PW-M Series Modular Access Control System

Intelligent Controllers

The PW-M Series Modular Access Control System is an advanced access control system that makes Casi upgrades a "screwdriverless" change over. This solution combines the flexibility and capabilities of Pro-Watch® with the power of the PWM5IC with its 32-bit architecture, TCP/IP support, flash memory, large local cardholder database, and large reader and I/O module support.

Pro-Watch handles system configuration, alarm/event monitoring and operation of the Intelligent Controller via TCP/IP. In the event of a communication break the Intelligent Controller is fully capable of operating off-line, making access control decisions independently of Pro-Watch. Connectivity to the host computer is accomplished via TCP/IP network connection.

The PWM5IC Intelligent Controller is a direct replacement for the Casi PX, PXN and PXNplus CPU controller.

It supports up to 64 Readers and up to 3 separate additional Micro5 enclosures via RS485 using the PWM5COM board allowing Reader, Output and Input boards to be combined as needed to minimize cost and optimize mounting options.

The PW-M series consist of the following:
- PWM5IC Intelligent Controller
- PWM2KIC M2000 Intelligent Controller
- PWM52SRP 2 Reader Board with Supervised Inputs
- PWM52RP 2 Reader Board
- PWM58RP 8 Reader Board
- PWM516DO 16 Digital Output Board
- PWM516DOR 16 Output Board with Relays
- PWM520IN 20 Input Board
- PWM5COM Communication Board
- PWM5MUX8 M5 8-Port Multiplexer

**FEATURES**

- Up to 12 intervals per time zone where each interval is a start time, stop time and day map. The day map indicates the day of the week or holiday
- 255 possible holidays are defined by starting date and duration
- Automatic calculation of leap year and Daylight Saving Time
- 19-digit (64-bit) user ID
- Support for FIPS long card numbers
- Up to eight card formats per reader
- Activation/deactivation dates by card
- Up to 12 access levels per card or individual time zones per readers
- Up to 15-digit Personal Identification Numbers (PIN)
- Operating modes include locked, unlocked, facility code, card only, card and PIN, card or PIN, and PIN only
- Strike modes include fail-safe and fail-secure
- Entire card bit-stream reported with invalid facility code or invalid card format
- Anti-passback support – free pass and exempt flags, last area accessed, last reader accessed, time/date of last access
- Configurable as standard, entry delay latching, entry delay non-latching and exit delay
- Configurable as standard (energize to activate) or fail-safe (de-energize to activate)
- Pulse control: single pulse (up to 24 hours) or repeating pulses (on/off in 0.1 second increments, up to 255 times)
### PW-M Series Modular Access Control System

### SPECIFICATIONS

#### DATABASE
- **Cardholders**: 600,000
- **Transaction storage**: 50,000
- **Firmware**: Flash programming for revision updates
- **Access codes**: virtually unlimited
- **Holidays**: virtually unlimited
- **Time codes**: 255
- **Card reader formats**: 8 per reader
- **Credential facility codes**: 8
- **Elevator support**: 128 floors
- **Dedicated alarms**: Dedicated tamper alarm, Dedicated power fail alarm
- **Real time clock**: Geographic time zone support, Daylight Saving Time, Leap Year support
  - 4 bit parallel accurate to 50 ppm

#### COMMUNICATION MODULES

**Communication Ports:**
- **Host Port 0**: 10/100- TX Ethernet
- **Optional alternative Port**: 10-BaseT/100Base-TX Ethernet port using a Lantronix Micro125 interface daughter board, p/n MO11AA003-01R, or equivalent
- **Peripheral interface Port 2**: 2-wire RS-485, asynchronous
- **Peripheral interface Port 3**: 2-wire RS-485, asynchronous
- **Inputs**: Two dedicated: tamper and power monitor

**Connectivity:**
- **Primary Port**: 10/100 Ethernet
- **IP Server, IP Client, DHCP Client**: HTTP, TLS, X.509
- **Download functionality**
  - System functional during system download: Yes
  - System functional during credential download: Yes

#### OPERATIONAL FUNCTIONALITY
- **Duress detection**
- **Operational modes:**
  - Credential only
  - PIN only
  - Credential or PIN
  - Credential and PIN
  - Facility code only
- **Maximum PIN size**: 15 digit
- **Door object support**
- **Threat level support**: 100 levels
- **Two person access rule**
- **Offline modes (selectable per reader):**
  - Facility code access
  - Locked (no access)
  - Unlocked (free access)

**Anti-passback support:**
- While preventing access (hard)
- While allowing access (soft)

**Transaction prioritization**: 999 levels

#### READERS AND CREDENTIALS
- **Prox**: OmniProx, HID Prox, DigiReaders, Indala Readers
- **Smart**: OmniClass, iClass, Mifare, DESFire
- **Keypad**: Magstripe, Wiegand, Casi F/2F

#### BOARD DIMENSIONS
- **PWM5IC**: 10.25" L x 4.56" W x 0.8" H (260.4 mm L x 115.8 mm W x 20.3 mm H)
- **PWM2KIC**: 11.375" L x 8.375" W x 1.04" H* (289.1mm L x 212.7mm W x 26.5mm H)
- **PWM52SRP**: 10.25" L x 3.5" W x 0.69" H (260.35mm L x 88.9mm W x 17.5mm H)
- **PWM52RP**: 10.25" L x 3.5" W x 0.69" H (260.35mm L x 88.9mm W x 17.5mm H)
- **PWM58RP**: 10.25" L x 3.5" W x 0.69" H (260.35mm L x 88.9mm W x 17.5mm H)
- **PWM516DO**: 10.25" L x 3.5" W x 0.69" H (260.35mm L x 88.9mm W x 17.5mm H)
- **PWM516DOR**: 10.25" L x 3.5" W x 0.69" H (260.35mm L x 88.9mm W x 12.7mm H)
- **PWM5COM**: 10.25" L x 3.5" W x 0.69" H (260.35mm L x 88.9mm W x 15.24mm H)
- **PWM5MUX8**: 10.25" L x 3.5" W x 0.69" H (260.35mm L x 88.9mm W x 17.5mm H)

#### ENVIRONMENT
- **Temperature**: 32 to 158° F (0 to 70° C) operational; -67 to 185° F (-55 to 85° C) storage
- **Humidity**: 0 to 95% RHNC

#### WIRE REQUIREMENTS
- **Power**: Twisted pair, 18 AWG
- **RS485**: 24 AWG, 4,000' (1,200m) max, 2 twisted pairs with shield (120W, 23 pF, Belden 9842 or equiv.)
- **Alarm input**: Twisted pair, 30 ohms max

#### COMMUNICATIONS – BACK PLANE SUPPLIED
- **9600, 19200, 38400, or 115200 bps, asynchronous**
**BENEFITS**

- True 32-bit microprocessor provides fast transaction processing for the most demanding network applications
- Modular hardware architecture provides flexibility and expansion capabilities
- Flash memory allows new versions of firmware to be downloaded from the host computer to the controller(s) through the central network
- Large, local controller database allows access control decisions to be made by controller in real time without the need to communicate to the server
- Scalable architecture ensures optimal performance with a seamless upgrade path to accommodate future growth beyond its initial installation
- Seamless support for TCP/IP protocols to allow intelligent controllers to tap into a LAN or WAN connectivity
- Supports multiple reader and card formats for maximum flexibility and security options
- Supervised communication and Lithium battery backup ensures system reliability
- System offline modes customizable per reader include facility code access, locked (no access), and unlocked (full access)

**PW-M Series Configuration**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CASI/GE/UTC</th>
<th>HONEYWELL PART NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intelligent Controller</td>
<td>PX, PXN, PXN+</td>
<td>PWM5IC</td>
</tr>
<tr>
<td>Communication Board</td>
<td>PWR/COM</td>
<td>PWM5COM</td>
</tr>
<tr>
<td>2 Reader Board</td>
<td>2RP</td>
<td>PWM52RP</td>
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<tr>
<td>2 Reader Board with Supervised Inputs</td>
<td>2SRP</td>
<td>PWM52SRP</td>
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<tr>
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<td>8RP</td>
<td>PWM58RP</td>
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<td>PWM516DO</td>
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<tr>
<td>16 Output Board with Relays</td>
<td>16DOR</td>
<td>PWM516DOR</td>
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<tr>
<td>20 Input Board</td>
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<td>PWM520IN</td>
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# PW-M Series Modular Access Control System

## ORDERING

<table>
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<tr>
<td>PW-M SERIES</td>
<td></td>
</tr>
<tr>
<td>PWM5IC</td>
<td>Intelligent Controller – Capacity for up to 64 Readers</td>
</tr>
<tr>
<td>PWM2KIC</td>
<td>M2000 Intelligent Controller*</td>
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<td>PWM5MUX8</td>
<td>8-port Multiplexer</td>
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*PWM5IC needed in conjunction with PWM2KIC sub-panel