

PRO4200

Intelligent Controller

(PRO42IC)

Installation and Configuration Guide

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TABLE OF CONTENTS

 1.1 Warnings and Cautions 1.2 Electro Static Discharge 1.3 Disclaimer – Product Liability; Mutual Indemnification 	10 10
	10
1.3 Disclaimer – Product Liability: Mutual Indemnification	
- J)	
1.4 CE and WEEE Marking	11
1.5 Unpacking Procedure	11
1.6 Shipping Instructions	11
1.7 Limited Warranty	12
1.8 Confidentiality	12
1.9 Compliance	13
2 Product Overview	14
2.1 PRO4200 and PRO3200	14
2.2 Port Settings	14
2.3 Other	14
3 Setting Up the PRO4200 Hardware	18
3.1 Setting the Jumpers	18
3.2 Setting the DIP Switches	19
3.3 Factory Default Communication Parameters: Interface 1 (NIC1).	20
3.4 Bulk Erase Configuration Memory	
3.5 Bulk Erase	
3.6 Status LEDs	
3.7 Initialization	22
3.8 LED Activity when Supplying Power to the PRO4200 Interface.	22
3.9 Supplying Power to the PRO4200 Interface	
3.10 Communications Wiring	24
3.11 Cabinet Tamper and Power Failure Input Wiring	25
3.12 Memory and Real Time Clock Backup Battery	25
4 Reader Module	26
4.1 Reader Wiring	27
4.2 Input Wiring	28
4.3 Control Output Wiring	28
5 System Configuration via Web Interface	30
5.1 Connecting to ACDSM for the First Time	30
5.2 Login Page	30
5.3 Home Page	31
5.4 WIN-PAK Network Settings	
5.5 Host Communication	33
5.6 Device Information	36
5.7 Advanced Networking	
5.8 User Configuration	39
5.9 Auto-Save	41
5.10 Load Certificate	
5.11 Status Display	
5.12 Restore Default Screen	
5.13 Apply Setting Screen	

5.14 Log Out	 	4	18
J.14 LOG Out	 		tC

LIST OF FIGURES

Figure 1:	PRO4200 Connections, LEDs, and DIP Switches	17
Figure 2:	PRO4200 Power Terminals	24
Figure 3:	PRO4200 Port Wiring	25
Figure 4:	PRO4200 TMP and FLT Terminals	25
Figure 5:	PRO4200 Intelligent Controller Module Wiring: Connectors TB1,TB3-9	9. 26
Figure 6:	PRO4200 Input wiring	28
Figure 7:	PRO4200 Output Wiring	29
Figure 8:	PRO4200 Web Server Login Screen	30
Figure 9:	PRO4200 Web Server Home Page	31
Figure 10	: PRO4200 Web Server Network Settings Screen	32
Figure 11	: PRO4200 Host Port Configuration Screen with IP Server Connection	34
Figure 12	: PRO4200 Host Comm Configuration Screen with IP Client Connection	n 36
Figure 13	: PRO4200 Web Server Device HW Info Screen	37
Figure 14	: PRO4200 Access Control Device Server Configuration Manager	38
Figure 15	: PRO4200 Web Server User Info Screen	39
Figure 16	: PRO4200 Access Control Device Server Configuration Manager	40
Figure 17	: Load HID Linq Certificate	43
Figure 18	: The Access Control Readers, Monitor	44
Figure 19	: Load Certificate	46
Figure 20	: PRO4200 Web Server Restore Default Screen	48
Figure 21	: PRO4200 Web Server Apply Setting Screen	48

LIST OF TABLES

Table 1	PRO4200 Jumper Settings	18
Table 2	PRO4200 DIP Switch Settings	19
	PRO4200 Technical Specifications	
Table 4	PRO4200 Status LED Combinations During Run Time	22
Table 5	Settings for Wiring to a Reader Port	27
Table 6	Settings for Configuring an LED Control Terminal	27

PRO4200 Installation

In this chapter...

Notices	8
Product Overview	14
Setting Up the PRO4200 Hardware	18
Reader Module	26
System Configuration via Web Interface	30

1 Notices

1.1 Warnings and Cautions



Note: See the Remote Enclosure Installation Manuals PRO22ENC1, PRO22ENC2, PRO22ENC3, PRO22ENC4, and PRO22ENC5 for installation instructions.

Before Installation



Warning: Before installation, **TURN OFF** the external circuit breaker which supplies power to the system.

Before connecting the device to the power supply, verify that the output voltage is within specifications of the power supply (see 'Technical Specification' on page 21).

Do not apply power to the system until **after** the installation has been completed. Personal injury or death can occur, and the equipment can be damaged beyond repair, if this precaution is not observed.

Fire Safety and Liability Notice



Warning: Never connect card readers to any critical entry, exit door, barrier, elevator or gate without providing **an alternative exit** in accordance with all the fire and life safety codes pertinent to the installation.

These fire and safety codes vary from city to city and you must get approval from local fire officials whenever using an electronic product to control a door or other barrier. Use of egress buttons, for example, may be illegal in some cities. In most applications, single action exit without prior knowledge of what to do is a life safety requirement. Always make certain that any required approvals are obtained in writing. DO NOT ACCEPT VERBAL APPROVALS SINCE THEY ARE NOT VALID.

Honeywell never recommends using the PRO4200 or related products for use as a primary warning or monitoring system. Primary warning or monitoring systems should always meet the local fire and safety code requirements. The installer must also test the system on a regular basis by instructing the end user in appropriate daily testing procedures. Failure to test a system regularly could make the installer liable for damages to the end user if a problem occurs.

Earth Grounding



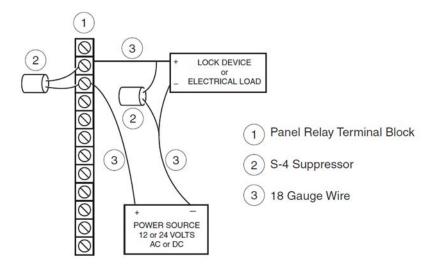
Warning: EARTH ground all enclosures for proper installation.

Use Suppressors



Warning: The S-4 Suppressor Kit must be installed with every electrical switching device connected through a relay contact, without regard to polarity. One S-4

is installed across the relay at the panel and the other is installed within 18 inches of the electrical switching device.



UL/ULC Warnings



Warning: Wiring methods shall be in accordance with the National Electrical Code (ANSI/NFPA70):

- All interconnecting devices must be UL Listed.
- Not Evaluated by UL for fire, life safety, or burglary applications.
- Do Not Connect To A Receptacle Controlled By A Switch.
- All interconnecting wire must be UL/ULC Listed, rated and suitable for the use.
- The battery leads and primary AC main power wiring is non-power limited. This wiring must be separated from all other wiring by at least.25" and cannot be installed in the same conduit as any other power limited wiring.
- Replacement of 3 volt lithium coin cell with:
 - Rayovac: BR2325, or Panasonic CR2330
- The system must be configured to activate an alarm or trouble signal.
 Failure to do so will not allow the access function to operate in the event of a tamper.
- Shielded cable shall be employed for all Input/Output wiring.



Note: The following applies to installations that require UL or ULC compliance:

- Only UL/ULC Listed readers with standard Wiegand data output communication format (protocol) and OSDP reader have been evaluated to use with this system.
- This product is intended to be installed indoors, within the protected premises.

- Access Control System, Model PRO4200, and Controller, Model PRO42IC meet the requirements for CAN/ULC-S319-05 Equipment Class 1.
- This product's compliance to ULC-S319, Electronic Access Control Systems, will be considered invalidated through the use of any add-on, expansion, memory or other module manufactured or supplied by the manufacturer or manufacturer's representative, unless specifically evaluated by ULC.
- All unused conduit holes must be properly plated or incorporate a Listed plug to fill any voids.



Note: Total current draw for all included assemblies shall not exceed 4A, including input rating and output load current.

- Suitable for S319, Class I
- Suitable for the following UL293/UL294 Performance Levels:
- Endurance: IVStandby: I
- Line Security: I
- · Attack: I
- Suitable panic or exit hardware shall be employed for fail secure applications.
 For UL293 applications, the Sys Fault contacts of the power supply and the door held, door forced shall be monitored by suitable audible device. Damage During Shipment



Caution: IF ANY DAMAGE TO THE SHIPMENT IS NOTICED, A CLAIM MUST BE FILED WITH THE COMMERCIAL CARRIER RESPONSIBLE FOR THE DAMAGE.

1.2 Electro Static Discharge



Caution: Electro-static discharge (ESD) can damage CMOS integrated circuits and modules.

To prevent damage always follow these procedures:

- Use static shield packaging and containers to transport all electronic components, including completed reader assemblies.
- Handle all ESD sensitive components at an approved static-controlled workstation. These workstations consist of a desk mat, floor mat and an ESD wrist strap. Workstations are available from various vendors.



Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the installation and user guides, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.



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Note: Any use of this product is subject to the terms and acceptance of the Honeywell. Software Agreement. Please request a copy from Honeywell (http://www.honeywellaccess.com), and review the agreement carefully.

1.3 Disclaimer - Product Liability; Mutual Indemnification

If a Customer receives a claim that a Product or any component thereof has caused personal injury or damage to the property of others, Customer shall immediately notify Honeywell in writing of all such claims. Honeywell shall defend or settle such claims and shall indemnify and hold Customer harmless for any costs or damages including reasonable attorneys' fees which Customer may be required to pay as a result of the defective Product or the negligence of Honeywell, its agents, or its employees.

Customer shall hold harmless and indemnify Honeywell from and against all claims, demands, losses and liability arising out of damage to property or injury to persons occasioned by or in connection with the acts or omissions of Customer and its agents and employees, and from and against all claims, demands, losses and liability for costs of fees, including reasonable attorneys' fees, in connection therewith.

1.4 CE and WEEE Marking

Description of the used symbol.



CE -Standard -Logo. This product complies with the harmonized Regulation of the EU



WEEE symbol. It indicates this product is to be recycling and not been thrown in the dustbin

1.5 Unpacking Procedure



Caution: If any damage to the shipment is noticed before unpacking, a claim must be filed with the commercial carrier.

All containers should be opened and unpacked carefully in order to prevent damage to the contents.

Follow these steps to unpack equipment in preparation for installation:

1. Open the container and remove the unit(s) and all packing material. Retain the container and all the packing materials. They may be used again for reshipment of the equipment, if needed.

- 2. Inspect the contents to see if anything is missing. If you notice any missing items, contact the order entry department at 1-800-323-4576 and follow the prompts.
- 3. Visually check the contents. If you see any damage, do the following:
 - a. If shipping has caused damage to the unit, a claim must be filed with the commercial carrier.
 - b. If any other defect is apparent, call for a return authorization.

1.6 Shipping Instructions

To ship equipment back to Honeywell, contact the customer service department at 1-800-323-4576 before returning the equipment. When you call, please have available:

- A description of the problem or the reason you are returning the equipment.
- Your original purchase order number, invoice number and if the unit is still under warranty.
- A new purchase order number if the unit is not under warranty

From the customer service department, obtain the **Return Authorization Number (RMA)**.

Show the RMA number on all packages shipped. Packages, which are not marked with an RMA number will be refused at the factory and returned to you **COD**.

Carefully pack the equipment for shipment. Use the original packing material whenever possible

1.7 Limited Warranty

All Products sold or licensed by Honeywell include a warranty registration card which must be completed and returned to Honeywell by or on behalf of the end user for Honeywell to provide warranty service, repair, credit or exchange. All warranty work shall be handled through Customer which shall notify Honeywell and apply for a Return Merchandise Authorization (RMA) number prior to returning any Product for service, repair, credit or exchange. Honeywell warrants that its Products shall be free from defects in materials and workmanship for a period of one year from the date of shipment of the Product to Customer. The warranty on Terminals, Printers, Communications Products and Upgrade kits is 90 days from the date of shipment. Satisfaction of this warranty shall be limited to repair or replacement of Products which are defective or defective under normal use. Honeywell's warranty shall not extend to any Product which, upon examination, is determined to be defective as a result of misuse, improper storage, incorrect installation, operation or maintenance, alteration, modification, accident or unusual deterioration of the Product due to physical environments in excess of the limits set forth in Product manuals. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THIS PROVISION. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. NO

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1.9 Compliance

To obtain applicable EU compliance Declaration of Conformities for this product, please refer to our website,

https://www.security.honeywell.com/All-Categories/access-control-systems/control-panels-hardware.

For any additional information regarding the compliance of this product to any EU-specific requirements, please contact:

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2 Product Overview

The Intelligent Controller is the heart of the PRO4200 and provides the real time processing for the connected I/O interfaces.

The PRO4200 is designed to operate without the need for a PC. It can be connected to a WIN-PAK host computer using the TCP/IP network connection. The PRO4200 holds the database for the subsystem configuration and card holders, and the event log buffer, which is in battery-backed memory.

2.1 PRO4200 and PRO3200

 The PRO4200 controller configuration and operation is similar to the PRO3200 controller and has additional the R2 functions on board; both use the WIN-PAK front end.



Note: The PRO4200 controller is compatible with the following Honeywell modules: PRO42R1, PRO42IN, PRO42R2, PRO42OUT, PRO32R2, PRO32IN, and PRO32OUT.

2.2 Port Settings

- Port 0 provides the host-embedded Ethernet interface.
- Ports 1 for RS-485 2-wire downstream support for connecting 16 I/O devices.

Note: That the I/O communications must be mapped differently in WIN-PAK, according to the following table:.

PRO4200	WIN-PAK Port
1	6

2.3 Other

- An on-board real time clock maintains the date and time, taking into account leap year and accounting for global time zones and daylight savings time changes.
- The database for the system configuration and card holders are stored in FLASH memory.
- The event log buffer is stored in battery-backed memory.
- Configuration data and event/status reports are communicated to the host via on-board 10-BaseT/100Base-TX Ethernet port.
- Transactions are stored in 1 MB of battery-backed SRAM. The maximum number of transactions stored while the host is offline is 100k Card and 50k Events to be configured.

• Cards are stored in Flash memory and read into DRAM when the board is powered up. The amount of storage available for cards and biometric records is 15 MB. The maximum number of cards depends on the card record database configuration, but the number is approximately 100,000. This maximum is dependent on how the card is configured with more space per card used with longer card number, more clearance codes, and so on.

PRO4200 Installation

Product Overview

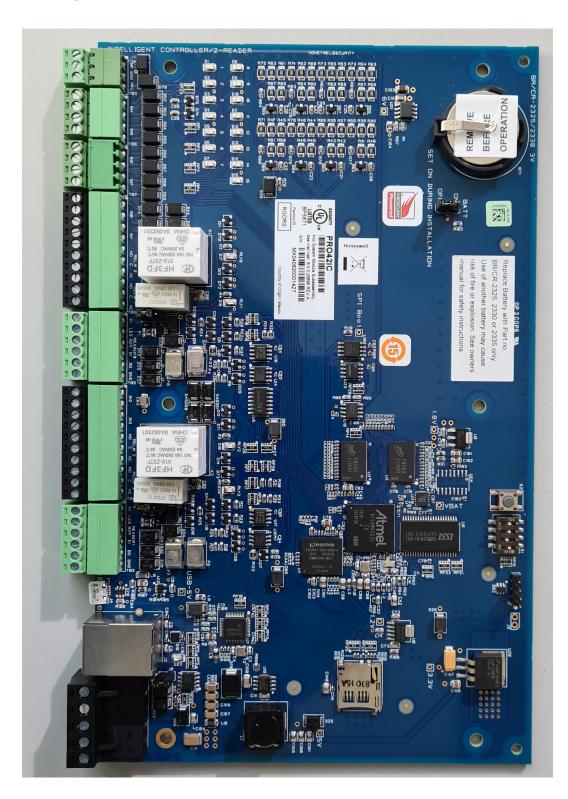


Figure 1: PRO4200 Connections, LEDs, and DIP Switches

3 Setting Up the PRO4200 Hardware

The PRO4200 processor is configured with 4 jumpers and a set of 4 DIP switches. These jumpers/switches set up the port interface, end of line termination, and operating mode configuration. Refer to the tables below to set the jumpers as required.

3.1 Setting the Jumpers

Table 1 PRO4200 Jumper Settings

Jumpers	Set At	Description
J5	OFF	RS-485 EOL Terminator is without termination
	ON	RS-485 EOL Terminator is terminated
	Reader Power Select	
J7	Reader 0	5V-12V, 2-3 12V (default), 1-2 5V
J8	Reader 1	5V-12V, 2-3 12V (default), 1-2 5V
J19	Battery	
	OFF= Battery OFF	ON = Battery ON

3.2 Setting the DIP Switches

Dual In-line Package (DIP) switches are read when the system powers up, except where noted otherwise. The following table shows the setting options.

Table 2 PRO4200 DIP Switch Settings

S1	S2	S3	S4	Selection
OFF	OFF	OFF	OFF	Normal Operating Mode.
ON	OFF	OFF	OFF	When DIP switch 1 is ON, Port 0 communicates with the web browser. Port 1 is used for 485 communications. After the panel initialization, enable the default user name (admin) and password (password). The user name and password are read dynamically; you do not need to reboot the panel.
OFF	ON	OFF	OFF	Use the factory default communication parameters.
ON	ON	OFF	OFF	Unless the network administrator reserves an IP address for the panel (based on the controller board's Media Access Control (MAC) address), the PRO4200 uses Dynamic Host Configuration Protocol (DHCP) to obtain an IP address from the network DHCP server. When power is applied with the switches in this position, there is a ten second window (when LEDs 1 and 2 flash alternately with LEDs 3 and 4), during which memory is cleared if switch 1 or switch 2 is changed to OFF. When switch 1 or 2 is changed to OFF, only LED 2 flashes and memory begins to be cleared. This period of clearing lasts several minutes. When the memory has been cleared, the LED pattern changes to the flashing of LEDs 1 and 4. The panel then reboots by itself. All data in memory is erased except the serial number, MAC address, hardware revision, and OEM code.
OFF	OFF	OFF	ON	DIP4 = ON -> Legacy Mode, PRO42IC works as PRO32IC. DIP4 = OFF -> Native Mode, PRO4200 Supported Functions and Capabilities, Readers and IN/OUTPUTs on PRO42IC can be used.

The PRO4200 DIP switches need to be set twice:

- 1. Configure the **S4-S3-S2-S1** DIP switches to **off-off-on-off** to set the default TCP/IP address to 192.168.0.251.
- 2. Apply power to the panel to set the IP address.
- 3. Change the **S4-S3-S2-S1** combination to **off-off-on**.(DIP switch 1 is "read on the fly"). This sets the login to the default user ID ("admin") and password ("password") for Ethernet communications.
- 4. Create users. See User Configuration for instructions.
- 5. Set the **S4-S3-S2-S1** combination to **off-off-off.**
- Configure the host port for TCP/IP and/or Serial communications. See Host Communication
 for instructions. This will enable both TCP/IP and serial hardware networking when you log in
 again.

3.3 Factory Default Communication Parameters: Interface 1 (NIC1)

Network: static IP address	192.168.0.251
Subnet Mask: Default Gateway	255.255.0.0
Default Gateway	192.168.0.1
DNS Server	192.168.0.1
Primary Host port: IP server, Data Security: TLS if Available, port 3001, communication address	0
Alternate Host Port	Disable

3.4 Bulk Erase Configuration Memory

The bulk erase function can be used for the following purpose:

- Erase all configuration and cardholder database (sanitize boars, less third party applications)
- Update the OEM default parameters after OEM code is changed.

Note: If clearing the memory does not correct the initializing problem, contact technical support.

3.5 Bulk Erase

Note: Do not remove power during steps 1-8.

- 1. Set S1 DIP switches to 1 & 2 "ON" and, 3 & 4 OFF".
- 2. Apply power to the PRO42IC board. LED 1 ON for about 15 seconds while PRO42IC boots up.
- 3. After the PRO42IC boots up, watch for LEDs 1& 2 and 3 & 4 to alternately flash at a 0.5 second rate.
- 4. Within 10 seconds after the above patterns starts, change switches 1 or 2 to "OFF". if these switches are not changed, then PRO42IC board will power up using the OEM default communication parameters.
- 5. LED 2 will flash indicating that the configuration memory is being erased.
- 6. Full memory erase will take up to 60 seconds, usually a lot less.
- 7. Once complete. only LED's 1&4 will flash for 3 seconds.
- 8. The PRO42IC board will complete its initialization in 2 seconds after LEDs 1 & 4 stop flashing.

Technical Specification



Caution: PRO4200 is manufactured for use in low-voltage, Class 2 power-limited circuits only.

Table 3 PRO4200 Technical Specifications

Category	Description
Primary Power	12 VDC ± 10%, 500 mA maximum (reader ports not included)
Reader Ports	600 mA maximum for 12V readers (add 600 mA to primary power current) 300 mA for 5V readers.
Memory and Clock Backup	Type BR2325, or Panasonic CR2330.
Ports	Port 0 - Host Communication: Ethernet: 10-BaseT/100Base-TX Port 1- Serial I/O Device: One each: 2-wire RS-485, 2,400 to 115,200 bps, asynchronous, half-duplex, 1 start bit, 8 data bits, and 1 stop bit Reader Interface: Data Inputs: 2-wire RS-485 RS-485 Mode: 9,600 to 115,200 bps, asynchronous, half-duplex, 1 start bit, 8 data bits, and 1 stop bit. Maximum cable length: 2000 ft. (609.6 m)
Inputs	8 unsupervised/supervised, standard EOL: 1k/1k ohm, 1%, ¼ watt 2 non-supervised, dedicated for cabinet tamper and power fault monitoring.
Cable requirements	Power:1 twisted pair, 18 AWG. RS-485: I/O Device Port: 1 twisted pair, shielded, 120 ohm impedance, 24 AWG, 4,000 ft. (1,219 m) max. Reader Port: 1 twisted pair, shielded, 120 ohm impedance, 24 AWG, 2,000 ft. (610 m) max. Alarm Input: 1 twisted pair, 30 ohms maximum Ethernet:Cat 5. Input:1 twisted pair, 30 ohms maximum.
Environmental	Temperature:0 to 49°C, operating -55 to +85°C, storage Humidity:0 to 85% RHNC
Mechanical	Dimensions:5.5 in. (137.7mm) W x 9 in. (228.6.4mm) L x .75 in. (19.05mm) H Weight:7.1 oz. (201 gm) nominal



Note: POLARITY for 12 VDC power is important. Make sure the +12 VDC is connected to the terminal labeled +12V and the return is connected to the terminal labeled GND.

3.6 Status LEDs

Power-up: All LED's OFF

3.7 Initialization

- 1. Initialization: After power is applied or reset switch pushed, LED 1 is ON for about 15 seconds, then LED's 2, 3, 4, 5, 6, R1, R2, IN0, IN1, IN2, IN3, IN4, IN5, IN6, and IN7 are flashed once at the beginning of initialization.
- 2. LEDs 3 and 4 is turned ON for approximately 1 second after the hardware initialization has completed, then the application code is initialized.
- 3. The amount of time the application takes to initialize depends on the size of the database, about 1 second without a card database.
- 4. Each 10,000 cards will add about 2 seconds to the application initialization.
- 5. When LED's 1, 2, 3 and 4 flash at the same time, data is being read from or written to flash memory.



Note: Do not cycle power when in this state.

6. If the sequence stops or repeats, perform the bulk erase procedure, see Bulk Erase.

3.8 LED Activity when Supplying Power to the PRO4200 Interface

Table 4 PRO4200 Status LED Combinations During Run Time

LED	Description
D1	Off-Line / On-Line and Battery Status
	Off-Line = 20% On, ON-Line = 80% On
	Double Flash means the Battery is Low
D2	Host Communication Activity (Ethernet port)
D3	Internal SIO Communication Activity
D4	External SIO Communication Activity
D 5	Unassigned
D6	Reader 0:
	Clock/Data or D1/Do mode: Flashes when Data is Received,
	Either Input F/2F Mode: Flashes when Transmitting
	Data/Acknowledgment is Received RS-485 Mode (OSDP):
	Flashes when Transmitting Data

LED	Description
D 7	Reader 1: Clock/Data or D1/D0 Mode: Flashes when Data is Revived, Either Input F?2F Mode: when Data/Acknowledgment is Received RS-485 Mode (OSDP): Flashes when Transmitting Data
D8	Input IN0 Status: OFF = Inactive, ON = Active, Flash = Fault*
D9	Input IN1 Status: OFF = Inactive, ON = Active, Flash = Fault*
D10	Input IN2 Status: OFF = Inactive, ON = Active, Flash = Fault*
D11	Input IN3 Status: OFF = Inactive, ON = Active, Flash = Fault*
D12	Input IN4 Status: OFF = Inactive, ON = Active, Flash = Fault*
D13	Input IN5 Status: OFF = Inactive, ON = Active, Flash = Fault*
D14	Input IN6 Status: OFF = Inactive, ON = Active, Flash = Fault*
D15	Input IN7 Status: OFF = Inactive, ON = Active, Flash = Fault*
D17	RelayK0:ON = Energized, Door Relay
D18	Relay K1: ON = Energized, Door Relay
D19	Relay K2: ON = Energized
D20	Relay K3: ON = Energized
D23	Flashes with Ethernet Traffic

3.9 Supplying Power to the PRO4200 Interface

The processor accepts 12 VDC for power. Locate power source as close to the unit as possible and connect it with minimum of 18AWG wires.

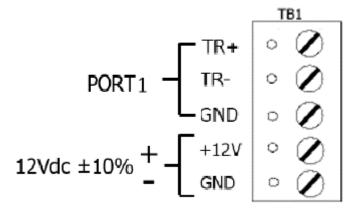


Caution: Observe POLARITY on 12 VDC.



Caution: ATTENTION: Observez la polarité du 12 VCC

Figure 2: PRO4200 Power Terminals

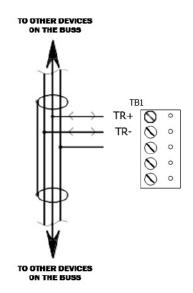


3.10 Communications Wiring

The PRO4200 processor communicates to the host via on-board Ethernet 10Base-T/100Base-TX port.

The serial I/O device communication port (TB1) is a 2-wire RS-485 interface which can be used to connect additional I/O panels. The interface allows multi-drop communication on a single bus of up to 4,000 feet (1,219 m). Use 1-twisted pair with drain wire and shield, 120-ohm impedance, 24 AWG, 4,000 ft. (1,219 m) maximum for communication.

Figure 3: PRO4200 Port Wiring

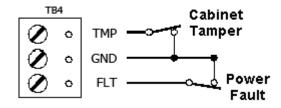


2-WIRE RS-485

(ONLY 2-WIRE RS-485 IS SUPPORTED)

3.11 Cabinet Tamper and Power Failure Input Wiring

Figure 4: PRO4200 TMP and FLT Terminals



Inputs TMP and FLT are used for monitoring cabinet tamper and power failure with normally closed contacts. These two inputs are for contact closure monitoring only; do not use end-of-line (EOL) resistor(s). If these inputs are not used, install a short piece of wire at the input to indicate a safe condition.

3.12 Memory and Real Time Clock Backup Battery

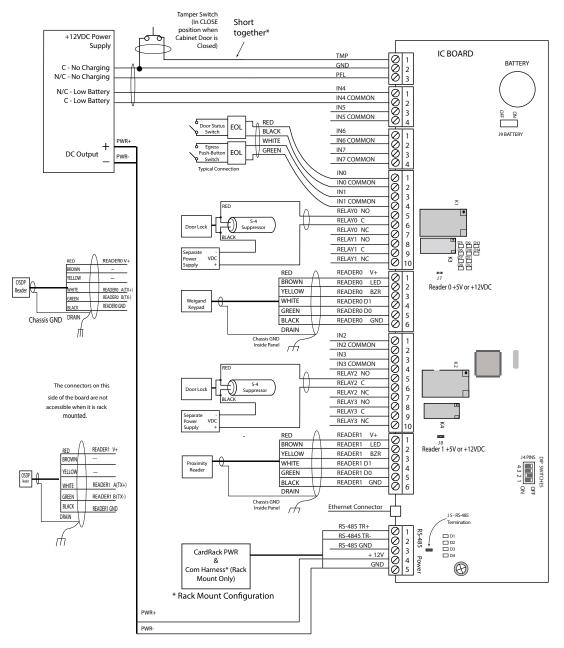
The event log buffer and the real time clock are backed up by BR2325. This BR2325, BR2330, or CR2330 battery should be replaced annually. A replacement battery may be obtained However, the replacement battery must be UL recognized.



Warning: Battery may explode if mistreated. DO NOT RECHARGE, DISASSEMBLE or DISPOSE OF IN FIRE!

4 Reader Module

Figure 5: PRO4200 Intelligent Controller Module Wiring: Connectors TB1,TB3-9.





Note: See Status LEDs (see page 22) for descriptions of LEDs D1-D20.

Note: For RS-485 Communication Connections, twist the blue pair together and use as the common; use the orange pair as your data pair, observing polarity. Connect the external drain shield to the appropriate earth ground on one end.

Note: Reader, Input, and Output addresses on the PRO4200 panel are labeled starting with address 0. This translates to address 1 in the WIN-PAK per the example below:

PRO4200 Device	PRO4200 Address	WIN-PAK Address
Reader\ Input\ Output	0	1
Reader\ Input\ Output	1	2

Note: The SIO board port for a PRO42IC in WIN-PAK is port 6 and is set as the default.

4.1 Reader Wiring

The following Honeywell reader should reference model numbers have been approved by UL for use with the PRO42IC:OS20TOSDP, OS20KTOSDP, OS40TOSDP, OS40KTOSDP.

Each reader port supports a reader with TTL interface. Power to the reader is selectable as 5VDC or 12VDC (pass-through). This selection is done by setting the jumpers J7 for reader 0 and J8 for reader 1. Set jumper at position "5" for 5VDC or "12" for pass-through 12VDC. The factory defaults set J7 and J8 to "5".

For wiring to a reader port:

Table 5 Settings for Wiring to a Reader Port

Terminal	Typical Wire Color	Wiegand Reader	Clock/Data Reader	OSDP Reader
1	Red	Power (5 or 12 Vdc)	Power (5 or 12 Vdc)	Power (12 VDC)
2	Brown	LED control	LED control	-
3	Yellow	Beeper Control	Beeper Control	-
4	White	Data 1 Signal	Clock Signal	A Signal (TX+)
5	Green	Data 0 Signal	Data Signal	B Signal (TX-)
6	Black	Common	Common	Ground

The LED control terminal in each reader port can be configured via host software to support one-wire single or bi-colored reader LED. An example of the most common configuration is shown below. If Beeper Control is not used, its terminal can be programmed to be the second wire for the two-wire bi-colored reader LED.

Table 6 Settings for Configuring an LED Control Terminal

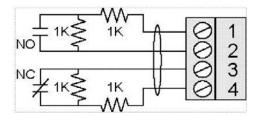
LED Output->	High	Tri-Stated	Low
Single Color LED	LED On	LED Off	LED Off
Bi-Color LED	Green LED On	Both LEDs Off	Red LED On

To fully utilize each reader port, a 6-conductor cable (18AWG) is required. Reader port configuration is set via host software.

4.2 Input Wiring

Inputs 0 to 7 may be configured to use normally open or normally closed contacts and non-supervised or supervised (with standard $\pm 1\%$ tolerance 1K ohm). Four of these inputs have default functional definitions, but all eight can be configured to monitor general-purpose sensors.

Figure 6: PRO4200 Input wiring



By default, Input 0 is defined as the Door Status Input corresponding to reader 0 and Input 1 is defined as the REX input corresponding to reader 0. Also by default, Input 2 is defined as the Door Status Input corresponding to reader 1 and Input 3 is defined as the REX input corresponding to reader 1.

Inputs 4, 5, 6 and 7 are general purpose inputs that can be used to monitor sensors or as control inputs. Inputs 6 and 7 are not accessible when the board is rack mounted.

Inputs TMP and PFL are typically used for monitoring cabinet tamper and power failure respectively. These two inputs are not supervised and are not accessible when the board is rack-mounted. These inputs were primarily provided for the case when this board is mounted remotely and cannot take advantage of the tamper and power fail detect inputs on the controller board. If these inputs are not used, install a short piece of wire at the input to indicate safe condition.

Input configuration including debounce and hold time is set via host software.

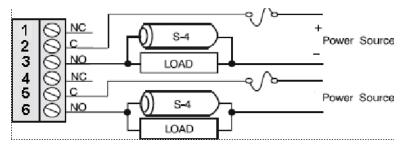
4.3 Control Output Wiring

Four form-C relay contacts are provided for controlling door strike or other devices. Each may be assigned to door-related functions or general-purpose output. They are configurable as standard (energize to activate) or fail-safe (de-energize to activate) via host software.

The energized or ON time of each relay can be configured using Pulse control for single or repeating pulses via host software. The energized or ON time for a single pulse can be extended up to 24 hours. For repeating pulses, the on/off time can be defined in 0.1 second increments and be repeated up to 255 times.

Relays 0 and 2 are rated for and normally used to control the door locks associated with readers 0 and 1 respectively. While Relays 0 and 2 are sized to handle the typical loads generated by electrical locks, load switching can cause abnormal contact wear and premature contact failure. Switching of inductive loads (i.e., strike) also causes EMI (electromagnetic interference) which may interfere with normal operation of other equipment. To minimize premature contact failure and to increase system reliability, a contact protection circuit is highly recommended. The following two circuits are suggested. Locate the protection circuit as close to the load as possible (within 12 inches [30cm]); the effectiveness of the circuit decreases as the distance from the load increases.

Figure 7: PRO4200 Output Wiring



Relays 1 and 3 are dry-circuit level signal relays typically used to indicate the status of the door lock. Use sufficiently large gauge of wires for the load current to avoid voltage loss.

5 System Configuration via Web Interface

The PRO4200 comes with **Access Control Device Server Manager (ACDSM)**. The ACDSM is a built-in web server, through which you can configure network and other system settings.



Notes:

- If you are using Internet Explorer Enhanced Security Configuration, you cannot access the ACDSM web server. All pages will display "Bad Request!" You must uninstall the Enhanced Security option before you can access the ACDSM.
- The default factory-set TCP/IP address for the built-in system configuration web server is 192.168.0.251

5.1 Connecting to ACDSM for the First Time

- 1. Use the factory default controller IP address 192.168.0.251.
- 2. Set the DIP switches to S4=OFF, S3=OFF, S2=ON, S1=OFF.



Note: S1 must be set to OFF for the factory default. After the panel powers up, change S1 to ON to enable the use of the default user name and password.

- 3. Connect the computer to host the web server via Ethernet **Port 0**. Connection should be via crossover Ethernet cable or by the regular Ethernet cables connected via the hub.
- 4. Set the host computer to the static IP address **192.168.0.250** to be able to connect to the factory-default PRO4200 controller at address **192.168.0.251**.
- 5. Power up the PRO4200 controller.

5.2 Login Page

1. Click the "Click Here to Login" link to display the User Name and Password fields.

Figure 8: PRO4200 Web Server Login Screen



Click Here to Login

2. Enter your User Name and Password.



Note: Default User ID is **admin** and the default Password is **password**.

5.3 Home Page

The first screen after the login is the home page which displays all the available configuration links on the left navigation bar:

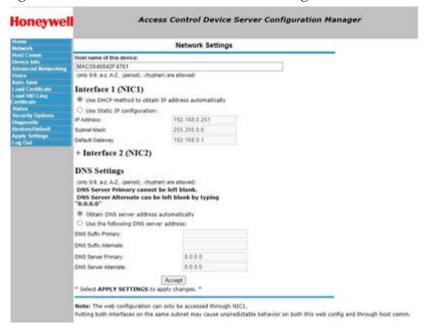
Figure 9: PRO4200 Web Server Home Page



5.4 WIN-PAK Network Settings

Click the **Network** link on the navigation bar to display the Network Settings screen where you can select the appropriate option button for dynamic or static IP address configuration:

Figure 10: PRO4200 Web Server Network Settings Screen



Notes:

- The Host Name of This Device field contains the Media Access Control (MAC) address of the PRO4200 controller board.
- The users can select the **Dynamic IP** option button and reserve an IP address for the MAC address, or they can select the other option button and assign a **Static IP** address as well.

Dynamic IP Configuration Method

- 1. Click the **Dynamic IP** option button to select the Dynamic Host Configuration Protocol (DHCP) method to obtain IP address automatically.
- 2. Click OK.



Note: WIN-PAK communicates with the PRO4200 panel using an IP address. If you must use the Dynamic IP option because of your network policies or configuration, you must reserve an IP address at the DHCP server for the MAC (Media Access Control) address in the PRO4200 panel. The MAC address is a unique identifier attached to network adapters. Each time the PRO4200 panel requests an IP address, the DHCP server will assign the address that was reserved for it.

Static IP Configuration Method

- 1. Click the **Static IP** option button to assign a static IP address, and enter the following information in the appropriate fields:
 - IP Address
 - Subnet Mask
 - Default Gateway
- 2. Click OK.

5.5 Host Communication

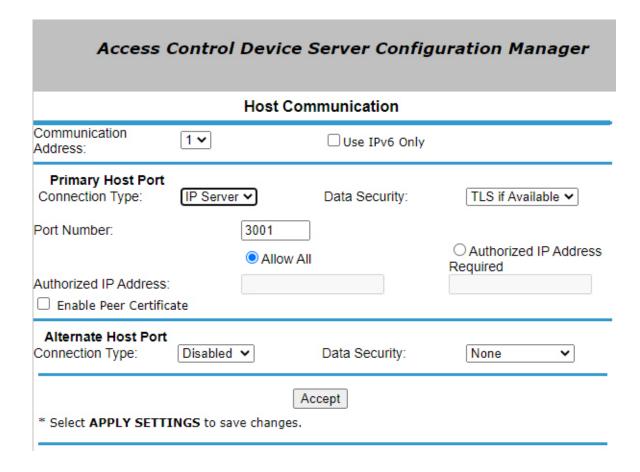
Click the **Host Communication** link on the navigation bar to display the Host Communication Configuration screen where you can select the appropriate settings for the Primary Host Port and Alternate Host Port:



Note: Some of the fields change dynamically depending on the Connection Type selected.

IP Server Connection Type

Figure 11: PRO4200 Host Port Configuration Screen with IP Server Connection



1. From PRO4200 Communication Address drop-down list, select one of the eight (0 to 7) available **communication addresses** for the PRO4200 board.



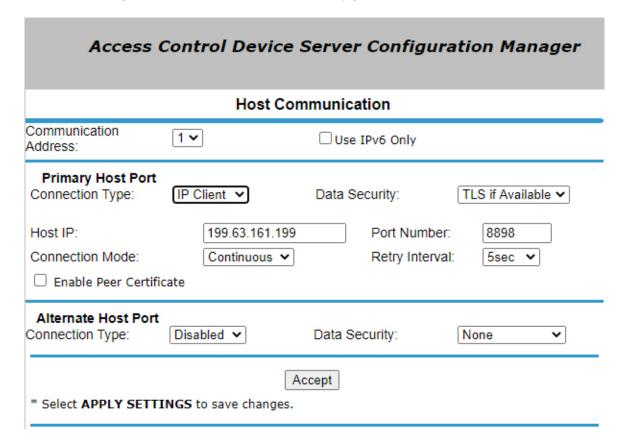
Note: In the previous panels, this selection was made manually by setting the DIP switches.

- **Data Security**. Select one of the following:
- None
- **Password/AES** from the drop-down list. If you select **Password/AES**, communications between the WIN-PAK Host and the PRO4200 panel are encrypted. Note that encryption must be enabled in WIN-PAK for the appropriate WIN-PAK channel. See Chapter 7, "Hardware Configuration," in the WIN-PAK Guide for channel encryption instructions.
- **Port Number**. Enter the port number through which the host computer can communicate with the PRO4200 board.

- Select either Allow All or the Authorized IP Address Required option button.
- 2. **Allow All,** as the label suggests, allows all IP addresses to communicate with the PRO4200. Select this option for web page browser access.
- 3. For the **Primary Host Port**, make the following selections:
- **Connection Type**. Select **IP Server** (the standard connection type), so that the WIN-PAK Host will poll the PRO4200 panel. The panel does not currently support the **IP Client** option, which would cause the PRO4200 panel to poll the WIN-PAK Host and the Host to reply to the panel.
- **Data Security**. Select one of the following:
 - None
 - Password/AES from the drop-down list. If you select
 Password/AES, communications between the WIN-PAK Host and
 the PRO4200 panel are encrypted. Note that encryption must be enabled
 in WIN-PAK for the appropriate WIN-PAK channel. See Chapter 7,
 "Hardware Configuration," in the WIN-PAK Guide for channel
 encryption instructions.
- **Port Number**. Enter the port number through which the host computer can communicate with the PRO4200 board.
- Select either Allow All or the Authorized IP Address Required option button.

Allow All, as the label suggests, allows all IP addresses to communicate with the PRO4200. Select this option for web page browser access.IP Client Connection Type

Figure 12: PRO4200 Host Comm Configuration Screen with IP Client Connection



4. Click Accept.

Note: PRO4200 Host Communication supports only IP server and client.

5.6 Device Information

1. Click the Device Info link on the navigation bar to display the read-only Access Control Device Hardware Information screen:

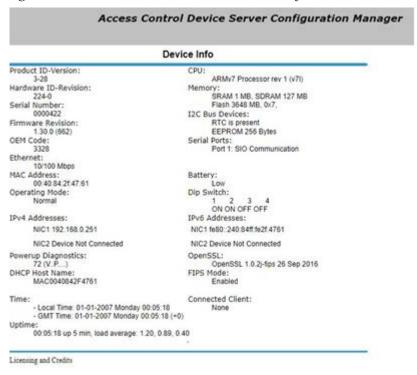
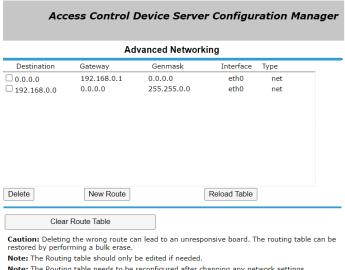


Figure 13: PRO4200 Web Server Device HW Info Screen

5.7 Advanced Networking

1. Click the Advanced Networking link on the navigation bar to display the Access Control Device Server Configuration Manager.

Figure 14: PRO4200 Access Control Device Server Configuration Manager



Note: The Routing table needs to be reconfigured after changing any network settings.

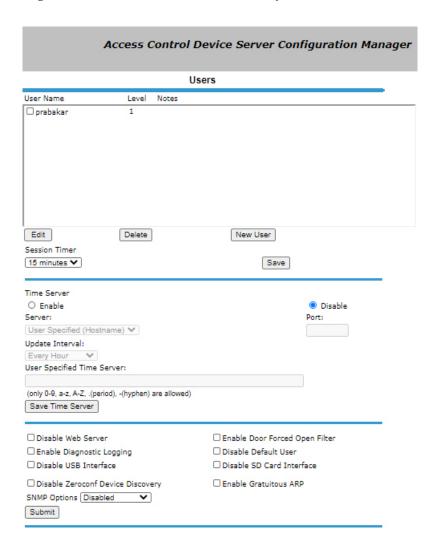
The Advanced Networking is displayed, and allows new routing information to be added. This Advanced Networking is typically not used as it is only for advanced configurations.

38 www.honeywell.com

5.8 User Configuration

Click the **Users** link on the navigation bar to display the User screen where you can add, edit, and delete user records:

Figure 15: PRO4200 Web Server User Info Screen



Adding a User

Follow these steps:

- 1. Click **New Account** to display the new user account screen.
- 2. Enter the following:
 - User name a unique character string that identifies the user.

- Level level of privileges the user will have. Level 1 grants the user read/write privileges to all panel features; level 2 grants the user read-only privileges to the Notes, Network, Host Port, and Device Info features; level 3 grants the user read-only privileges to just the Notes and Device Info features.
- 3. Specify the maximum period of time a session will remain open without user activity. If the period expires without user activity, the user is logged out. After specifying the time period, click **Save Session Timer** to save the setting.
- 4. Configure the auto-save timer. This feature, if enabled, automatically saves the hardware configuration in non-volatile Random Access Memory (RAM) at the specified time interval. If you select Enable Auto-Save, then select a time interval from the drop-down list, and click **Save Auto-Save Timer** to save the setting.

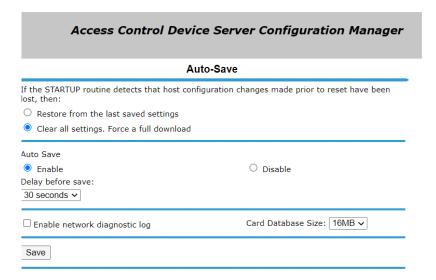
Editing a User

To edit a user record, click to select the user from the Username column and then click **Edit**. Use the information provided in the previous section, "Adding a User," to edit the record.

Deleting a User

To delete a user record, click to select the user from the Username column and then click **Delete**.

Figure 16: PRO4200 Access Control Device Server Configuration Manager



5. Click to select Restore from the last saved settings to restore from the save point at power up, or from the reboot button on the controller.

40 www.honeywell.com

6. Click to select "Clear all settings, Force a full down" to force a controller to reload at power-up.

Enabling

Auto-save configures the controller to automatically save settings for configuration changes.

Disabling



Note: Auto-save means that configuration changes are not automatically saved. Configuration can be manually saved.

The **auto-save delay** specifies the time consumed to wait after a host configuration changes, before starting to save.

The timer is specified between 30 seconds and 30 minutes.

Checking "Enable Network Diagnostic Log" causes diagnostic information to be written to the debug file in every 15 minutes, when debug is enabled.

The Card Database Size specify size of 16MB only.

• Click on "Save Settings" for changes to be loaded into the controller.

5.9 Auto-Save

- 1. Click the Auto-Save link on the navigation bar.
- 2. The Auto Save configuration automatically saves the behavior and determines how the controller reacts on start up, if host configuration changes have been lost.

5.10 Load Certificate

- 1. Click the Load Certificate link on the navigation bar to display.
- 2. The Load Certificate page will allow the certificates loaded at the factory to be replaced by unique custom certificates.

Access Control Device Server Configuration Manager	
Load Certificate	
Please specify a certificate file(*.crt):	
Choose File No file chosen	
Please specify the private key file(*.pem):	
Choose File No file chosen	
Load certificate files	
Certificate Information	
Issued to:	Mercury Security EP- series Mercury
Issued by:	Security Root CA from
Valid time:	09/30/2009 to 07/30/2036
Load Peer Certificate	
Please specify a peer certificate file(*.crt):	
Choose File No file chosen	
Load peer certificate	
Peer Certificate Information	
Issued to:	
Issued by:	
Valid time:	from to

The Certificate Information section of "Peer Certificate Information" lists the information about the currently loaded certificates.

- 3. Click the "Browser Button" to select the related files to be loaded in PRO4200.
- 4. Click the "Load Certificate Files" to upload the files selected.

The PRO4200 series controllers allow for a maximum of 4096-bit RSA key encryption and SHA-384.

Certificate Types

The .crt file is the certificate file.

The .pem file is the Private Key file.



Note: Settings are not permanently saved in the device until saved on the "Apply Settings" web page.

Peer Certificates

In the controller's web interface, the "Enable Peer Certificate" option in the Host Comm configuration web page will enable/disable driver side verification in the controller. When this option is set, the controller will make a request to the Driver to send its peer certificate during the TLS handshake.

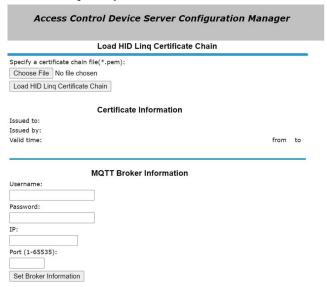
Load HID Linq Certificate



Note: For Future Use - Not applicable for WIN-PAK. Please contact Honeywell Tech Support for more details

- 1. Click the Load HID Linq Certificate link on the navigation bar to display.
- 2. The Load HID Linq Certificate will allow load specify a certificates chain file.

Figure 17: Load HID Ling Certificate



5.11 Status Display

- 1. Click the "Status link" on the navigation bar to display.
- 2. The Status screen will display the state of the Access Control Readers, Monitor Points and Control Points, as well as the transaction log.

Access Control Device Server Configuration Manager ACR Status ACR Number Door No ACRs are configured! Hide ACR Status Transaction Log No Transactions! Show transactions since: mm/dd/yyyy Hide Transactions Access Control Device Server Configuration Manager SIO Status No SIOs are configured! Hide SIO Status **Monitor Point Status** Monitor Point Name No Monitor points are configured! Hide Monitor Point Status

Figure 18: The Access Control Readers, Monitor



Note: The status display is only available in firmware revisions 1.8.0 and later.

Security Options

1. Click the "Security Options" link on the navigation bar to display the choose, if Enable 802.1x Authentication.



In order to communicate with the controller, the board must be on an isolated network (or directly talking to a PC). This is because the board cannot be communicated through the network that has an authentication server until. The Authenticated server unit must properly configured.

If The Authenticated server unit is not configured the PC configuring will not be able to communicate with it. By default, the controllers have 802.1x disabled.

Ensure the controller is using static IP and connected as "Network Settings".

2. Click "Security Options" on the menu, Once the controller is able to be communicated with browser (left-most side of the web page).

Enable 802.1x Authentication

As an added layer of local area network security, 802.1x authentication can be added to prevent unwanted access to a given network.

This allows you to enable 802.1x authentication and configure the security options for the Ethernet interface. This option is disabled by default.

Available selections for Authentication EAP Configuration are "TLS", "MD5" and "PEAP/MSCHAPv2".



When selecting TLS, ensure that the certificates of the controller are signed by the same root certificate that is used on the authentication server. (Skip this step if selecting MD5 or PEAP via MSCHAPV2). Go to the "Load Certificate" page and upload the necessary .crt and .pem files.

Figure 19: Load Certificate

Load Certificate



EAP Identity is a required field, but all fields are based on the configuration of the authentication server. Thus, the user should know the necessary settings before filling out these fields. Should the authentication server not require an EAP identity / username, any identity must be entered such as "admin".

Enable Encrypted Partition

Selecting this option allows the configuration and data files to be encrypted, cannot be undone without a bulk erase.

Once all fields are set to the configuration corresponding to the authentication server's.

- 1. Click "Save Configuration" and then click on "Apply Settings" on the menu
- 2. Click "Apply Settings, Reboot" button. The controller will now reboot.
- 3. Once the board has rebooted, connect the controller to the network that talks to the desired network, authenticator, and authenticator server.
- 4. The controller is now configured for 802.1x.

Disabling 802.1x

In order to disable 802.1x, first follow the steps in the "Network Settings" section above to ensure that the controller is using static IP. Once you have that information,

- 1. Click on "Security Options" and uncheck the "Enable 802.1x Authentication" check box.
- 2. Click on "Save Configuration", then
- 3. Click on "Apply Settings" on the menu
- 4. Click the "Apply Settings, Reboot" button.

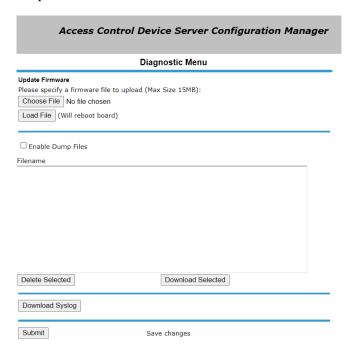
The controller will now reboot.



Note: That if the PC configuring the board is on the authenticated network, and the controller's 802.1x is disabled, the controller will no longer be able to talk to the PC, since it is no longer authenticated. In order to communicate with the board again, follow the steps in the section "Network Settings" above.

Diagnostics Menu

1. Click the Diagnostic Menu link on the navigation bar to display where you can choose to update the firmware.



Enable Dump Files

The PRO4200 is capable of creating a core dump file. An SD card must be installed to use this feature.

Download Syslog

This option allows you to download the encrypted Syslog file.

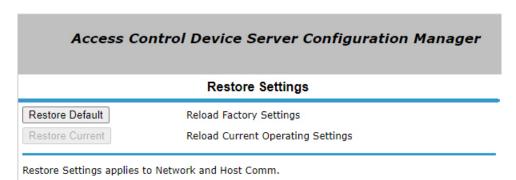


Note: The Syslog file can be analyzed and should only be downloaded if requested to assist in troubleshooting an issue.

5.12 Restore Default Screen

• Click the **Restore Default** link on the navigation bar to restore the default configuration values for the PRO4200:

Figure 20: PRO4200 Web Server Restore Default Screen

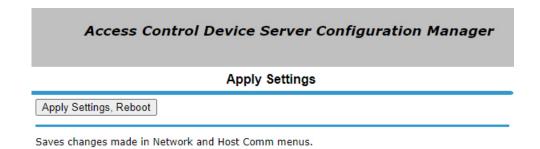


- 1. Click **Restore Default** to reload the default factory settings for all the configuration variables.
- 2. Click **Restore Current** to reload the current operational settings for all the configuration variables.

5.13 Apply Setting Screen

• Click the Apply Setting link on the navigation bar to apply the selected configuration values.

Figure 21: PRO4200 Web Server Apply Setting Screen



Click **Apply**, **Reboot** to apply all the configured values and reboot the PRO4200.

5.14 Log Out

Click the **Log Out** link on the navigation bar to log out of the web server.

48 www.honeywell.com



For more information: www.honeywellaccess.com

Technical Support Self-Service | Customer Portal

https://myhoneywellbuildingsuniversity.com/training/support/





YouTube | Honeywell Help and Support

 $https://www.youtube.com/channel/UCBEL6ouNV_LN5lEpYRujMTg/featured\\$





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