Quantum II RFID ECU

Installation instructions

PK3724-T - 2019 - 05

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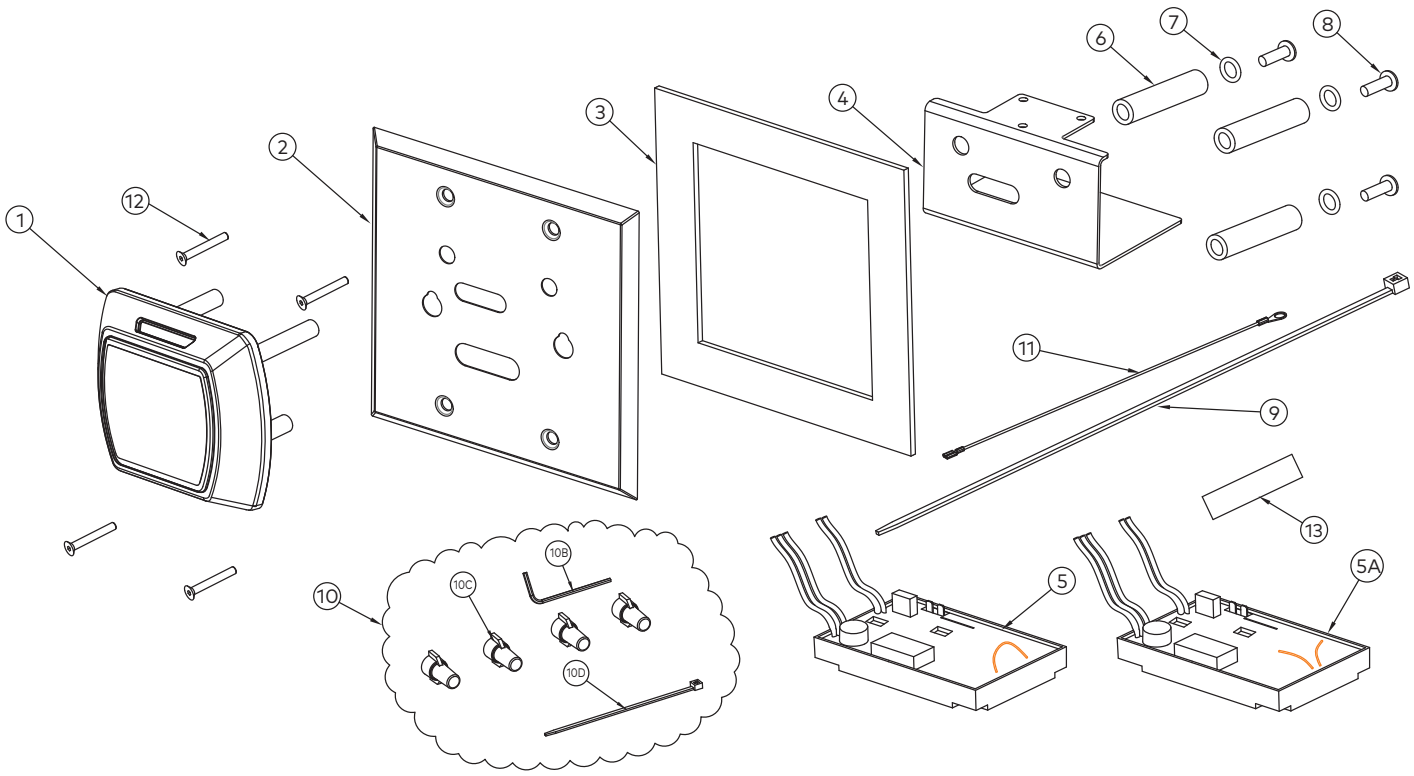
dormakaba

1 Components

Quantum II RFID ECU Exploded View

Figure 1

Quantum II RFID ECU			
ITEM NO.	**PART NUMBER**	**DESCRIPTION**	**QTY.**
1	A21710-COLOR	Quantum II RFID Reader Assembly	1
2	A32760-COLOR	Quantum II RCU Faceplate	1
3	94640	RCU Gasket	1
4	A22770	Mounting Bracket	1
5	A28732-RMO	PCB Assembly / RFID MT2	1
6	A37010	Sleeve, Quantum II RCU	3
7	A37000	Washer, Flat, #8 Screw	1
8	73400-014	Screw, #8-32 /1/2" PH, Philips	3
9	A27490	Tie Wrap, 14", RCU	1
10	55250	Nut, Wire	4
11	A28360	Wire Harness RCU PCB	1
12	50170-COLOR	Screw, #6-32 x 1" FH	4



2 Product Description

The Saflok Elevator Control Unit (ECU) is a Saflok card reader module for the purpose of controlling access to elevator floor call buttons. The ECU can be used to either control access to one floor (Secure Stop) or used to control all floor call buttons.

Pre Installation requirements

Power: (Not Supplied)

A Low voltage power source of 12 to 24 volts with a minimum current of 125 mA AC or DC is required but not included with the RCU.

IMPORTANT

DO NOT EXCEED 24 VOLTS

Adequate space:

The area around and behind the elevator panel must have adequate space to mount the ECU. Refer to figures 2 &3 for mounting options and dimensional information.

ECU electrical configuration:

The ECU is equipped with a Dry Contact Relay that can be configured either Normally Open (NO) or Normally Closed (NC).

The relay is rated for five Amps at 250VAC or 5 AMPS at 30VDC. Typically the NO set of contacts are used so that the ECU will work like the elevator call button to complete the circuit to call the elevator to the specific floor.

IMPORTANT

Review your local Fire, Electrical and Building Codes before installing this product. Be sure to investigate the switching current and voltages present at the existing elevator buttons and determine if the ECU relay contact rating and configuration will be adequate.

The Elevator technician installer must be capable and knowledgeable of the elevator system. All installations must be done in such a way as to be able to commandeer the elevators in an emergency by overriding or by-passing the ECU. There are many variations in elevator controls and local codes; for this reason, the ECU must be installed by a qualified elevator technician

3 Installing the ECU

1. Determine the reader configuration (Flush or Surface Mount). Refer to Figures 2 and 3.
2. Determine the position of the ECU on the face of the elevator panel. Be sure there is adequate space on the face and behind the panel for all mounting hardware and PCB.
3. Select appropriate template for the reader configuration (Page 5 and 6). Use the template to prep the elevator panel.

Flush mount reader installation

1. Disassemble the reader from the 4 ½ X 4 ½ mounting plate. Refer to the exploded diagram Figure 1.
2. Retain all of the mounting hardware, brackets, and ECU PCB for re use.
3. Insert the reader through the elevator panel cut out (Flush mount prep) and re assemble the PCB mounting bracket onto the back side of the elevator panel using the mounting hardware.
4. Re install the ECU PCB onto the bracket using the tie wrap to secure.

(Refer to the exploded diagram Figure 1)

Surface mount reader installation

1. Insert the ECU assembly through the elevator panel cut out (Surface mount prep) and secure it with four (4) #6 screws.

Figure 2
Flush Mount

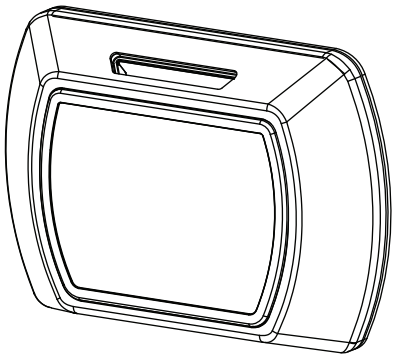
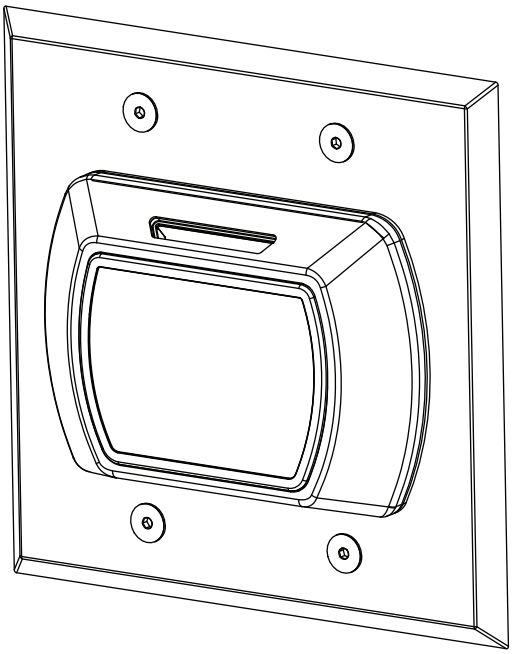


Figure 3
Surface Mount



4 Installation Steps

Flush Mount Reader

Figure 4
Flush Mount Reader Installation Dimensions

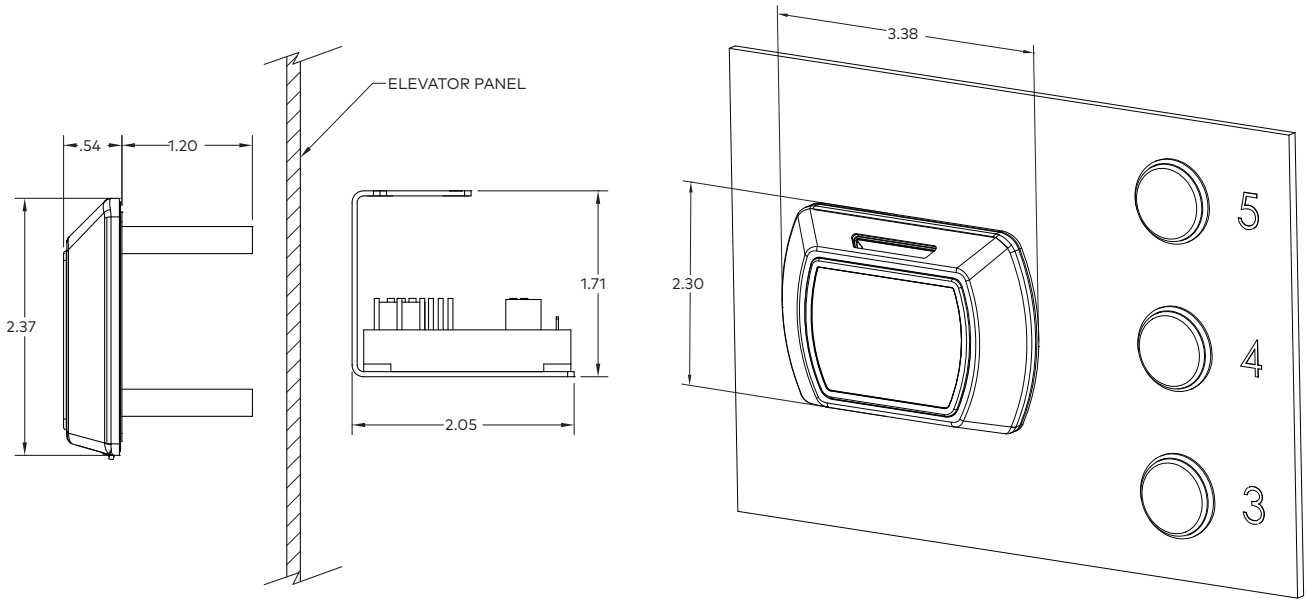
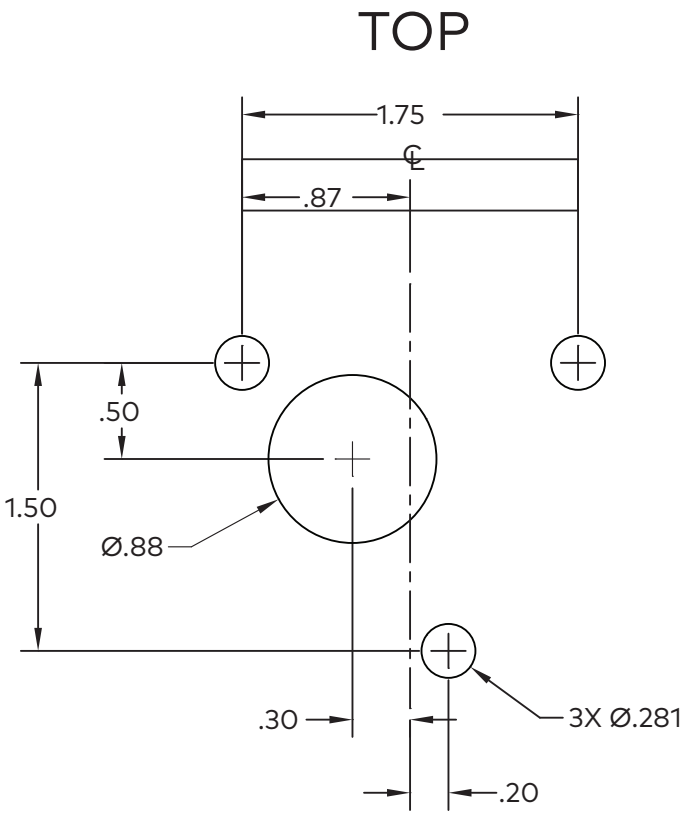


Figure 5
Flush Mount Reader Installation Template



4 Installation Steps

Surface Mount Reader

Figure 6
Surface Mount Reader
Installation Dimensions

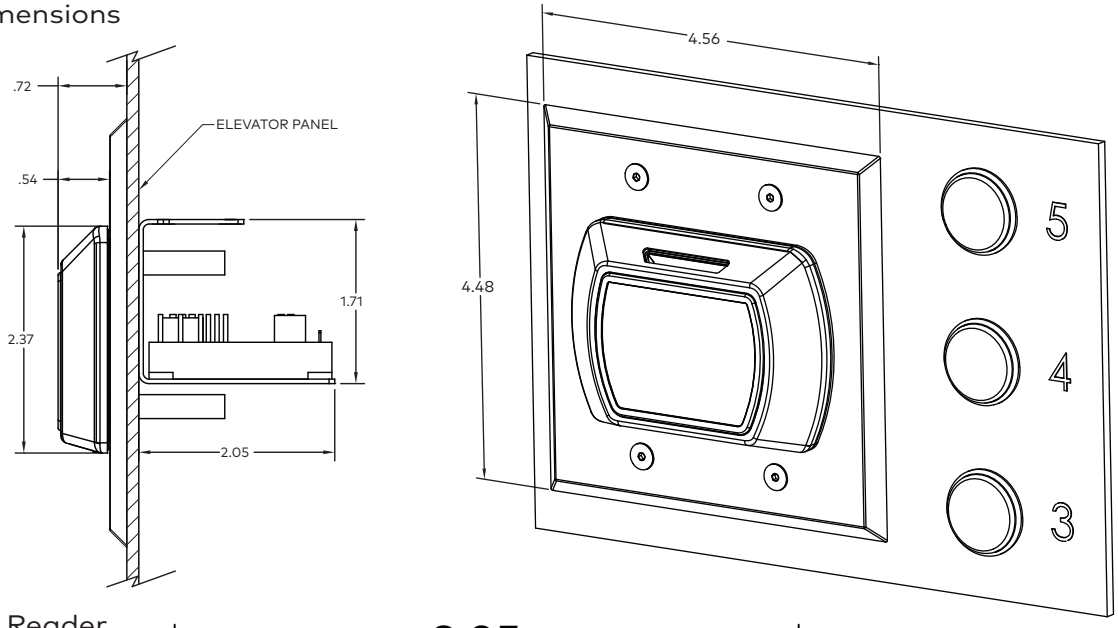
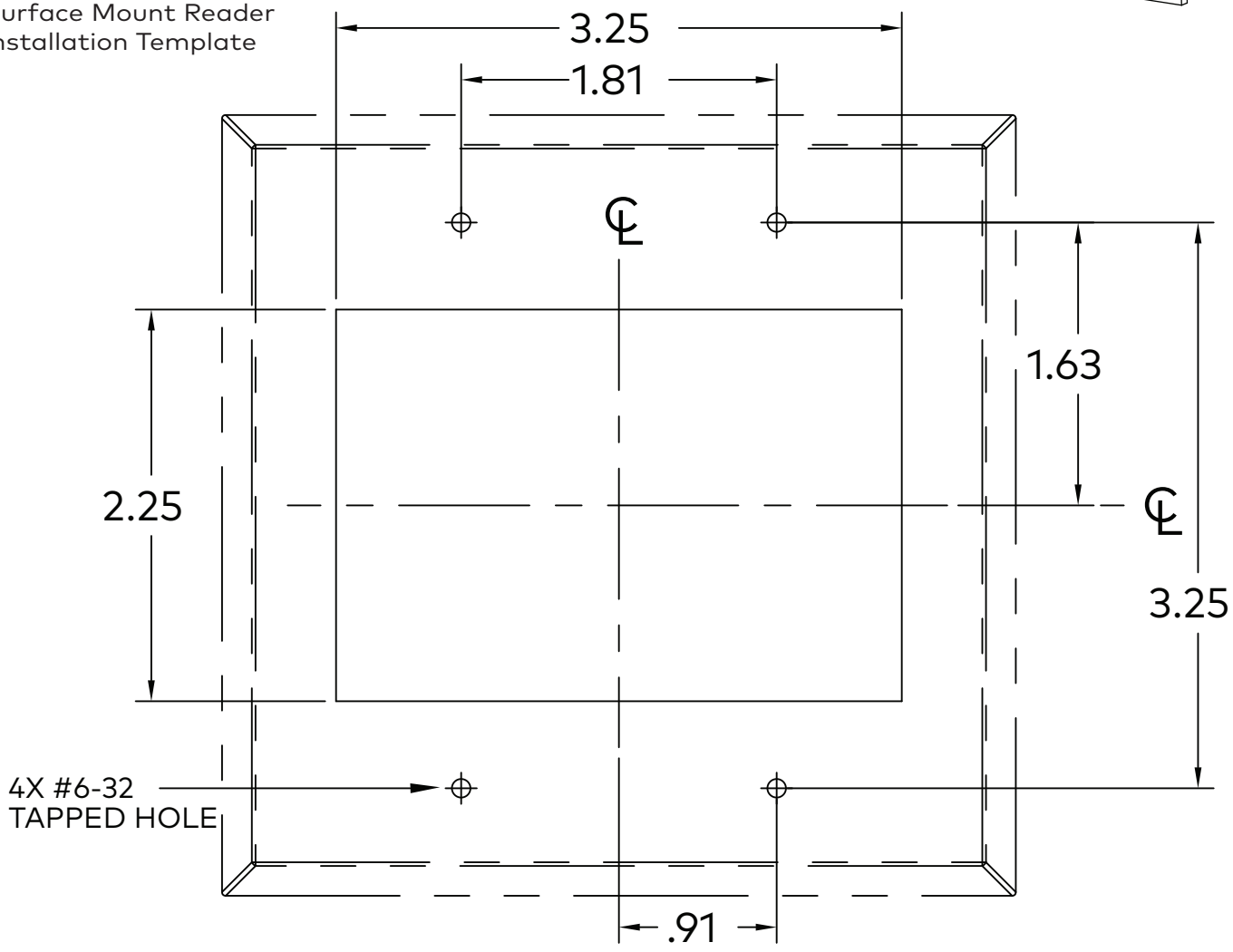


Figure 7
Surface Mount Reader
Installation Template



5 Wiring the ECU

Power Leads

The ECU requires 12-24 volts AC or DC input. Two White (Non-Polarized) wire leads are provided for supplying power to the reader. Ensure that voltage going to the ECU does not exceed 24 volts. Power supplies must be in a separate enclosure and rated properly. Refer to your local Electrical and Building Codes.

Relay Leads

The ECU is equipped with a 5 Amp Dry Contact Relay that can be configured either Normally Open (NO) or Normally Closed (NC).

⚠ CAUTION

Observe all local electrical and building codes

Red relay lead = Common (COM) contact
Blue relay lead = Normally Open (NO) contact
Black relay lead = Normally Closed (NC) contact

Wire the appropriate contact (COM and either NO or NC) to the elevator call buttons. Refer to fig 10 for typical wiring configuration.

Chassis ground Lead

The Green lead on the ECU is used for chassis ground. Connect the Green lead between one of the spade terminals on the ECU PCB and one of the reader mounting screws. Refer to fig 9.

Reader connections

Reader Ribbon

Insert the reader ribbon into the ribbon connector on the ECU PCB. Observe proper orientation. The gold contacts of the connector should mate with the gold contacts on the reader ribbon. Refer to fig 8 for proper orientation

Reader Power

Plug the reader power Red lead into the white power port on the ECU PCB. Refer to fig 9.

5 Wiring the ECU

Figure 8
Reader Ribbon

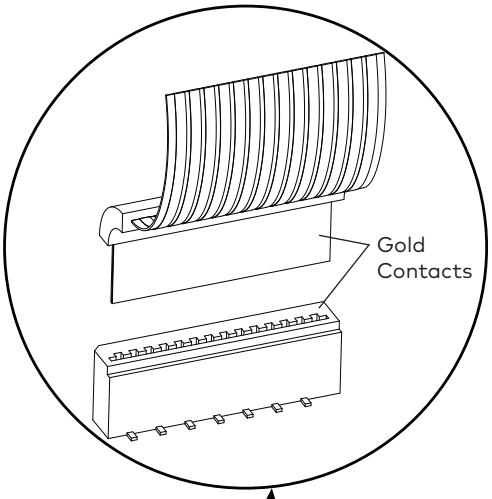
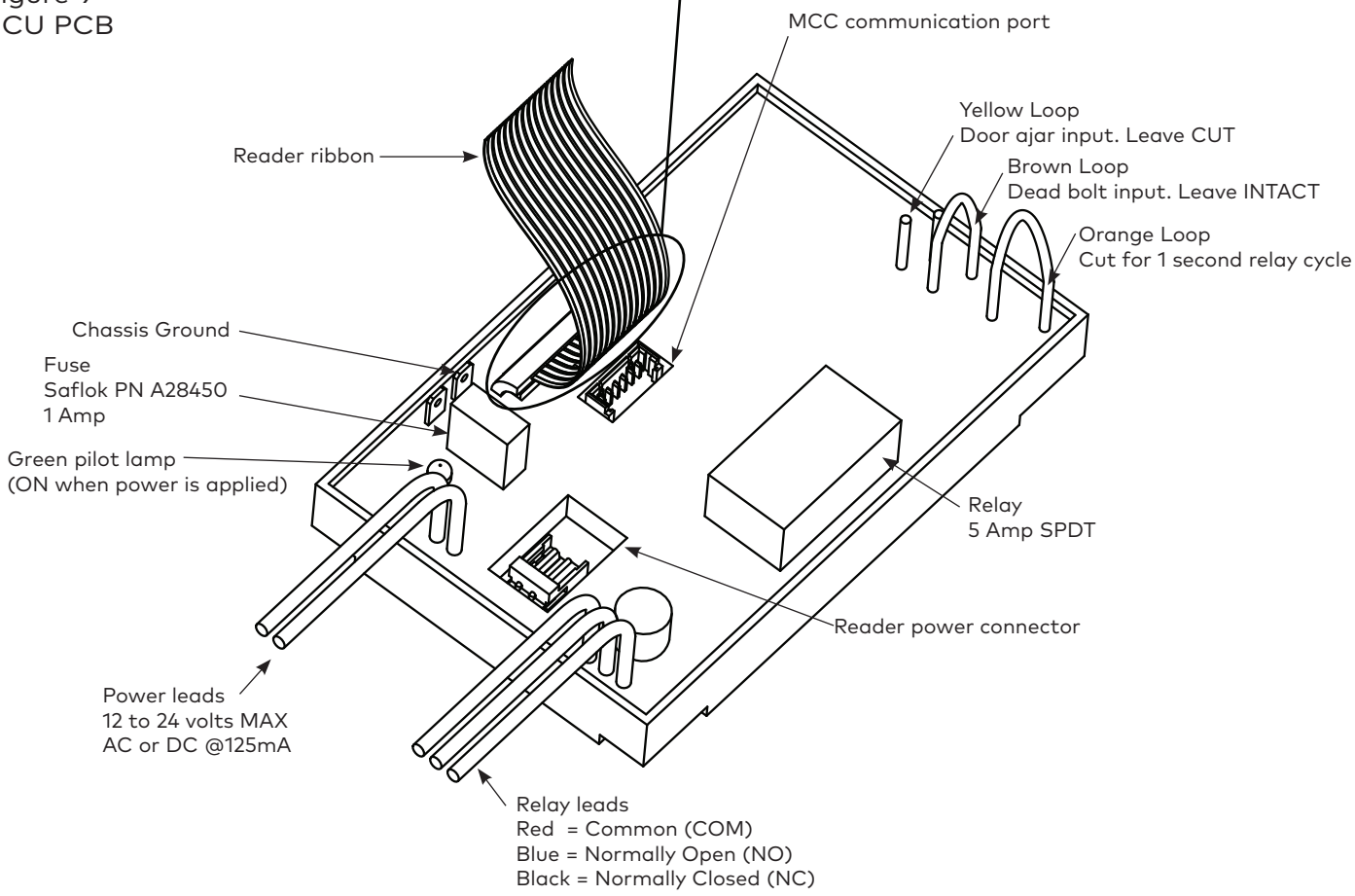
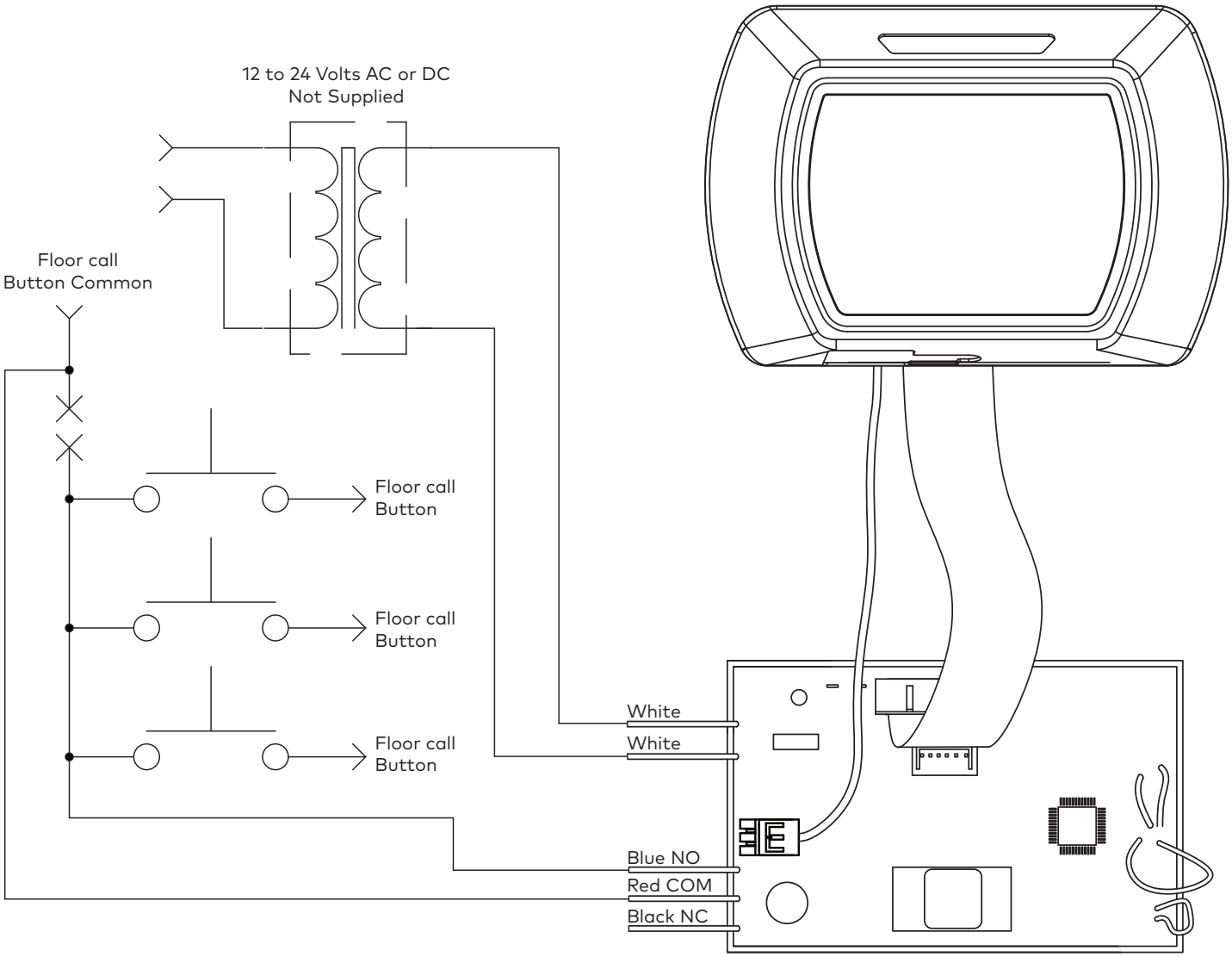


Figure 9
ECU PCB



5 Wiring the ECU

Figure 10
Typical ECU Wiring



6 Final Test and Inspection

Electronics / Keys

Apply power to the 2 white wires of the ECU. The green LED on the card reader should flash 4 times indicating a power on reset.

The ECU comes construction programmed from the factory or can be programmed to the property. Refer to the Saflok System Manual for programming instructions.

Present the appropriate key (construction or property) to the face of the reader. The reader should flash the green LED and activate the relay for 5 seconds.

During the 5 seconds press the appropriate call button on the elevator panel.

If the ECU is programmed to the property verify that all property programmed keys function to the specifications of the properties key design.

Appearance

Verify that the readers finish is free of blemishes or scratches that would distract from the ECUs appearance.

7 Troubleshooting Table

Problem	Possible Cause	Solution
No LEDs when key is presented to the reader	Reader ribbon connections not properly seated or plugged in	Check for proper reader ribbon and reader power lead connection
	No power on white power leads	Verify input power at the 2 white power leads (Green power pilot LED on)
	Blown Fuse	Check the fuse (see fig x)
	Bad Reader / ECU PCB	Replace reader / ECU PCB
Yellow and Red LEDs flash two times simultaneously	Improper key use	Present the key face straight onto the reader slowly
	Damaged or corrupted key	Replace key
Red and Green LEDs flash simultaneously	Time and date in the ECU is not set	Program the time and date into the ECU (see programming lock clock in the System Manual)
Yellow LED flashes 2 times	Key not valid in ECU	Make a new key or perform LED diagnostics to see why the key does not work. (see LED diagnostics in the System Manual)
Yellow LED Flashes 1 time	ECU not programmed	Property program the ECU (See Lock Programming in the System Manual)
Relay not activating	Bad relay lead connections	Verify relay lead connections. See diagram X
	Bad ECU relay	Verify relay contacts with a meter. Replace PCB if defective

Model: Quantum II RFID ECU

FCC and IC Warnings: 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. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

FCC Warning: The users of this equipment shall not change or modify the equipment in any way, or they could void their authority to operate the equipment under FCC rules.

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