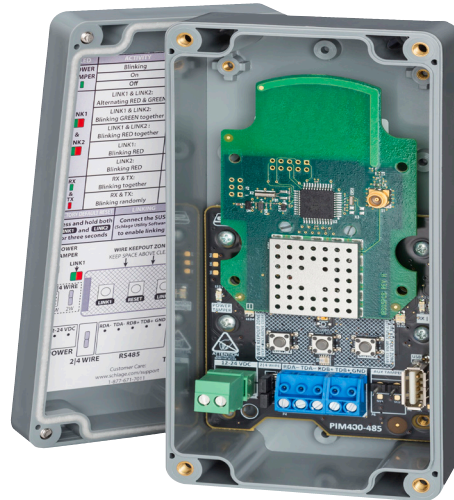


Panel interface module for AD-400 series wireless devices



Avigilon™ Access Control Manager (ACM) utilizes the Schlage PIM400-485-RSI panel interface module (AC-ALL-SCH-PIM400-485-RSI) from Allegion as part of our wireless lock solution. This panel interface module (PIM) enables communication between ACM and Schlage AD-400 series wireless locks.



WIRELESS LOCKS

The Schlage PIM400-485-RSI panel interface module seamlessly integrates to the Mercury EP2500 controller from Avigilon, eliminating the need for reader interface modules. Each PIM supports up to 16 Schlage AD-400 locks.

High transmission power is enabled by 900 MHz spread spectrum technology in a license-free band. An error detection algorithm maintains data integrity on each transmission, and redundant transmissions ensure communication success. Periodic “heartbeat” signals provide supervision and ensure reliable RF communications are maintained. Lastly, you can enable dynamic channel switching (DCS) to overcome harsh RF environments by automatically changing channels to avoid potential interference.

Used extensively by government and military organizations, spread spectrum technology provides significant security advantages over conventional transmission methods. Spread spectrum transmissions are encrypted with AES 128-bit keys to make wireless access devices virtually uncompromisable. In addition, scalability is virtually unlimited because each AD-400 Series wireless access module has nearly one million addresses to choose from during the linking process.

The patent-pending Wake up on Radio (WOR) feature drives communication from the PIM400 to any or all linked wireless devices in 10 seconds or less. This innovative feature works efficiently in parallel with periodic heartbeat signals to maintain up to a two-year battery life on AD-400 Series locks. The response rate can be field configured down to one second to preserve battery life. When you use Wake up on Radio in critical applications, you should also enable dynamic channel switching.

KEY FEATURES

- 900 MHz spread spectrum RF technology for long range, reliable communications
- Automatic linking to remote wireless access points with 10 channel frequencies to select from for easy commissioning
- AES 128-bit encrypted spread spectrum transmissions
- Five visual indicators to quickly pinpoint and display status
- Flash memory for easy firmware upgrades
- NEMA 1, 4, 4X, 6; UL 294; FCC Part 15; RoHS; Industry Canada (IC) certifications
- Redesign with smaller footprint



Specifications

TECHNICAL SPECIFICATIONS

Frequency	Range 902–928 MHz
Modulation	900 MHz spread spectrum, direct sequence, 10 channels
RF interference avoidance	Optional dynamic channel switching
Transmission/encryption	AES 128-bit key (optional)
Credential verification time	< One second (dependant on latency time of the access control panel)
Communication range	<ul style="list-style-type: none"> Up to 200 feet (61 m) with obstructions Up to 1,000 feet (305 m) clear line of sight Up to 2,000 feet (609 m) line of sight with high gain antenna on PIM400
Visual/audible communications	Five LEDs for status indicators
System interface	Wiegand (data1/data0) or magnetic stripe (Clock and data)
Power supply	12 VDC or 24 VDC
Voltage range	9.5 VDC to 26 VDC
Max current requirement	Up to 250 mA
Operating temperature	-31° to 151° F (-35° to 66° C)
Operating humidity	0% to 100% non condensing
Dimensions (H x W x D)	6.3" x 3.2" x 2.2" (16.0 cm x 8.13 cm x 5.59 cm)
Weight	1.25 lb (.56 kg)
Cable specifications	<ul style="list-style-type: none"> DC power input: 18AWG, two conductor (Belden 8760 or equivalent) up to 1,000 feet (305 m) PIM400-485 to Mercury controller: 24AWG, two or four conductor shielded (Belden9842, 9841 or equivalent) up to 4,000 feet (1,219 m)
Data rate	RF: 40 kbps; RS-485: 9.6 kbps
Certifications	NEMA 1, 4, 4X, 6; UL 294; FCC Part 15; Industry Canada (IC); RoHS

TECHNICAL FEATURES

Reliable communications	900 MHz band for longer transmission ranges and better penetration through and around objects because of longer signal wavelengths.	
Online communications (heartbeat)	Regular communications between AD-400 Series wireless locks and PIM400 monitor transmission presence and integrity; download information or instructions such as unlock and relock.	
Auto addressing (linking)	Linking ties a specific wireless access module to a selected PIM400 and assigns a unique address. There are over 65,000 unique addresses available per channel, providing nearly a million combinations for virtually unlimited scalability.	
Assured communications	A Packet-Error-Rate-Test (PERT) is performed during linking at reduced power levels to ensure reliable communication during operation.	
Encoded transmissions	Each RF transmission is encrypted with AES 128-bit keys to provide virtually uncompromisable security.	
Tamper	The PIM400 cover is monitored by an optical tamper switch.	
Visual indications	<ul style="list-style-type: none"> Power on Microprocessor running Linking status PIM receiving RF data PIM transmitting RF data 	<ul style="list-style-type: none"> PIM receiving RS-485 data PIM transmitting RS-485 data PIM firmware version PIM tamper status
Access point status available through RS-485 connection	<ul style="list-style-type: none"> Card and keypad data Door position Loss of RF communication Request-to-exit Request-to-enter Low battery 	<ul style="list-style-type: none"> PIM tamper Mechanical key override Deadbolt position Interior cover tamper guard Lock/unlock status Interior push button
Configurable items	<ul style="list-style-type: none"> Wake up on Radio (WOR) Heartbeat frequency Relock parameters Card data format conversion Extended unlock Fail safe/fail secure/fail as is Door held pre-alarm 	<ul style="list-style-type: none"> Cache memory parameters Dynamic channel switching (DCS) Reader configuration Keypad configuration Inside push-button configuration User interface configuration

ORDERING INFORMATION

AC-ALL-SCH-PIM400-485-RSI	Panel interface module with outdoor enclosure standard. Supports up to 16 access points via RS-485 with Mercury EP2500 controllers.
Accessories	<ul style="list-style-type: none"> HHD kit (AC-ALL-SCH-HHD-KIT-USB) – Handheld device with SUS installed and HH-USB cable. Mercury EP2500 controller (AC-MER-CONT-64DR).