SMARTRISE
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RFID-1 PROGRAMMING MANUAL

Version 2.00

This manual contains information for programming the RFID-1 tag reader security software included in software version 2 only (v2.32 or above)

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GETTING STARTED

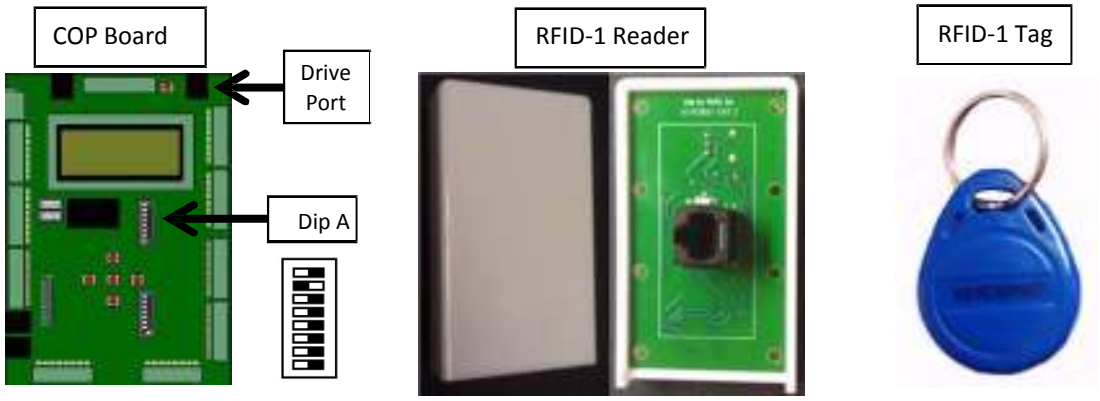
The Smartrise SRU controller provides a RFID-1 interface which allows the user to program security tags for each car. Currently, the RFID-1 security feature is only available on a 3- board system (MR/CT/COP boards) and in software version 2.32 and above.

Requirements

The following shows requirements for programming the RFID-1 tags:

1. Tag programming can only be done from the master board (COP).
2. Group – Only one master COP allowed per group. All other car COP's are classified as slaves.
3. Simplex – The COP board must be a master.

Hardware



COP Board Dip A

The Dip Switch settings you will use on the COP board (Dip A) are as follows:

1. Operating the RFID-1 – Dip Switch #2 on. This is always on for the RFID-1 to operate.
2. Programming a Manager Tag – Dip Switches (#2 & #3) + swiping a Tag will program that tag as the Manager Tag. This tag is needed for the programming of slave tags.
3. Deleting All Tags – Dip Switches (#2, #3 & #4) + swiping the Manager Tag will delete all tags. This needs to be done to initialize the board for the first time.

125 KHZ RFID-1 Reader

The reader will plug into the Drive port on the COP board. In a Group system only one car COP board can be a Master board for programming. All other car COP boards will be slave boards. The reader should be installed so that the LED's are visible when powered on and the plate accessible for scanning the tag when swiped across it.

125 KHZ RFID-1 Tag

A small keychain tag with a numerical ID printed on it. These tags can be programmed as the Master Tag or as floor tags. The number printed on the tag is used by the software but is not needed for individual programming. When the tags are programmed they are assigned a numerical value starting at 000 (Master programmer tag), 001 (1st tag programmed), 002 (2nd tag programmed), etc. up to max of 585 tags.

PROGRAMMING THE READER (REQUIRES ACCESS TO COP BOARD)

1. Plug the reader into the COP Drive port using a standard CAT5 cable.
2. Turn on Dip Switch #2. **[This will be left on when programming or using the RFID-1 reader]**.
3. Turn on Dip Switch #3 (#2 & #3 are now on) and swipe a tag across the reader. This will program that tag as the Manager Tag which will be needed to program the User Tags.
4. Turn on Dip Switch #4 (#2, #3 & #4 are now on) and swipe the Manager Tag (programmed in step #3). This will delete all tags that may be programmed in system, including the new Manager Tag programmed in Step #3.
5. Turn off Dip Switch #4 and swipe a tag across the reader reprogramming it as the new Manager Tag.
6. Turn off Dip Switch #3 (**#2 is the only switch that will stay on**). Now you're ready to program the User tags.

LED Patterns – Programming the Reader

Red / Green Blinking w/short pause between blinking	Manager Tag programmed successfully
Red / Green Blinking w/long pause between blinking	Delete all tags successful

PROGRAMMING THE USER TAGS

1. With the solid red light on, swipe the Manager Tag across the face. You should have a solid green light with a brief red flash showing the reader is in programming mode.
2. Swipe the un-programmed tag across the reader. The LED should be solid red with a brief green flash showing that the new tag is recognized. The Car Call Lamps (CCL) will display the tag ID (001 for 1st tag, 002 for second tag, etc.) in Binary. The following table shows an example of a 4-stop car and the Car Call Lamps that correspond with the tag ID.

Tag Description	ID#	Floor 1 CCL	Floor 2 CCL	Floor 3 CCL	Floor 4 CCL
Master Tag	0000				
User Tags	0001	X			
	0002		X		
	0003	X	X		
	0004			X	
	0005	X		X	
	0006		X	X	
	0007	X	X	X	
	0008				X

3. Press the DCB button. The reader should now go to "Waiting for floor permissions" with the red and green LEDs flashing. Perform step "a" or "b" below.
    a. Press the Car Call Button(s) for each floor that this tag will unlock when swiped
    b. Pressing the DOB during this phase will toggle between giving permission to all or no floors.
4. Press the DCB button to save tag's programming and reader goes back to Programming Mode.
5. Repeat steps 2~3 for each tag to be programmed.
6. When finished programming, and while in Programming Mode, press the DOB to exit programming mode. This will be done when the LED is solid green with a brief red flash. The LED should go to solid red which means it is in normal operation mode waiting for a tag swipe.

LED Patterns – Programming RFID-1 Slave Tags

LED Pattern	Description	DOB	DCB
Solid Green w/ brief Red flash	**Programming mode:** Waiting for new tag to be swiped or tag ID to be entered with CCBs	Exits programming mode	Allows programmer to manually enter a tag ID (for modification or deletion only)
Solid Red w/ brief Green flash	**Verification Mode:** New tag recognized (CCL displays tag ID)	Deletes tag	Advances to "waiting for floor permissions" mode
Red / Green Blinking	**Floor Permissions Mode:** Pressing single or multiple CCB's will enable those floors.	Toggles between giving permission to ALL or NONE floors	Saves permissions

DCB on floor permission: Save floor permissions and go back to beginning of programming mode waiting for new tag.

1. The Door Open Button (DOB) and Door Close Button (DCB) handle several functions when programming the RFID-1.
    a. DOB
        i. **DOB in Programming Mode**: *Exit programming mode*
        ii. **DOB when displaying tag ID or after manually entering ID**: *Deletes tag*
        iii. **DOB when on floor permissions**: *Toggles between giving permission to ALL or NONE floors*
    b. DCB
        i. **DCB in Programming Mode**: *Allows programmer to manually enter a tag ID (001, 002, etc. - see table on previous page)*
        ii. **DCB when displaying tag ID**: *Advances to "waiting for Floor permissions"*
        iii. **DCB when "waiting for floor permissions**: *Saves Permissions*

USING THE RFID-1 USER TAGS

LED Patterns – Operation

Solid Red	Normal – Waiting for tag swipe
Solid Green	Tag recognized – Unlocking floors programmed for tag
Red Blinking	Unrecognized tag

To operate the elevator with RFID-1 tags:

1. Reader displays solid Red LED
2. User swipes the tag across the reader.
    a. Reader displays solid Green LED – Push the floor Car Call Button (CCB) that ID tag has access to.
    b. Reader shows blinking Red LED – tag is not recognized. Contact elevator administrator for assistance.

General Information

Up to 585 tags are supported. Upon power up the master broadcasts tag #1, then #2, #3, etc… Any slave COPs on the network will save the new broadcasted tag if it is different than its own local copy.

Worst case update time for a slave (subsequent car COP boards) can be 15-20 minutes after programming with 2 or more cars if all 585 tags are programmed.

User Precaution

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Changes or modifications not expressly approved by Smartrise Engineering, Inc. could void the user's authority to operate the equipment.

Compliance Statement for Canada (English)

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.

Déclaration de conformité pour le Canada (français)

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Sales and Service Information

To obtain information about Smartrise products and technical support, please reference the following information.

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