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 access control 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.

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 switch, 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.

Encryption Key & Credential Interoperability

- Hardware configured with our default encryption key or custom key developed by Schlage Custom Encryption Key Service (SCEKS) including NXP, HID® and NFC
- Schlage MIFARE® DESFire® and MIFARE Classic® credentials
- Apple Wallet® and Google Wallet™ NFC student ID and employee badge
- HID iCLASS®, iCLASS SE® and SEOS® plastic and NFC mobile credentials
- Other competitive credentials (see the Credential Compatibility Guide)

Schlage Credential Services

- CardTrax™ credential format sequencing service offering industry standard formats
- Custom format development

Features & Benefits

- Open architecture platform - integrated into most popular physical access control systems through our PACS Alliance program
- Multi-technology credential compatibility includes Schlage MIFARE®, NFC mobile[1], and proximity
  - Optional support for HID® smart and NFC mobile credentials
- Panel interface options ensure seamless communication with the access control system
- Secure encrypted data transmission
- Unique communication protocols won't interfere with other wireless networks
- 'Wake up on Radio' feature enables centralized lockdown in less than 10 seconds while still optimizing battery life up to 2 years
- Non-invasive wireless installation for historic buildings and sensitive areas
- Wireless accessories available for remote, gate, elevator, and portable or temporary (mustering) applications

CYBERSECURITY
Learn about Allegion's commitment

1. Check with PACS provider for specific support of mobile credentials in Apple Wallet® and Google Wallet™

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 simplified system design.

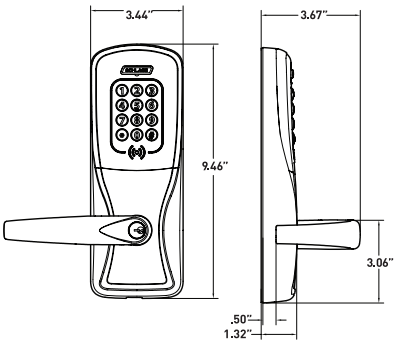
Wake-Up on Radio

This feature enables implementation of wireless locks in applications where centralized lockdown 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.

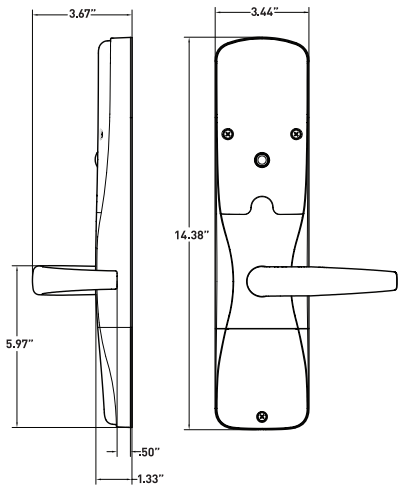
Panel Interface Module (PIM400)

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.

Exterior



Interior



AD-400 Electronic Lock Specifications	
Modulation	900 MHz spread spectrum, direct sequence, 10 channels
Frequency range	902-928 MHz
Transmission/encryption	AES-128 bit key
Credential verification time	< 1 second[1]
Wake-up on radio	Responds to lock/unlock command from host in less than 10 seconds in battery powered applications (per field configuration)
Communication range	Up to 200 ft with obstructions (normal building construction), up to 1,000 ft clear line of sight
RF interference avoidance	Configurable dynamic channel switching
Data rate	RF: 40 kbps
Visual/audible communications	Tri-colored LED's and audible indicators (field configurable)
System interface	RS-485, Wiegand, or Clock & Data via PIM400 to host
Power supply	4AA, 8AA, 12 VDC or 24 VDC
Voltage range	4 VDC to 26 VDC
Max current requirement	Up to 250 mA
Battery life	Up to 2 yrs with 4AA
Operating temperature	Exterior: -31° to 151°F (-35° to 66°C) Interior: 32° to 120°F (0° to 49°C) (battery)
Operating humidity	0 - 100% non-condensing
Certifications	ANSI/BHMA A156.25; ANSI/BHMA Grade 1; UL 294; ULC S319; UL 10C 3 hour; FCC Part 15; Industry Canada (IC); ADA compliant; Cylindrical and mortise chassis only: TDI DR-464; DR-465; FL12400, FL4613, FL1592, FL13013, FL14482; Mortise chassis only: FL3905
Accessories	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)

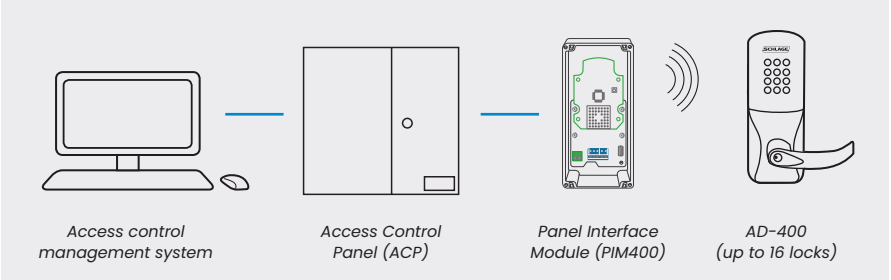
Functions

- Storeroom[2]
- Office/classroom[2, 3]
- Privacy[3]
- Apartment[3]

Available Status Signals

- Lock/unlock status[4]
- Request-to-exit
- Door position
- Mechanical key override[3]
- Deadbolt position[3]
- Interior push button[3]
- Interior cover tamper guard[3]
- Battery status
- Communication status[3]
- Request-to-enter[3]

*The AD-400 has a number of field-configurable features and provides opening intelligence through status signals that can be monitored by access control software. Please consult one of our Physical Access Control Software (PACS) providers for **details** on specific features.*



1. Lock requires less than 100 msec, response time does not include latency time of ACP.
2. Storeroom and office/classroom functions not available with mortise deadbolt option.
3. Consult your Physical Access Control Software (PACS) provider for specific scope of support. Interior pushbutton, mechanical key override, and deadbolt position are only available when linked 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.

Mechanical Specifications			
	Cylindrical	**Mortise**	**Exit Trim**
Handing	Handed to order, field reversible		
ANSI standard (meets or exceeds)	A156.25 locked outdoor A156.2 Series 4000 Grade 1	A156.25 locked outdoor A156.13 Series 1000 Grade 1	A156.25 locked outdoor A156.3 Grade 1
Door thickness	1-3/4" standard, 1-3/8" to 2-3/4" optional (available in 1/8" increments)		
Backset	Standard: 2-3/4" Optional: 2-3/8", 3-3/4", 5"	2-3/4" only	Defined by exit device
Latch bolt	Standard: 1/2" throw Optional: 3/4" throw	Standard: 3/4" throw Optional: 1" throw on mortise deadbolt	Provided by exit device
Levers	Pressure cast zinc, plated		
Strike	Standard: 1-3/16" lip, ANSI, 1-1/4" x 4-7/8" Optional: Additional configurations available, please see price book		Provided by exit device
Cylinder and keys	Schlage® 6-pin Everest 29 S123 keyway Conventional cylinder with two patented keys standard. Additional options available including SFIC, FSIC and competitor brands. See lever and cylinder compatibility data sheet.		

Standard Multi-Technology Reader Specification	
Credential technologies	Proximity (125 kHz), Smart (13.56 MHz) and Near Field Communication (NFC)
Standards	ISO 15693, ISO 14443
Read range	Proximity: up to 1.25"; Smart: up to .75"; NFC mobile: mobile device dependent
Proximity credential support	Schlage, ISONAS™, HID4, GE/CASI ProxLite®, AWID® and LenelProx®
Smart credential support	Secure sector: Schlage MIFARE Classic®, Schlage MIFARE Plus®, Schlage MIFARE® DESFire®, PIV and PIV-I[1,2] CSN only: HID iCLASS®, HID iCLASS SE®, Inside Contactless Pico Tag®, MIFARE Classic/Plus/DESFire, ST Microelectronics®, Texas Instruments Tag-It®, Phillips I-Code®
Mobile credential support	Apple Wallet® NFC student ID and employee badge mobile credentials, Google Wallet™ NFC student ID and employee badge mobile credentials[3]
Certifications	FCC, Industry Canada (IC), UL 294
Options	12 button, 3 x 4 matrix backlit keypad

Available AD Series Reader Modules

Multi-Technology

- Proximity
- Smart
- NFC mobile

+ KEYPAD option

Si with HID Support

- Smart
- NFC mobile

+ KEYPAD option

Magnetic Stripe (insertion)

+ KEYPAD option

Magnetic Stripe (swipe)

+ KEYPAD option

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 HSPD-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. 75 bit output format default. Configurable to other output formats.
3. Check with PACS provider for specific support of mobile credentials in Apple Wallet® and Google Wallet.™
4. Proximity bit lengths greater than 37 not supported.

AD Series exit trim is compatible with Von Duprin 98/99 and 98/99XP (rim, mortise, SVR; and CVC, CVR on metal doors only), Von Duprin 22/22F (rim and SVR) and Falcon 25 (rim) exit devices from Allegion. The AD Series is also compatible with select rim exit devices from Sargent, Corbin Russwin, Yale, Dorma and Precision.

For Von Duprin and Falcon solutions, a low current request-to-exit switch (RX-LC or AE) is required. The part numbers are:

Von Duprin: 050281
Falcon: 650359

Refer to the AD Series Exit Trim Compatibility Guide for additional details.

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[3]
- Allows facility to migrate to more secure credential technologies over time and as budgets permit

Additional Readers

Si option with HID® support

Supports:

- Secure application area of HID iCLASS®, iCLASS SE®, Seos® smart credentials
- iCLASS Standard Key and Elite Keys
- HID NFC mobile credentials
- All Schlage MIFARE® and NFC mobile credentials

Does not support:

- Proximity
- Bluetooth® (BLE) mobile credentials

Magnetic stripe

- Available with choice of insertion or swipe style readers
- Triple track reader (1, 2 or 3), field configurable
- ABA, ISO76XX standard

Keypad

- Backlit keypad
- 12 button, 3 x 4 matrix

Ordering Information

AD - 400 - CY - 70 - MG - SPA - 626 - P6 - S123 - RH - 4B - 13-247 - 10-025 - 134

Series	Class	Chassis	Function	Reader	Lever Style	Finish	Key Cylinder	Keyway	Handing	Battery	Backset & Latch or Armored Front	Strike	Door Thickness
1	2	3	4	5	6	7	8	9	10	11	12	13	14

Standard options are indicated with a dot. 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
993DT	Non-functioning dummy trim for exit

4 Function

40	Privacy
50	Office/classroom
60	Apartment
70	Storeroom

Lock function capabilities are determined by users access control system.

5 Reader

• KP	Keypad
MG	Magnetic stripe (insertion)
MGK	Magnetic stripe + keypad (insertion)
MS	Magnetic stripe (swipe)
MSK	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 multi-technology + keypad (125 kHz and 13.56 MHz)
Si	HID support
SiK	HID support + 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

605	Bright Brass
606	Satin Brass
612	Satin Bronze
619	Satin Nickel
625	Bright Chrome
• 626	Satin Chrome
626AM	Satin Chrome Antimicrobial
643e	Aged Bronze

8 Key Cylinder

• P6	Schlage 6-pin conventional key-in-lever cylinder

See price book for other SFIC, FSIC and less cylinder options available. Compatible with Schlage®, Sargent®, Corbin Russwin, Medeco® and Yale®.

9 Keyway

• S123	Everest 29

See price book for other available keyway options including restricted keyways in Primus XP high security cylinders and master keying.

10 Handing

• RH	Right handed
LH	Left handed

Field reversible.

11 Battery

• 4B	4AA
8B	8AA

12 Backset & Latch or Armored Front

• 13-247	Cylindrical: 2-3/4" backset deadlatch, square corner, 1-1/8" x 2-1/4"
• 09-663	Mortise: Armor front, 1-1/4" wide, square corner

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

13 Strike

• 10-025	Cylindrical: 1-3/16" lip, ANSI, no box, 1-1/4" x 4-7/8"
• 10-072	Mortise: 1-3/16" lip, 1-1/4" x 4-7/8" square corner, box

See price book for other available strikes.

14 Door Thickness

• 134	1-3/4"

Other thicknesses available between 1-3/8" and 2-3/4" See price book for details.

Lever Styles

Conventional cylinders shown, SFIC and FSIC also available.


Athens


Boardwalk


Broadway


Latitude


Longitude


Rhodes


Sparta

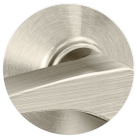

Tubular

Finishes

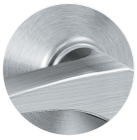

605
Bright Brass

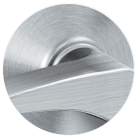

606
Satin Brass


612
Satin Bronze


619
Satin Nickel


625
Bright Chrome


626
Satin Chrome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