Honeywell | **THE FUTURE IS WHAT WE MAKE IT**

Pro-Watch 7000

Intelligent Controller and System
PW7K1IC

Install Guide

Ordering Information

Please contact your local Honeywell representative or visit us on the web at www.honeywellintegrated.com for information about ordering.
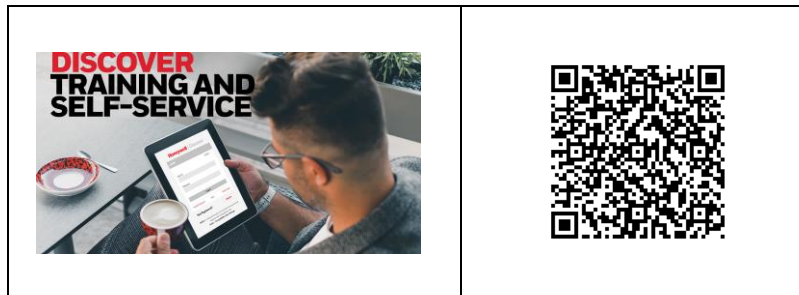
Feedback

Honeywell appreciates your comments about this manual. Please visit us on the web at www.honey- wellintegrated.com to post your comments.

Discover | Customer Portal

Self-Service Product Support and Learning Management System

https://honeywelldiscovertraining.com/login/discover/default.asp

YouTube | Honeywell Help and Support

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

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Notices

Wiring methods shall be in accordance with the National Electrical Code (ANSI/NFPA70), Canadian Electrical Code, Part I (CSA C22.1) Safety Standard for Electrical Installations, local codes, and the authorities having jurisdiction.

⚠ **Caution: Disconnect power before servicing.**

⚠ **Caution: ATTENTION: Débranchez l'alimentation électrique avant l'entretien.**

Warnings and Cautions

Note: *See the Remote Enclosure Installation Manuals PW5K2ENC1/PW5K2ENC2 or PW5K1ENC3 (not evaluated by UL) for installation instructions.*

Before Installation

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

⚠ **Warning: AVERTISSEMENT: Avant de procéder à l'installation, DESENCLENCHER le disjoncteur via lequel le système est alimenté.**

Before connecting the device to the power supply, verify that the output voltage is within specifications of the power supply (see Technical Specifications beginning on page 20).

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 (Not Evaluated by UL for fire, life safety, or burglary application)

⚠ **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.**

⚠ **Warning: AVERTISSEMENT: Ne jamais connecter de lecteur de carte en un point critique (porte de sortie, barrière, ascenseur ou portillon) sans proposer une autre sortie, ce afin de respecter la règlementation en vigueur en matière d'incendie et de protection des vies humaines, afférente à l'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 Integrated Security never recommends using the PW-7000 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.

Failure to test a system regularly could make the installer liable for damages to the end user if a problem occurs.

Earth Grounding

⚠ **Warning: The earth ground is connected at the factory and should not be removed.**

⚠ **Warning: AVERTISSEMENT: La prise de terre est reliée à l'usine et ne doit pas être retirée**

Use Suppressors

⚠ **Warning: Use suppressors on all door strikes. Use S-4 suppressors for installation. Honeywell Integrated Security, Inc. recommends only DC strikes.**

⚠ **Warning: AVERTISSEMENT: Employer des suppresseurs de surtensions transitoires (S-4) sur toutes les gâches de porte. Honeywell Integrated Security recommande l'utilisation exclusive de gâches électriques à courant continu.**

UL/ULC Warnings

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

Only UL/ULC Listed readers with standard Wiegand data output communication format (protocol) have been evaluated for use with this system.

This product is intended to be installed indoors, within the protected premises.

Access Control System, Model PW7000, and Controller, Model PW7K1IC 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.

All interconnecting devices must be UL/ULC Listed.

Shielded cable shall be employed for all Input/Output wiring.

Refer to the following Installation manuals for installation, connection, programming, and operation instructions of the following sub-assemblies:

Assembly Number	Installation Manual Part Number
PW7K1IC	800-25673
PW7K1R2	800-25676
PW7K1IN	800-25674
PW7KOUT	800-25675
PW6K1IC	800-00005V3
PW6K1R2	800-01951V4
PW6K1IN	800-01952V1
PW6K1OUT	800-01953V1
PW5K2ENC1 and PW5K2ENC2	800-06952
PW5K1ENC3	800-06955V1
PW5K2ENC5	800-08421
PW6K2E2PS	800-08279V3

Note: *Not Evaluated by UL for fire, life safety, or burglary applications.*

Note: *The earth ground is connected at the factory and should not be removed.*

Do Not Connect To A Receptacle Controlled By A Switch.

Replacement 3 volt lithium coin cell must be one of the following:

Rayovac: BR2325 or CR2330

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 0.25" and cannot be installed in the same conduit as any other power limited wiring.

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.

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) have been evaluated for 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: IV
- Standby: 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.

CE + 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

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.**

Caution: **ATTENTION: SI L'EQUIPEMENT A SUBI DES DOMMAGES LORS DE SON TRANSPORT, ADRESSER UNE RECLAMATION AU TRANSPORTEUR RESPONSABLE.**

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.

Caution: **ATTENTION: Des décharges électrostatiques peuvent endommager les modules et circuits intégrés CMOS.**

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.*

Note: *This document and the data in it shall not be duplicated, used or disclosed to others for procurement or manufacturing, except as authorized by and with the written permission of Honeywell Integrated Security, Inc. The information contained in this document or in the product itself is the exclusive property and trade secrets of Honeywell Integrated Security, Inc. Copyright laws of the United States protect all information in this document or in the software product itself.*

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

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 Integrated Security in writing of all such claims. Honeywell Integrated Security 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 Integrated Security, its agents, or its employees.

Customer shall hold harmless and indemnify Honeywell Integrated Security 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.

Unpacking Procedure

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

Caution: **ATTENTION: SI L'EQUIPEMENT A SUBI DES DOMMAGES LORS DE SON TRANSPORT, ADRESSER UNE RECLAMATION AU TRANSPORTEUR RESPONSABLE.**

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 Option-1.

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.

Shipping Instructions

To ship equipment back to Honeywell Integrated Security, 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.

Limited Warranty

All Products sold or licensed by Honeywell Integrated Security include a warranty registration card which must be completed and returned to Honeywell Integrated Security by or on behalf of the end user for Honeywell Integrated Security to provide warranty service, repair, credit or exchange. All warranty work shall be handled through Customer which shall notify Honeywell Integrated Security and apply for a Return Merchandise Authorization (RMA) number prior to returning any Product for service, repair, credit or exchange. Honeywell Integrated Security warrants that its Products shall be free from defects in materials and workmanship for a period of two years 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 Integrated Security'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 REPRESENTATION OR WARRANTY OF THE DISTRIBUTOR SHALL EXTEND THE LIABILITY OR RESPONSIBILITY OF THE MANUFACTURER BEYOND THE TERMS OF THIS PROVISION. IN NO EVENT SHALL HONEYWELL INTEGRATED SECURITY BE LIABLE FOR ANY RE-PROCUREMENT COSTS, LOSS OF PROFITS, LOSS OF USE, INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES TO ANY PERSON RESULTING FROM THE USE OF HONEYWELL INTEGRATED SECURITY'S PRODUCTS.

Confidentiality

All software, drawings, diagrams, specifications, catalogs, literature, manuals and other materials furnished by Honeywell Integrated Security relating to the design, use and service of the Products shall remain confidential and shall constitute the proprietary rights of Honeywell Integrated Security and Customer agrees to treat such information as confidential. Customer shall acquire no rights in the design of the Products or the related materials except to use such information solely for the purpose of and only during the time it sells the Products.

Customer shall not copy the design of any of the Products or use or cause to be used any Product design or related materials for its own benefit or for the benefit of any other party. The covenants contained in this section shall remain effective throughout the term of this Agreement and thereafter unless specifically waived by Honeywell Integrated Security in writing.

Compliance

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB- 003 du Canada.

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:

Honeywell Security & Communications

Honeywell Security - Quality Assurance Dept., Newhouse Industrial Estate Motherwell

Lanarkshire ML1 5SB Scotland

United Kingdom

Tel: +44(0) 1698 738200

Email: UK64Sales@Honeywell.com

Recommended testing and maintenance

Perform the following on a semi-annual basis. Disconnect power from the enclosure, open the enclosure door and inspect the system including the DC battery. Replace the DC battery if it shows any sign of corrosion or leakage or if the battery is 2 years old or older. Oil the lock cylinder. Close the panel and re-apply power.

1 PRODUCT OVERVIEW

The Intelligent Controller is the heart of the PW-7000 and provides the real time processing for the connected I/O interfaces.

The PW-7000 is designed to operate without the need for a PC. It can be connected to a Pro-Watch host computer using TCP/IP network connection. The PW-7000 holds the database for the subsystem configuration and card holders, and the event log buffer, which is in battery-backed memory.

Note: *Please refer to the Pro-Watch Software Suite Guide for details on using the Pro-Watch interface.*

PW-7000 and PW-6000

The PW-7000 controller configuration and operation is similar to the PW-6000 controller and has additional R2 functions on board; both use the Pro-Watch front end.

The PW-7000 controller is compatible with the following Honeywell modules; PW7K1R2, PW7K1IN, PW7K1OUT, PW6K1R2, PW6K1IN, and PW6K1OUT. For more details see Pro-Watch Intelligent Compatibility Matrix (page 25).

Port Settings

• Port 0 provides the host-embedded Ethernet interface.

• Ports 1 for RS-485 2-wire downstream support for connecting 32 I/O devices. Note that the I/O communications must be mapped differently in Pro-Watch, according to the following table:

PW-7000 Port	Pro-Watch Port
1	*1*

Figure 1: PW7K1IC Board
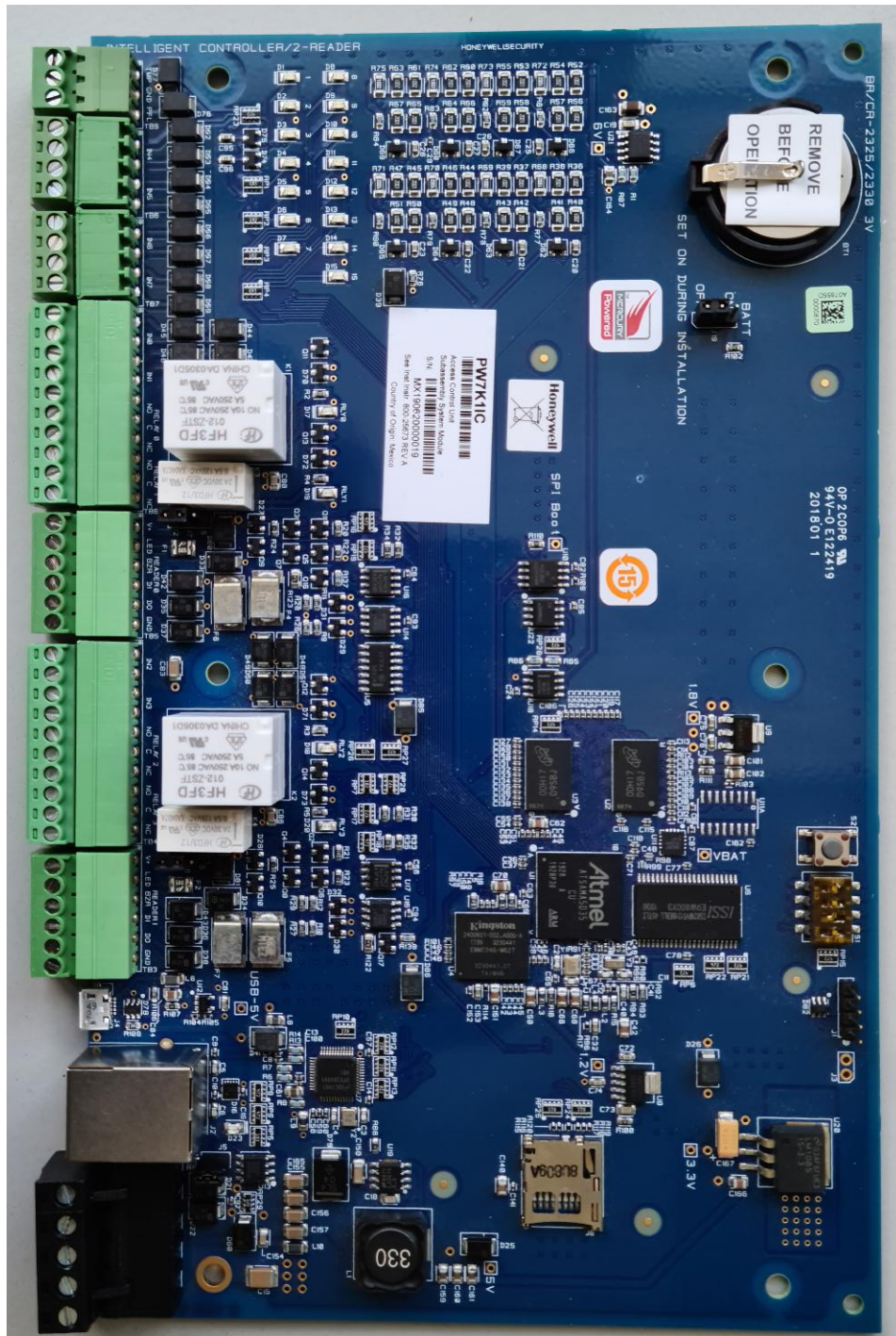
Other

- 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 50,000.

- 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 240,000. 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.

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2 SETTING UP PW-7000 HARDWARE

The PW-7000 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.

Setting the Jumpers

Table 1 PW-7000 Jumper Settings

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

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 PW-7000 DIP Switch Settings

S1	S2	S3	S4	Selection
OFF	OFF	OFF	OFF	Normal Operating Mode.
ON	OFF	OFF	OFF	Enables the default user name (admin) and (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.

S1	S2	S3	S4	Selection
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 PW-7000 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 1and 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, PW7K1IC works as PW6K1IC. DIP4 = OFF -> Native Mode, PW7K1IC Supported Functions and Capabilities, Readers and IN/OUTPUTs on PW7K1IC can be used .For more details see Pro-Watch Intelligent Compatibility Matrix (page 25).

The PW-7000 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-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-off**.

6. Configure the host port(s) for IP Server and/or IP Client communications. See Host Communication for instructions. This will enable both TCP/IP and serial hardware networking when you log in again.

Factory Default Communication Parameters: Interface 1 (Port 0)

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**

Bulk Erase Configuration Memory

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

- Erase all configuration and cardholder database (sanitize boards, less third party applications)

- Update the OEM default parameters after OEM code is changed.

- To recover from the database corruption and to avoid PW7000 board to reboot continuously.

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

Bulk Erase

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

Step 1.   Set S1 DIP switches to 1 & 2 "ON" and, 3 & 4 "OFF".

Step 2.   Apply power to the PW7K1IC board. LED 1 ON for about 15 seconds while PW7K1IC boots up.

Step 3.   After the PW7K1IC boots up, watch for LEDs 1& 2 and 3 & 4 to alternately flash at a 0.5 second rate.

Step 4.   Within 10 seconds after the above patterns starts, change switches 1 or 2 to "OFF". If these switches are not changed, then PW7K1IC board will power up using the OEM default communication parameters.

Step 5.   LED 2 will flash indicating that the configuration memory is being erased.

Step 6.   Full memory erase will take up to 60 seconds, usually a lot less.

Step 7.   Once complete. only LED's 1 & 4 will flash for 3 seconds.

Step 8.   The PW7K1IC board will complete its initialization in 2 seconds after LEDs 1 & 4 stop flashing.

Technical Specifications

> ⚠ **Caution: PW-7000 is manufactured for use in low-voltage, Class 2 power-limited circuits only.**

Table 3 PW-7000 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	3Volts Lithium, type BR2325 or CR2330.
Ports	**Port 0 – Host Communication:** Ethernet: 10-BaseT/100Base-TX **Port 1 – Serial I/O Device:** 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: TTL compatible, F/2F or 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: *Specifications subject to change without notice.*

> ⚠ **Caution: Locate the power source as close to this board as possible. Connect power with minimum of 18AWG wires.**

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.*

Status LEDs

Power-up: All LED's OFF.

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.

Run Time Supplying Power to the PW-7000 Interface

Table 5 PW-7000 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
D5	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
D7	Reader 1: Clock / Data or D1 / D0 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
D8	Input IN 0 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	Relay K0: ON = Energizes, Door Relay
D18	Relay K1: ON = Energized, Door Relay
D19	Relay K2: ON = Energized
D20	Relay K3: ON = Energized
D23	Flashes with Ethernet Traffic

Wiring

This section presents information on reader wiring, input wiring, and control output wiring. The following figure shows the PW-7000 board and identifies its terminal block pin assignments.

Supplying Power to the PW-7000 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: PW-7000 Power Terminals
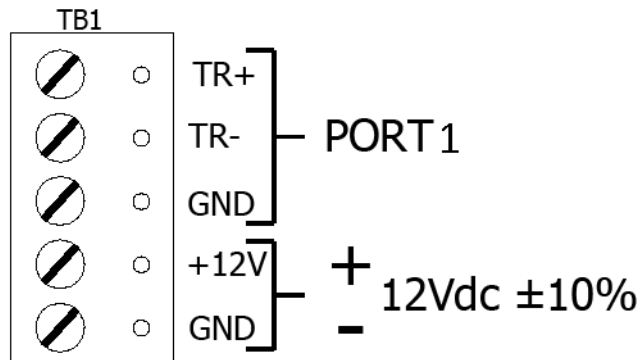
Communications Wiring

The PW-7000 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: PW-7000 Port Wiring

2-WIRE RS-485
(ONLY 2-WIRE RS-485 IS SUPPORTED)
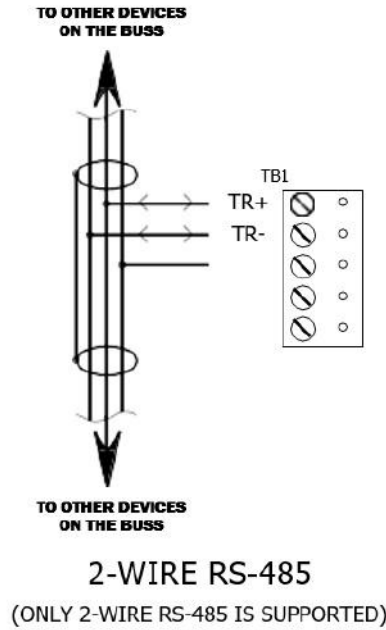
Cabinet Tamper and Power Failure Input Wiring

Figure 4: PW-7000 TMP and FLT Terminals
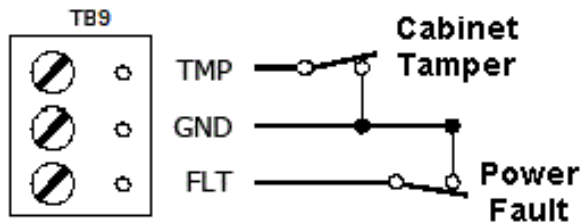
Inputs TMP and FLT are used for monitoring cabinet tamper and power failure with normally closed contacts. These two inputs are for contact closure monitoring only; do not use end-of-line (EOL) resistor(s). If these inputs are not used, install a short piece of wire at the input to indicate a safe condition.

Memory and Real Time Clock Backup Battery

The event log buffer and the real time clock are backed up by a 3V lithium battery. This BR2325 or CR2330 battery should be replaced annually. A replacement battery may be obtained from Honeywell or a local battery retailer. However, the replacement battery must be UL recognized.

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

⚠️ **Warning: AVERTISSEMENT: La batterie peut éclater si elle est maltraitée. NE PAS RECHARGER, DEMONTER OU JETER AU FEU!**

Pro-Watch Intelligent Compatibility Matrix

Note:
- PW7KIC available in PW 4.5 SP3 & PW 5.0 SP1 and higher
- PW7K1IC (Legacy) option requires dipswitch 4=ON, configured in Pro-Watch as PW-6000 'Panel Type' and Honeywell channel protocol
- PW7K1IC supports 1 downstream protocol only
- * Not tested

Pro-Watch Intelligent Controller Compatibility Matrix					
SIO's		**PW5K1IC**	**PW6K1IC**	**PW7K1IC (Legacy)**	**PW7K1IC (Native)**
PW5K1	R2	Add as 5KR2	Add as 5KR2	Add as 5KR2	Add as 6KR2
	R1	Add as 5KR1	Add as 5KR1	Add as 5KR1*	Add as 6KR1*
	IN	Add as 5KIN	Add as 5KIN	Add as 5KIN	Add as 6KIN
	OUT	Add as 5KOUT	Add as 5KOUT	Add as 5KOUT	Add as 6KOUT
PW6K1	R2	Add as 5KR2	Add as 6KR2	Add as 6KR2	Add as 6KR2
	R1	Add as 5KR1	Add as 6KR1	Add as 6KR1	Add as 6KR1
	IN	Add as 5KIN	Add as 6KIN	Add as 6KIN	Add as 6KIN
	OUT	Add as 5KOUT	Add as 6KOUT	Add as 6KOUT	Add as 6KOUT
PW7K1	R2	Add as 5KR2	Add as 6KR2	Add as 6KR2	Add as 6KR2 / Add as 7KR2
	R1	Add as 5KR1	Add as 6KR1	Add as 6KR1	Add as 6KR1 / Add as MR50*
	IN	Add as 5KIN	Add as 6KIN	Add as 6KIN	Add as 6KIN / Add as 7KIN
	OUT	Add as 5KOUT	Add as 6KOUT	Add as 6KOUT	Add as 6KOUT / Add as 7KOUT

SIO selectable in Pro-Watch and uses 'MSP1 (Honeywell)' Protocol
SIO **not** Selectable in Pro-Watch and uses 'MSP1 (Honeywell)' Protocol
Selectable in Pro-Watch and uses 'MSP1 (Mercury)' Protocol

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SYSTEM CONFIGURATION

The PW-7000 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.

Note: *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.*

Note: *The default factory-set TCP/IP address for the built-in system configuration web server is **192.168.0.251***

Connecting to ACDSM for the First Time

Step 1.   Use the factory default controller IP address **192.168.0.251**.

Step 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.*

Step 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.

Step 4.   Set the host computer to the static IP address **192.168.0.250** to be able to connect to the factory-default PW-7000 controller at address **192.168.0.251**.

Step 5.   Power up the PW-7000 controller.

Login Page

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

Figure 5: PW-7000 Web Server Login Screen

Step 2. Enter your **User Name** and **Password**.

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

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 6: PW-7000 Web Server Home Page
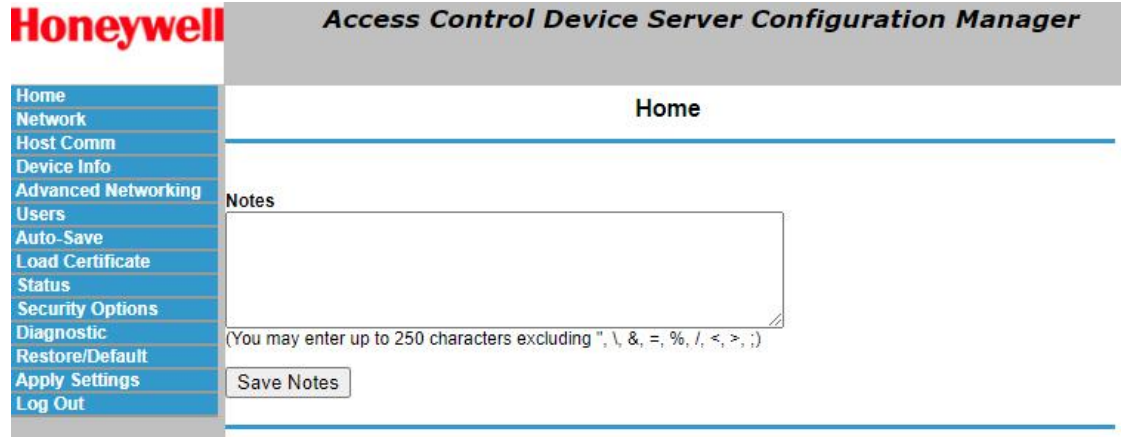
Network Settings

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 7: PW-7000 Web Server Network Settings Screen

Note: *The Host Name of This Device field contains the Media Access Control (MAC) address of the PW-7000 controller board.*

Note: *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

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

Step 2.   Click **OK**.

Note: *Pro-Watch communicates with the PW-7000 panel using an IP address. If you must use the Dynamic IP option because of your network policies or configuration, it is recommended to reserve an IP address at the DHCP server for the MAC (Media Access Control) address in the PW-7000 panel. The MAC address is a unique identifier attached to network adapters. Each time the PW-7000 panel requests an IP address, the DHCP server will assign the address that was reserved for it.*

Static IP Configuration Method

Step 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

Step 2.   Click **OK**.

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 8: PW-7000 Host Port Configuration Screen with IP Server Connection

Step 1. From PW7000 Communication Address drop-down list, select one of the eight (0 to 7) available **communication addresses** for the PW-7000 board.

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

Step 2. For the **Primary Host Port**, make the following selections:

- **Connection Type**. Select **IP Server** (the standard connection type), so that the Pro-Watch Host will poll the PW-7000 panel. The panel does not currently support the **IP Client** option, which would cause the PW-7000 panel to poll the Pro-Watch 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 Pro-Watch Host and the PW-7000 panel are encrypted. Note that encryption must be enabled in Pro-Watch for the appropriate Pro-Watch channel. See Chapter 7, "Hardware Configuration," in the Pro-Watch Guide for channel encryption instructions.
    - **TLS Required**
    - **TLS if Available**

- **Port Number**. Enter the port number through which the host computer can communicate with the PW-7000 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 PW-7000. Select this option for web page browser access.

    - If you select the **Authorized IP Address Required** option, also enter in the **Authorized IP Addresses** fields all the IP addresses that would be allowed to communicate with the PW-7000. Use this option only for Host communication.

    Step 3.   Click **OK**.

IP Client Connection Type

Figure 9: PW-7000 Host Port Configuration Screen with IP Client Connection

Device Information

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

Figure 11: PW–7000 Web Server Device HW Info Screen

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 12: PW-7000 Web Server User Info Screen

Adding a User

Follow these steps:

Step 1.   Click **New Account** to display the new user account screen.

Step 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.

Step 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.

Step 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.
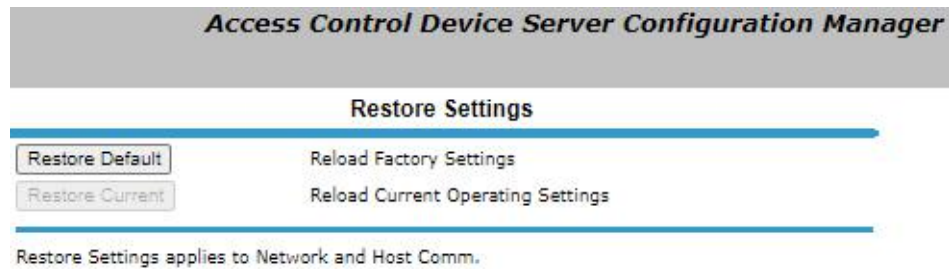
Deleting a User

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

Restore Default Screen

Step 1.   Click the Restore Default link on the navigation bar to restore the default configuration values for the PW-7000:

Figure 13: PW-7000 Web Server Restore Default Screen

Step 2.   Click **Restore Default** to reload the default factory settings for all the configuration variables.

Step 3.   Click **Restore Current** to reload the current operational settings for all the configuration variables.

Apply Setting Screen

Step 1.   Click the Apply Setting link on the navigation bar to apply the selected configuration values:
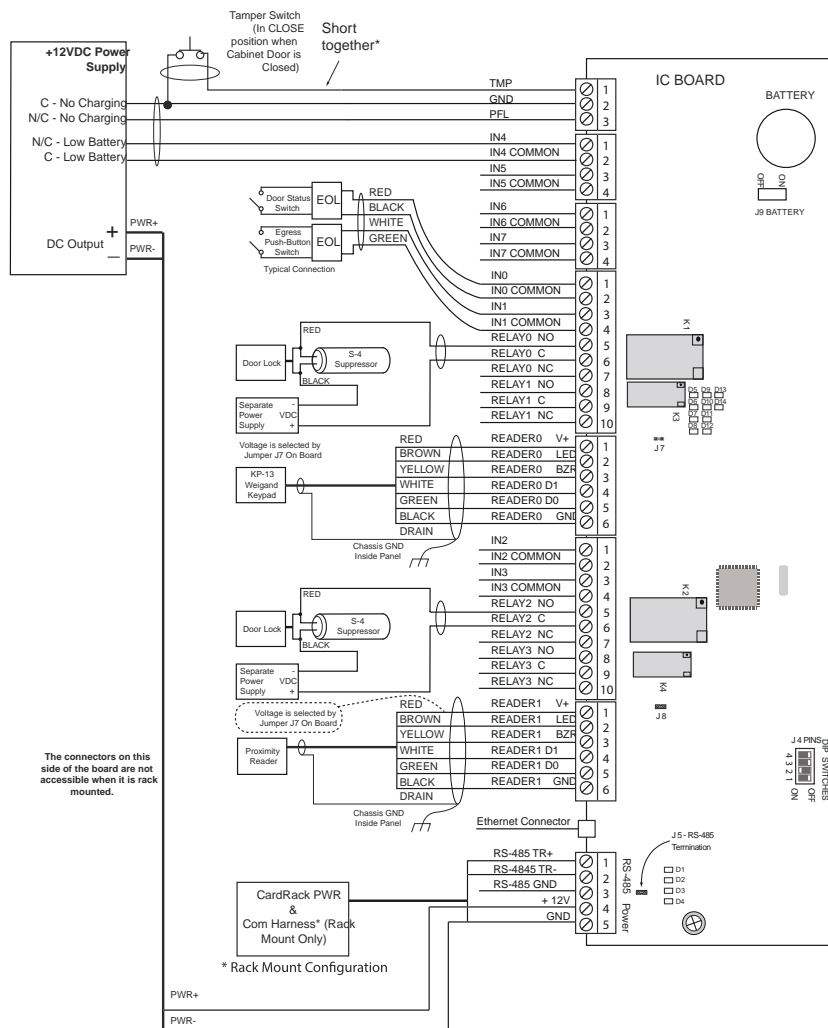
Figure 14: PW-7000 Web Server Apply Setting Screen

Step 2.   Click **Apply, Reboot** to apply all the configured values and reboot the PW-7000.

Log Out

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

READER MODULE

Figure 1: PW-7000 Intelligent Controller Module Wiring: TB1,TB3-9

Note: See *Status LEDs* (see page 20) for descriptions of LEDs D1-D20.

Reader Wiring

The following Honeywell reader module numbers have been approved by UL for use with the PW7K1IC: OM40BHONA, OM55BHONA, OP10HONE, OP30HONE, OP40HONE, OP90HONE, OT30HONA, OT31HONA, OT35HONA, and OT36HONA.

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 J2 for reader 0 and J3 for reader 1. Set jumper at position "5" for 5VDC or "12" for pass-through 12VDC. The factory defaults set J2 and J3 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
1	Red	Power (5 or 12 Vdc)	Power (5 or 12 Vdc)
2	Brown	LED control	LED control
3	Yellow	Beeper Control	Beeper Control
4	White	Data 1 Signal	Clock Signal
5	Green	Data 0 Signal	Data Signal
6	Black	Common	Common

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.

Input Wiring

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

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.

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.
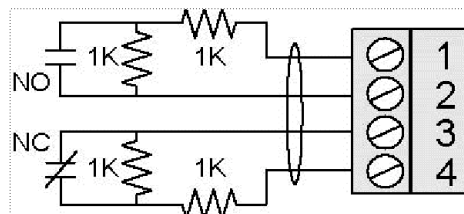
ssRelays 1 and 3 are dry-circuit level signal relays typically used to indicate the status of the door lock.

Use sufficiently large gauge of wires for the load current to avoid voltage loss.
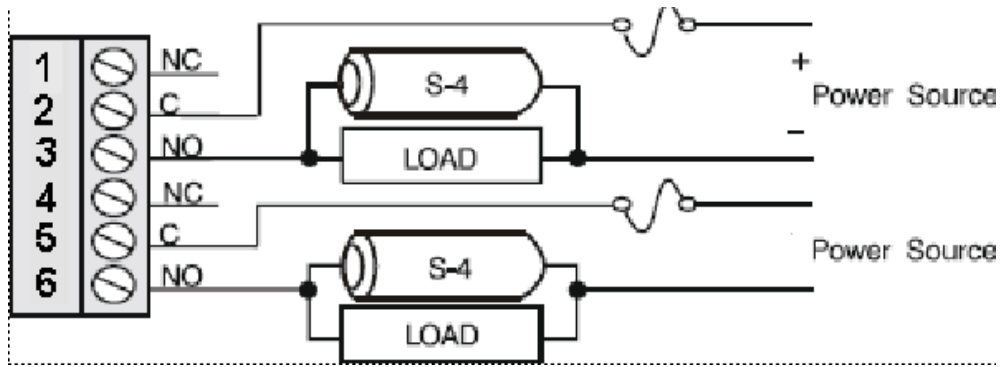
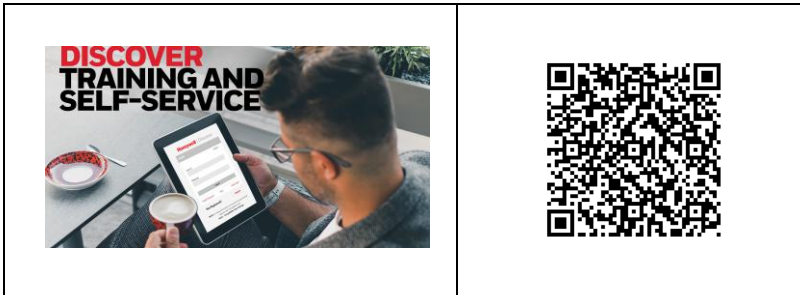This page is intentionally left blank.

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www.security.honeywell.com

Discover | Customer Portal

Self-Service Product Support and Learning Management System

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YouTube | Honeywell Help and Support

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

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