shielded cables for the readers

2- Connect the shield wire of the reader cable to the Ground wire

3- Crimp the shield wires and earth ground wire to the included (W) ring terminal connector. Connect the ring terminal to the mounting screw of the MFC (remove paint under the ring connector for good electrical contact.)

4- Ensure the Relay Expansion Boards (if applicable) has no more than 30VDC from elevator or other power source.

5.0 Annex D EMI Ferrite Cable Clamp

Step 1: Wrap Cat 5 network cable around ferrite cable clamp (1 Loop)

2-4 Inches
(5 to 10 cm)
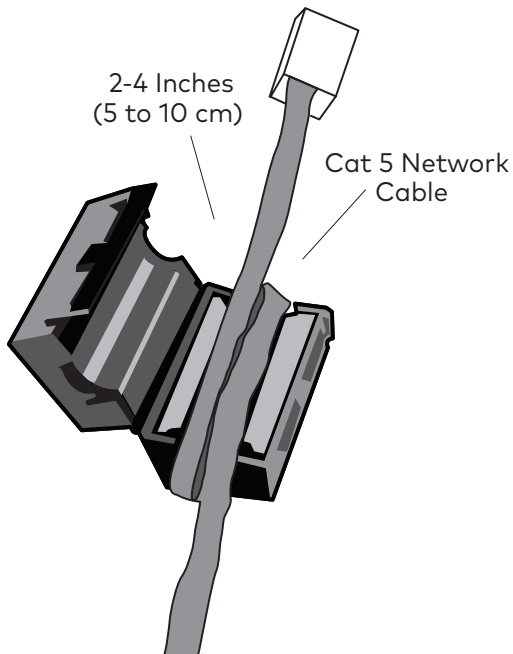
Cat 5 Network Cable

Step 2: Close cable clamp around Cat 5 Network cable
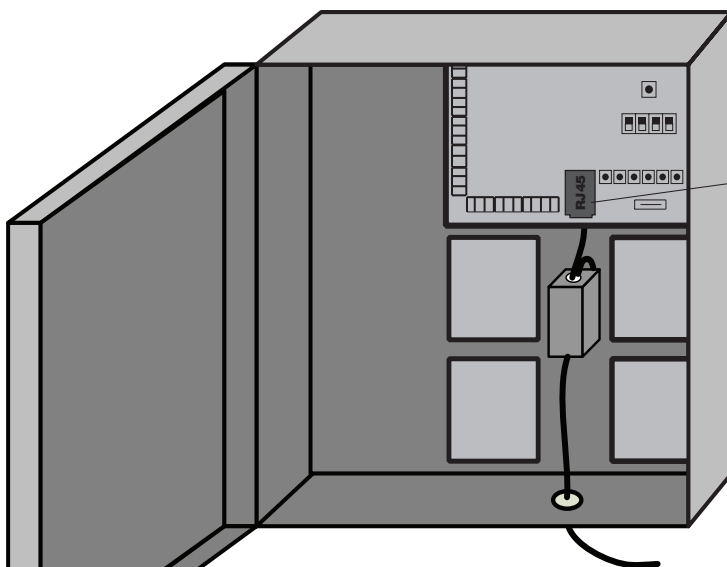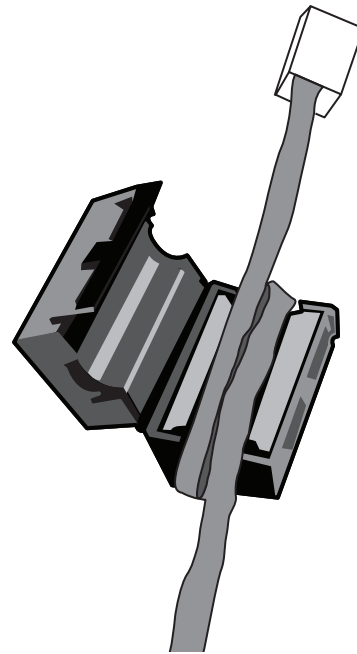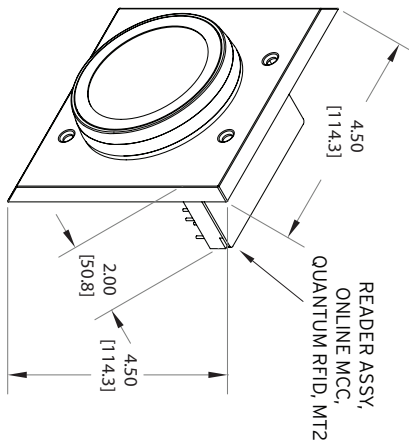
Step 3: Connect network cable to MFC

Caution:
The ferrite cable clamp SHALL be installed to prevent electromagnetic interference with other equipment

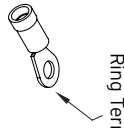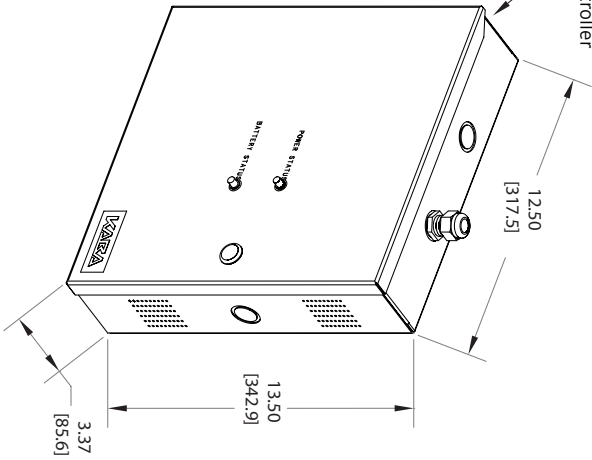# 5.0 Annex E MFC Component Breakdown

RELAY EXPANSION BOARD (REB) TABLE

CONFIGURATION	REB W/STD HARNESS QTY: (P/N: 064-511798-001)	REB W/EXPANDED HARNESS QTY: (P/N: 064-511798-002)
SINGLE ZONE	NO RELAY EXPANSION BOARD	NO RELAY EXPANSION BOARD
8 ZONES	1	0
16 ZONES	2	0
24 ZONES	2	1
32 ZONES	3	1

Relay Expansion Board

Relay Expansion Board

Ring Terminal

Power Adapter

READER ASSY, ONLINE MCC, QUANTUM RFID, MT2

4.50 [114.3]

2.00 [50.8]

4.50 [114.3]

MFC Multi- Floor Controller #T78-D1NNR

12.50 [317.5]

13.50 [342.9]

3.37 [85.6]
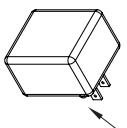
POWER ADAPTER TABLE
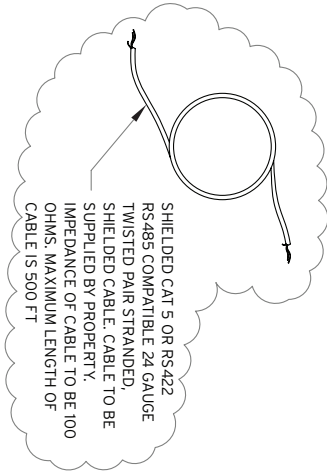
CONFIGURATION	POWER ADAPTER P/N:
NORTH AMERICA	062-511929R
INTERNATIONAL	126-513907-1

SHIELDED CAT 5 OR RS422 RS485 COMPATIBLE 24 GAUGE TWISTED PAIR STRANDED, SHIELDED CABLE. CABLE TO BE SUPPLIED BY PROPERTY. IMPEDANCE OF CABLE TO BE 100 OHMS. MAXIMUM LENGTH OF CABLE IS 500 FT

5.0 Annex F Single Reader Wiring Diagram
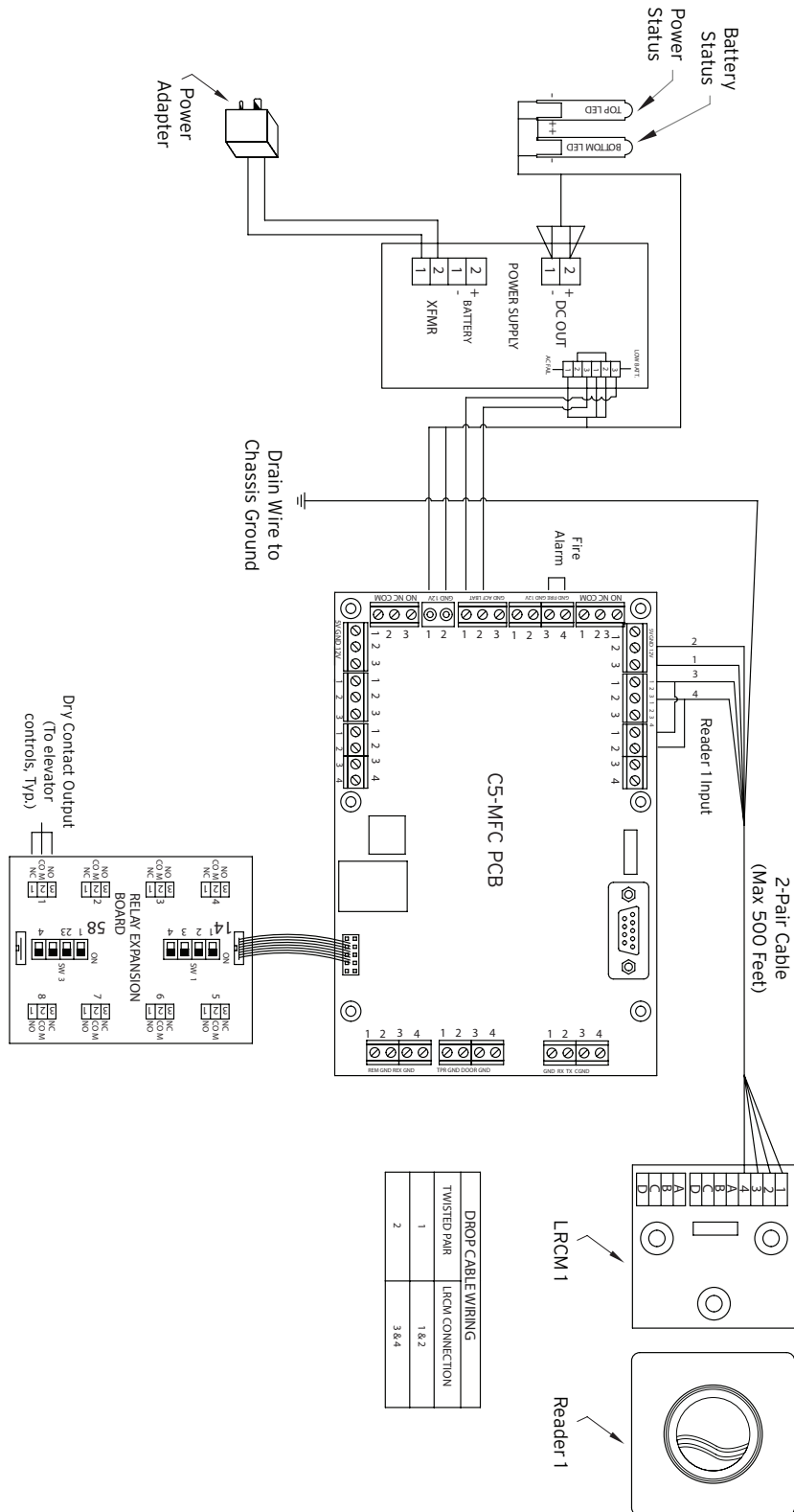
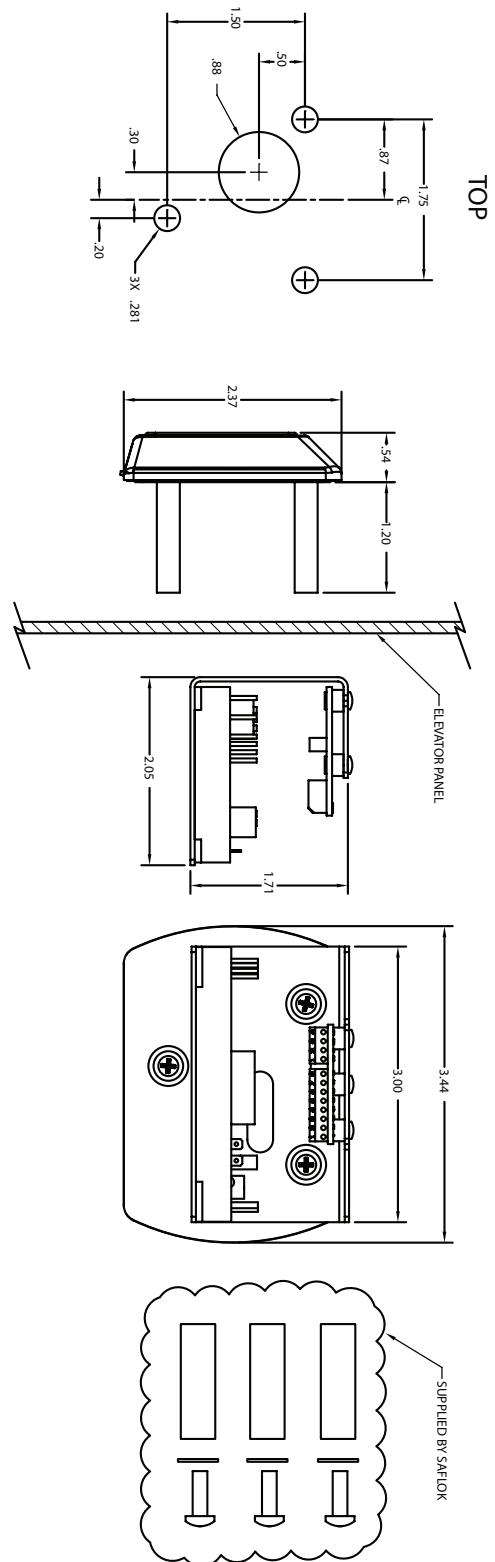# 5.0 Annex G Dual Reader Wiring Diagram with Relay Expansion Boards
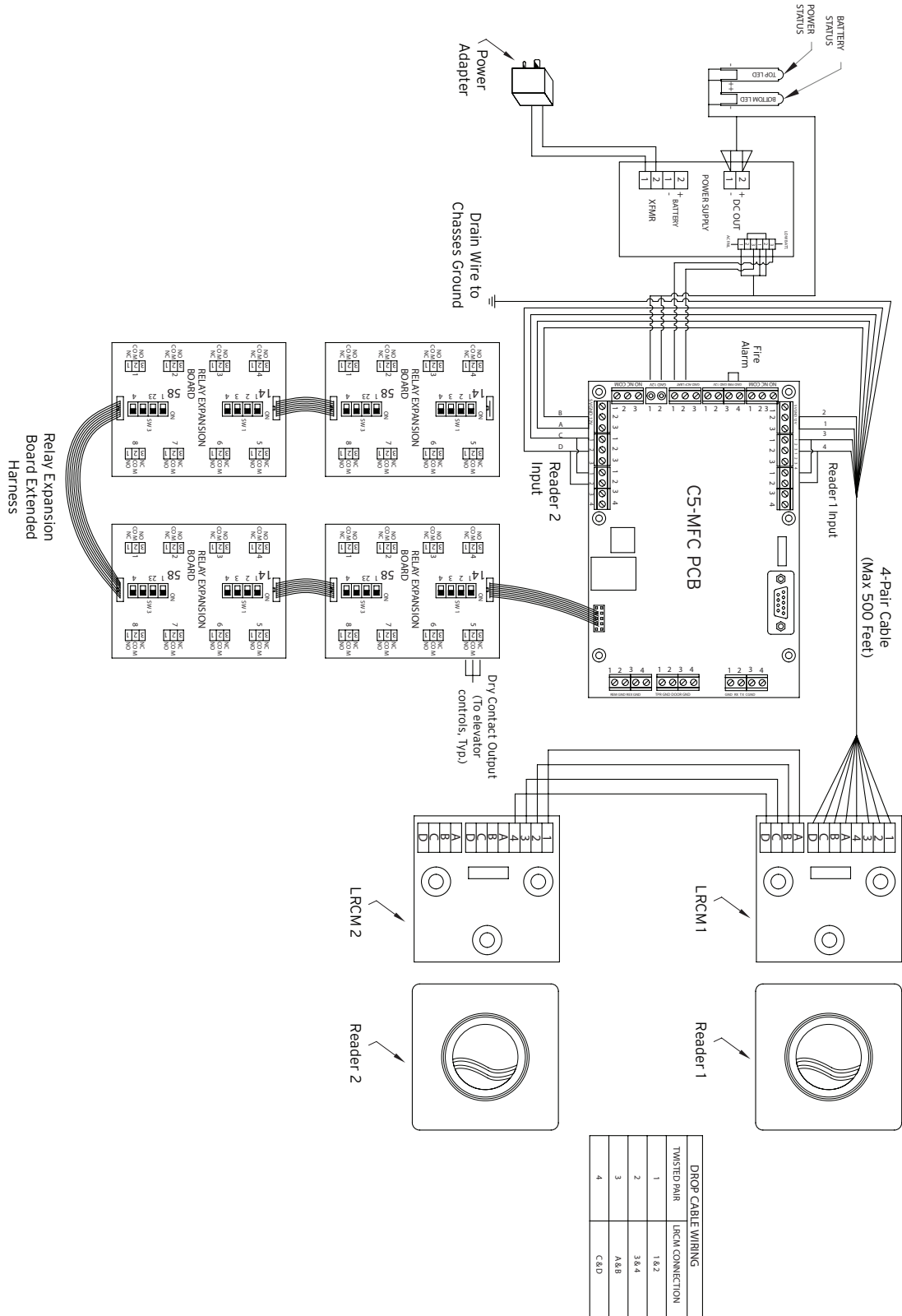
5.0 Annex H Drilling Template for ECU RFID Readers

Quantum RFID reader
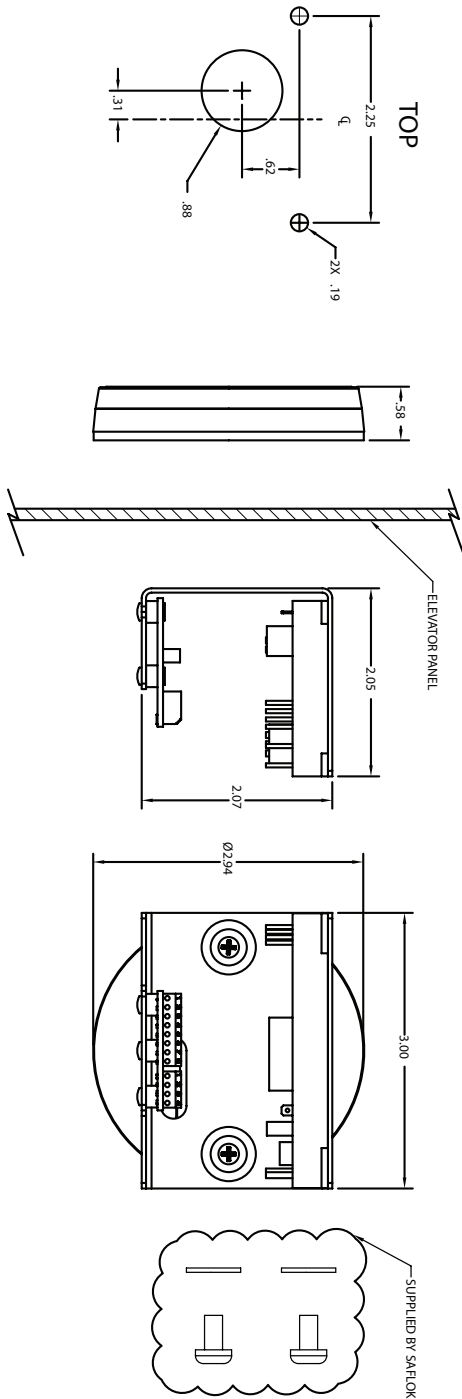
QuantumII,III, IV readers

5.0 Annex I Fire Alarm Panel Wiring

Remove Jumper for Fire Alarm Feature

C5-MFC PCB

Fire Alarm Panel
Normally closed
Contacts open on Fire Alarm
(Not supplied by dormakaba)

NC

C

See Note 1 & 2
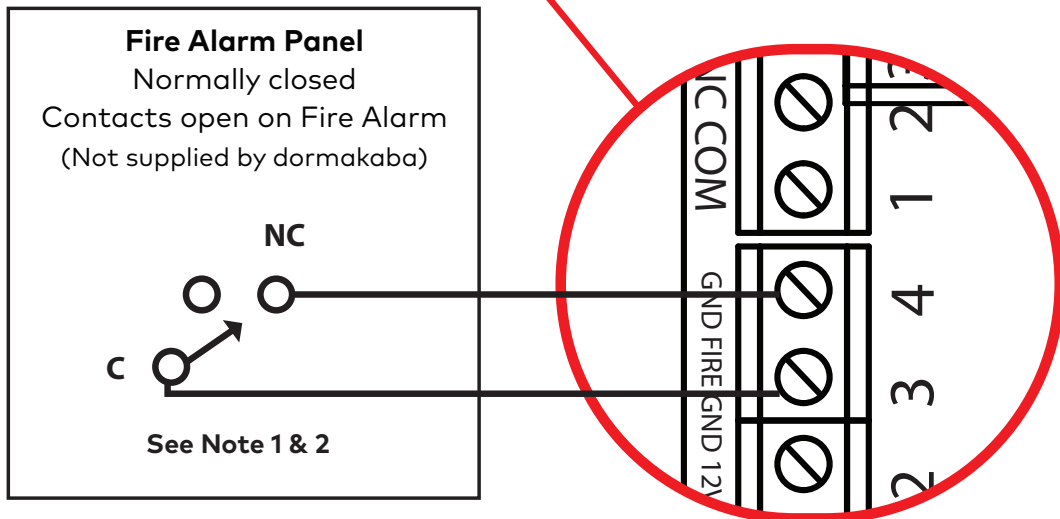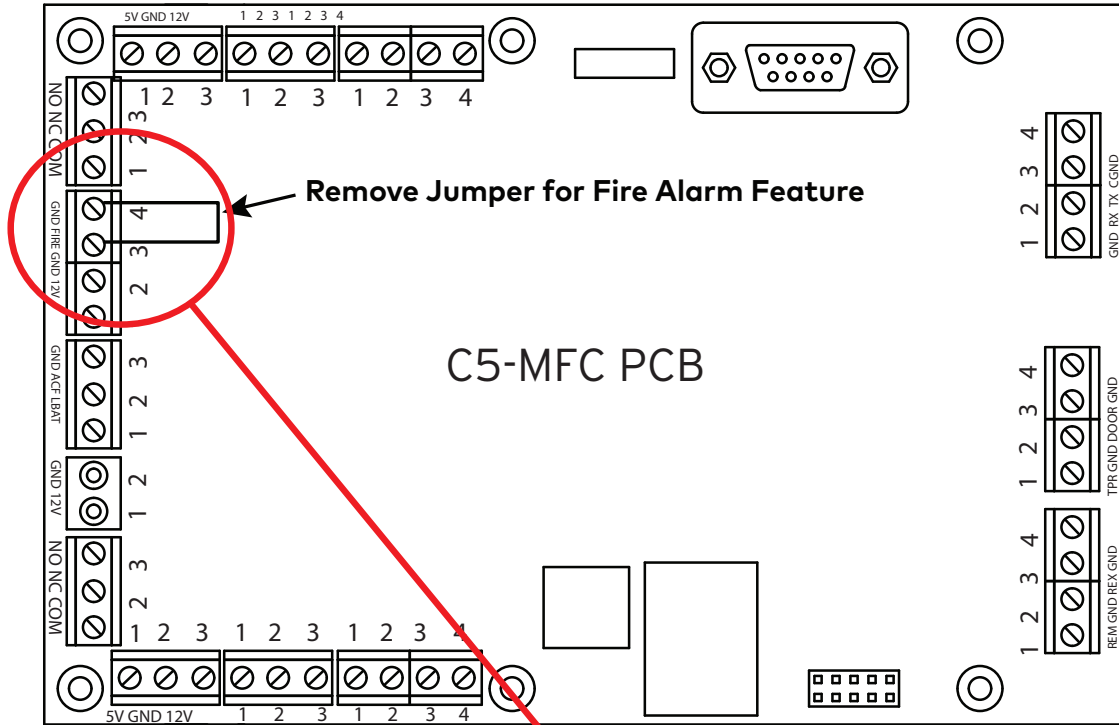
Note 1: When the MFC is connected to a Fire Alarm Panel, it must be connected to a Normally Closed (NC) dry contact output.

Note 2: If the fire Alarm Connection is not used, DO Not remove the the jumper between pin 3 and 4 of J18.

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