

# LATCH<sup>®</sup>

## **Application Notes**

*Ver. 4.0, Sep 2021*

## Contents

<b>OVERVIEW .....</b>	<b>3</b>
<b>Application Note #1 – Latch R Series integrates with an electric strike .....</b>	<b>5</b>
<b>Application Note #2 – Latch R Series integrates with an electric strike and locally controls it .....</b>	<b>6</b>
<b>Application Note #3 – Latch R Series integrates an electric strike, Latch Intercom, and Latch Camera.....</b>	<b>7</b>
<b>Application Note #4 – Latch R Series integrates with an electric lockset and an electrified hinge .....</b>	<b>8</b>
<b>Application Note #5 – Latch R Series integrates with an electrified hinge and an electric mortise exit device.....</b>	<b>9</b>
<b>Application Note #6 – Latch R Series integrates with a magnetic lock, a push to exit button, and a REX motion sensor .....</b>	<b>10</b>
<b>Application Note #7 – Latch R Series integrates a double magnetic lock, and a REX motion sensor .....</b>	<b>11</b>
<b>Application Note #8 – Latch R Series integrates an electrified lockset and an electrified hinge .....</b>	<b>12</b>
<b>Application Note #9 – Latch R Series integrates an electric strike and an electrified hinge .....</b>	<b>13</b>
<b>Application Note #10 – Latch R Series integrates an electric exit device and an electrified hinge .....</b>	<b>14</b>
<b>Application Note #11 – Latch R Series integrates with electrified hinges and a vertical rod exit device with lever trim .....</b>	<b>15</b>
<b>Application Note #12 – Latch R Series integrates an electric strike, a REX motion sensor, a push to exit button, and a door contact to enable DSN feature (Door State Notification) .....</b>	<b>16</b>
<b>Application Note #13 – Latch R Series integrates an electric mortise exit device and an electrified hinge to enable DSN feature (Door State Notification).....</b>	<b>17</b>
<b>Application Note #14 – Latch R Series integrates 3<sup>rd</sup> party access control panel as an RFID reader.....</b>	<b>18</b>
<b>Application Note #15 – Latch R Series basic fire alarm integration diagram .....</b>	<b>19</b>
<b>Application Note #16 – Latch M Series (phasing out), Latch M2 Series (Battery operated) .....</b>	<b>20</b>
<b>Application Note #17 – Latch M Series (phasing out) integrates an electrified hinge .....</b>	<b>21</b>
<b>Application Note #18 – Latch C Series (Battery operated, phasing out).....</b>	<b>22</b>

<b>Application Note #19 – Latch C2 Deadbolt (Battery operated)</b> .....	<b>23</b>
<b>Application Note #20 – Latch Hub interfaces 4 devices. Hallway installation</b> .....	<b>24</b>
<b>Application Note #21 – Latch Hub interfaces Smart Thermostat and Water Sensor. Apartment installation</b> .....	<b>25</b>

## OVERVIEW

Latch is a full-building access system for the modern apartment—providing residents and property managers with unprecedented flexibility, convenience, and security through smarter hardware, software, and services.

Latch products include:

The **Latch Intercom** is simple, flexible, secure, and designed to always let the right people in. Tactile buttons accommodate every visitor in all weather conditions and new connectivity options enable easier installation at every door. The fiber composite shell and impact-resistant glass are also perfect for the modern building.

The **Latch Camera** complements our Latch Intercom solution, providing safe and secure video calling for residents and guests.

The **Latch R Series** combines a reader, door controller, and management system into one simple product. The device directly connects to any electrified locking mechanism, motion detectors, and request-to-exit devices.

The **Latch M Series** has an industry standard mortise cartridge at its core and is designed to meet—and exceed—every project requirement. It is built to the highest commercial standards, compliant with code requirements, and available for interior or exterior use.

The **Latch C Series** is a cylindrical deadbolt that can easily retrofit into an existing building or be added to the scope of a new project. Like the Latch M, it doesn't require network connectivity and is rated to meet the most stringent building codes.

# LATCH<sup>®</sup>

Latch Application Notes, Ver 4.0

---

The **Latch Hub** is a core part of the Latch multifamily infrastructure, providing internet connectivity to smart access and smart home devices in one central location. The Latch Hub has a dual core processor that connects to the internet via Wi-Fi, ethernet, and 4G cellular – creating a singular, connected experience between Latch access devices as well as third-party smart home devices, such as lights, thermostats, and leak detectors.

The **Latch Water Sensor** is a device that provides peace of mind that, when leaks arise, residents and property managers will be notified so that problems can be addressed quickly. The Latch Water Sensor requires a Latch Hub and should be placed in any leak-prone areas.

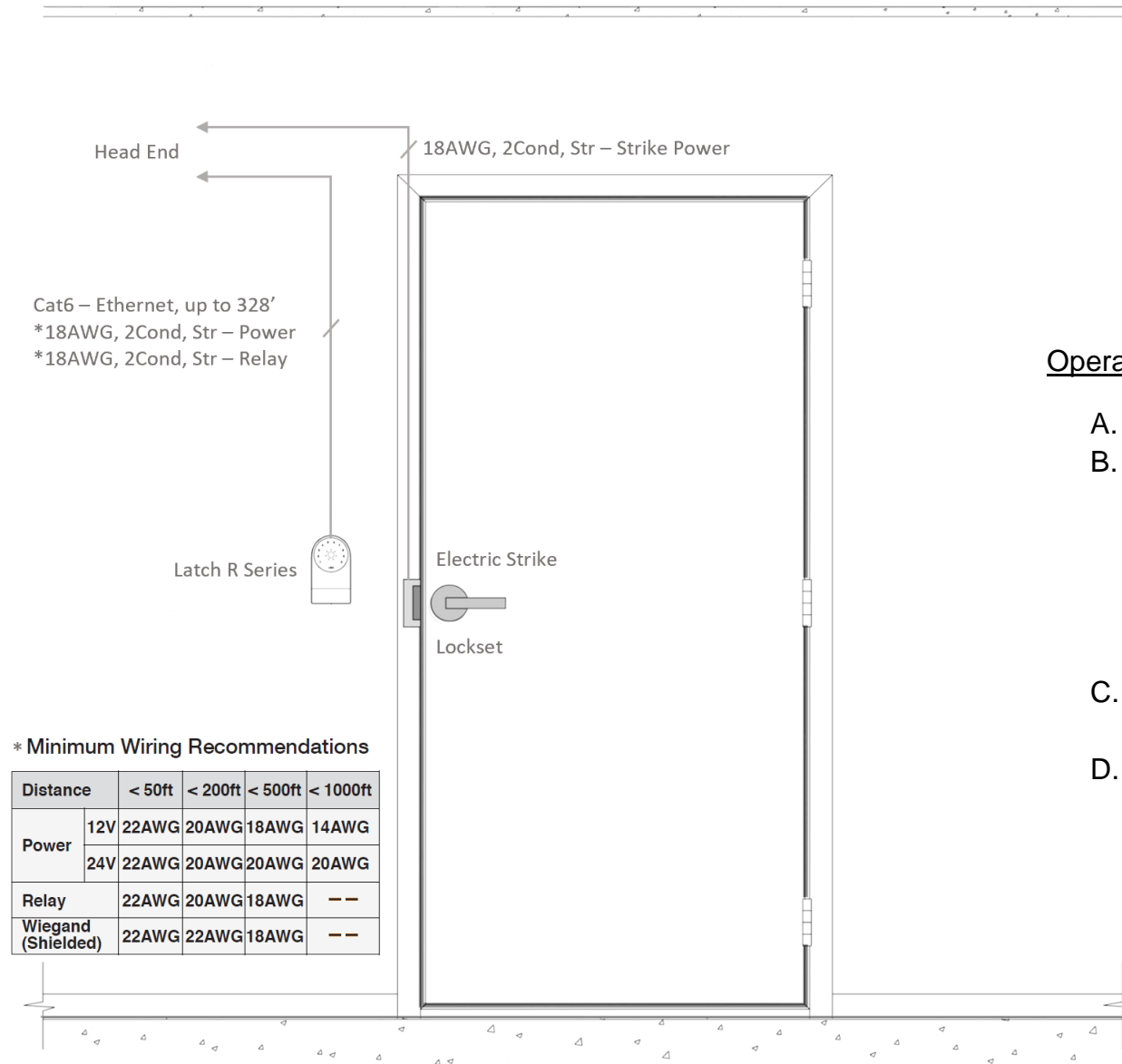
This document will help Specifiers and System Integrators better understand different Latch product applications and project them into correct material estimations and proper installations.

For Technical Support questions please contact Latch Technical Support at **347-986-1882**.

# LATCH®

Latch Application Notes, Ver 4.0

## Application Note #1 – Latch R Series integrates with an electric strike



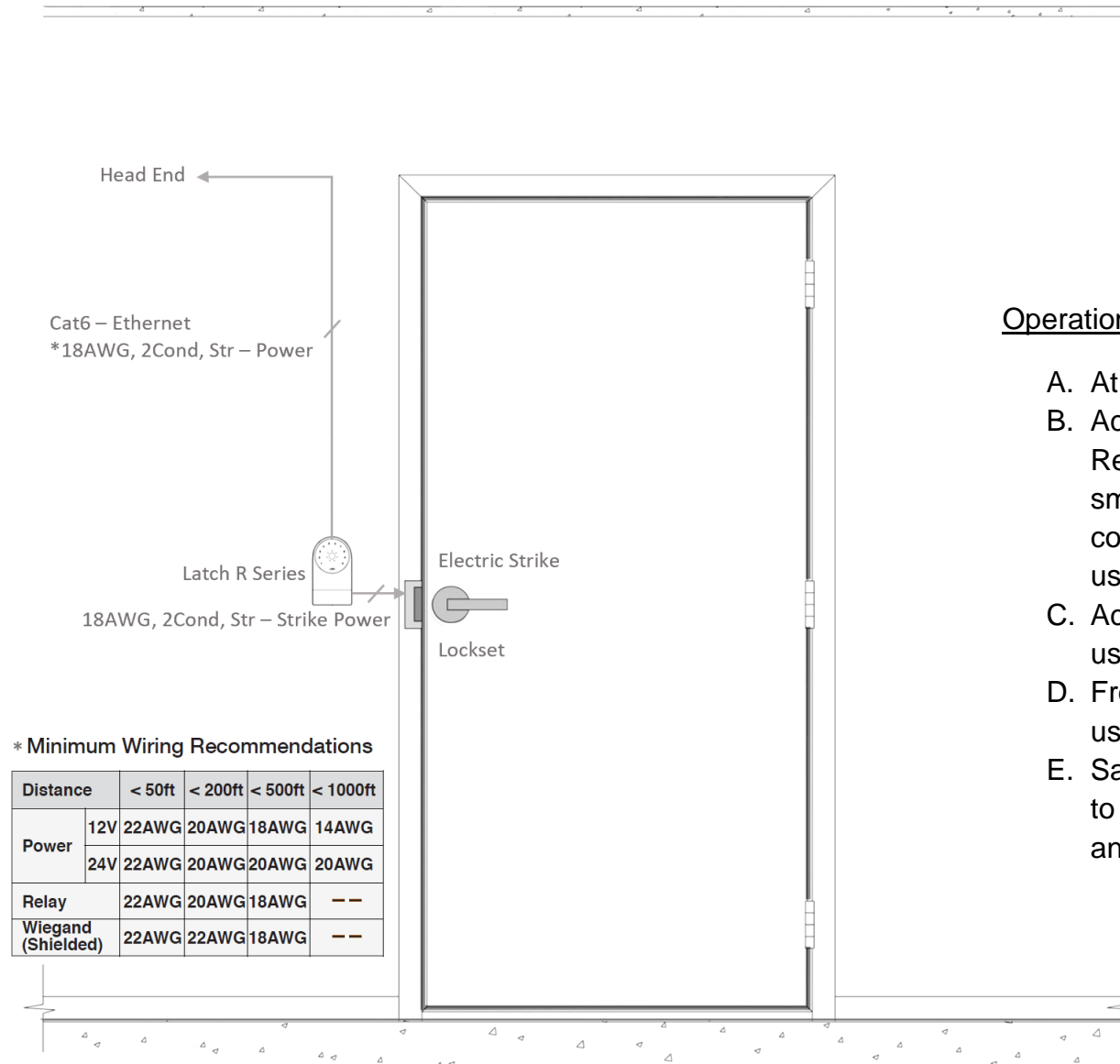
### Operational Details

- A. At entry, door is locked
- B. Access by Latch R Series Reader/Controller using smart phone, by numerical code display on device, or use of a keycard
- C. Access by key override using lockset
- D. Free egress at all times using interior lever trim

# LATCH<sup>®</sup>

Latch Application Notes, Ver 4.0

## Application Note #2 – Latch R Series integrates with an electric strike and locally controls it



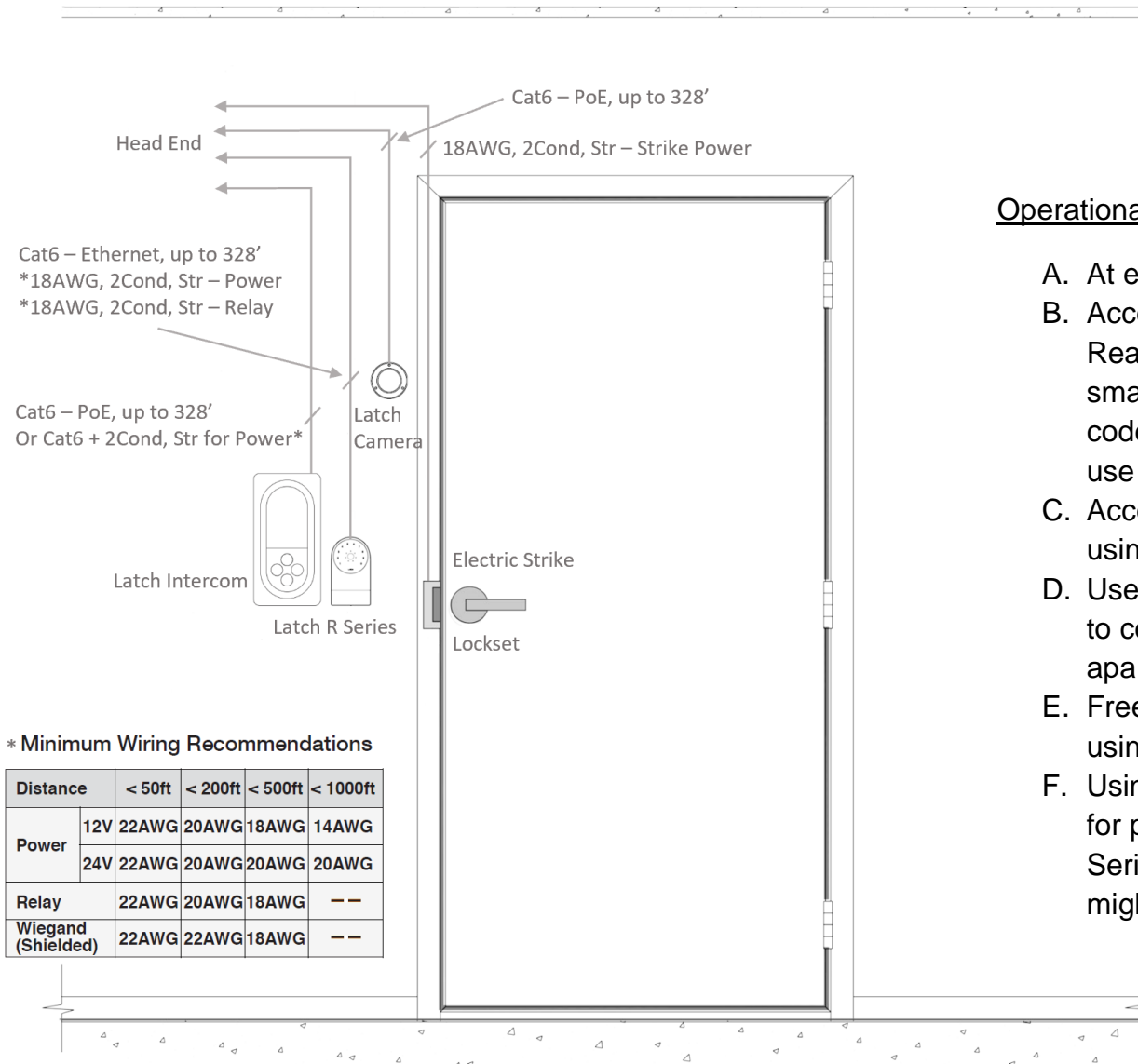
### Operational Details

- A. At entry, door is locked
- B. Access by Latch R Series Reader/Controller using smart phone, by numerical code display on device, or use of a keycard
- C. Access by key override using lockset
- D. Free egress at all times using interior lever trim
- E. Same power supply used to power both R Series and Electric Strike

# LATCH<sup>®</sup>

Latch Application Notes, Ver 4.0

## Application Note #3 – Latch R Series integrates an electric strike, Latch Intercom, and Latch Camera



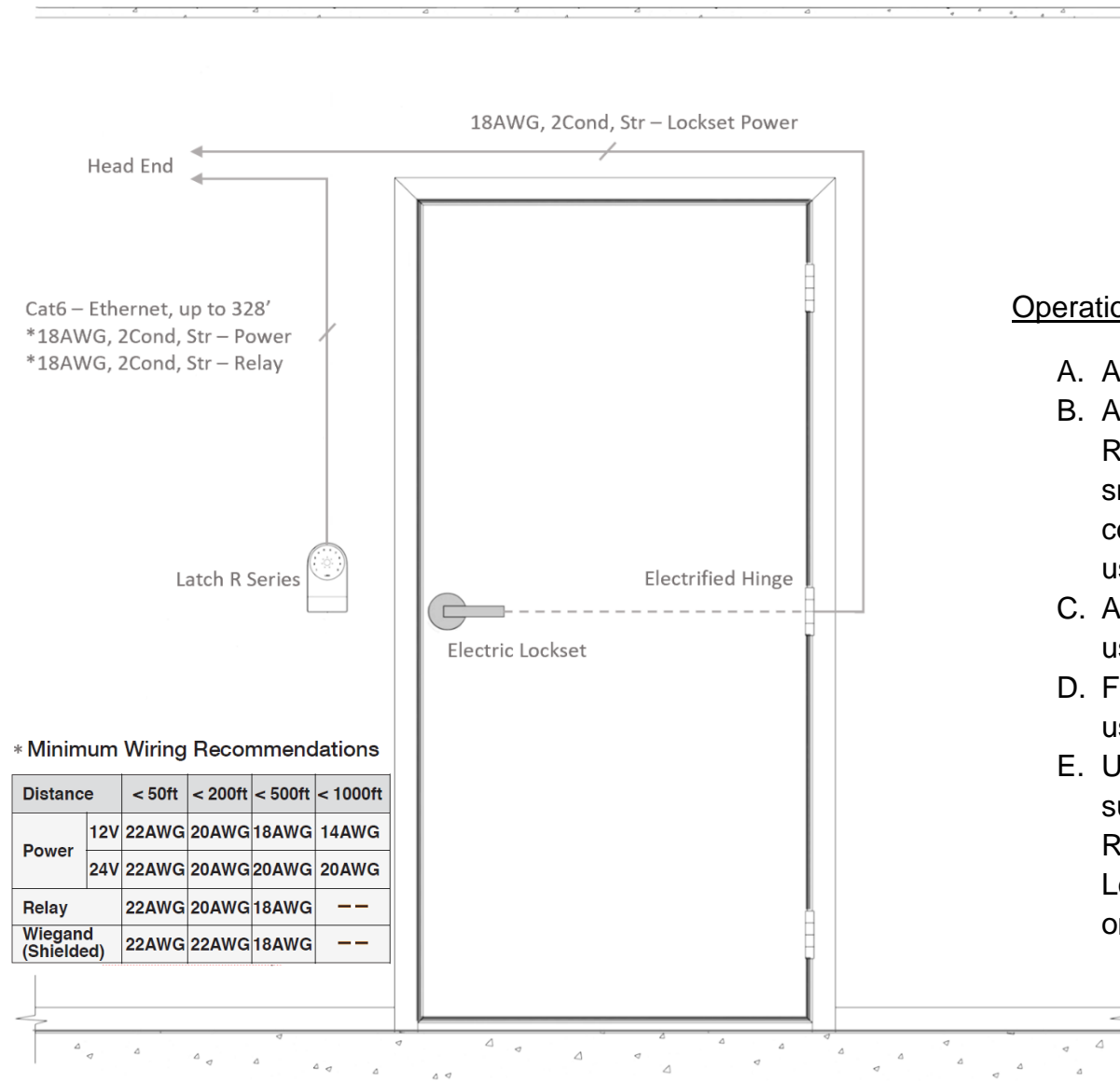
### Operational Details

- A. At entry, door is locked
- B. Access by Latch R Series Reader/Controller using smart phone, by numerical code display on device, or use of a keycard
- C. Access by key override using lockset
- D. Use Intercom and Camera to communicate with apartment tenant
- E. Free egress at all times using interior lever trim
- F. Using same power supply for powering both R Series and Electric Strike might be an option

# LATCH<sup>®</sup>

Latch Application Notes, Ver 4.0

## Application Note #4 – Latch R Series integrates with an electric lockset and an electrified hinge



### Operational Details

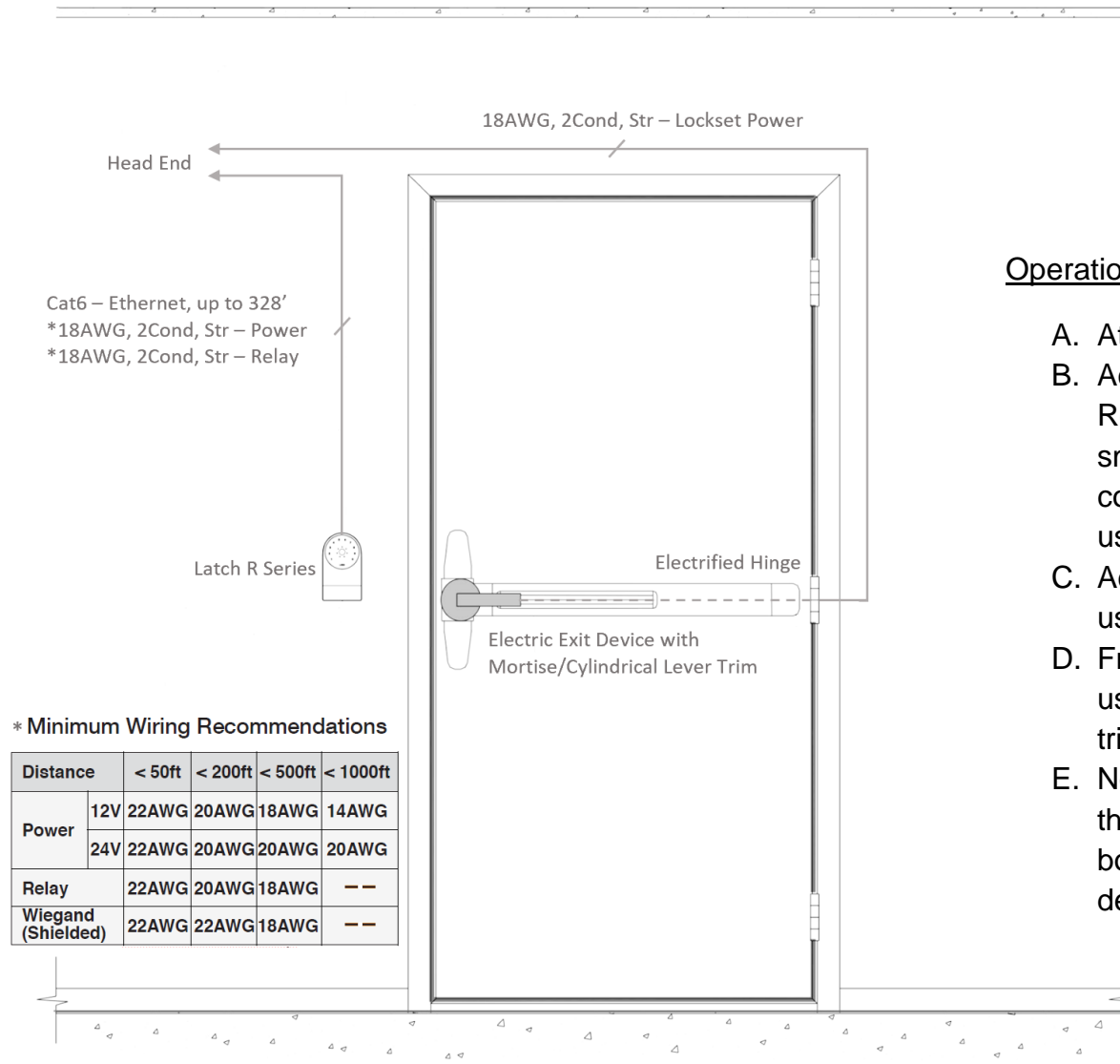
- A. At entry, door is locked
- B. Access by Latch R Series Reader/Controller using smart phone, by numerical code display on device, or use of a keycard
- C. Access by key override using lockset
- D. Free egress at all times using interior lever trim
- E. Using the same power supply for powering both R Series and Electric Lockset might be an option



# LATCH<sup>®</sup>

Latch Application Notes, Ver 4.0

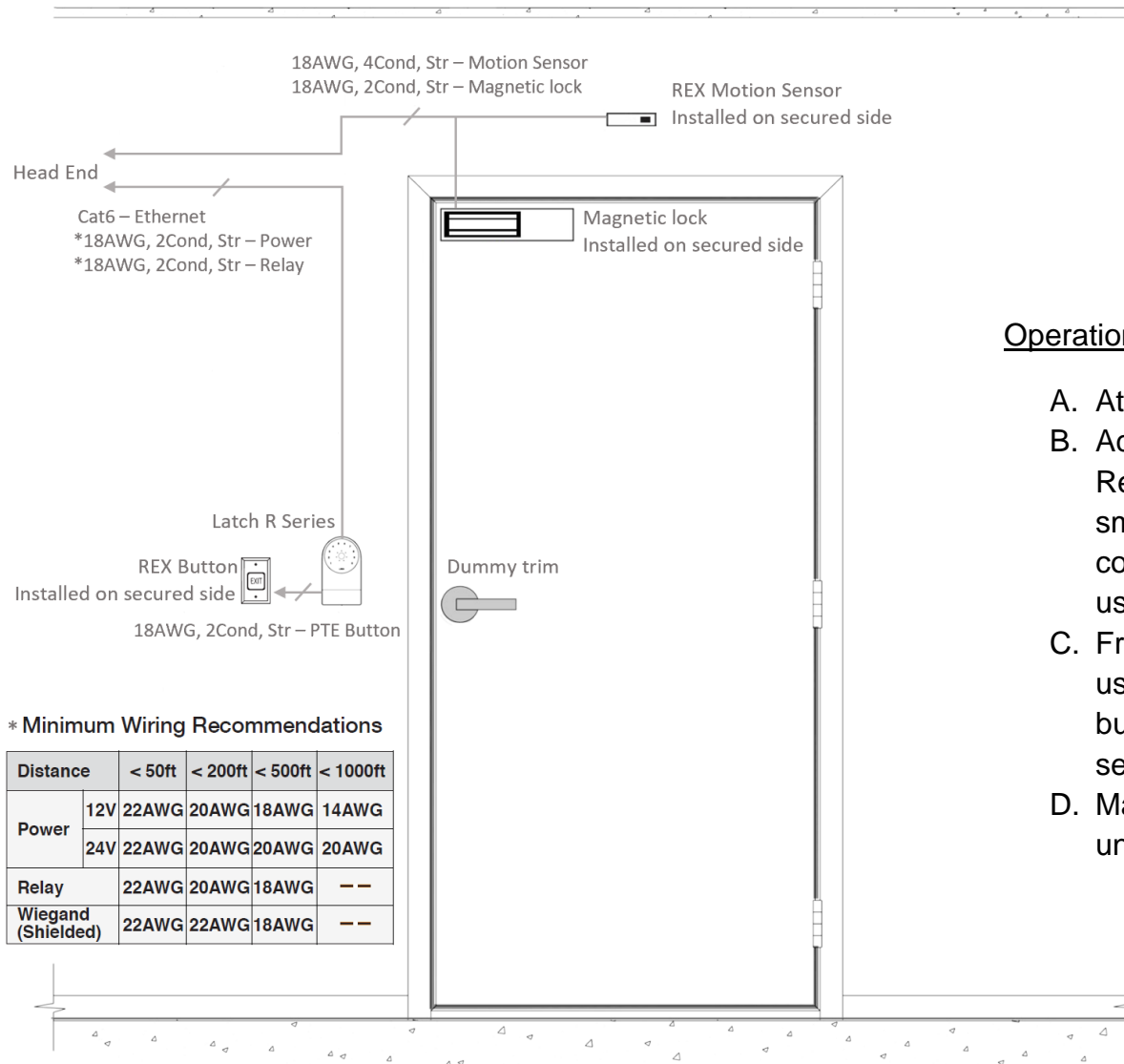
## Application Note #5 – Latch R Series integrates with an electrified hinge and an electric mortise exit device



### Operational Details

- A. At entry, door is locked
- B. Access by Latch R Series Reader/Controller using smart phone, by numerical code display on device, or use of a keycard
- C. Access by key override using lockset
- D. Free egress at all times using interior push bar trim
- E. Not recommended to use the same power supply for both R Series and exit device

## Application Note #6 – Latch R Series integrates with a magnetic lock, a push to exit button, and a REX motion sensor



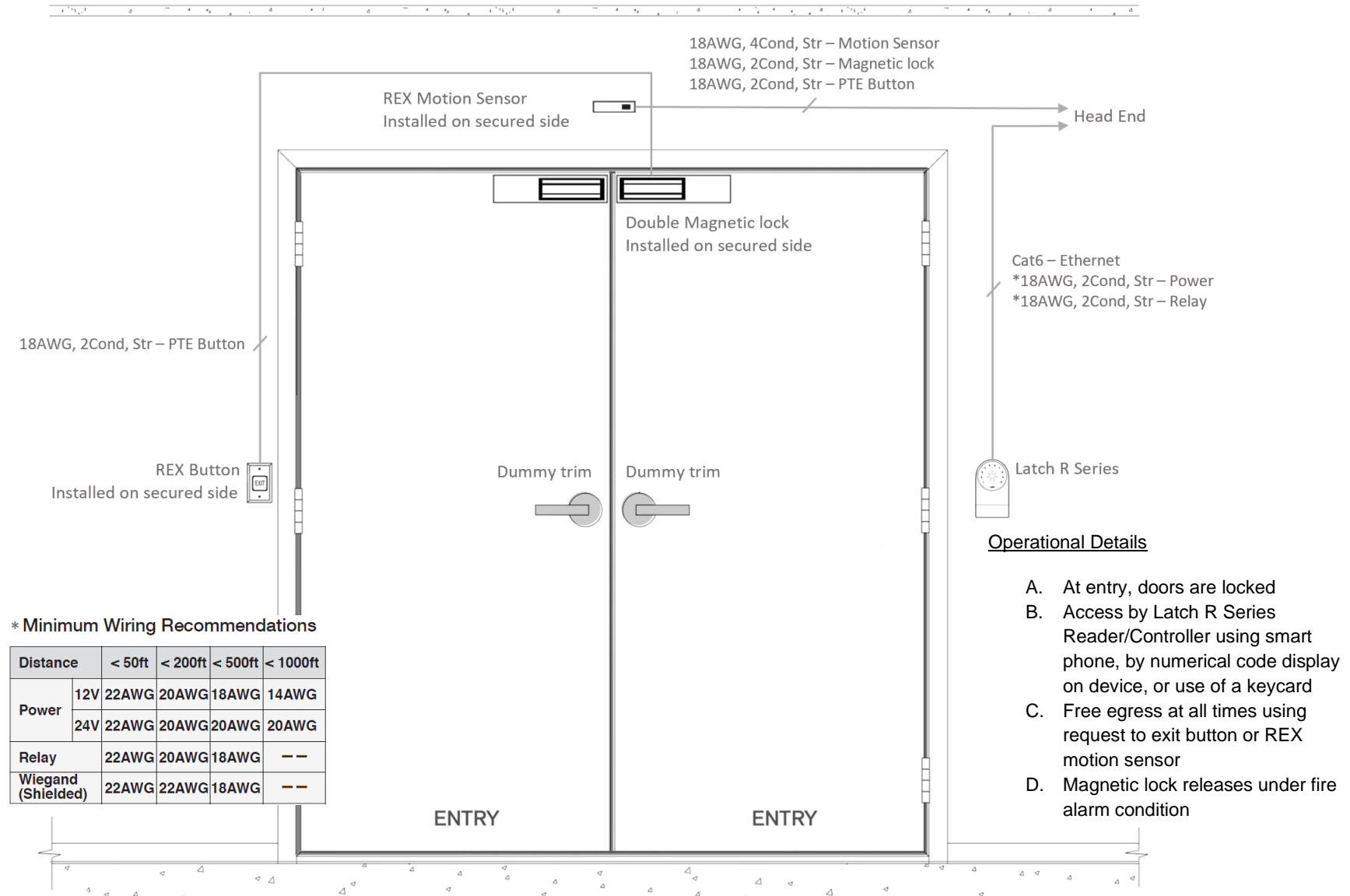
### Operational Details

- A. At entry, door is locked
- B. Access by Latch R Series Reader/Controller using smart phone, by numerical code display on device, or use of a keycard
- C. Free egress at all times using request to exit button or REX motion sensor
- D. Magnetic Lock releases under fire alarm condition

# LATCH<sup>®</sup>

Latch Application Notes, Ver 4.0

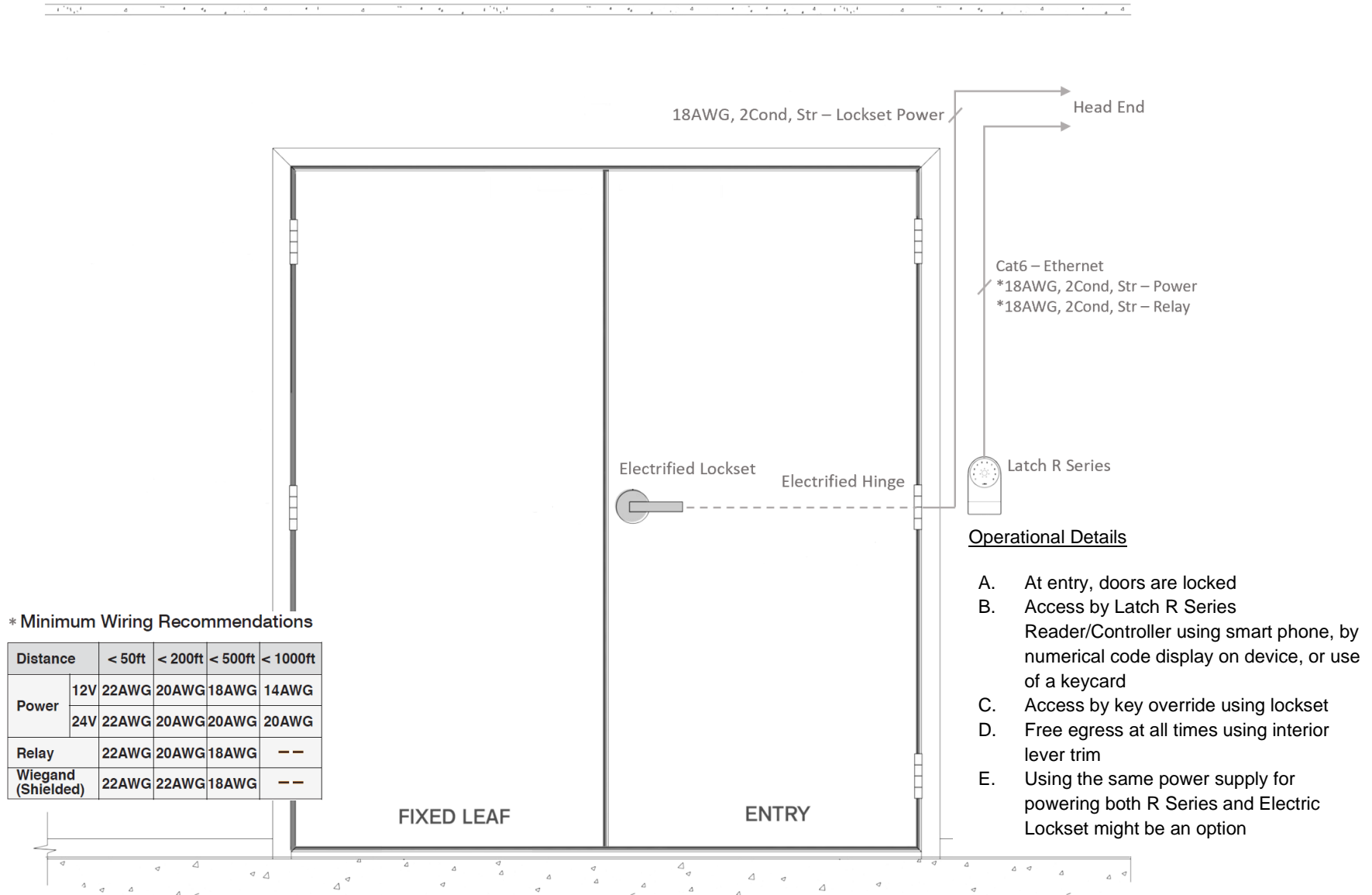
## Application Note #7 – Latch R Series integrates a double magnetic lock, and a REX motion sensor



# LATCH®

Latch Application Notes, Ver 4.0

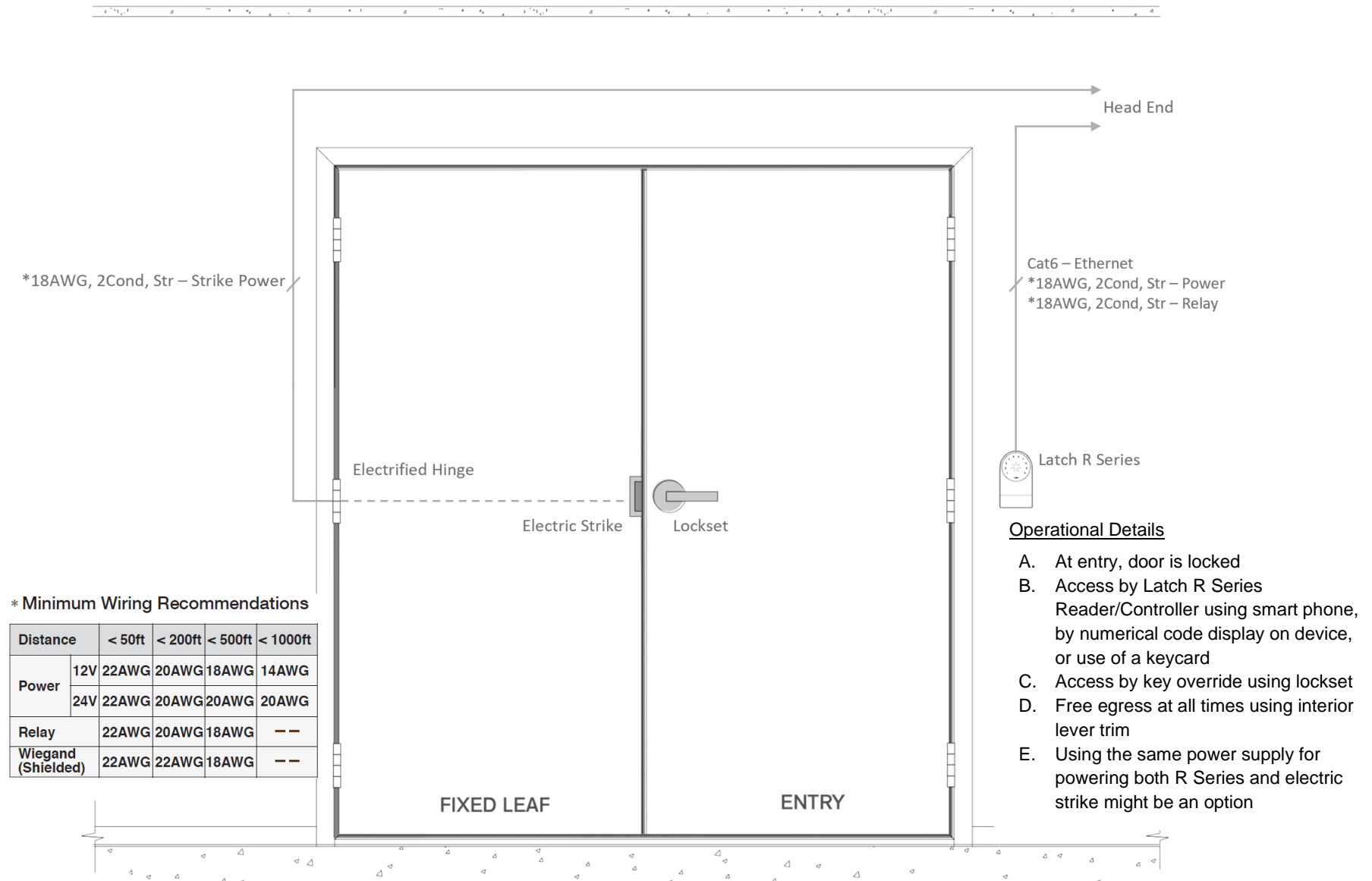
## Application Note #8 – Latch R Series integrates an electrified lockset and an electrified hinge



# LATCH®

Latch Application Notes, Ver 4.0

## Application Note #9 – Latch R Series integrates an electric strike and an electrified hinge



**\* Minimum Wiring Recommendations**

Distance	< 50ft	< 200ft	< 500ft	< 1000ft	
Power	12V	22AWG	20AWG	18AWG	14AWG
	24V	22AWG	20AWG	20AWG	20AWG
Relay		22AWG	20AWG	18AWG	--
Wiegand (Shielded)		22AWG	22AWG	18AWG	--

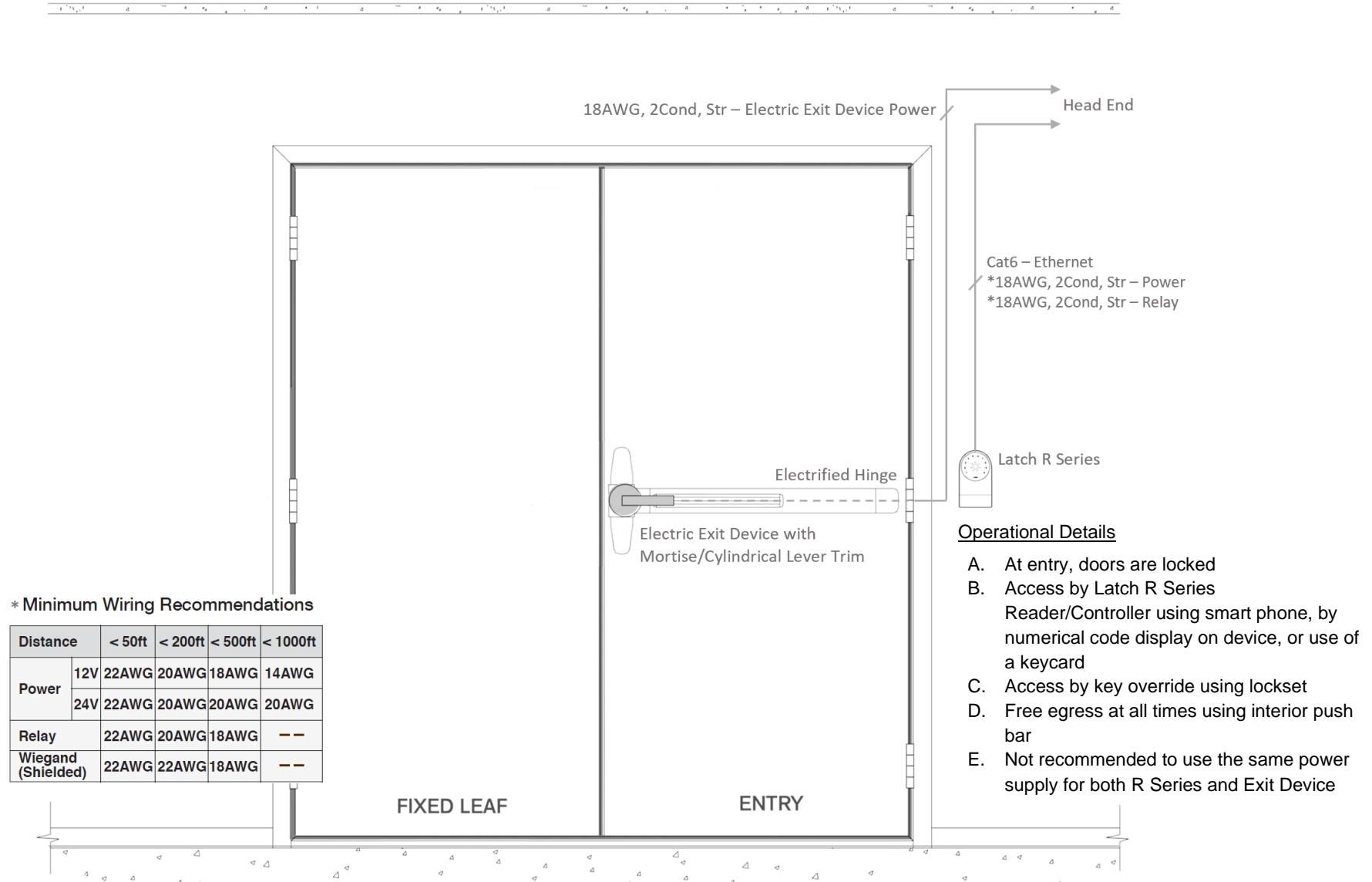
**Operational Details**

- A. At entry, door is locked
- B. Access by Latch R Series Reader/Controller using smart phone, by numerical code display on device, or use of a keycard
- C. Access by key override using lockset
- D. Free egress at all times using interior lever trim
- E. Using the same power supply for powering both R Series and electric strike might be an option

# LATCH<sup>®</sup>

Latch Application Notes, Ver 4.0

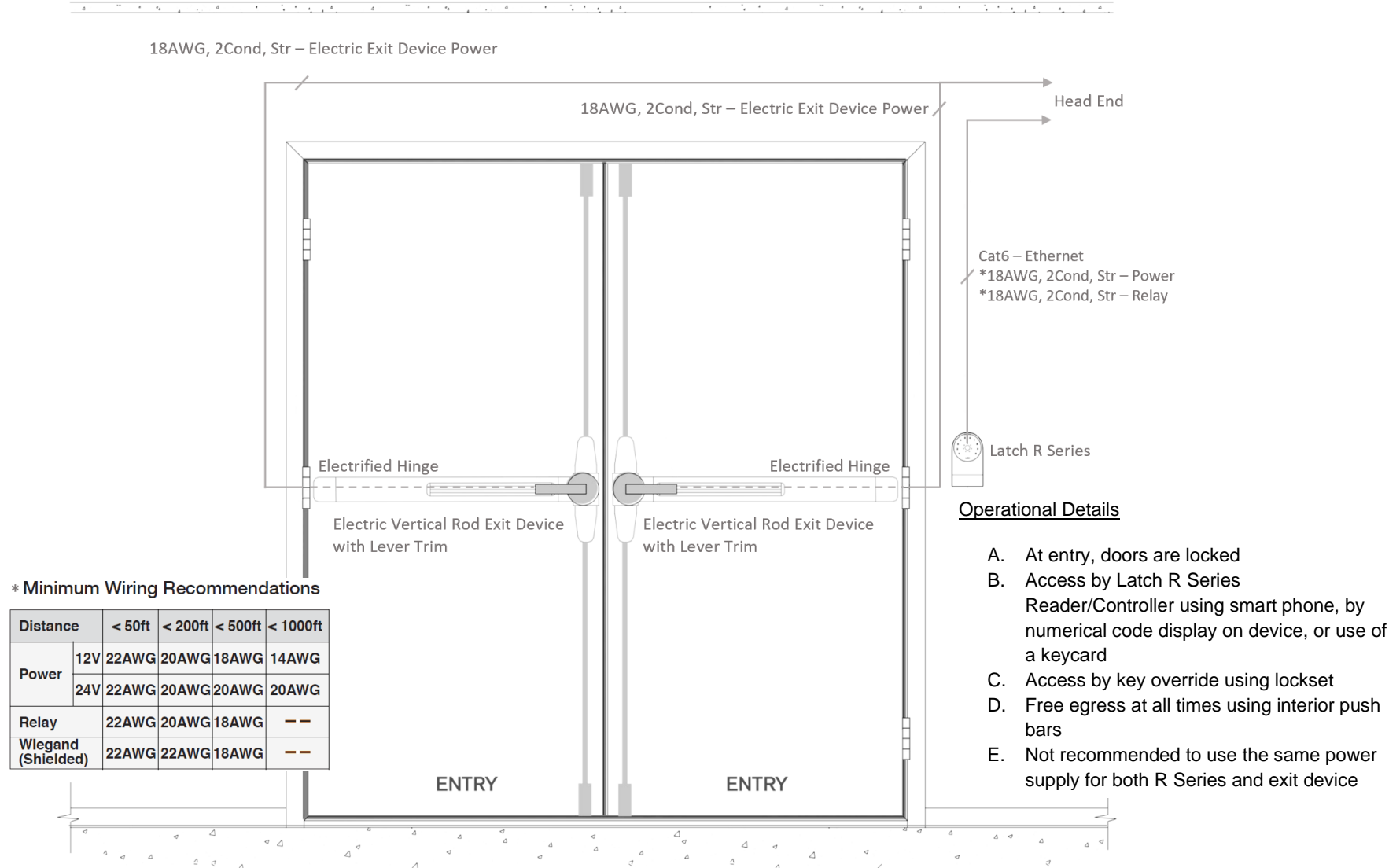
## Application Note #10 – Latch R Series integrates an electric exit device and an electrified hinge



# LATCH®

Latch Application Notes, Ver 4.0

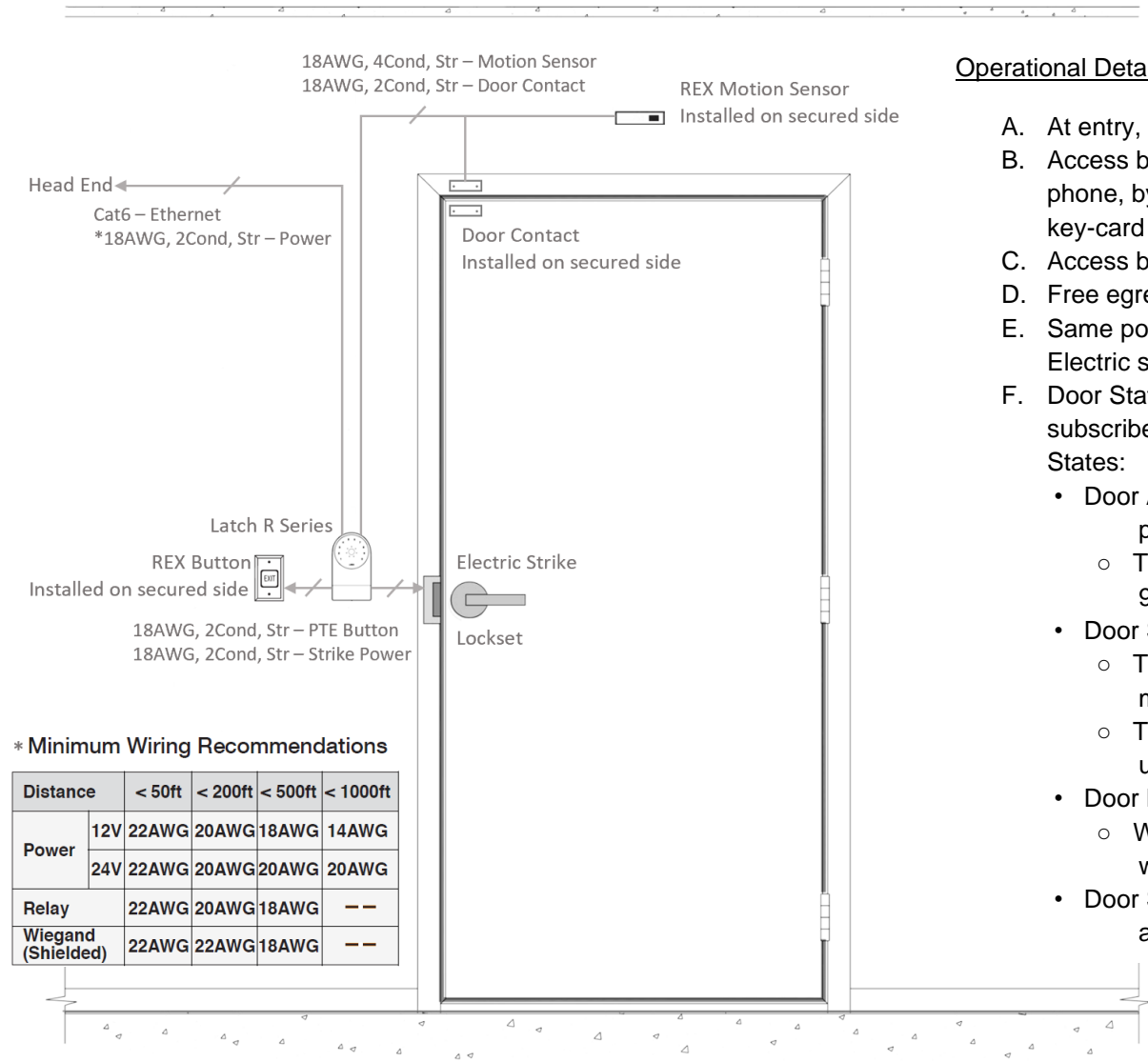
## Application Note #11 – Latch R Series integrates with electrified hinges and a vertical rod exit device with lever trim



# LATCH<sup>®</sup>

Latch Application Notes, Ver 4.0

## Application Note #12 – Latch R Series integrates an electric strike, a REX motion sensor, a push to exit button, and a door contact to enable DSN feature (Door State Notification)



### \* Minimum Wiring Recommendations

Distance	< 50ft	< 200ft	< 500ft	< 1000ft	
Power	12V	22AWG	20AWG	18AWG	14AWG
	24V	22AWG	20AWG	20AWG	20AWG
Relay	22AWG	20AWG	18AWG	--	
Wiegand (Shielded)	22AWG	22AWG	18AWG	--	

### Operational Details

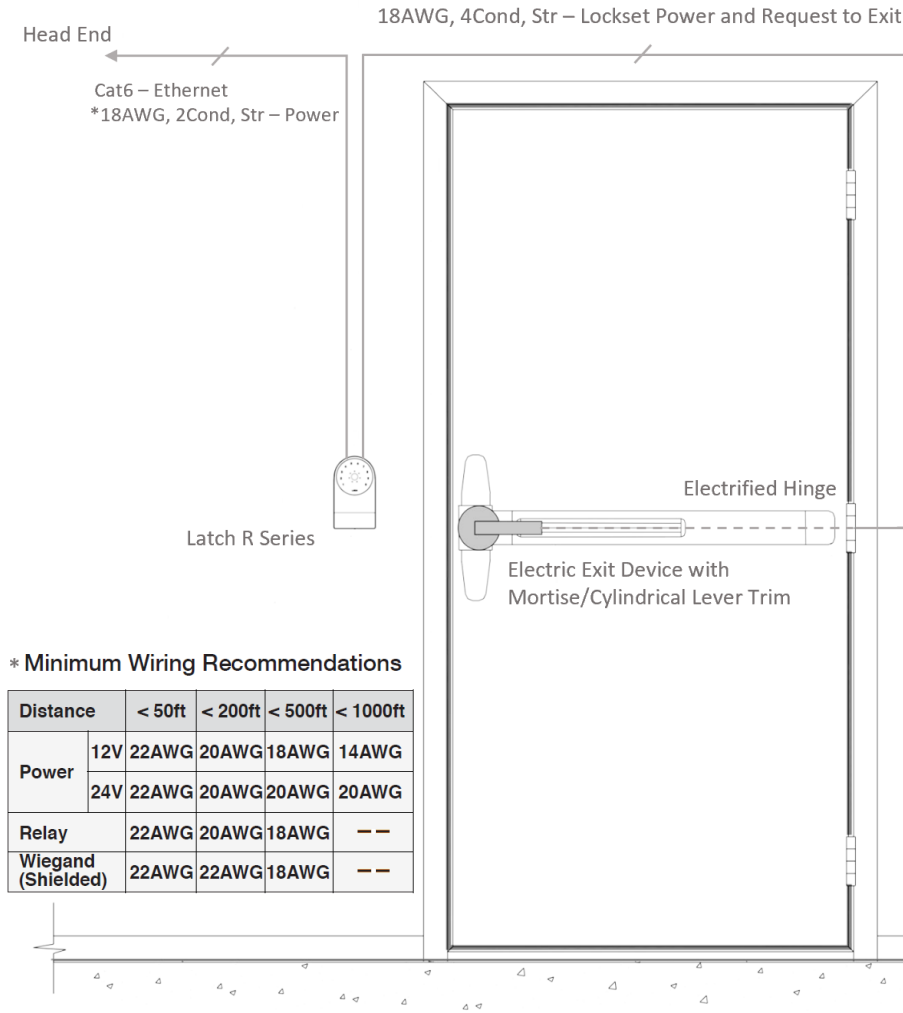
- A. At entry, door is locked
- B. Access by Latch R Series Reader/Controller using smart phone, by numerical code display on device, or use of a key-card
- C. Access by key override using lockset
- D. Free egress at all times using interior lever trim
- E. Same power supply used to power the R Series and Electric strike
- F. Door State Notifications will send notifications to subscribed Property Managers for the following Door States:
  - Door Ajar: The door is held open for an extended period of time.
    - Time period configurable between 30, 60, and 90 seconds.
  - Door Still Ajar
    - Time period configurable between 5, 10, and 15 minutes.
    - This notification is repeatedly sent at this interval until the door is closed.
  - Door Breached: The door is forced open.
    - When the door is opened from the outside without a valid credential.
  - Door Secured: The door is closed after any of the above Door States.



# LATCH<sup>®</sup>

Latch Application Notes, Ver 4.0

## Application Note #13 – Latch R Series integrates an electric mortise exit device and an electrified hinge to enable DSN feature (Door State Notification)



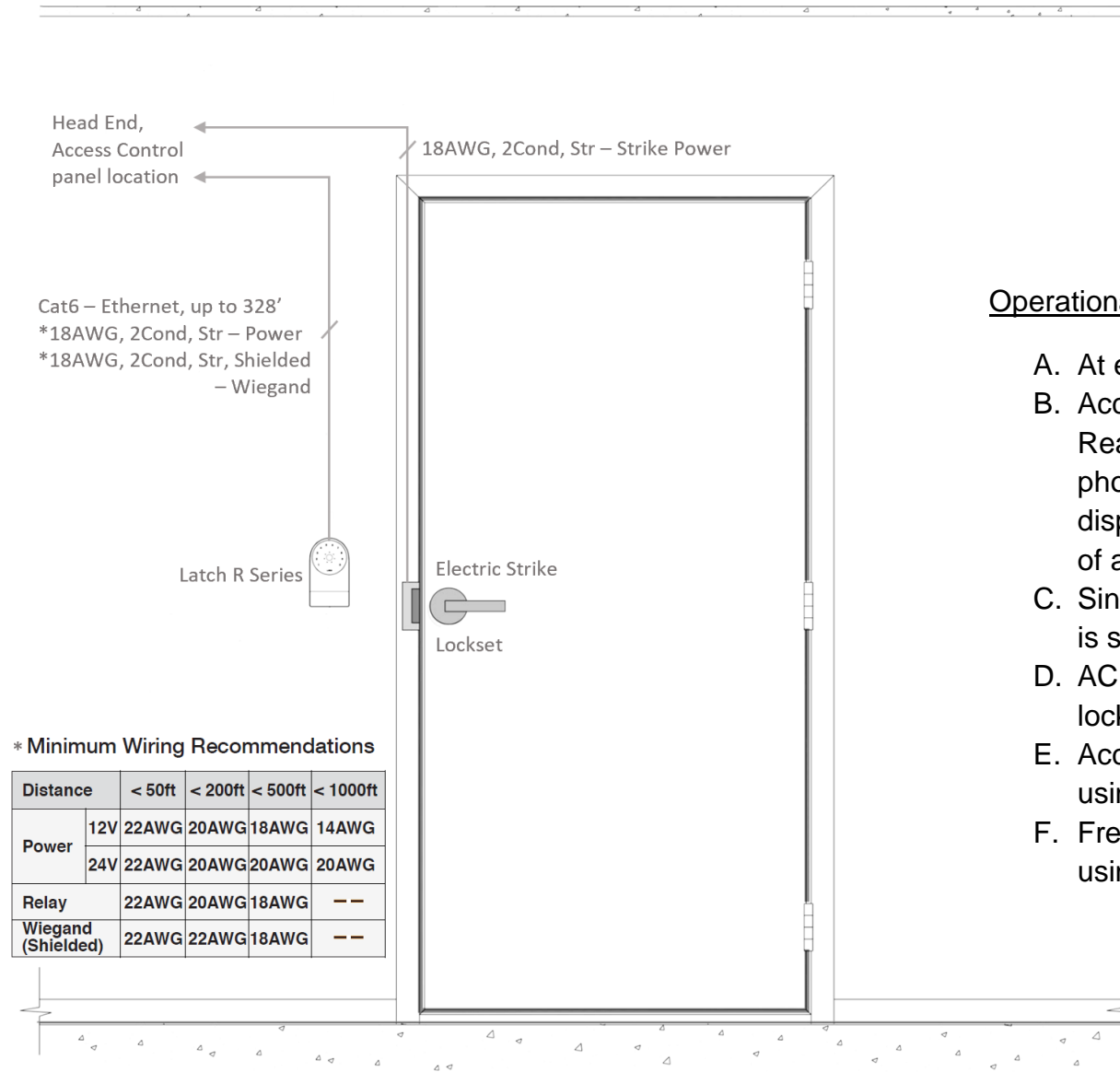
### Operational Details

- A. At entry, door is locked
- B. Access by Latch R Series Reader/Controller using smart phone, by numerical code display on device, or use of a key-card
- C. Access by key override using lockset
- D. Free egress at all times using interior lever trim
- E. Same power supply used to power the R Series and Electric Exit device
- F. Door State Notifications will send notifications to subscribed Property Managers for the following Door States:
  - Door Ajar: The door is held open for an extended period of time.
    - Time period configurable between 30, 60, and 90 seconds.
  - Door Still Ajar
    - Time period configurable between 5, 10, and 15 minutes.
    - This notification is repeatedly sent at this interval until the door is closed.
  - Door Breached: The door is forced open.
    - When the door is opened from the outside without a valid credential.
  - Door Secured: The door is closed after any of the above Door States.

# LATCH<sup>®</sup>

Latch Application Notes, Ver 4.0

## Application Note #14 – Latch R Series integrates 3<sup>rd</sup> party access control panel as an RFID reader



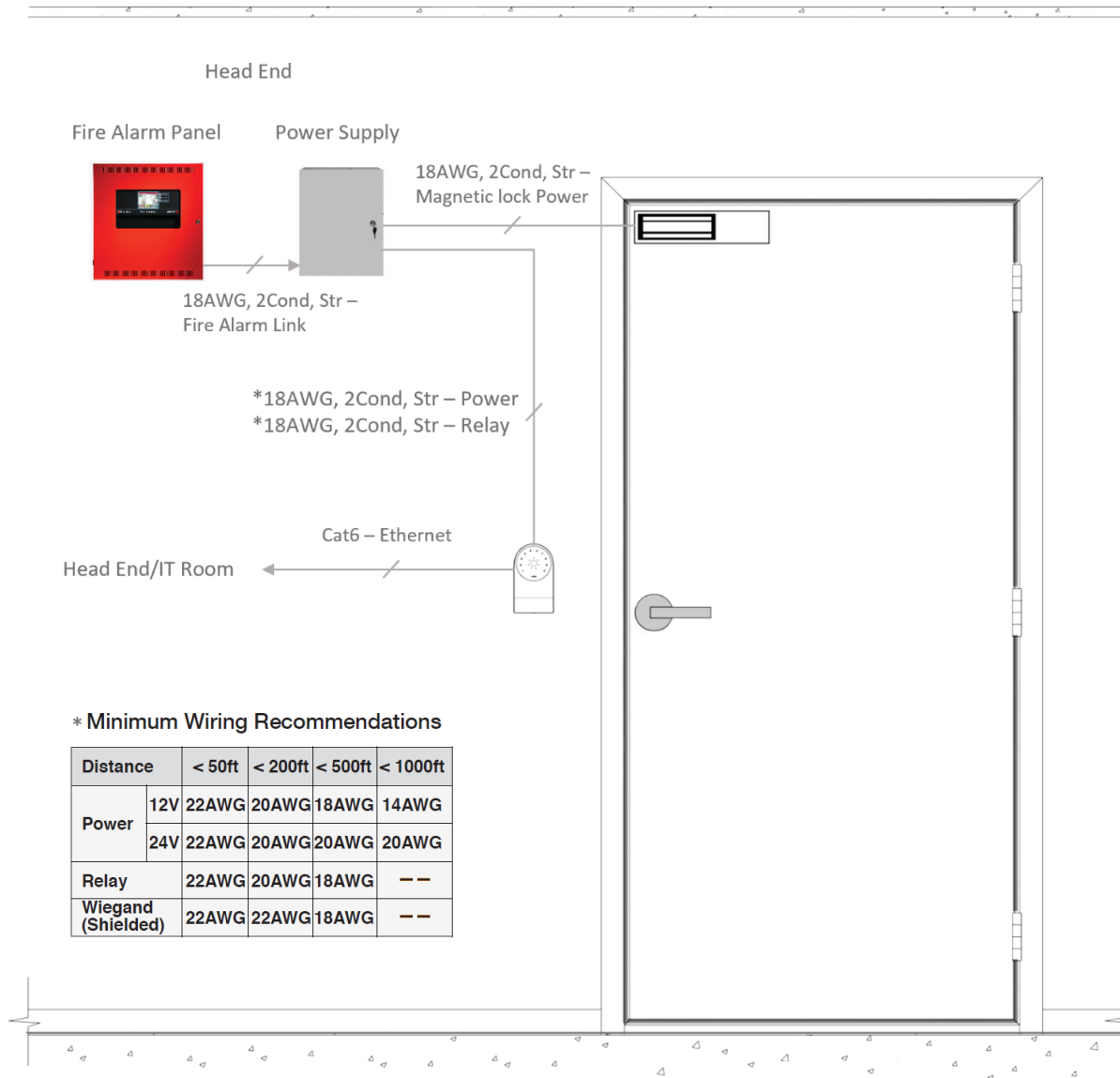
### \* Minimum Wiring Recommendations

Distance	< 50ft	< 200ft	< 500ft	< 1000ft	
Power	12V	22AWG	20AWG	18AWG	14AWG
	24V	22AWG	20AWG	20AWG	20AWG
Relay	22AWG	20AWG	18AWG	--	
Wiegand (Shielded)	22AWG	22AWG	18AWG	--	

### Operational Details

- A. At entry, door is locked
- B. Access by Latch R Series Reader using smart phone, by numerical code display on device, or use of a keycard
- C. Single Wiegand credential is sent to AC panel
- D. AC panel controls door lock
- E. Access by key override using lockset
- F. Free egress at all times using interior lever trim

## Application Note #15 – Latch R Series basic fire alarm integration diagram



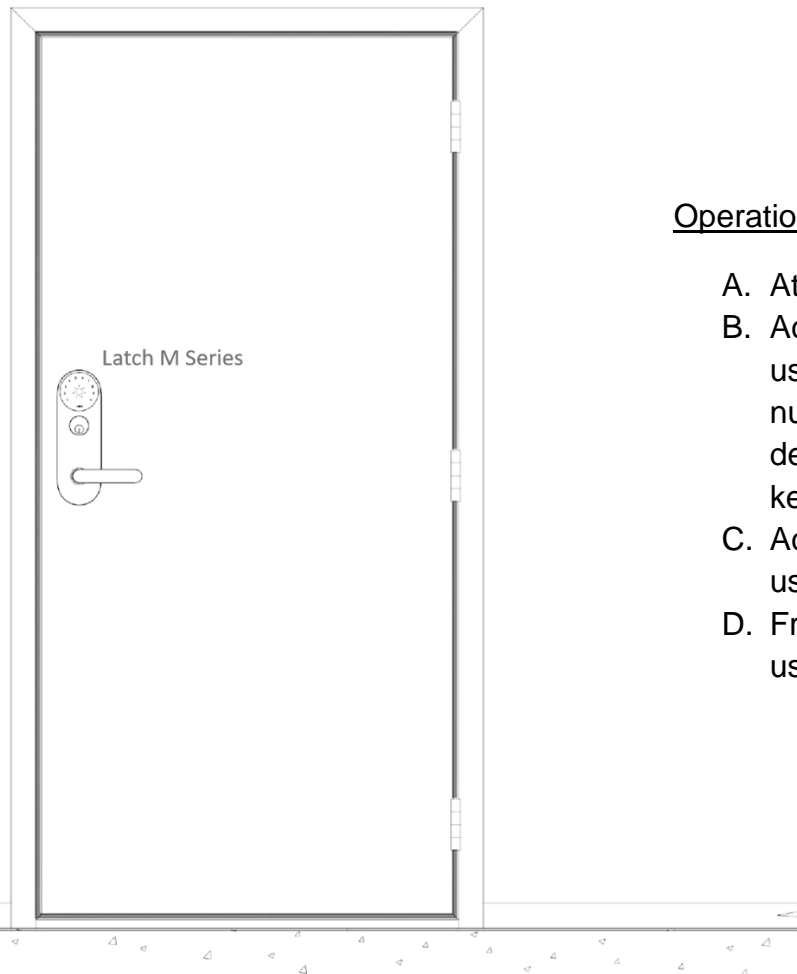
### Operational Details

- A. At entry, door is locked
- B. Access by Latch R Series Reader using smart phone, by numerical code display on device, or use of a keycard
- C. In case of a fire, fire alarm panel will cease the power for magnetic lock, supplied by the power supply, assuring free egress

---

## Application Note #16 – Latch M Series (phasing out), Latch M2 Series (Battery operated)

---



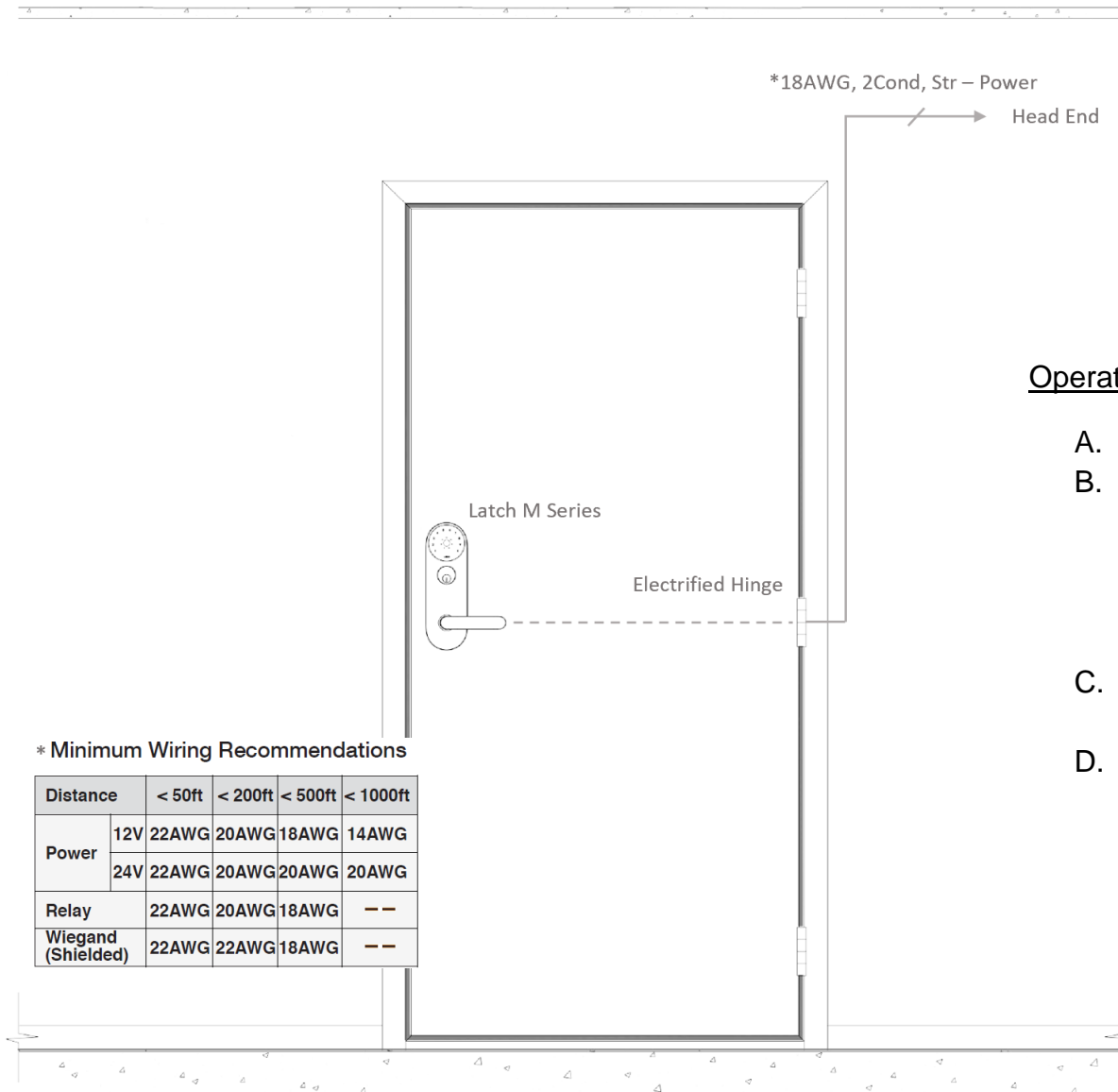
### Operational Details

- A. At entry, door is locked
- B. Access by Latch M Series using smart phone, by numerical code display on device, or use of a keycard
- C. Access by key override using lockset
- D. Free egress at all times using interior lever trim

# LATCH<sup>®</sup>

Latch Application Notes, Ver 4.0

## Application Note #17 – Latch M Series (phasing out) integrates an electrified hinge



\* Minimum Wiring Recommendations

Distance	< 50ft	< 200ft	< 500ft	< 1000ft	
Power	12V	22AWG	20AWG	18AWG	14AWG
	24V	22AWG	20AWG	20AWG	20AWG
Relay	22AWG	20AWG	18AWG	---	
Wiegand (Shielded)	22AWG	22AWG	18AWG	---	

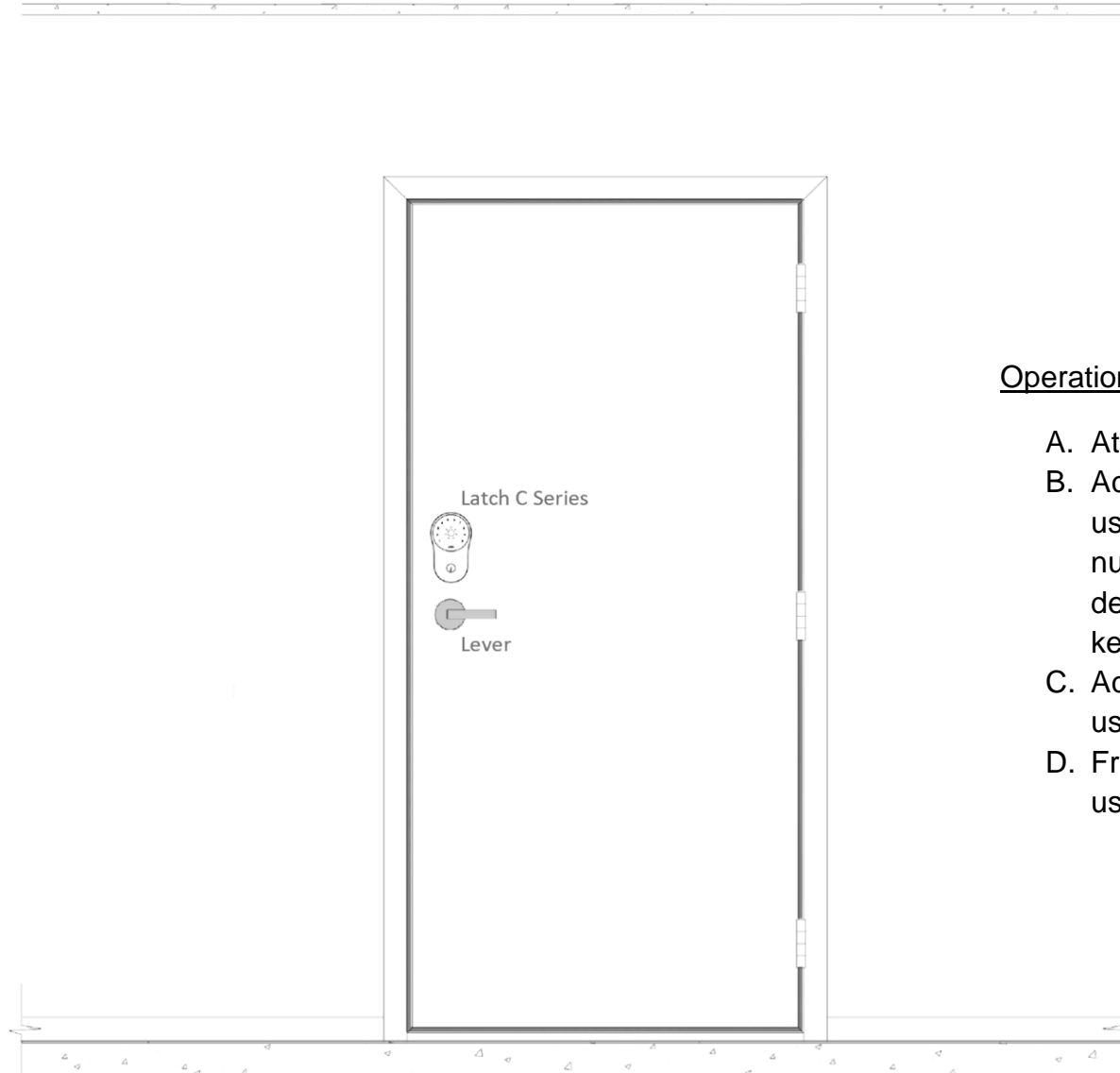
### Operational Details

- A. At entry, door is locked
- B. Access by Latch M Series using smart phone, by numerical code display on device, or use of a keycard
- C. Access by key override using lockset
- D. Free egress at all times using interior lever trim

---

## Application Note #18 – Latch C Series (Battery operated, phasing out)

---

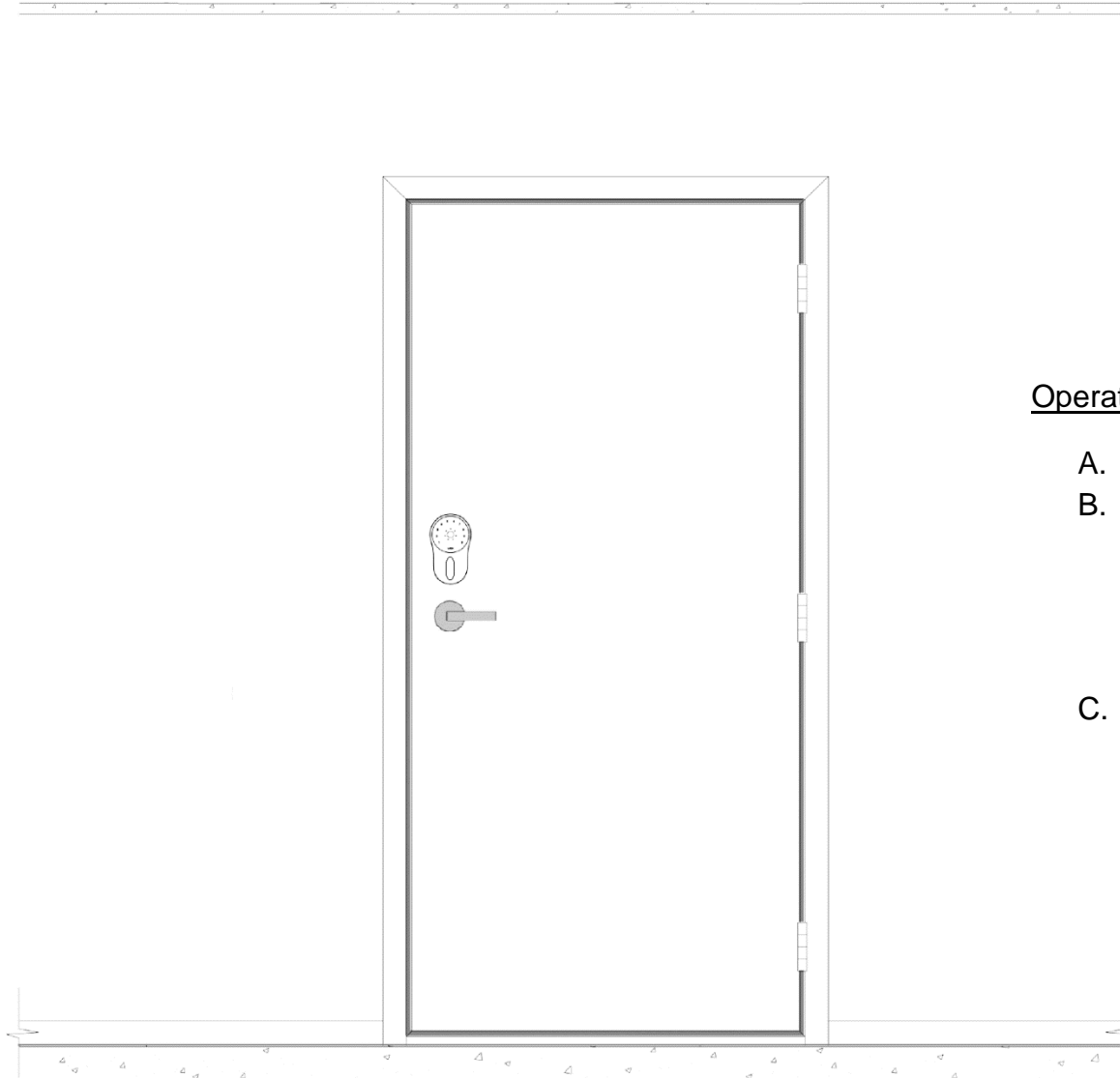


### Operational Details

- A. At entry, door is locked
- B. Access by Latch C Series using smart phone, by numerical code display on device, or use of a keycard
- C. Access by key override using lockset
- D. Free egress at all times using interior lever trim

---

## Application Note #19 – Latch C2 Deadbolt (Battery operated)



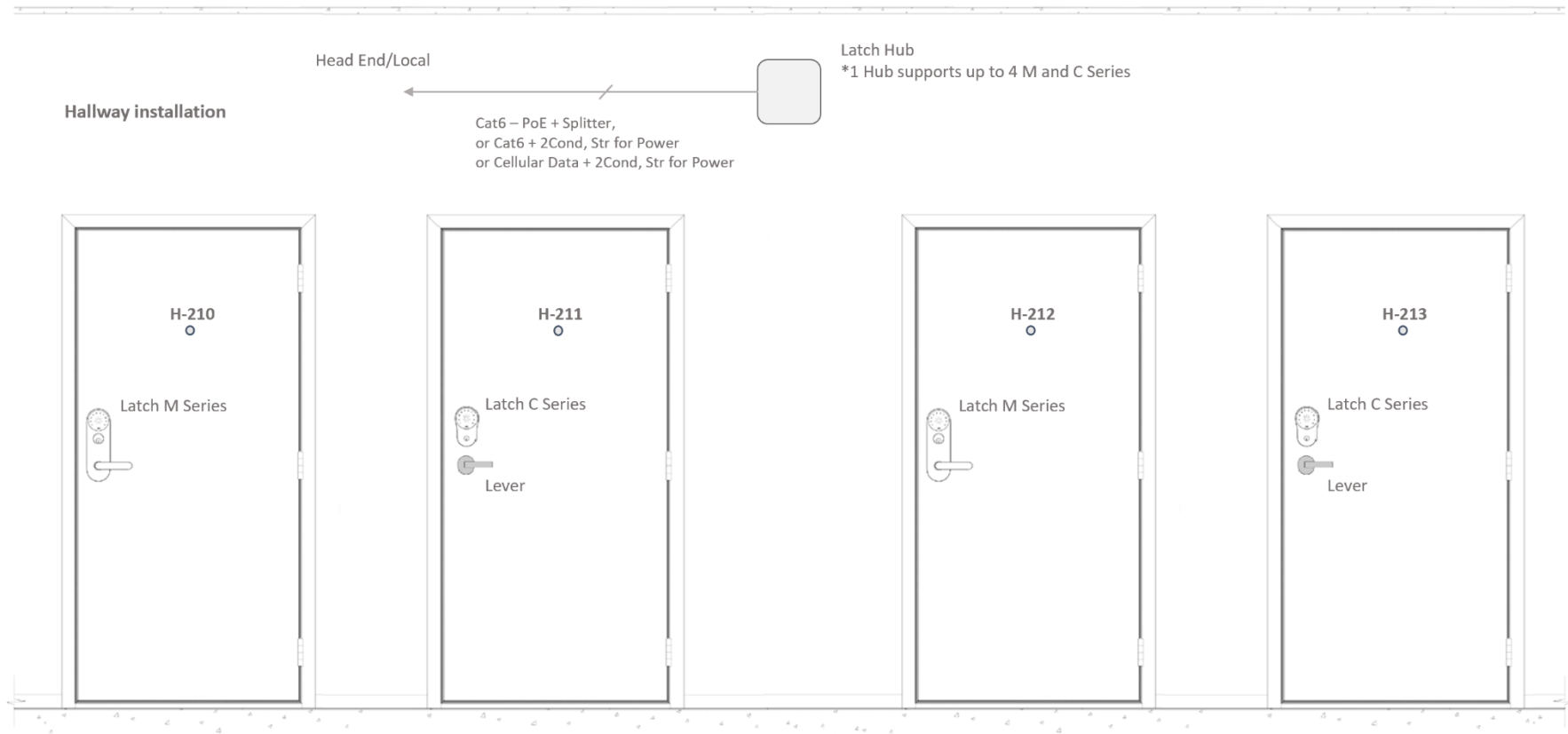
### Operational Details

- A. At entry, door is locked
- B. Access by Latch C2 Deadbolt using smart phone, by numerical code display on device, or use of a keycard
- C. Free egress at all times using interior lever trim

# LATCH®

Latch Application Notes, Ver 4.0

## Application Note #20 – Latch Hub interfaces 4 devices. Hallway installation



### \* Minimum Wiring Recommendations

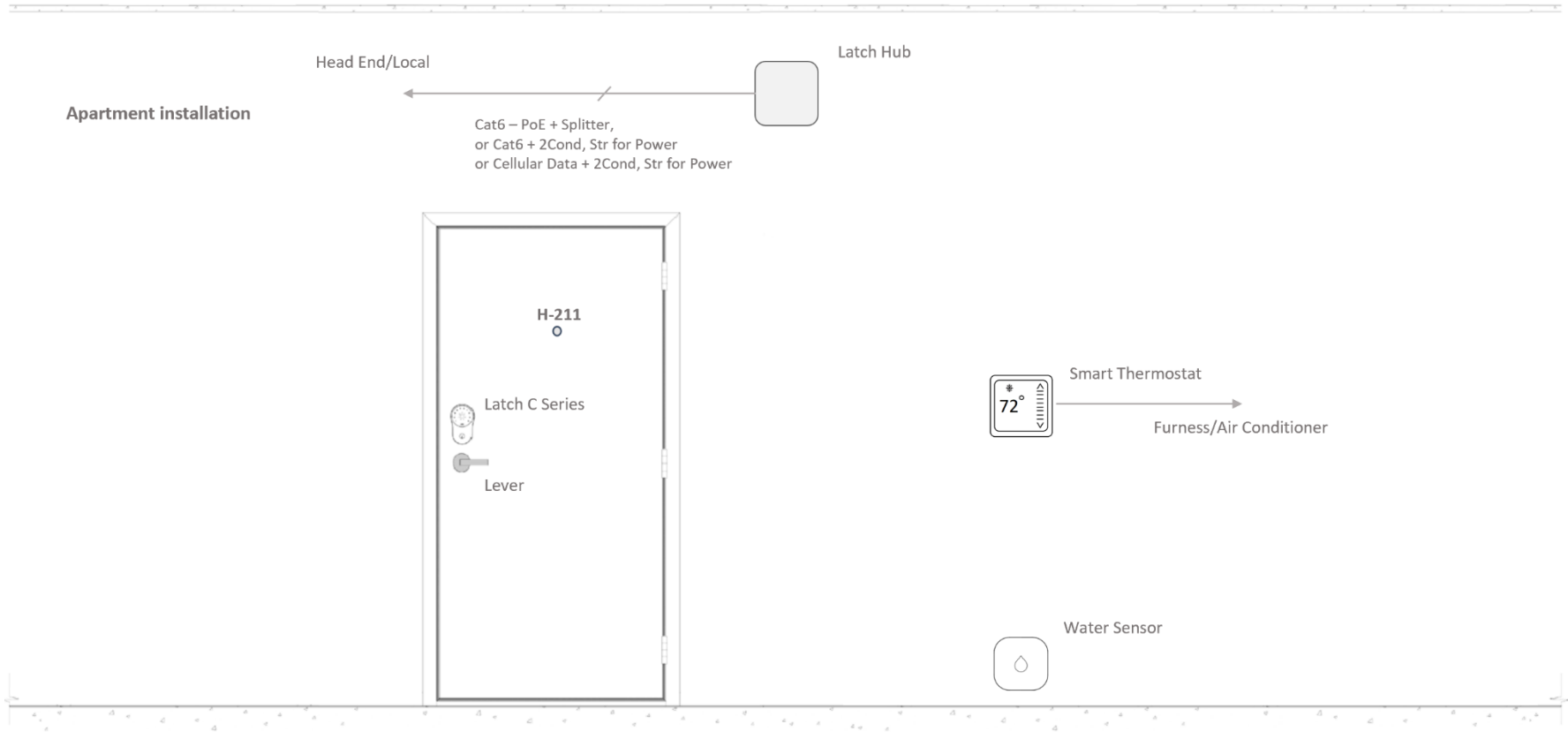
Distance	< 50ft	< 200ft	< 500ft	< 1000ft
Power	12V 22AWG	20AWG	18AWG	14AWG
	24V 22AWG	20AWG	20AWG	20AWG
Relay	22AWG	20AWG	18AWG	--
Wiegand (Shielded)	22AWG	22AWG	18AWG	--



# LATCH<sup>®</sup>

Latch Application Notes, Ver 4.0

## Application Note #21 – Latch Hub interfaces Smart Thermostat and Water Sensor. Apartment installation



### \* Minimum Wiring Recommendations

Distance	< 50ft	< 200ft	< 500ft	< 1000ft
Power	12V 22AWG	20AWG	18AWG	14AWG
	24V 22AWG	20AWG	20AWG	20AWG
Relay	22AWG	20AWG	18AWG	--
Wiegand (Shielded)	22AWG	22AWG	18AWG	--