

## Interface View



Figure 15.20 - Interface View in Menu

The Interface View tab shows information on the Controller's IF board and its various power supplies. See software manual for more information on each status.

### Interface Board

#### interface board status

Reset Button Status: 0  
 LED Blink Pattern: No Watchdog: 01-00-01-00-01-00-00-00-00-00  
 Current IP/DHCP 10.100.250.36/dhcp enabled  
 Pending IP/DHCP 10.100.250.36/dhcp enabled  
 Current/Pending Zone Number: 2/2  
 Pending Zone Number: 2  
 Pending Zone Change Time: 0 Remaining: 0  
 Power Status: Power Unprotected  
 Super cap not attached  
 On main power  
 Tamper Status: Tamper Clear

#### interface board control

Watchdog Status: 1  
 Watchdog Strobe: -1  
 Zone: 2  
 dipSwitches: 111111101

Buzzer On  
 Enable WD

#### real time clock

rtc: 8/10/2021 2:08:29 PM, system: 8/10/2021 2:08:43 PM

#### pins

GPIO 0: Super Cap Charged And Attached 0	GPIO 14: Check battery clock (charging = 0) 0
GPIO 1: Enable Super Cap Charging 1	GPIO 15: All power good (CAP ATTACHED = 0) 1
GPIO 2: (not used)	GPIO 16: Dip switch 2, pin 1 1
GPIO 3: (not used)	GPIO 17: Enable watchdog (output) 0
GPIO 5: Dip switch 1, pin 5 1	GPIO 18: Watchdog pulse (output) -1
GPIO 6: Dip switch 1, pin 4 1	GPIO 19: Buzzer on (output) -1
GPIO 7: Dip switch 1, pin 3 1	GPIO 20: Debug LED (output) 1
GPIO 8: Dip switch 1, pin 2 1	GPIO 21: On main power 1
GPIO 9: Dip switch 1, pin 1 1	GPIO 22: Board reset button 0
GPIO 10: Dip switch 2, pin 5 1	GPIO 23: RTC battery status 1
GPIO 11: Dip switch 2, pin 4 1	GPIO 24: Tamper (ALARM = 0) 1
GPIO 12: Dip switch 2, pin 3 1	GPIO 25: Low Voltage (UNKNOWN) 1
GPIO 13: Dip switch 2, pin 2 0	GPIO 26: Watchdog status (UNKNOWN) 1
	GPIO 27: On super cap 0

#### power

GPIO 0: Super Cap Charged And Attached	0	Enabled for 60 seconds, disabled for 5 (where GPIO-1 can be read)
GPIO 1: Enable Super Cap Charging	1	0: not charged or not attached, 1: attached and charged @ 20%
GPIO 15: All power good:	1	Not used
GPIO 21: On main power	1	1: Indicates main power attached, 0 when on super cap
GPIO 25: Low Voltage:	1	Not used - if low voltage then Pi likely shuts down

Figure 15.21 - Interface View Screen Example

## Remote Control View

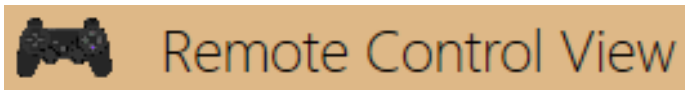


Figure 15.22 - Remote Control View in Menu

The Remote Control View tab is used to update the Controller's firmware, when necessary. It also allows you to reboot the Controller via the Reboot Options section.

Select Files - used to select the updated firmware files

Upload Files - Uploads the selected files to the Controller

Complete Upgrade - Completes the firmware update via the process selected in the Restart Options checkboxes.

Restart Applications - Restart the Controller's applications.

Reboot - Soft-reboots the Controller, rebooting the OS without powering down/up the Controller.

Repower (via watchdog) - Hard-reboot, which causes power to be cut for approximately 10 seconds before restarting.

### Controller Software Management

#### Evaluate Controller Software

LXControl App Active Folder: /home/pi/Documents/bins/LXControlApp/setB/  
LXControl App Upgrade Folder: /home/pi/Documents/bins/LXControlApp/setA/  
UDPResponder Active Folder: /home/pi/Documents/bins/UDPResponder/setA/  
UDPResponder Upgrade Folder: /home/pi/Documents/bins/UDPResponder/setB/

#### Select Files

Select Folder

#### Upload

Upload Files

#### Set Folder and Reset

Complete Upgrade

#### Restart Options

☒ Restart Applications ☐ Reboot ☐ Reset Power

#### Reboot Options

Restart Applications

Reboot

Repower (via watchdog)

Figure 15.23 - Remote Control View Screen Example



# **Chapter 16**

## **Troubleshooting**



# Troubleshooting

This section contains solutions to possible system problems. As many system components (and therefore functions) are interrelated, you may be referred back and forth to different sections to complete the troubleshooting.

Use the headings to locate your problem. Follow the solution list down until the problem is remedied. You may not need to perform all solutions.

## Before you start

- 1) Check all connections and wiring of affected component(s)
- 2) Verify 110VAC power to the Power Supply
- 3) Verify 15VAC to Controller
- 4) Verify 15VDC to IO Board

## LF Antenna

**No Tx indicator (LED 5, 7, 9 out on IF board)**

*Is the LF Antenna getting power?*

Verify 15VDC to the LF Antenna.

*Is the LF Antenna tuned correctly?*

Verify that the LF Antenna is tuned properly (see LF Antenna chapter)

*Is Tx Gain set too low?*

Use the Accutech Software to increase the Tx Gain.

*Is the LF Antenna damaged?*

Replace the antenna (from another zone, or with a spare)

*Is a cable broken or pinched?*

Check for broken or pinched cables. Replace cables as necessary.

*Is RS485 wired properly?*

Verify that all RS485 connections are wired correctly with the proper cables.

*If there is still no Tx indicator...*

Tx may be blown on the Controller's IF Board. Receiver

**No Rx indicator (LED 6, 8, 10 out on IF board)**

*Is the Receiver addressed correctly?*

Verify that the Receiver is addressed properly (see Receiver chapter)

*Is the Receiver damaged?*

Replace the Receiver (from another zone, or with a spare)

*Is the Receiver getting power?*

Verify 15VDC from the Controller's IF board.

*Is a cable broken or pinched?*

Check for broken or pinched cables. Replace cables as necessary.

*Is RS485 wired properly?*

Verify that all RS485 connections are wired correctly with the proper cables.

*If there is still no Rx indicator...*

Rx may be blown on the Controller's IF Board.

## Tags

*Tag is not detected*

Use a BTAD to verify Tag is turned on and functioning properly.

*Tag (turned on, functioning) is not detected*

See "No Tx indicator" and "No Rx indicator" sections.

## False Tag Detection (nuisance alarms)

*Is another zone setting this zone into alarm?*

Implement stagger tuning (see LF Antenna chapter)

*Are patient rooms adjacent to the monitored zone?*

Reduce LF Antenna sensitivity (LF Antenna chapter) and/or reduce Receiver sensitivity (chapter 5)

## Keypad

Does not reset

*Is the correct code being entered?*

Verify code.

*Was the incorrect code entered 3 times?*

If so, the Keypad will lock the user out for 90 seconds (Green LED blinks during this time)

*Is a cable broken or pinched?*

Check for broken or pinched cables. Replace cables as necessary.

*Is the Keypad damaged?*

If so, replace the Keypad (from another zone, or a spare)

**Tx Supervise alarming (LED**

*Are metal carts in front of the antennas?*

Remove metal carts from area.

*Is the antenna damaged?*

Replace the antenna (from another zone, or with spare)

*Is a cable broken or pinched?*

Check for broken or pinched cables. Replace cables as necessary.

*Is the LF Antenna tuned correctly?*

Verify that the LF Antenna is tuned properly (see LF Antenna chapter)

*Is Tx Supervise threshold set too high?*

See tuning procedures (LF Antenna chapter)

## Alarms

**Door Ajar Indicator Alarming (LED 9 on IO Board)**

*Is the door propped open?*

Check.

*Is the door a high-traffic zone?*

Extend Door Ajar Delay Time (see Software chapter)

*Is monitored zone an Elevator/Hallway with a PIR?*

Disconnect Door Ajar feature by removing wire to Receiver on both ends.

**Loiter indicator alarming (LED10 on IO Board)**

*Is a patient in the monitored zone?*

Address situation.

*Is a patient in a room next to the monitored zone?*

Reduce the LF Antenna Tx field sensitivity (see Software chapter)

## No Functions Working

*If none of these features are working...*

Check output on Controller with DMM.

If outputs are good, check wiring and connections.

If any outputs are not functioning, Controller may need replacing.

### ***Lock Operation Verification***

From Controller's IO board:

- 5) Verify 12VDC output at P10
- 6) Label and remove wires in P4 connector
- 7) Jumper "Fire +V In" to "Fire +V Out"
- 8) With a Tag in monitored zone, use an ohmmeter to check for a closed contact across "Lock N.O." and "Lock Comm"
- 9) When you remove Tag from zone, this contact should then open
- 10) If these actions do not occur then the Controller's IO board may be defective
- 11) If board tests good, continue to "At Lock."

At 3101 Lock:

- 1) Verify 12VDC at Pins 1, 14, & 26 (Green LED1 should be on in non-energized state)
- 2) Using a jumper wire or needle-nose pliers, jumper Pin 3 to Pin 4. (This should energize the Lock; the Green LED14 will change to Red)
- 3) Use a jumper wire or needle-nose pliers to short Pins 5 & 6. (This will de-energize or reset Lock; LED14 will turn off for as long as pins 5 & 6 see a closed contact)

---

**NOTE:** LED2 should be lit at all times, if it is flashing or not illuminated then the Lock board is defective.

---

## **LED1 (Com Error)**

LED1 (Com Error) on the IO board indicates if there is a problem with the connection between the IO Board and IF Board.

Check the wiring between the IO Board (P1) and the IF Board (TB1). See chapter X.

## **LED11 (Supervisor Indicator)**

LED11 (Supervisor Indicator) on the IO board indicates if there is a problem with the system's LF Antenna(s) and/or Receiver(s).

LED11 is a visual indicator of Supervisor status; therefore you can troubleshoot without having to listen to the piezo buzzer alarm. You may silence the piezo buzzer alarm via the Accutech Software.

To determine what the problem is, review the Accutech Software (chapter X).





# Index

## A

### Alarms

Band Removal ix, 1-3, 1-5, 5-3, 6-4, 12-3, 13-8

Door Ajar 1-4, 1-5, 8-3, 8-5, 12-3, 12-4

Egress 1-3, 1-5, 12-3

Loiter 1-4, 1-5, 12-3, 12-4

Roll Call 1-5, 5-3, 12-3, 12-4, 13-8

Supervisor 1-5

## B

Band Removal ix, 1-3, 1-5, 5-3, 6-4, 12-3, 13-8

## C

### Components

BTAD v, viii, ix, 1-3, 1-5, 6-3

Controller ix, 1-3, 1-5, 1-6, 3-3, 3-4, 3-5, 3-15, 5-3, 5-7, 5-8, 5-9, 9-5, 9-6, 11-3, 11-5, 12-3, 13-5, 14-3

IF Board ix, 3-7, 3-10, 14-3, 14-5

IO Board ix, 3-3, 3-8, 3-11, 3-14, 4-9, 7-5, 7-6, 8-5, 8-6, 10-9, 10-10, 11-5, 11-8, 12-3, 12-5, 13-6, 13-7, 15-8, 16-3, 16-4, 16-5

Microprocessor ix, 3-3, 3-4, 3-6, 3-7

Cut Band Tag 1-5

Elevator Deactivation 1-4, 1-5, 1-6, 2-4, 11-3, 11-5, 13-1, 13-3, 13-4, 13-5, 13-6, 13-7, 13-8

Fire Panel Interface ix, 1-5, 1-6, 2-4, 10-5, 11-1, 11-3, 11-4, 11-5, 13-5

Keypad 1-3, 1-4, 1-5, 1-6, 2-3, 2-4, 7-1, 7-3, 7-4, 7-5, 7-6, 7-7, 10-3, 10-5, 12-3, 13-3

KP-103 7-3, 7-12, 7-13

KP-403 7-3, 7-4

LED 4-4, 4-10, 4-11, 7-4, 7-7, 10-7, 11-3, 11-6

LF Antenna ix, 1-3, 1-5, 1-6, 3-3, 3-4, 3-5, 3-15, 5-3, 5-7, 5-8, 5-9, 9-5, 9-6, 11-3, 11-5, 12-3, 13-5, 14-3

Local Alarm x, 1-3, 1-5, 1-6, 2-3, 2-4, 12-3, 12-4, 12-5, 12-6

Magnetic Lock 1-4, 10-3, 10-4, 10-5, 10-6, 10-9

Magnetic Switch 1-5, 2-3, 8-1, 8-3, 8-4, 8-5, 8-6

Passive Infrared Reader 1-5, 1-6, 9-1, 9-3, 13-5, 13-6

PIR 1-4, 1-5, 2-3, 2-4, 9-1, 9-3, 9-4, 9-5, 9-6, 9-7, 12-3, 13-5, 13-6

Power Supply ix, 1-5, 1-6, 2-4, 3-3, 14-1, 14-3, 14-4, 14-5, 14-6

Receiver ix, 1-3, 1-5, 1-6, 2-4, 5-1, 5-3, 5-5, 5-6, 5-7, 5-8, 5-9, 5-10

## D

Delayed Egress 1-6, 3-12, 10-3, 10-4, 10-5, 10-7

### Direct access programming 7-13

DAP 7-12, 7-13

## M

Masking 9-3, 9-7

## P

Patient Rooms 4-6

## R

Request-to-Enter 7-12

## S

Sensor Wheel 10-7

Stagger Tuning 4-3, 4-5, 4-7

T

Tag Detection 4-4, 10-5

Tx field 4-4

The BR5200 Door Controller is mounted at egress zones to interface with system receivers and zone components. It includes an IO Board, IF Board, and Microprocessor within a white metal case. The Controller is connected to a supercapacitor to prevent corruption of data upon power loss, and the case includes a tamper switch to prevent unauthorized access to its internal components.

## Electrical

**Power Requirements:** 19.5VAC @ 1A max

## Mechanical

**Construction:** Metal Case

**Enclosure size:** 16.75" x 9.60" x 3.25"

**Weight** (including enclosure, supercapacitor, tamper switch): approximately 9 lbs

## Operating Characteristics

**Operating Temperature:** 32° to 120° Fahrenheit

Intended for Indoor Use Only

## Duty Cycle

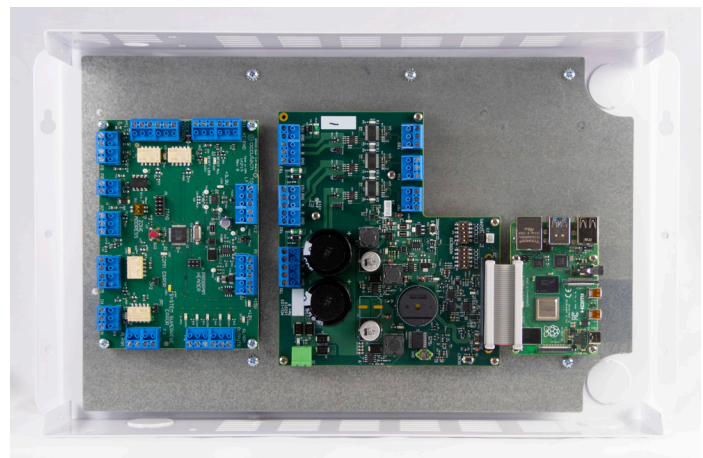
Rated for continuous use.



The BR5200 Door Controller (with cover)

Model: BR5200DC

Part Number: 700335



The BR5200 Door Controller (without cover)

The BR5200 RXC Controller allows the connection of additional receivers to a system when there are not enough ports available on the BR5200 Door Controller(s). RXC Controllers feature an IF board and Microprocessor within a metal case. The controller is connected to a supercapacitor to prevent corruption of data upon sudden power loss, and the case includes a tamper switch to prevent unauthorized access to its internal components.

## Electrical

**Power Requirements:** 19.5VAC @ 850mA max

## Mechanical

**Construction:** Metal Case

**Enclosure size:** 16.75" x 9.60" x 3.25"

**Weight** (including enclosure, supercapacitor, tamper switch): approximately 8.8 lbs

## Operating Characteristics

**Operating Temperature:** 32° to 120° Fahrenheit

Intended for indoor use only

## Duty Cycle

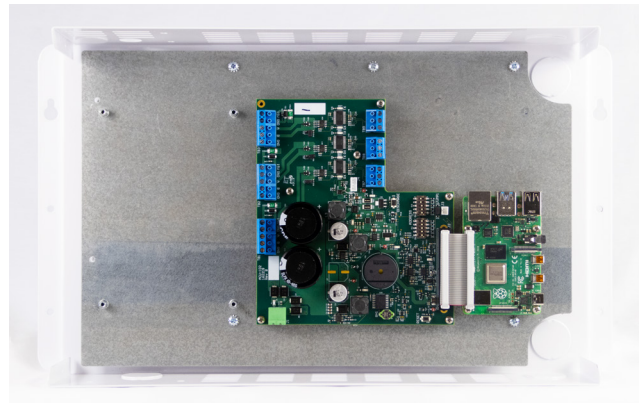
Rated for continuous use.



The BR5200 Rx Controller (with cover)

Model: BR5200RXC

Part Number: 700336



The BR5200 RXC Controller (without cover)

The BR5230 LF Antenna is mounted on the wall at an egress zone and creates a Tx Activation Field. The field excites any Tag that enters its range, prompting the Tag to send a signal to system receivers. This signal is transmitted to the controller, which then initiates actions such as locking doors, deactivating elevators, and triggering system alarms.

## Electrical

**Operating Voltage:** Minimum 15VDC

**Current Consumption:** Maximum 350 mA

## Terminal Block Ratings

Maximum 300 V, 10A on a single pin

## Mechanical

**Construction:** Injection molded ABS

**Size:** 17.50" x 7.00" x 1.50"

**Weight:** 1.88 pounds

**Mounting Surface:** Four 3/16" screws

## Operating Characteristics

**Tuning Frequency:** Nominal 131KHz  
(127KHz to 138KHz for stagger tuning)

**Exciter Range:** up to 10 feet radius (360°)

**Communication:** RS485

**Baud Rate:** 115200 bps

**FCC ID:** JM7-HWHY-662019

**IC:** 2683A-662019

## Environmental

**Operating Temperature:** 32° to 120° Fahrenheit

**Intended for indoor use only**

## Duty Cycle

Rated for continuous use.



BR5230 LF Antenna  
Model: BR5230LF  
Part Number: 762019

The BR52PS195 Power Supply provides power to the system controller, which then distributes that power to other system components. The Power Supply can be hardwired, if needed, and can be mounted on a server rack within an equipment room.

## Electrical

**Input:** 120VAC, 5A on Emergency Power

**Output:** 19.5VAC @ 5A

## Mechanical

**Construction:** Metal Case

**Enclosure size:** 4.83" x 3.075" x 6.60"

**Weight:** 4.81 pounds

## Environmental

A Power Supply operates best in an ambient temperature between 35 and 90 degrees Fahrenheit. Operation outside of this range may cause unexpected or undesirable results, including premature failure.

Intended for indoor use only.

## Duty Cycle

Rated for continuous use.

- ULXXX and CSA XX.X #XXX Class 2 Power Supply
- Input: 120VAC, 60 Hz, 2A with a 2A resettable circuit breaker
- Each BR52PS195 Power Supply comes with a grounded 6-foot power cord for ease of installation.
- A three-prong 120-Volt outlet with emergency back-up should be located within 6 feet of each Power Supply.



Model: BR52PS195  
Part Number: 500255

The BR5240 Receiver picks up signals from system tags and relays them to a system controller. It is mounted onto a facility's ceiling (or above a drop ceiling, if possible). Receivers can be connected in buses of up to three receivers, spaced approximately 65 feet apart. Each receiver unit contains two receiver boards which are addressed via dip switch configuration.

When choosing the location and number of Auxiliary Receivers, be sure to consider the following:

- the facility's structure (i.e. concrete, metal lathe as opposed to drywall walls or foil-backed ceiling tiles).
- keep a minimum distance of 4 feet away from fluorescent lighting and air handling equipment.
- Band removal alarms can be generated anywhere within a facility, not just exit points. This includes bathrooms, visiting areas, storage rooms, and laundry rooms.

## Electrical

**Operating Voltage:** 15VDC @ 140mA

**Communication:** RS485 Half Duplex

**Baud Rate:** 230400

## Mechanical

**Construction:** Injection molded ABS

**Size:** 7.25" x 7.25" x 1.76"

**Weight:** 12.7 oz

## Operating Characteristics

**Receive Frequency:** 418 MHz

**FCC ID:** JM7-HWHY-662220

**IC:** 2683A-662220

## Environmental

**Operating temperature:** 32° to 120° Fahrenheit

**Intended for indoor use only.**

## Duty Cycle

Rated for continuous use.



BR5240 Receiver (with cover)  
Part Number: 762220



BR5240 Receiver (without cover)



BR52 Tags, only used in the BR5200 system, are small wristwatch-sized devices worn by an infant. They feature beacon technology, which sends a signal every 1.5 seconds to “check in” with the BR5200 system. They also feature Intelli-Band Technology, which will alarm if the band is loosened, cut, saturated, removed, or tampered with. Beacon Tags are assigned to a specific infant via the Tag Test Station and Accutech Software. Once assigned, the computer associates a name, room number, and any other pertinent information about the infant with that tag.

## Electrical

BR52 Tags operate by internal battery. They can be powered on/off with a BTAD.

## Mechanical

### Construction:

**Size:** 1.25” x 1.75” x 0.75”

**Weight:** 0.88 oz



Model: BR52 Tag  
Part Number: 692015

## Operating Characteristics

**Transmit Frequency:** 418 MHz

**Receive Frequency:** 127-138 kHz

**FCC ID:** JM7-HWHY-662020

**IC:** 2683A-662020

## Environmental

**Operating Temperature:** 32° to 120° Fahrenheit

**Intended for indoor use only.**

## Attachment

BR52 Tags are attached to infants with an elastic cloth band. The BR band has conductive fiber stripes that must be in contact with both the infant’s skin and the gold contacts on the Tag. The band must be routed properly through the Tag case for the system to function properly. Tags are typically attached to a wrist or ankle. For smaller infants, placing the Tag around the thigh is also acceptable. BR52 Tag bands are for one-time use only.

## Maintenance

- BR52 Tags are reusable but they must be thoroughly cleaned and sanitized between applications. Acceptable cleaning methods: Antibacterial wipes or Hydrogen peroxide (wipe, do not soak)
- Always rinse and dry a tag to remove any cleaning solutions to prevent residual chemicals from soaking into the plastic. This can cause brittleness, thereby, reducing the life of the tag.
- If the band becomes soiled, replace the band and clean the Tag.

## Testing

There are several ways to test a tag:

- Enter a monitored zone (Software will report.)
- The Keypad’s Auxiliary LED (Yellow) will light when a Tag is detected.

## Storage

To preserve battery life and prevent nuisance alarms, BR52 Tags should be turned off with a BTAD stored away from sources of electrical noise, and stored in a metal container with lid. Extra Tag bands should be stored in a clean and dry environment.



The Cuddles Soft Bracelet is a latex free, light-weight, non-allergenic, self-adjusting band that fits snugly and comfortably around the ankle or wrist. Made of an ultra-soft polyester blend, the bracelet won't cut or chafe the skin, and won't fall off due to movement or changes in weight. In the event of removal or cutting, the Soft Bracelet, in conjunction with the BR52 tag, immediately activates an alarm — preventing abductions and ensuring the continued safety and security of the infant wearing it.

### Dimensions:

Size: 8.00" x 0.700" x 0.100"

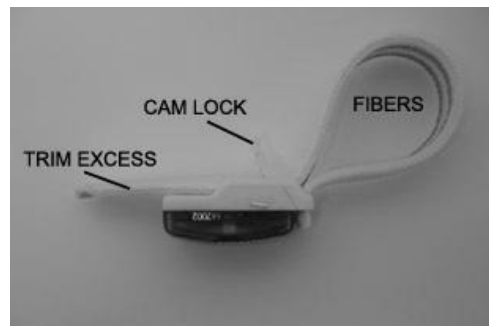
Weight: 0.125 ounces

### Material:

Lycra - soft blue polyester blend with silver coated nylon fiber



Cuddles Soft Bracelet (YBRBAND) - 25 Pack  
Part Number: 100908



As applied to a BR Tag

The BTAD is a handheld device that activates and deactivates BR5200 system Tags. The BTAD is also used as a testing device for Tags. It incorporates a keypad (for security purposes) and an internal Tag that will cause an alarm if it moves into or through a monitored egress zone. A code must be entered into the BTAD to activate/deactivate a Tag.

## Electrical

**Battery:** 3.7 VDC 1600 mAh (5.92 Wh) lithium ion battery pack. (DO NOT attempt to repair or rebuild/replace the cells within)

**Component Cell:** UL1642

**Test Specification:** UL2054:2004 R9.11

**Battery Shipping Compliance:** UN38.3

**Maximum charging current:** 0.8 A

**Nominal charging voltage:** 5.0 V

**Charging Cable:** USB Type C - charges via computer USB port or a 120 VAC to 5VDC/500mA adapter (not included). Note: Using a charger that provides less than the recommended 500mA can work, but will take longer than normal to charge.

## Mechanical

**Size:** approximately 5.50" x 3.00" x 1.25" (with boot)

**Weight:** 7 ounces

## Operating Characteristics

**Transmit Frequency:** 127.0 kHz

**Receive Frequency:** 418 MHz

**Internal Security Tag Transmit Frequency:** 418 MHz

**Internal Security Tag Receive Frequency:** 127-138 kHz

**FCC ID:** JM7-HWHY-662021

**IC:** 2683A-662021



Model: BTAD  
Part Number: 762021

## Environmental

**Operating Temperature:** 32° to 120° Fahrenheit  
Intended for indoor use only.

The KP-103 keypad is used to escort residents through a monitored zone and to reset zone equipment once an alarm has occurred. Up to 100 different (4 to 8 digits) user codes can be used to reset the alarm and to activate the Escort function.

## Electrical:

Operating Voltage: 12 V OR 24 V AC/DC

Active Current Draw:

100 mA Max @ 12 V

65 mA Max @ 24 V

Idle Current Draw:

9 mA Max @ 12 V

17 mA Max @ 24 V

Relay Contact Rating: 10 A @ 28 VDC/120 AC

Cable: minimum 22-gauge, 6-conductor

## Mechanical:

Size: 4-5/8" x 2-7/8" x 1-3/8"

Weight: 4.3 ounces

Mounting: Flush or Surface Mount

\*Metal box not recommended

## Operating Characteristics:

Keypad LED Indicators:

LED	Status	Function
Green	On	Reset active
Yellow	On	Tag Detect active
Red	On	Unit is in alarm

## Environmental:

Intended for indoor use only.

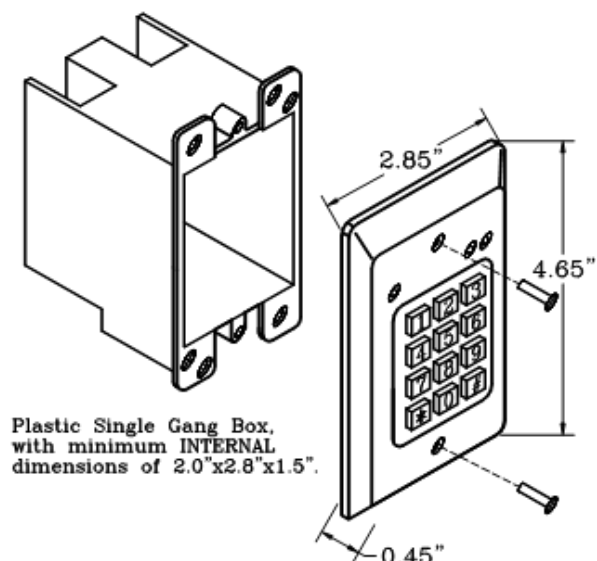
## Duty Cycle:

Rated for continuous use.



Model Number: KP-103

Part Number: 650209



The Keypad is used to escort residents through a monitored zone and to reset zone equipment once an alarm has occurred. Up to 100 different (4 to 8 digits) user codes can be used to reset the alarm and to activate the Escort function.

## Electrical:

Operating Voltage: 12 V OR 24 V AC/DC

Active Current Draw:

100 mA Max @ 12V

120 mA Max @ 24V

Idle Current Draw:

10 mA Max @ 12V

22 mA Max @ 24V

Relay Contact Rating: 10 A @ 28 VDC/120 AC

Cable: minimum 22-gauge, 6-conductor

## Mechanical:

Surface Mount Die Cast Metal Black Powder

Coated Back Box

Stainless Steel Faceplate with Tamper-Proof screws

Durable Metal Keys are backlit for visibility in dark areas



Model Number: KP-403

Part Number: 650403

## Operating Characteristics:

Adjustable Relay on Time from 1 to 999 seconds

Two Programmable Relay Outputs

Output 1: 100 User Codes with Code Lengths from 4 to 8 digits

Output 2: 10 User Codes with Code Lengths from 4 to 8 digits Request to Exit feature

Anti-Tailgating feature

Keypad LED Indicators:

LED	Status	Function
Green	On	Reset active
Yellow	On	Tag Detect active
Red	On	Unit is in alarm



## Environmental:

Intended for indoor and outdoor use.

## Duty Cycle:

Rated for continuous use.



The Magnetic Switch is used on doors when alarm activation is not desired unless the door is opened.

## Electrical:

Operating Voltage: 150 VDC maximum  
Contact Rating: 3 watts  
Maximum Switch Voltage: 30V AC/DC  
Switching  
Current: 0.5 amps DC  
Cable: needs minimum 22-gauge, 2-conductor

## Mechanical:

Size: 2.50" x 0.80" x 0.60"  
Weight: 1.2 ounces  
Color: Brown  
Surface mounted (Flush available)

## Operating Characteristics:

Contacts: N.O., N.C., and Common  
Initial contact resistance: 100 ohms maximum  
Operating Time: 1.0 ms maximum  
Bounce Time: N.C. leg 1.5 ms maximum  
N.O. leg: 1.0 ms maximum  
Release Time: 0.5 ms maximum  
Maximum Operating Frequency: 200 Hz  
Insulation resistance: 1 x 10 ohms maximum  
Electrostatic capacitance: 1.5 pF maximum

## Environmental:

Operating Temperature: 32° to 120° Fahrenheit  
Intended for indoor use only.

## Duty Cycle:

Rated for continuous use.



Magnetic Switch

Model Number: MCSM  
Part Number: 650514

UL Listed:  
AMQV.BP2343



The Passive Infrared Reader (PIR) is a device that uses an infrared sensor to monitor elevators, hallways, corridors, and passageways. Like the Magnetic Switch, the PIR is used in areas where alarm activation is not desired immediately upon Tag detection. It can also be used in hallways or other areas where a Magnetic Switch would not be feasible.

### Electrical:

Operating Voltage: 12V DC

Current: Stand-by 15 mA, In alarm 18mA

Relay Output: N.O./N.C. 2A/28V AC/DC maximum

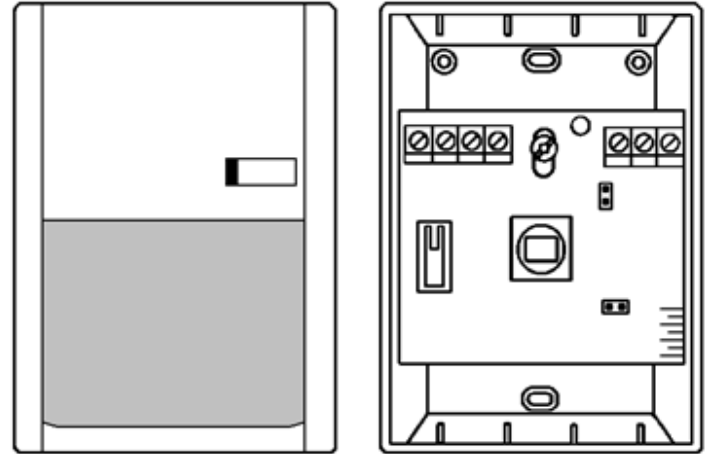
Cable: needs minimum 22-gauge 4-conductor stranded, non-shielded

### Mechanical:

Dimensions: 2.50" x 4.40" x 1.40"

Weight: 3 ounces

Color: White



FRONT COVER

INSIDE (PCB)

Passive Infrared Reader (PIR)

### Operating Characteristics:

Beam Coverage: Vertical curtain up to 15 x 15 feet. \*The beam is adjustable from its normal 0° setting (perpendicular to the unit) up to 12°.

Model Number: PIR

Part Number: 300302

UL Listed:

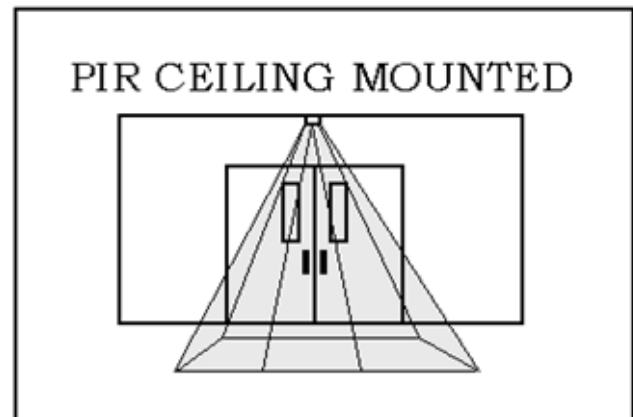
ANSR.BP6082

### Environmental:

Operating Temperature: 32° to 120° Fahrenheit  
Intended for indoor use only.

### Duty Cycle:

Rated for continuous use.



PIR Ceiling Mounted Coverage Example

The Accutech 3101 Magnetic Lock is custom-designed to our specifications and cannot be purchased directly from the manufacturer. The 3101 Magnetic Lock will engage when the zone Controller detects a Tag in the Tx Activation Field. The Lock will remain engaged as long as the Tag is in the Tx Activation Field. When the Tag leaves the Tx Activation Field, the Lock will disengage after an adjustable period of time (0-120 seconds).

## Safety Features:

The Lock will NOT engage (or will disengage) when the facility's Fire Alarm is activated or power is lost.

The 3101 Magnetic Lock also incorporates Delayed Egress Circuitry that complies with N.F.P.A. 101 Life Safety Codes 5-2.1.6.1. If engaged, the Lock will release within 15 seconds (after 1-3 second nuisance delay) whenever a maintained force (less than 15 pounds required) is applied to the door. An audible tone enunciates both countdown and release. When the Lock releases, the red LED will turn solid green and the alarm will sound continuously.

## Electrical:

Operating Voltage: 12V AC/DC

Current Consumption: 300 mA

Cable: non-shielded 18-gauge, 6-conductor

## Mechanical:

Lock Size: 3" x 2 ¾" x 11"

Armature Size ½" x 2-5/16" x 7-3/8"

Standard Finish: Satin Aluminum-US28

Weight: 11 US pounds

## Environmental:

Operating Temperature: 32° to 120°  
Fahrenheit

Intended for indoor use only.

## Duty Cycle:

Rated for continuous use.



Accutech 3101 Magnetic Lock

Model Number: MLE

Part Number: 700228

Part Number: ACT-M2400 (w/DE Relay)

ANSI/UL294 Access Control Sys. Units:

- FWAX.SA9532
- Auxiliary Locks listed 2N98
- Special Arrangements listed 1M59
- BOCA National Building Code

## Operating Characteristics:

Holding Force: 1200 pounds

Once locked, the Lock will disengage when any of the following conditions occur:

- All Tags leave the Tx Activation Field
- A Keypad Reset
- A PBO is activated or key switch at lock location
- The facility's fire alarm is activated.
- Power is removed from the Lock.
- The Central Override is activated.
- When a maintained force (less than 15 pounds required) is applied to the door for an adjustable period of time (1-3 seconds).



ALVY (UL294 6th  
Ed.)-ACCESS CON-  
TROL SYSTEM UNITS



SPECIAL LOCKING  
ARRANGEMENTS  
CATEGORY FWAX



AUXILIARY LOCK  
CATEGORY GWXT





The Fire Panel Interface (FPI) ensures the magnetic lock(s) and/or elevator deactivation circuitry will be disengaged in the event of a fire. Accutech follows NFPA codes and regulations; therefore, all Accutech restraints will be disabled in the event of a fire (audial and visual alarms will remain active). For each FPI unit used, one set of dry contacts will be needed from the facility's fire panel. Each FPI unit provides dry contact outputs for up to eight controllers.

## Electrical:

Operating Voltage: 12 VDC  
Current Consumption: 120 mA maximum  
Contact Rating: 1 amp/12 VDC  
Cable: needs minimum 22-gauge, 2-conductor non shielded to each Controller

## Mechanical:

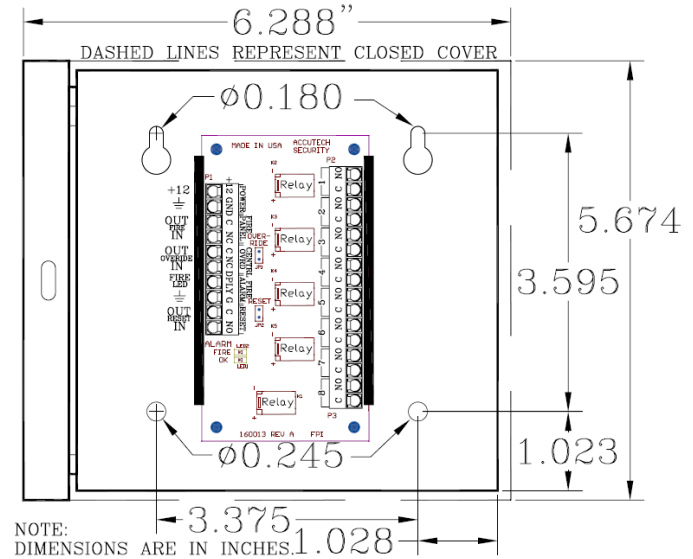
Enclosure size: 6.29" x 5.68" x 2.00"  
Weight: 25 ounces

## Operating Characteristics:

Fire Panel Alarm State: Open contacts  
Contact State: N.O. during alarm state  
N.C. during operating state

## Environmental:

Operating Temperature: 32° to 120° Fahrenheit  
Intended for indoor use only.



Fire Panel Interface (FPI) Rev A

Model Number: FPI

Part Number: 700013



The Local Alarm, (SpectraAlert Advance Series mini-horn by System Sensor) is a sounder intended to attract attention near the monitored zone.

## Electrical:

**Nominal Voltage:** 12VDC OR 24VDC

**Operating Voltage Range:** 8-33

**Input Terminals:** 12 to 18AWG

## Mechanical:

**Dimensions:** 4.6"L x 2.9"W x .45"D

**Weight:** 2.67 oz

### Mounting:

Surface: deep single-gang back box

Flush: Standard 4"x4" back box

## Environmental:

**Operating Temperature:** 32° to 120° Fahrenheit

**Intended for indoor use only.**



The Local Alarm  
Part Number: 700216

### Sounder Current Draw (ma RMS)

SWITCH SETTING	SOUND PATTERN	VOLUME	8-17V		16-33V	
			DC	FWR	DC	FWR
1	TEMPORAL	HIGH	12	10	17	15
2	TEMPORAL	LOW	10	9	14	13
3	NON-TEMPORAL	HIGH	22	17	29	25
4	NON-TEMPORAL	LOW	17	13	21	19

## Operating Characteristics:

- 3kHz Sounder Frequency (nominal)
- Rotary switch on back for setting selection
- High and low volume settings
- Temporal and non-temporal tones
- Listed for ceiling or wall mounting
- Listed to Underwriter's Laboratories Standard UL 464

### Sounder Output (dBA) Reverberant

SWITCH SETTING	SOUND PATTERN	OUTPUT LEVEL	8 VDC	8 VFWR	12 VDC	12 VFWR	16-33 VDC	16-33 VDC
1	TEMPORAL	HIGH	68	67	71	70	78	76
2	TEMPORAL	LOW	66	65	69	68	76	75
3	NON-TEMPORAL	HIGH	72	71	75	74	80	79
4	NON-TEMPORAL	LOW	70	69	73	72	78	77

Elevator Deactivation Circuitry is designed to prevent someone (or an asset) wearing an Accutech Tag from using an elevator to leave a monitored floor. Using Relays enclosed in the Elevator Deactivation Relay Cabinet, the Elevator Company is able to interface with the Accutech System.

Therefore:

- If a Tag enters a monitored elevator zone, the elevator's call button on that floor will be deactivated
- (Call buttons on other floors are unaffected and no one is restricted from coming to the floor).
- When a Tag is in the zone (or approaches the zone) and the elevator doors are open, an alarm will sound and the elevator doors will remain open.
- If the elevator car is en route to the floor when a Tag approaches the zone, the elevator will arrive on the floor, the door(s) will open, and the system will alarm.

## Electrical:

Operating Voltage: 12V DC

Current Consumption: 120 mA maximum

Contact Rating: 10A / 250V AC

Cable: need minimum 22-gauge, 6-conductor

## Mechanical:

Construction: Metal case

Enclosure size: 7.80" x 8.25" x 3.75"

Enclosure weight: 3.5 US pounds

## Operating Characteristics:

- Dry Contacts supplied by Elevator Company for door switch
- 12V DC Alarm Voltage energizes K1 Relay to deactivate the Car when a Tag is detected and the elevator door is open.
- 12V DC Tag Detect Voltage energizes K2 Relay to deactivate the Call Button when a Tag is detected.

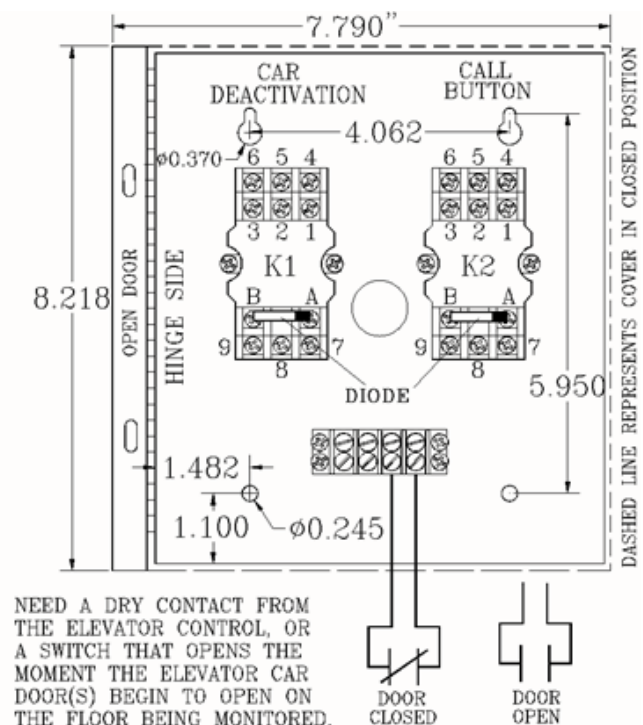
## Environmental:

Operating Temperature: 32° to 120° Fahrenheit

Intended for indoor use only.

## Duty Cycle:

Rated for continuous use.



Elevator Deactivation

Model Number: ED

Part Number: 700027