AD-400
Networked wireless electronic lock

Overview

AD Series electronic locks from Schlage are designed to be modular and provide more options to choose from, more functionality in the lock and more compatibility with existing systems. Its patented modular design allows the lock to be customized to fit the needs of an application now, and changed to meet future needs without removing it from the door.

Factory orderable options include choices of credential readers, chassis type, network configurations, locking functions, power options, lever styles and finishes. It also offers a wide selection of features that can be configured in the field to customize your openings.

To simplify installation, the AD Series combines all the hardware components required at the door for a complete access control system into one integrated design that includes the electrified lock, credential reader, request-to-exit and request-to-enter sensors, door position switch, tamper guard and more.

The AD-400 wireless networked lock gives you many of the key benefits of a hardwired access control system — without the wires. This allows you to secure doors that were traditionally difficult to run wires to in the past—and increase the security throughout your facility.

The AD-400 has a number of features built in, that are configurable in the field and a long list of items that can be monitored by access control software. Please consult one of our Physical Access Control Software (PACS) providers for details on the integration of specific features.

Features and benefits

- Open architecture platform
- Panel interface options ensure seamless communication with your system
- Non-invasive installations for historic buildings and sensitive areas
- Secure encrypted data transmission
- Unique communication protocols that won’t interfere with other wireless networks
- Patent-pending wireless feature enables centralized lock down in less than 10 seconds while still optimizing battery life up to 2 years
- Wireless accessories available for remote, gate, elevator and portable (mustering) applications
- Compatible with NFC mobile credentials on iOS and Android platforms
- ANSI/BHMA A156.25, ANSI/BHMA Grade 1, UL 294, UL10C, FCC Part 15, ADA, RoHS, Industry Canada (IC), FL12400®, FL1591®, FL13013® and FL14402®

1 Check with PACS provider for specific support of Mobile Student IDs in Apple Wallet and Google Pay
2 Applies to cylindrical and mortise chassis only

CYBERSECURITY
Learn about Allegion’s commitment
Reliable communications

Secure and reliable wireless communication with the Panel Interface Module (PIM) is accomplished using 900 MHz frequency. 900 MHz band enables longer transmission ranges because signal propagation with longer wavelengths travel a greater distance and better penetrate typical building construction – allowing for simplifed system design.

Wake-Up on Radio

This feature enables implementation of wireless locks in applications where centralized lock down or unlock is required. ‘Wake Up on Radio’ utilizes patent pending technology to enable real-time activation at a remote battery powered wireless lock. The technology is configurable from 10 to 1 second increments. When Wake-Up on Radio is used in critical applications Dynamic Channel Switching should also be enabled.

Panel Interface Module (PIM400)

The PIM400 (sold separately) is required for communication between the AD-400 wireless lock and the access control panel, and can support up to 16 locks depending on your access control system.

AD-400 electronic lock specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modulation</td>
<td>900 MHz spread spectrum, direct sequence, 10 channels</td>
</tr>
<tr>
<td>Frequency range</td>
<td>902-928 MHz</td>
</tr>
<tr>
<td>Transmission/encryption</td>
<td>AES-128 bit key</td>
</tr>
<tr>
<td>Credential verification time</td>
<td>&lt; 1 second</td>
</tr>
<tr>
<td>Wake-Up on Radio</td>
<td>Responds to lock/unlock command and from host in less than 10 seconds in battery powered applications (per field configuration)</td>
</tr>
<tr>
<td>Communication range</td>
<td>Up to 200 ft with obstructions (normal building construction), up to 1000 ft clear line of sight</td>
</tr>
<tr>
<td>RF interference avoidance</td>
<td>Configurable dynamic channel switching</td>
</tr>
<tr>
<td>Data rate</td>
<td>RF 40 kbps</td>
</tr>
<tr>
<td>Visual/audible communications</td>
<td>Tri-colored LED’s and audible indicators (field configurable)</td>
</tr>
<tr>
<td>System interface</td>
<td>RS-485, Wiegand, or Clock &amp; Data via PIM400 to host</td>
</tr>
<tr>
<td>Power supply</td>
<td>4AA, 8AA, 12 VDC or 24 VDC</td>
</tr>
<tr>
<td>Voltage range</td>
<td>4 VDC to 26 VDC</td>
</tr>
<tr>
<td>Max current requirement</td>
<td>Up to 250 mA</td>
</tr>
<tr>
<td>Battery life</td>
<td>Up to 2 yrs with 4AA</td>
</tr>
<tr>
<td>Operating temperature/</td>
<td>-30°F to 150°F (-35°F to 66°F)</td>
</tr>
<tr>
<td>exterior</td>
<td></td>
</tr>
<tr>
<td>Operating temperature/</td>
<td>32°F to 120°F (-0°F to 49°C) (battery)</td>
</tr>
<tr>
<td>interior</td>
<td></td>
</tr>
<tr>
<td>Operating humidity</td>
<td>0 – 100% non-condensing</td>
</tr>
<tr>
<td>Certifications</td>
<td>ANSI/BHMA A156.25, ANSI/BHMA Grade 1, UL 294, UL10 C, FCC Part 15, ADA, RoHS</td>
</tr>
<tr>
<td>Accessories</td>
<td>Panel Interface Module (PIM400), SUS-A Cable used with SUS Android mobile app, remote antennas for PIM400 to extend range, Dry Contact Relay Board (RLBD) may be required for supervised inputs (Wiegand systems)</td>
</tr>
</tbody>
</table>

Functions

- Classroom/storeroom
- Office
- Privacy
- Apartment

Available status signals

- Lock/unlock status
- Request-to-exit
- Door position
- Mechanical key override
- Deadbolt position
- Interior push button
- Interior cover tamper guard
- Battery status
- Communication status
- Request-to-enter

1 Lock requires less than 100 ms, response time does not include latency time of ACP.
2 Classroom/storeroom and office function not available with motorize deadbolt option.
3 Contact your Physical Access Control Software (PACS) provider for specific scope of support. Interior push button, mechanical key override and deadbolt position are only available when locked via PIM400-485.
4 Software indicates lock/unlock status based on sequence of events, but cannot validate mechanical clutch position unless monitored on RS-485 connection.
AD Series exit trim:

AD-400 exit trim is exclusively compatible with Von Duprin 98/99 and 98/99XP (Rim, Mortise, and SVR, CVc and CVR on metal doors only), Von Duprin 22/22F (Rim and SVR) and Falcon 25 (Rim) exit devices made by Allegion. The proper low current request-to-exit switch (RX-LC or AE) is required.

Part numbers for request-to-exit switch:
- Von Duprin: 050261
- Falcon: 650359

Benefits of AD Series multi-technology readers:

- Reads multiple brands of both proximity (125 kHz) and smart (13.56 MHz) technologies with single reader
- Compatible with NFC mobile credentials on iOS and Android platforms
- Allows facility to migrate to more secure credential technologies over time and as budgets permit

Additional readers

- Smart – ICLASS compatible
- Reads secure sector of HID ICLASS, ICLASS SE, ICLASS SEOS, ICLASS Standard Key, and ICLASS Elite Key; Schlage MIFARE Classic, MIFARE Plus, and MIFARE DESFire EV1 and EV2
- Reads NFC mobile credential, Bluetooth mobile credential not supported
- Proximity not supported

Magnetic stripe

- Available with choice of insertion or swipe style readers
- Triple track reader (1, 2 or 3), field configurable
- ABA, ISO7816 standard

Keypad

- Backlit keypad
- 12 button, 3x4 matrix

Available AD Series reader modules

- Multi-technology
  - Proximity
  - Smart card
  - NFC mobile
  - Keypad
- Multi-technology
  - Proximity
  - Smart card
  - NFC mobile
  - Keypad
- Smart – ICLASS compatible
  - Proximity
  - Smart card
  - NFC mobile
  - Keypad
- Magnetic stripe (insertion)
- Magnetic stripe (swipe)
- Magnetic stripe (swipe)
- Keypad

1. FIPS 201-2 Integration ready option available: The AD Series can be used in applications which require approval by the U.S. Federal Government under HSPO-12 for FIPS 201-2 compliance when installed as part of a tested and approved integrated solution. Please see the AD-402 data sheet or AD-302 data sheet for complete details.

2. 76 bit output format default. Configurable to other output formats.

3. Check with PACS provider for specific support of Mobile Student IDs in Apple Wallet and Google Pay.
### Ordering Information

Available through one of our GSA schedule 84 approved distributions; BAA options available

<table>
<thead>
<tr>
<th>Series</th>
<th>Class</th>
<th>Chassis</th>
<th>Function</th>
<th>Reader</th>
<th>Lever style</th>
<th>Finish</th>
<th>Lever cylinder</th>
<th>Keying type</th>
<th>Handing</th>
<th>Battery</th>
<th>Backset &amp; latch</th>
<th>Strike</th>
<th>Door thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD-400</td>
<td>CY-70</td>
<td>MG-SPA</td>
<td>626-PD</td>
<td>S123-RH</td>
<td>4B-10-049-10-025</td>
<td>3/4</td>
<td>ATH Athens</td>
<td>BRK Boardwalk</td>
<td>LAT Latitude</td>
<td>LON Longitude</td>
<td>RHO Rhodes</td>
<td>SPA Sparta</td>
<td>TLR Tubular</td>
</tr>
</tbody>
</table>

**Selections correspond with the numbers above**

Standard options are indicated in bold. See price book for specific configuration options.

3 **Chassis**

- CY Cylindrical
- MS Mortise
- MD Mortise deadbolt
- 993R Exit trim – Rim/CVC/CVR
- 993S Exit trim – SVR
- 993M Exit trim – mortise
- 903DT Non-functioning dummy trim for exit

4 **Function**

- 70 Classroom/storeroom
- 50 Office
- 40 Privacy
- 60 Apartment

Lock function capabilities are determined by user access control system.

5 **Reader**

- KP Keypad
- MG Magnetic stripe (insertion)
- MGS Magnetic stripe + keypad (insertion)
- MSG Magnetic stripe (swipe)
- MS Magnetic stripe + keypad (swipe)
- MT Multi-technology (125 kHz, 13.56 MHz, NFC)
- MTK Multi-technology + keypad (125 kHz, 13.56 MHz, NFC)
- FMK FIPS 201-1 compliant
- S Multi-technology + keypad (125 kHz and 13.56 MHz)
- SIK Smart-IClass compatible
- Sik Smart-IClass compatible + keypad
- DT Dummy trim

6 **Lever**

- ATH Athens
- BRK Boardwalk
- BRW Broadway
- LAT Latitude
- LON Longitude
- RHO Rhodes
- SPA Sparta
- TLR Tubular

Available with tactile warning options.

7 **Finish**

- 626 Satin chrome
- 605 Bright brass
- 606 Satin brass
- 612 Satin bronze
- 619 Satin nickel
- 625 Bright chrome
- 643e Aged bronze
- 626AM Satin chrome antimicrobial

8 **Lever cylinder type**

9 **Keyway type**

10 **Handing**

- RH Right handed
- LH Left handed

11 **Battery**

- 4B 4AA
- 8B 8AA

12 **Backset & latch or armor front**

**Cylindrical**

- 13-247 2 1/2" backset, deadlatch, square corner, 1 3/4" x 2 1/2"

**Mortise**

- 09-663 Armor front, 1 3/4" wide, square corner

See price book for mortise deadbolt and other backset and latch options or armor front options.

13 **Strike**

**Cylindrical**

- 10-025 1 3/4" lip, ANSI no box, 1 3/4" x 4 1/4"

**Mortise**

- 10-072 1 3/4" lip, 1 3/4" x 4 1/4" square corner, box

See price book for other available strikes.

14 **Door thickness**

- 1 1/4"

Other thicknesses available between 1 1/4" and 2 1/4"

See price book for detail.

### Finishes

**Warm tone finishes**

- 605 Bright brass
- 606 Satin brass
- 612 Satin bronze
- 643e Aged bronze

**Cool tone finishes**

- 619 Satin nickel
- 625 Bright chrome
- 626 Satin chrome
- 626AM Satin chrome with antimicrobial

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**About Allegion**

Allegion (NYSE:ALLE) is a global pioneer in safety and security, with leading brands like CISA®, Interflex®, LCN®, Schlage®, SimonsVoss® and Von Duprin®. Focusing on security around the door and adjacent areas, Allegion produces a range of solutions for homes, businesses, schools and other institutions. Allegion is a $2 billion company, with products sold in almost 130 countries. For more, visit www.allegion.com.
AD-400 Lock Integrations overview

“Online” Integration

**Connection overview**
- Uses a hub to connect wirelessly to the Locks:
  - AD uses a PIM Hub over 900Mhz
  - AD uses an AD Hub over Bluetooth (COMING SOON)
- The Hub is wired back to an AC42

**Real-time communication with Command**
- All events show up in real-time
- Battery & connectivity in Command
- Remote / Web Unlock (Command & Pass)
- Real-time lockdowns (within 10 seconds)
- No Verkada Pass Bluetooth Support
- IPB (Interior Push Button) — lock door from inside with a push button. Supports “Function 50” — while in locked mode, only certain users can still pass

AD Online Integration

Real-time Integration
4 Locks : 1 AC42

Access control anywhere
Verkada simplicity

AD300
AD400
PIM 400–485 Hub
AC42
Cloud
Devices
# Ordering Information

## AD Series Wireless Lock estimated pricing*

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Description</th>
<th>Cost (MSRP) USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD–400–CY</td>
<td>Cylindrical Lock</td>
<td>$2,646</td>
</tr>
<tr>
<td>AD–400–MS</td>
<td>Mortise Lock</td>
<td>$2,937</td>
</tr>
<tr>
<td>AD–400–933*</td>
<td>Exit Trim</td>
<td>$3,044</td>
</tr>
<tr>
<td>PIM400–485</td>
<td>PIM Hub</td>
<td>$1,721</td>
</tr>
<tr>
<td>ANT 400–REM–HALL</td>
<td>Remote Antenna Module</td>
<td>$652</td>
</tr>
</tbody>
</table>

* Final pricing will vary based on final lock information.  
Note: Up to 4 locks can be attached to one AC42 Door Controller.