# TABLE OF CONTENTS

## About the 734N Series
- Power Supply ................................................................. 1
- Zone Terminals ............................................................... 1
- Annunciators ................................................................. 1
- Indicator LEDs .............................................................. 1
- Form C Relay ................................................................. 2
- Programming Connection ............................................... 2
- Wiegand and OSDP Reader Support ................................ 2
- Local Event Storage ........................................................ 2

## PCB Features ................................................................ 3

## Install the 734N Series Module ..................................... 4
- Mount the 734N .............................................................. 4
- Wire the Access Control Lock ........................................ 5
- Isolation Relay (optional) ............................................... 8
- Install the 333 Suppressor ............................................. 9
- Wire the Zone Terminals .............................................. 10
- Connect a Wiegand Card Reader .................................... 12
- Connect an OSDP Card Reader ..................................... 15
- Network Connection ..................................................... 19
- Set the 734N Address ................................................... 20

## Program the Panel ...................................................... 23
- Device Setup ................................................................. 23
  - Device Number ......................................................... 23
  - Device Name ............................................................. 23
  - Device Type .............................................................. 24
  - Communication Type ................................................ 24

## Program the 734N Series Module ................................ 25
- 734N Menu ..................................................................... 26
- Programmer Menu ........................................................ 26
- Initialization Options .................................................... 27
  - Initialize Communication .......................................... 27
  - Initialize Access ........................................................ 27
- Communication Menu .................................................. 28
  - 734N Device Number .................................................. 28
  - 734N DHCP ............................................................... 28
  - 734N IP Address ........................................................ 28
  - Subnet Mask ................................................................ 28
  - Gateway Address ....................................................... 29
  - Panel IP Address ......................................................... 29
  - Panel IP Port ................................................................ 29
  - 734N Passphrase ........................................................ 29
Access Options .......................................................... 30
  Reader Protocol Type .................................................. 30
  Activate Zone 2 Bypass ................................................ 32
  Activate Zone 3 Request to Exit .................................... 34
  Activate Onboard Speaker ........................................... 35
  Card Formats .............................................................. 35
  Require Site Code .......................................................... 38
  Number of User Code Digits .......................................... 39
  Card Format Added/Changed (Custom Format) .................... 40
  No Communication with Panel ........................................ 40
Stop ............................................................................... 41

Test the 734N Series Module ......................... 42
734N Menu ................................................................. 42
  Diagnostics Menu ............................................................. 42
  Zone Status Display ......................................................... 43

Public Card Formats ................................................. 44

734N Series Network Specifications .... 45
Compliance Listing Specifications .......... 47
  UL Access Control .......................................................... 47
ULC Commercial Burglary (XR150/XR550 Series Panels) ................. 49
Certifications ................................................................. 50
  Underwriters Laboratory (UL Listed) ......................... 50
Product Specifications ...................... 51
Readers and Credentials ..................... 53
ABOUT THE 734N SERIES

The 734N and 734N-POE Access Control Modules allow you to add IP network access control capability to XR150/XR550 Series panels using proximity, credential, or mag-stripe card readers. The modules also allow you to use the powerful built-in access control capability of DMP Panels.

Power Supply

734N Series modules operate at 12/24 VDC from the power supply supporting a door’s magnetic lock or door-strike. The 734N-POE can also be powered from POE.

Warning: To avoid the risk of equipment damage, do not exceed 750 mA total output current for zones connected to the module.

Annunciators

An onboard programmable piezo provides local annunciation at the module. You can also connect a variety of switched ground annunciators to the module for remote annunciation.

Indicator LEDs

734N Series modules provide three indicator LEDs:

• RELAY (red) turns on for the same duration as the door strike relay.
• WIEGAND (yellow) turns on for one second to indicate receipt of valid input.
• DATA (green) indicates that the module is communicating with the panel.

Zone Terminals

Four input zones are provided to allow connection of nearby burglary devices.
Form C Relay

The 10 Amp Form C relay draws up to 35 mA of current. Refer to “Wire the Access Control Lock” and “Isolation Relay (optional)” in this document for more information.

Programming Connection

The modules also provide a keypad programming connection that allows you to use a standard DMP LCD keypad for initial setup. Programming can be completed using a keypad connected to the module or from XR150/XR550 panels.

Wiegand and OSDP Reader Support

The 734N Series supports both Wiegand and OSDP card readers. For information on compatible readers, refer to “Readers and Credentials”. OSDP support requires 734N/734N-POE modules with PCB Rev 9 and higher.

Local Event Storage

When communication is lost with the panel, 734N and 734N-POE Access Control Modules store access granted events locally in module memory. When communication is reestablished, stored events are sent and synced with panel events, then inserted into the event buffer according to the actual time when they occurred. To enable local event storage, CARD FORMAT must be set to DMP or CUSTOM and NO COMM WITH PNL must be set to SITE or ANY.

Local Event Storage requires 734N/734N-POE modules with firmware Version 105 or higher, along with XR Series firmware Version 202 or higher.
PCB FEATURES

Figure 1: PCB Features
INSTALL THE 734N SERIES MODULE

Mount the 734N

The module comes in a high-impact plastic housing that you can mount directly to a wall, backboard, or other flat surface.

For easy installation, the back and ends of the 734N housing have wire entrances. The back also contains multiple mounting holes that allow you to mount the module on a single-gang switch box. DMP recommends mounting the 734N near the protected door. Refer to Figure 2 for mounting hole locations on the housing base.

1. Remove the PCB from the plastic housing by loosening the clips on one side and gently lifting it out of the housing base.
2. Insert the included screws in the desired mounting hole locations and tighten them to secure the housing to the surface.
3. Reinstall the PCB in the housing base.

Figure 2: Mounting Hole Locations
2 Wire the Access Control Lock

The module provides a Form C (SPDT) relay for controlling locks and other electronically-controlled barriers. The three relay terminals marked NO C NC allow you to connect the device wiring to the relay for module control.

When the 734N Series module is powered with a 12/24 V power supply, the device can power an electric strike, up to 750 mA. See Figure 3 and Figure 4 for typical magnetic lock and door strike wiring. The 734N-POE can also be powered with POE. See Figure 5 for POE door strike wiring.

The Form C relay draws up to 35 mA of current and contacts are rated for 10 Amps (resistive) at 12/24 VDC. When connecting multiple locks to the Form C relay, the total current for all locks cannot exceed 10 Amps. If the total current for all locks exceeds 10 Amps, problems may arise and an isolation relay may be needed. See “Isolation Relay (optional)” for more information.
Figure 3: Typical Magnetic Lock Wiring

- Mag lock positive to 734N terminal NC
- Mag lock negative to power supply negative
- Power supply positive to 734N terminal C

Model 333 Suppressor
12/24 VDC Power Supply

Figure 4: Typical Door Strike Wiring

- Door strike positive to 734N terminal NO
- Door strike negative to power supply negative
- Power supply positive to 734N terminal C

Model 333 Suppressor
12/24 VDC Power Supply
DC Door Strike
Figure 5: Typical Door Strike Wiring with POE (734N-POE only)
3 Isolation Relay (optional)

The Form C relay can control a device that draws less than 10 Amps of current. If a device draws more than 10 Amps of current, or the sum of all devices controlled by the Form C relay exceeds 10 Amps, an isolation relay must be used. Refer to Figure 6 and Figure 7 for isolation relay wiring.

Figure 6: Magnetic Lock with an Isolation Relay

Figure 7: Door Strike with an Isolation Relay
4 Install the 333Suppressor

Use the included 333 suppressor with the 734N Series module to suppress any surges caused by energizing a magnetic lock or door strike.

Install the 333 across the module’s C (common) and NO (normally open) or NC (normally closed) terminals.

If the device being controlled by the relay is connected to the NO and C terminals, install the suppressor on the NO and C terminals.

Conversely, if the device is connected to the NC and C terminals, install the 333 Suppressor on NC and C terminals.

The suppressor wire is non-polarized. Install the suppressor as shown in Figure 8.

![Figure 8: 333 Suppressor Installation]
5 Wire the Zone Terminals

Terminals 5 through 9 connect grounded zones 1 through 3. These zones have a grounded side and cannot be used for fire-initiating devices. Zones 2 and 3 can also be used for access control with Zone 2 providing a bypass option and Zone 3 providing Request to Exit functionality. Zone 4 terminals provide a non-powered Class B, Style A zone.

Use the supplied DMP Model 311 1k Ohm End-of-Line resistors on each zone. Refer to the panel programming guide for programming instructions. See Figure 9 for more information on wiring the zone terminals.

Auxiliary Outputs 1 & 2

The module controls Auxiliary Outputs 1 and 2 when the Activate Zone 2 Bypass programming option is enabled and the Zone 2 Bypass Time is set. When the door contact (zone 2) is opened while the door strike is activated, the Zone 2 Bypass Time starts. If the door has not closed at the end of the timer, Aux Output 1 is turned on and the timer starts again. If the door is still open at the end of the second timer, Aux Output 2 is turned on. Aux Outputs 1 and 2 turn off when the door contact is closed. Use the Model 431 Relay Harness for connection of Output 1 and Output 2.
<table>
<thead>
<tr>
<th>Zone #</th>
<th>Recommended Device</th>
<th>Residential Fire Device?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Any burglary device</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>Door contact</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>REX (PIR or Button)</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>Any Device</td>
<td>No</td>
</tr>
</tbody>
</table>

Table 1: 734N Zone Uses

Zone 3 can also be wired normally closed with an in-line 1k Ohm resistor

Figure 9: Zone Terminal Wiring
6a Connect a Wiegand Card Reader

The 734N Series module provides direct 12/24 VDC, 200 mA output to the reader on the Red terminal connection. Figure 10 shows a reader with wire colors RED, WHT, GRN, and BLK connecting to Terminals 1, 2, 3, and 4.

The green wire carries Data Zero (D0), and the white wire carries Data One (D1). The red wire connects 12/24 VDC, 200 mA maximum power and the black wire is ground.

The wire colors may be different depending on the reader being installed. Refer to the literature provided with the reader for wire coding, wire distance, cable type (such as shielded), and other specifications.

Wiegand Status Indicator Outputs
Terminals 5, 6, and 7 provide connections for Remote LED Control, Remote Annunciation, and Armed Status indicators.
LC (Remote LED Control)
Remote LED Control provides an unsupervised switched ground for a visual indicator that turns on when the relay activates. Connect the wire from the LC Terminal to an LED. The LED turns on for the duration the door strike relay is on. HID readers optionally provide a connection for LED reader control.

<table>
<thead>
<tr>
<th>LC Wire Color</th>
<th>LED Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orange</td>
<td>Green</td>
</tr>
<tr>
<td>Brown</td>
<td>Red</td>
</tr>
</tbody>
</table>

RA (Remote Annunciation)
Remote Annunciation provides an unsupervised switched ground for a remote annunciator that turns on when the Zone 2 Bypass timer expires. Connect the wire from the RA Terminal to a remote annunciator. The remote annunciator silences when the RA restores. The remote annunciator (RA) switched ground operates even if the speaker is programmed not to operate.

AS (Armed Status)
Armed Status provides an unsupervised switched ground for a visual or audible armed status indicator that turns on when the burglary areas are armed, such as SYSTEM ON or ALL SYSTEM ON. Connect a wire from the AS Terminal to an armed status indicator.

Caution: Status indicator outputs support a maximum of 100 mA per terminal. Exceeding the maximum rating on LC, RA, or AS terminals can damage equipment.
Figure 10: Wiegand Card Reader Wiring

Wiegand Card Reader

- Red (12/24VDC)
- Black (GND)
- Green (Data 0)
- White (Data 1)
- Orange or Brown
- Yellow

- Yellow to RA
- Orange or Brown to LC

Figure 10: Wiegand Card Reader Wiring
**Connect an OSDP Card Reader**

The 734N Series provides 12/24 VDC, 200 mA power to the reader on the RED terminal connection and two-way data transmission on the GRN and WHT connection. Only one OSDP reader can be connected to a module.

Use 24 AWG or larger two conductor RS-485 cable to connect a reader to module terminals. For data transmission, connect the A (485 -) wire to the GRN terminal and the B (485 +) wire to the WHT terminal. For reader power, connect the red (DC +) wire to the RED terminal and the black (DC -) wire to the BLK terminal. Refer to Figure 11.

Wire colors may be different depending on the reader. Refer to literature provided with the reader for wire coding, distance, and other specifications.

**Note:** OSDP card readers require 734N Series Access Control modules with PCB Rev 9 and higher.
OSDP Reader LED Operation
OSDP readers connected to 734N Series modules provide visual indication of relay condition, connection type, and encryption status with a red and green LED. Enable reader LED operation in **LED CONTROL**.

If enabled, the reader LED is turned on and operates the same as a Wiegand reader LED, lighting green when the module relay activates. Visual indication for connection and encryption status functions as follows:

- **Fast blink (50 ms interval)**—Connection secure, encrypted with 128-bit AES and your custom secure key.
- **Slow blink (100 ms interval)**—Connection encrypted with the default SIA secure key.
- **None**—Connected, but not secure or encrypted.

If disabled, the reader LED is turned off and does not operate in any condition.

OSDP Reader Annunciation
OSDP readers connected to 734N Series modules provide audible indication of card reads. Enable reader annunciation in **BUZZER CONTROL**.

If enabled, the reader’s internal annunciator follows normal RA terminal operation.

If disabled, the reader’s internal annunciator will beep once when a credential is presented.
**OSDP Card Reader**

Black (GND)
A (485 -)
B (485 +)
Red (12/24 VDC)

**Figure 11: OSDP Card Reader Wiring**
**OSDP Status Indicator Outputs**
Terminals 6 and 7 provide connections for Remote Annunciation and Armed Status indicators.

**RA (Remote Annunciation)**
Remote Annunciation provides an unsupervised switched ground for a remote annunciator that turns on when the Zone 2 Bypass timer expires. Connect the wire from the RA Terminal to a remote annunciator. The remote annunciator silences when the RA restores. The remote annunciator (RA) switched ground operates even if the speaker is programmed not to operate.

**AS (Armed Status)**
Armed Status provides an unsupervised switched ground for a visual or audible armed status indicator that turns on when the burglary areas are armed, such as SYSTEM ON or ALL SYSTEM ON. Connect a wire from the AS Terminal to an armed status indicator.

**Caution:** Status indicator outputs support a maximum of 100 mA per terminal. Exceeding the maximum rating on LC, RA, or AS terminals can damage equipment.
7 Network Connection

Connect an IP network cable from the LAN/WAN connection to the 734N Network connector. The 734N Series module communicates AES encrypted TCP with panels that have network installed.

Two LEDs are located on the Ethernet jack.

- The green LED indicates that data is being sent to the panel
- The yellow LED indicates the speed of the transmission. A solid yellow LED indicates the network is connected at 100BASE-T. A flashing yellow LED indicates the network is connected at 10BASE-T
Set the 734N Address

Keypad Bus Addresses Explained
DMP XR550 Series panels use Keypad Bus addresses 1 through 16. XR150 Series panels can only use Keypad Bus addresses 1 through 8. Each Keypad Bus address can accommodate 1 door output and 4 expansion zones. A module with an address of 2 on the Keypad Bus would represent Door 2 and zones 21-24. A module with a keypad address of 14 would represent Door 14 and zones 141-144.

AX-Bus Addresses Explained (XR550 only)
DMP XR550 panels are capable of access control expansion using any of the five AX/LX-Bus headers (AX/LX500, 600, 700, 800, and 900). An AX-Bus address can accommodate 1 door output and 1 expansion zone. Because the 734N Series module has a built-in 4-zone expander, 3 extra zones must be mapped to the 734N. A module with an address of 501 on AX500 would represent Door 501 and zones 501-504. A module with an address of 505 on AX500 would represent Door 505 and zones 505-508. A module with an address of 701 on AX700 would represent Door 701 and zones 701-704.

Note: Hardwired zone expanders and addressable points and modules do not communicate on an AX-Bus. AX-Bus doors do not have programmable device or communication types and do not have assignable display areas.
734N Address Table
Only valid zone numbers can be assigned to access control modules in device setup. For complete keypad and AX-Bus address mapping, refer to the chart below.

<table>
<thead>
<tr>
<th>Keypad Bus</th>
<th>AX-Bus</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DEVICE/DOOR</strong></td>
<td><strong>ZONES</strong></td>
</tr>
<tr>
<td>1</td>
<td>11-14</td>
</tr>
<tr>
<td>2</td>
<td>21-24</td>
</tr>
<tr>
<td>3</td>
<td>31-34</td>
</tr>
<tr>
<td>4</td>
<td>41-44</td>
</tr>
<tr>
<td>5</td>
<td>51-54</td>
</tr>
<tr>
<td>6</td>
<td>61-64</td>
</tr>
<tr>
<td>7</td>
<td>71-74</td>
</tr>
<tr>
<td>8</td>
<td>81-84</td>
</tr>
<tr>
<td>9</td>
<td>91-94</td>
</tr>
<tr>
<td>10</td>
<td>101-104</td>
</tr>
<tr>
<td>11</td>
<td>111-114</td>
</tr>
<tr>
<td>12</td>
<td>121-124</td>
</tr>
<tr>
<td>13</td>
<td>131-134</td>
</tr>
<tr>
<td>14</td>
<td>141-144</td>
</tr>
<tr>
<td>16</td>
<td>161-164</td>
</tr>
</tbody>
</table>

**Table 2: Device Addresses and Zone Numbers**
9 Connect the Power Supply

The device can also be powered by a 12 VDC plug-in power supply (Model 376L) or a 12 VDC external power supply (Model 505-12). When using a plug-in power supply, mount the device near a wall outlet.

1. Remove the housing cover.
2. Install the supplied jumper on the two pins next to EXT on the power source header.
3. Wire the power supply to the DC power terminals by following the power supply-specific instructions below.
4. Snap the cover into place.

Plug-In Power Supply
Connect the black wire with the white stripe to the positive (+) terminal and the solid black wire to the negative (-) terminal. Plug the power supply into an unswitched 110 VAC outlet.

External Power Supply
Use 22 AWG wire to connect the DC power terminal block on the device to the DC power terminal on the 505-12 power supply PCB. Connect the transformer to an unswitched 120 VAC 1.5 Amp power source.
PROGRAM THE PANEL

To access the Programmer menu, reset the panel, enter 6653 (PROG), then press CMD. After completing each of the following steps, press CMD to advance to the next option. Refer to the panel programming guide as needed.

DEVICE SETUP

Advance to DEVICE SETUP, then press a select key or area to enter the setup menu.

Device Number
Set the module’s address. For information about valid addresses, refer to Table 2.

Device Name
Press a select key or area, then enter a name for the module.
Configure additional options as needed. To configure specific options for the module locally, do not program **CARD OPTIONS** or **734 OPTIONS** in Device Setup.

**Device Type**
Press a select key or area, then select **DOOR** as the device type.

**Communication Type**
Press a select key or area, then select **NET** (Network) as the module communication type.
When you program the 734N Series module, you must use a keypad connected to the programming header and set to address 1. For 12 V applications, connect the keypad to the module using a Model 330 4-wire harness. For 24 V applications, connect the keypad to the module using a Model 330-24 4-wire programming harness with in-line resistor.

⚠️ **Caution:** Do not connect a keypad using a standard Model 330 harness if using a 24 V power supply! Damage to the keypad could occur.

You can also program the module from an XR150/XR550 Series panel. If you choose to program the 734N from the panel, all future programming should be performed through the panel. The panel’s programming overrides any programming performed from a keypad connected to the 734N. While the module is in programming mode, it will not be able to communicate with the panel.

⚠️ **Caution:** OSDP readers can only be programmed locally from the module with a keypad. To properly bond the reader to the module, the 734N must be new or initialized and the reader must be new or factory reset. After programming is complete and the keypad is disconnected, the reader is bonded to the module and cannot be reprogrammed with a different secure key until it is factory reset by the manufacturer.
Reset Header
To reset the module when first installing the system, short the two pins on the reset header before applying power to the module.

To reset the module while the system is operational, short the two pins on the reset header for one or two seconds without powering down the system.

734N MENU
When you connect the keypad to the module, the version number and release date display. To access the module Programmer Menu, enter 6653 (PROG).

PROGRAMMER MENU
Press CMD to advance through programmer menu and press a select key or area to enter the appropriate menu: INITIALIZATION, COMMUNICATION, ACCESS OPTIONS, or STOP.
INITIALIZATION OPTIONS

These options set the 734N Series module programming back to factory defaults. Press any select key or area to enter the initialization menu.

Initialize Communication

Select **YES** to set module communication programming back to factory defaults. Select **NO** to leave communication options unchanged.

*Confirm Communication Initialization:* The module displays **SURE? YES NO** for confirmation to clear the memory. To leave communication options unchanged, select **NO**. To clear communication programming, select **YES**. No programming is cleared unless you select **YES**.

Initialize Access

Select **YES** to set the 734N Series access programming back to factory defaults. Select **NO** to leave access options unchanged.

*Confirm Access Initialization:* The module displays **SURE? YES NO** for confirmation to clear the memory. To leave communication options unchanged, select **NO**. To clear access options programming, select **YES**. No programming is cleared unless you select **YES**.
COMMUNICATION MENU
Press a select key or area to enter the Communication menu. Press CMD to advance to the “Access Options” menu. Press the back arrow to return to “Initialization Options”.

734N Device Number
Enter a device number for the module. This device number must also be programmed in the panel. The default device number is 7. For more information about device addressing, refer to Table 2.

734N DHCP
Press a select key or area to choose a setting. Select YES to use dynamic IP address information for the module’s IP Address, Subnet Mask, and Gateway Address. Select NO to enter static IP information. Default is YES.

734N IP Address
Press a select key or area to enter the static IP address of the module if the DHCP is set to NO. Default is 192.168.0.201.

Subnet Mask
Press a select key or area to enter the local subnet mask assigned to the module. Default is 255.255.255.0.
**Gateway Address**
Press a select key or area to enter the local gateway address of the module. Default is **192.168.0.1**.

**Panel IP Address**
Press a select key or area to enter the IP address of the panel. Default is **192.168.0.1**.

*Note:* This IP address must match the address programmed in the panel at the Local IP Address option in Network Options. The DHCP programming in the panel must be set to **NO**.

**Panel IP Port**
Press a select key or area to enter the port number that the module uses to send communication to the panel. This must be the same port that is programmed in the 734N Listen Port in Network Options programming of the panel. The panel IP port cannot be the same as the panel network programming port. Default is **2002**.

**734N Passphrase**
You must enter an 8-16 character alphanumeric passphrase to encrypt communication with the panel. The 734N passphrase must match the one entered in panel Network Options. The passphrase is blank by default.
ACCESS OPTIONS
Press any select key or area to enter the Access Options menu. Press CMD to advance to “Stop”. Press the Back arrow to return to the “Communication Menu”.

Reader Protocol Type
Set the 734N Series to work with Wiegand or OSDP card readers. Press a select key or area to change the module Reader Protocol Type. The default is WIEGAND.

If you choose Wiegand, the menu advances to “Activate Zone 2 Bypass”. If you choose OSDP, the menu advances to LED CONTROL.

OSDP LED Control
Select YES to enable reader LED operation. Select NO to disable reader LED operation. For more information, refer to “Connect an OSDP Card Reader”.

OSDP Buzzer Control
Select YES to enable built-in reader annunciation. Select NO to disable built-in reader annunciation. For more information, refer to “Connect an OSDP Card Reader”.

READER PROTOCOL:
WIEGAND        OSDP

LED CONTROL:
NO   YES

BUZZER CONTROL:
NO   YES
**OSDP Secure Key**

The secure key is programmed into the OSDP reader and is used to establish 128-bit AES encrypted two-way communication between the reader and module.

Record this key and store it in a secure location away from the module and reader. After the reader is bonded to the module, the secure key cannot be changed in the reader or retrieved from 734N Series programming. Replacement modules can be bonded to any compatible reader with the reader’s secure key.

**Caution:** OSDP readers can only be programmed locally from the module with a keypad. To properly bond the reader to the module, the 734N Series must be initialized and the reader must be new or factory reset. After programming is complete and the keypad is disconnected, the reader is bonded to the module and cannot be reprogrammed with a different secure key until it is factory reset by the manufacturer.

Press a select key or area to enter a secure key up to 16 alphanumeric characters. These characters are visible until **CMD** is pressed.
**Activate Zone 2 Bypass**

Select **YES** to activate the zone 2 bypass operation. Selecting **NO** allows standard zone operation on zone 2. The default is **NO**.

If the door being released by the 734N Series module is protected (contact installed), a programmable bypass entry/exit timer can be provided by connecting its contact wiring to the 734N Series module zone 2. When the onboard Form C relay activates and the user opens the door connected to zone 2, the zone is delayed for the number of seconds programmed in **ZONE 2 BYPASS TIME** allowing the user to enter/exit during an armed period.

If zone 2 does not restore (door closed) within the programmed time, the piezo sounds every other second during the last ten seconds. If zone 2 restores prior to the end of the programmed time, the piezo silences. If the zone does not restore before the programmed time, the module ends the bypass and indicates the open or short zone condition to the panel.
**Zone 2 Bypass Time**

Enter the number of seconds to elapse before the bypass timer expires. The range is 20 to 250 seconds. Press any select key or area to enter the number of seconds. The default is 40 seconds. Figure 12 shows how the bypass option works.

**Figure 12: Zone 2 Bypass Timeline**

**Relock on Zone 2 Change**

Selecting **YES** turns the relay off when zone 2 changes state. Selecting **NO** leaves the relay on when zone 2 changes state. Turning off the relay allows a long strike time to be automatically ended upon zone 2 change and relocks the door. The default is **NO**.
Activate Zone 3 Request to Exit
Selecting **YES** activates the zone 3 Request to Exit (REX) option. Selecting **NO** allows standard zone operation on zone 3. Default setting is **NO**.

Connect a motion sensing device or a mechanical switch to zone 3 to provide REX capability to the system. Zone 3 can be used to activate the strike relay and bypass or activate bypass only. For zone wiring details, refer to Figure 8.

**Activate Strike Relay and Bypass**
Wire zone 3 as normally open with a 1k Ohm EOL resistor.

When zone 3 shorts, the onboard Form C relay activates for the programmed number of seconds. See “Zone 3 REX Strike Time”. During this time, the user can open the protected door to start the programmed zone 2 bypass entry/exit timer. After the programmed number of seconds, the relay restores the door to its locked state.

**Activate Bypass Only**
Wire zone 3 as normally closed with an in-line 1k Ohm resistor.

When zone 3 opens from a normal state, only a bypass occurs and the onboard relay does not activate.
**Zone 3 REX Strike Time**
Enter the number of REX seconds to elapse. The range is 5 to 250 seconds. Press any select key or area to enter the number of seconds. The default is 5 seconds.

**Activate Onboard Speaker**
Select YES to enable the onboard piezo for local annunciation, such as alarm and trouble annunciations. Select NO to turn the speaker off for all operations. This does not affect remote annunciator open collector (RA) operation. The default is NO.

**Card Formats**
Select DMP to allow credentials that use a 26 - 45 bit data string. The menu advances to “Require Site Code”.

Select CUSTOM to disable DMP format and program slots 1-8 as needed. The menu advances to “Card Format Number”.

Select ANY to allow all card reads to activate the door strike relay. The door strike relay is activated for the length of time programmed in ZN 3 REX TIME. No user code information is sent to the panel. The menu advances to “No Communication with Panel”.

The default card format is DMP.
**Card Format Number**

Notice: If you see CARD OPTIONS, refer to LT-0737C.

Enter the slot number (1-8) that you want to program for a custom non-DMP card format. The format that is programmed into slot 1 is the default format. In the event that a card with an unrecognized format is used, that card will be read in the format that is programmed in slot 1. To restrict card reads to specific formats, only program slots 2-8.

See “Public Card Formats” for some publicly available card formats that can be used with the 734N. Other private or custom formats may also be compatible. Please contact the credential supplier or manufacturer for the bit structure.

**Note:** If you select slot 1 and you are upgrading from XR panel version 182 or earlier, FORMAT NAME will automatically be named SINGLE CARD FORMAT and WIEGAND CODE LENGTH will default to 45.
**Format Name**
Press any select key or area and name the card. Press **CMD** to save and advance.

**Wiegand Code Length**
When using a custom credential, enter the total number of bits to be received in Wiegand code including parity bits.

Press any select key or area to enter a number between 1-255 to equal the number of bits. Default is 26 bits.

An access card contains data bits for a site code, user code, and start/stop/parity bits. The starting position, location, and code length must be determined and programmed into the keypad. See Figure 13.

```
01110101101101010001100111
```

**Example:** Wiegand Code Length = 26 bits

**Figure 13: Wiegand Data Stream Bit Location**
**Site Code Position and Length**
Enter the site code start position and length in the data string. Press select area 2 to clear the site code start position and enter a number between 0-255. Press CMD to save. Default is 1.

Press select area 4 to clear the site code length and enter a number between 1-24. Press CMD to save. Default is 8.

**User Code Position and Length**
Define the user code start bit position and length. Press select area 2 to clear the user code position and enter a number between 0-255. Press CMD to save. Default is 9.

Press select area 4 to clear the user code length and enter a number between 16-64. Press CMD to save. Default is 16.

**Require Site Code**
Press the select key or area under YES to use a site code and press CMD to view the site code entry display. Press NO to advance to “Number of User Code Digits”. Default is NO.

In addition to user code verification, door access is only granted when any one site code programmed at the SITE CODE ENTRY option matches the site code received in the Wiegand string.
**SITE CODE 1:**

**NO OF USER CODE DIGITS:** 5

---

*Site Code Display:* You can program up to eight 8-digit site codes. The site code range is 0 - 16777214.

In the keypad display, enter site code 1 and press **CMD**. The display will ask for site code 2 followed by site code 3 and so on. When you have selected the site code you want to change, press **CMD**.

### Number of User Code Digits

The 734N module recognizes user codes from 4-12 digits long. Press any top row select key or area to enter a user code digit length. This number must match the user code number length being programmed in the panel. The device will recommend a number of user code digits based on the user code length. Default is **5**.

All bits are read and converted into a decimal number string. The number string is left padded with 0 (zero) if needed for long user code lengths.

**Example:**

- # decoded 1234567
- 10 digits 0001234567
- 4 digits 4567
Card Format Added/Changed (Custom Format)
When a custom card format is added successfully, the keypad displays **xx BIT ADDED**, where **xx** is the Wiegand code length. When the format is changed, the keypad displays **xx BIT Changed**. Press **CMD**. The menu returns to “Card Format Number”. Program another custom card format or press **CMD** to advance to **NO COMM WITH PNL**.

No Communication with Panel
Define the relay action when communication with the panel has not occurred for 5 seconds: **OFF, SITE, ANY, ON, or LAST**. Default is **OFF**. Press any select key or area to change the default relay action:

Press the first select key or area to choose **OFF** (Relay Always Off). The relay does not turn on when any Wiegand string is received. **OFF** does not affect any REX operation. If communication is lost during a door strike, the relay remains on for the door strike duration but turns off at the end of the door strike timer.

Press the second select key or area to choose **SITE** (Accept Site Code). Door access is granted when the Wiegand site code string received matches any site code programmed at Site Code. Refer to “Require Site Code” for more information.
Press the third select key or area to choose **ANY** (Any Wiegand Read). Access is granted when any Wiegand string is received.

Press the fourth select key or area to choose **ON** (Relay Always On). The relay is always on.

Press **CMD** to display additional actions. Press the first select key or area to choose **LAST** (Keep Last State). The relay remains in the same state and does not change when communication is lost.

**STOP**

Press any select key or area to initiate the stop routine. When programming is saved successfully, **STOP** displays and the module returns to the main 734N Menu. Test the module or remove the keypad harness to disconnect the keypad.
TEST THE 734N SERIES MODULE

734N MENU
When you connect the keypad to the module, the version number and release date display. Press CMD to enter the Diagnostic Menu.

Diagnostics Menu
Select YES to display Panel Communication Connect Status. Select NO to return to “734N Menu”.

Connect Status
To display the status of connection with the panel, press any top row key or select area.

Not Connected: The 734N cannot establish a connection to the panel over the network.

Bad Passphrase: The passphrase programmed into the 734N does not match the passphrase programmed into the panel.

Device Not Programmed: The device number is not programmed into the panel.

Duplicate Device: There is another device on the network with the same device number.

Transmit Time: The speed of the last transmission and acknowledgment in milliseconds.
Zone Status Display

Enter a zone number then press **CMD** to display its status. To display another zone, enter the zone number and press **CMD**. If the zone number entered isn’t programmed, the keypad displays **INVALID ZONE NO.**

<table>
<thead>
<tr>
<th>Zone</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone: 1</td>
<td>OKAY</td>
</tr>
<tr>
<td>Zone: 2</td>
<td>OPEN</td>
</tr>
<tr>
<td>Zone: 3</td>
<td>SHORT</td>
</tr>
</tbody>
</table>
## PUBLIC CARD FORMATS

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>H10301 26 bit</td>
<td>26</td>
<td>1</td>
<td>8</td>
<td>9</td>
<td>16</td>
<td>5</td>
</tr>
<tr>
<td>H10302 37 bit</td>
<td>37</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>35</td>
<td>11</td>
</tr>
<tr>
<td>H10302 37 bit</td>
<td>37</td>
<td>1</td>
<td>16</td>
<td>17</td>
<td>19</td>
<td>6</td>
</tr>
<tr>
<td>H10304 37 bit</td>
<td>39</td>
<td>1</td>
<td>17</td>
<td>18</td>
<td>20</td>
<td>7</td>
</tr>
<tr>
<td>Farpointe 39 bit</td>
<td>35</td>
<td>2</td>
<td>12</td>
<td>14</td>
<td>20</td>
<td>6</td>
</tr>
<tr>
<td>Corporate 1000 35 bit</td>
<td>48</td>
<td>2</td>
<td>22</td>
<td>24</td>
<td>23</td>
<td>7</td>
</tr>
</tbody>
</table>
The 734N Series was designed to have minimum impact on network performance. The modules are supervised in the panel by exchanging two data packets every five seconds. The payload of the data packets exchanged between the XR150/XR550 Series and the modules is a very small 18 bytes. The total traffic for all supervision, including network overhead, is roughly two kilobytes per minute per module. This would be equivalent to a very small email message.

If required, all of the traffic between the modules and the panel can be completely isolated from the rest of the existing network by connecting all of the modules and the panel to the same switch, then connecting the switch to the remainder of the network. All traffic between the modules and the panel would then be confined to the switch where they are connected, while still allowing the panel to communicate with the central station through the normal network.

The security of the modules is multi-faceted. Most importantly, 734N Series modules are single purpose network devices. All of the ports in the TCP/IP stack used in the modules are disabled and allow no inbound connections. This prevents a potential intruder from making any type of connection with the modules through the network. The modules communicate with the control panel by establishing an outbound only connection to the panel. All communication between the modules and the control panel is encrypted using 128-bit AES encryption. This is the same encryption standard approved and used by the U.S. government, including the National Security Agency for encrypting secret information.

734N Series encryption has not been evaluated by UL.
Packet Communication

- The module establishes panel communication using the TCP/IP protocol.
- At start up, the module opens a TCP/IP connection that remains open indefinitely.
- The socket can be closed by the module or panel after a time-out.
- The connection is re-established by the module after the time-out.
- A pair of supervision packets are sent every 5 seconds.
  - The payload for each packet is 18 bytes and the total traffic, including overhead, is approximately 2 kilobytes per minute for each 734N Series module.
  - Non-Supervision messages have a payload range of 18-50 bytes.
**COMPLIANCE LISTING SPECIFICATIONS**

**UL Access Control**

The access relay must be configured as fail-safe or fail-secure as determined by the local Authority Having Jurisdiction (AHJ). This system is not intended to be used in place of listed panic hardware.

For listed installations, the 734N or 734N-POE must be installed within the protected area.

The power supply must be a listed commercial burglary/household fire, power limited, Class 2 with a compatible voltage range for the product. The 734N requires a 12 or 24 VDC power source. The 734N-POE can be powered by a 12 or 24 VDC or UL 294 listed POE switch.

For UL Access and Commercial Burglary, the 734N-POE must be installed inside a UL listed DMP metal enclosure such as a Model 341. Refer to Mount the Device for mounting instructions.

POE power to be supplied by a UL 294 Listed, power limited, injector providing 44-57 VDC and 15.40 W for maximum output (POE).

POE power to be supplied by a UL 294 Listed, power limited, injector providing 50-57 VDC and 30.0 W for maximum output (POE+).

POE power to be supplied by a UL 294 Listed POE+ Midspan or Endspan providing 44-57 VDC and 30 W for maximum output.
This product is not intended for outside wiring as covered by Article 800 in the National Electrical Code, NFPA 70.

Category 5e cabling is minimum performance category recommended. The performance category utilized should match the transmission speed required at the installation site.

Compliance with IEEE 802.3 (at or af) specifications was not verified as part of UL 294B.

The equipment is intended to comply with the following sections of the National Electrical Code, ANSI/NFPA 725.121.

The minimum conductor gauge permitted to connect between the PSE or power injector and the PD shall be 26 AWG (0.13 mm²) for patch cords; 24 AWG (0.21 mm²) for horizontal or riser cable.

Use Cat 5 568-B wiring for connections. See Figure 14.

The equipment shall be provided with information concerning the power sourcing equipment (PSE) connector configuration (for example, Alternative A or Alternative B or both), and the maximum power class supported by the PSE.

The 734N-POE is compatible with the Altronix Netway 1.

![Figure 14: Cat 5 568-B Wiring](image)
**ULC Commercial Burglary (XR150/XR550 Series Panels)**

When using the zones of the 734N in a listed application, place the module in a listed enclosure and connect a DMP Model 307 Clip-on Tamper Switch to the enclosure programmed as a 24-Hour zone.

The 734N Access Control features have not been investigated by ULC.

The 734N zones can be used in a Low Risk application. For Medium or High Risk applications, refer to the Dual Zone Protection diagram in the XR150/XR550 Canadian installation guide.
CERTIFICATIONS

FCC Part 15
California State Fire Marshal (CSFM)
NIST AES Algorithm Certificate #1937

Underwriters Laboratory (UL Listed)

734N

- **ANSI/UL 294**
  - Level I: Access Control System Units
  - Level IV: Destructive Attack, Line Security, and Standby Power
- **ANSI/UL 609**
  - Local Burglar Alarm Units And Systems
- **ANSI/UL 1076**
  - Proprietary Burglar Alarm Units And Systems
- **ANSI/UL 1023**
  - Household Burglar-Alarm System Units
- **ANSI/UL 1610**
  - Central Station Burglar-Alarm Units
- **ULC S304**
  - Central And Monitoring Station Burglar Alarm
- **ULC/ORD-C1076**
  - Proprietary Burglar
- **ULC Subject-C1023**
  - Household Burglar

734N-POE

- **ANSI/UL 294**
  - Level I: Access Control System Units
  - Level IV: Destructive Attack, Line Security, and Standby Power
- **ANSI/UL 609**
  - Local Burglar Alarm Units And Systems
- **ANSI/UL 1076**
  - Proprietary Burglar Alarm Units And Systems
- **ANSI/UL 1610**
  - Central Station Burglar-Alarm Units
PRODUCT SPECIFICATIONS

Primary Power
8.5 VDC to 28.5 VDC if 12/24 VDC
Reader Output at 12 VDC: 10.12 - 13.13 VDC
Reader Output at 24 VDC: 20.23 - 26.28 VDC

Current Draw
Standby
346 mA at 12 VDC (includes 200 mA for proximity reader)
+1.6 mA per active zone

Alarm
348 mA at 12 VDC (includes 200 mA for proximity reader)
+10 mA with Annunciator ON
+2 mA per faulted zone

Form C Relay
35 mA at 12/24 VDC

Output 1 and 2
12.5 mA at 12 VDC

When powered from POE
Standby
243 mA (includes 200 mA for proximity reader)
+1.6 mA per active zone

Alarm
273 mA (includes 200 mA for proximity reader)
+10 mA with Annunciator ON
+2 mA per faulted zone
<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Voltage (POE)</td>
<td>12 VDC</td>
</tr>
<tr>
<td>Maximum Power Draw (POE)</td>
<td>12.95 W</td>
</tr>
<tr>
<td>Total Available Output Current</td>
<td>750 mA</td>
</tr>
<tr>
<td>Zones</td>
<td>5 VDC, 2 mA max</td>
</tr>
<tr>
<td>Dimensions</td>
<td>4.5 W x 2.75 H x 1.75 D in</td>
</tr>
<tr>
<td></td>
<td>11.43 W x 7 H x 4.45 D cm</td>
</tr>
<tr>
<td>Weight</td>
<td>8 oz 0.23 kg</td>
</tr>
</tbody>
</table>
# READERS AND CREDENTIALS

<table>
<thead>
<tr>
<th><strong>125 kHz Proximity Readers</strong></th>
<th><strong>125 kHz Proximity Credentials</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>P-300 Cascade Proximity reader</td>
<td>PSC-1 Standard light proximity card</td>
</tr>
<tr>
<td>P-500 Alps proximity reader</td>
<td>PSK-3 Proximity key ring tag</td>
</tr>
<tr>
<td>P-620 Denali Proximity Reader with keypad</td>
<td>PSM-2P ISO imageable proximity card</td>
</tr>
<tr>
<td>P-640 Patagonia proximity reader with keypad</td>
<td>1306 ProxPatch™</td>
</tr>
<tr>
<td>MP-5365 MiniProx™ proximity reader</td>
<td>1326 ProxCard II® card</td>
</tr>
<tr>
<td>MX-5375 MaxiProx® proximity reader</td>
<td>1346 ProxKey III® access device</td>
</tr>
<tr>
<td>PP-6005B ProxPoint Plus® proximity reader</td>
<td>1351 ProxPass®</td>
</tr>
<tr>
<td>PR-5355 ProxPro® proximity reader with keypad</td>
<td>1386 ISOProx II® card</td>
</tr>
<tr>
<td>PR-5455 ProxPro® II proximity reader</td>
<td></td>
</tr>
<tr>
<td>TL-5395 Thinline II® proximity reader</td>
<td></td>
</tr>
</tbody>
</table>
### 13.56 MHz Wiegand Smartcard Readers

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delta3*</td>
<td>Mullion mount smartcard reader</td>
</tr>
<tr>
<td>Delta5*</td>
<td>Single gang box mount smartcard reader</td>
</tr>
<tr>
<td>Delta6.4*</td>
<td>Smartcard reader with keypad</td>
</tr>
<tr>
<td>CSR-35P</td>
<td>Bluetooth smartcard reader</td>
</tr>
</tbody>
</table>

### 13.56 MHz OSDP Smartcard Readers

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delta3- OSDP*</td>
<td>Mullion mount OSDP smartcard reader</td>
</tr>
<tr>
<td>Delta5- OSDP*</td>
<td>Single gang box mount OSDP smartcard reader</td>
</tr>
<tr>
<td>Delta6.4- OSDP*</td>
<td>OSDP smartcard reader with keypad</td>
</tr>
<tr>
<td>CSR-35P- OSDP</td>
<td>Bluetooth OSDP smartcard reader</td>
</tr>
</tbody>
</table>

### 13.56 MHz Smartcard Credentials

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DE2</td>
<td>MIFARE® DESFire® EV2 smartcard</td>
</tr>
<tr>
<td>CSK-2</td>
<td>MIFARE® DESFire® EV2 keyfob smartcard</td>
</tr>
</tbody>
</table>

OSDP capability for 734N Series modules was designed and tested with Farpointe readers. Other reader brands may be usable, but have not been tested with 734N Series modules and are not deemed compatible.

*Delta Proximity Readers and Credentials not evaluated by UL.*