

# ACX Series

## Access Controller for Ethernet

The ACX Series controllers are the industry's most powerful all-in-one access controllers designed for both critical government and private sector security applications.



# ACX Series

## Access Controller for Ethernet

### Features



These Andover Continuum controllers are just as attractive for one to eight reader installations.

#### Onboard I/O for Access Control

Schneider Electric understands that not all security installations are the same. The ACX Series has been designed with flexibility in mind. There are two base hardware models: the 5720 and the 5740. The 5740 has double the universal inputs, reader inputs, and outputs onboard as the 5720. These models come standard with the following I/O configurations:

ACX Series	Model 5720	Model 5740
Universal Inputs	6	12
Reader Inputs	4	8
Tamper Input	1	1
Digital Lock Outputs	2	4

The ACX is designed to support both entry and egress readers while supplying +5 or +12 VDC to each reader.

#### IT Friendly with IPSec/IKE Protocols For National Security

Communications with the ACX is not only fast, supporting data transfer rates up to 100 Mbps, but secure with IPSec/IKE encryption and authentication. Encryption (up to 192-bit) and authentication may be enabled for communication to and from Andover Continuum workstations and controllers. Andover Continuum utilizes Internet Protocol Security (IPSec) and Internet Key Exchange (IKE) for its encryption to assure tamper-proof communications over the Ethernet.

#### Internal support for 480,000 Personnel Records

The ACX Series is perfect for large systems. A controller servicing up to 8 areas can hold 480,000 personnel records. With such a large local storage capacity, access decisions can be made swiftly without waiting for validation by a remote server.



#### PRODUCT AT A GLANCE

- Native Ethernet IP Access Controller
- Access control for 1 to 8 readers
- Powerful CPU with 128 MB of DDR SDRAM and 32 MB Flash
- Dedicated processor for reader inputs
- Battery backed storage for up to 480,000 personnel records
- Flash for easy online software updates
- Andover Plain English (PE) language simplifies programming
- Compatible with CyberStation v1.8 and higher software. (CyberStation v1.74 SP2 may be used with limited feature set.)
- Secure 10/100 Ethernet communications via IPSec/IKE Encryption with hardware acceleration for Authentication and Encryption
- Easy configuration using embedded configuration web pages
- Support for Area Lockdown and Condition "Threat" Level based access rights
- Support for 2nd Generation Continuum XDrivers
- HSPD-12/FIPS 201 Ready

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### Features (continued)

#### 128 MB of Dynamic RAM and 32 MB of Flash Memory

Each ACX Series controller comes standard with 32 MB of flash memory and 128 MB of DDR SDRAM. The flash memory is used to preserve 12 MB of application and run-time data. The dynamic RAM is partitioned for dedicated functions: a full 12 MB for applications, 48 MB for personnel records and 8 MB for the operating system. The unused memory is available for future enhancements.

Personnel record data is preserved using on-board batteries that can hold the data for at least 7 days without the use of an external UPS. If the controller has its application stored in flash and power loss lasts longer than what the battery can supply for RAM, the controller will send a message to CyberStation and request that the personnel records automatically be reloaded when the power returns.

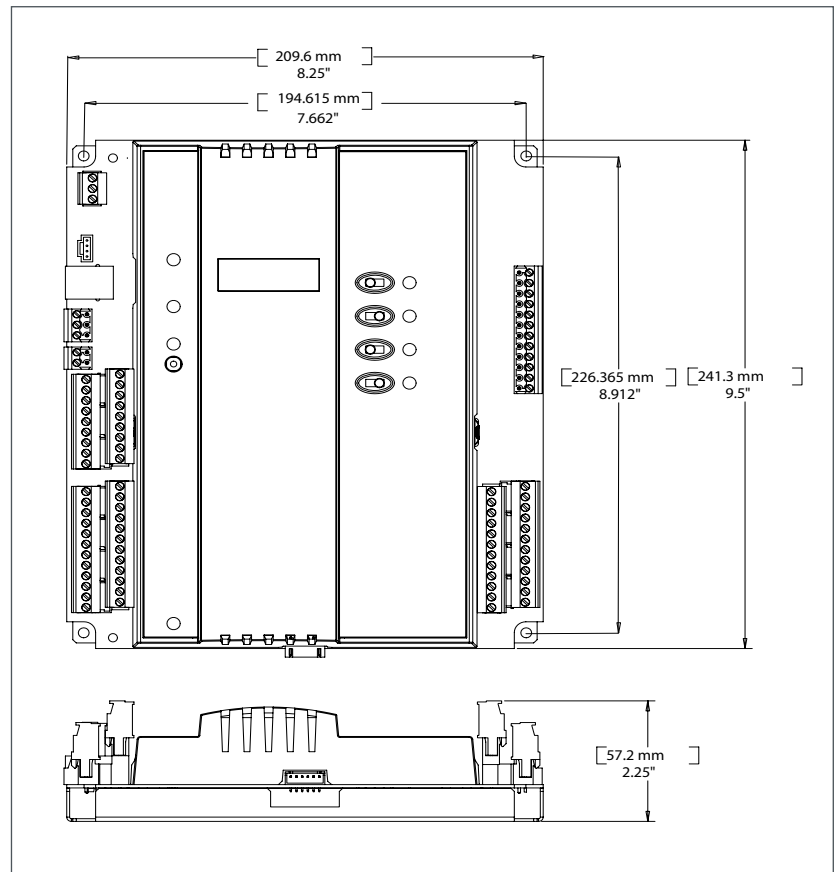
#### Advanced Reader Inputs with Dedicated Processor

The reader inputs are powered by a dedicated processor allowing the ACX Series controllers to support current and future devices for advanced applications. The ACX Series hardware is ready to support 260-bit encrypted data messages from the reader.

#### Support for Area Lockdown

It is important to be able to contain potential threats when they are detected. The ACX controller can respond to Area Lockdown commands set from Andover Continuum software providing a quick method of sealing off areas. A simple click of a graphic or an automatic program response is all that is needed to disable card readers and exit requests in any given area. First responder personnel can still gain access to the area if their record is marked with "executive privilege".

#### Dimensional Drawings



# ACX Series

## Access Controller for Ethernet

### Features (continued)

#### Condition “Threat” Level-Based Access Rights

The ACX Series controller can adapt access rights to a change in condition or “threat” levels. Each personnel record can now be assigned a clearance level for each area to which they have access. When the condition is more severe than the person’s clearance level then access is automatically denied. The Condition Level may be set manually through CyberStation v1.8 or automatically through a program. A program can even be used to monitor national threat levels and adjust Andover Continuum Condition Levels accordingly.

#### xP Module Support

Each model supports the use of two xP expansion modules plus an xP-Display unit. The xPBD4 module is ideal for expanding the ACX for special or ADA access to doors. Modules can also be used to provide a cost effective entry reader only solution.

#### Wired Infinet or wireless Infinet support

The ACX Series controller can support up to 32 Infinet nodes. The RS-485 programmable port can be set to support a wired or wireless Infinet field bus. To use a wireless mesh network, plug an Andover Continuum Wireless Adapter into the Service Port.

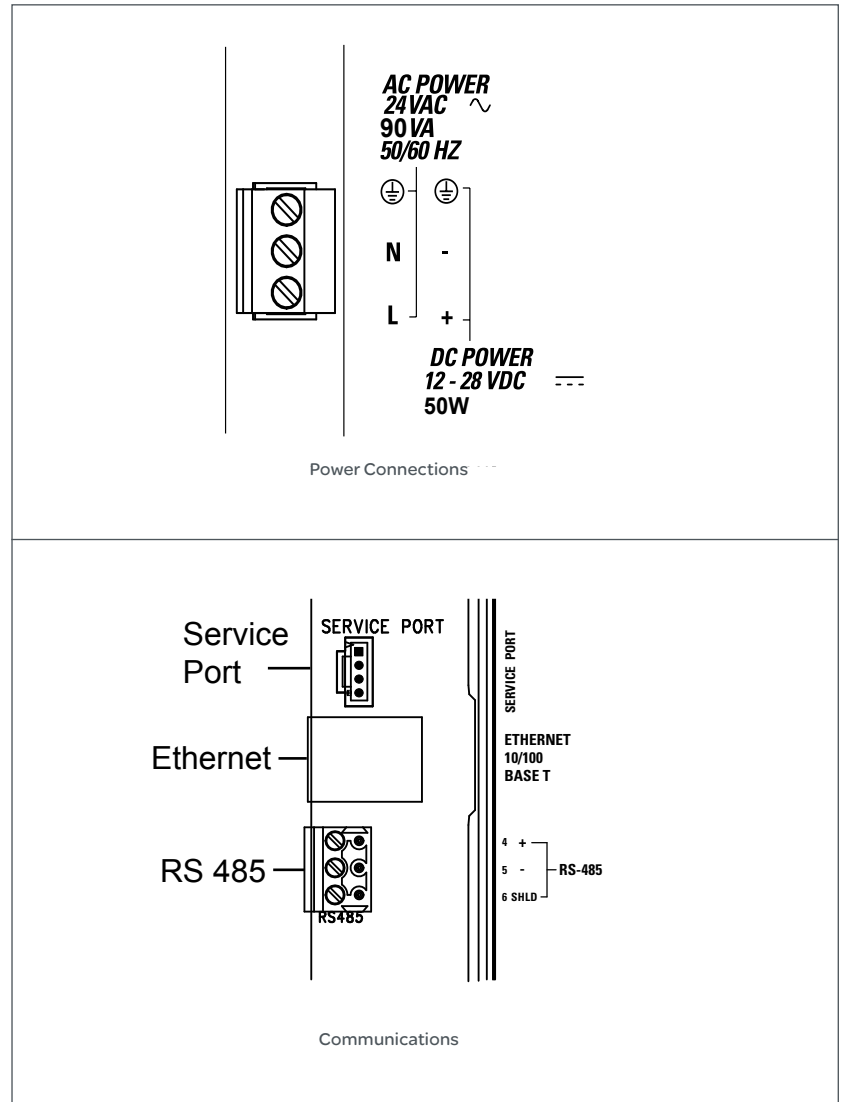
#### Full Credential Format for Support for 260-bits

The ACX Series controllers are ready to support a wide range of card formats. Ideal for retrofits, an ACX controller lets you preserve existing cards by accepting standard formats (Weigand, ABA, HID Corporate-1000, CardKey) as well as custom formats (Custom Weigand, Custom ABA). The ACX can support formats up to 260-bits making the ACX Series controllers ready for government installations that must meet HSPD-12 and FIPS 201 standards.

#### SNMP Network Management and Alarm Support

SNMP (Simple Network Messaging Protocol) messages may be sent to network monitoring software such as HP Openview to inform IT managers as to the health and presence of the access controller on the corporate network. The

#### Dimensional Drawings



ACX Series controller also supports the SNMP Alarming option.

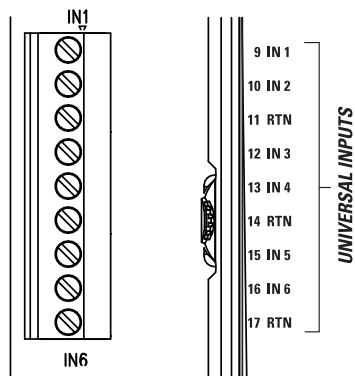
#### XDriver Support

The ACX Series is available with XDriver support for 2nd Generation Continuum XDrivers to interface with third-party devices. For example, Modbus is a common protocol used in lighting control and power monitoring products. Using a Modbus XDriver on an ACX controller allows the security system to be coordinated with emergency lighting and power systems for added security benefits.

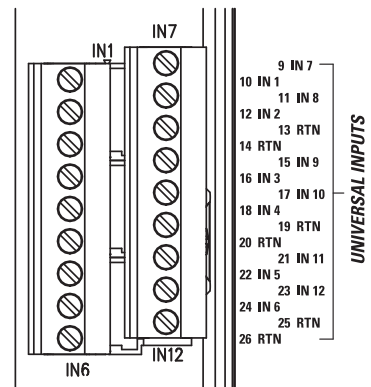
# ACX Series Access Controller for Ethernet Features (continued)

## Dimensional Drawings

### INPUT CONNECTIONS

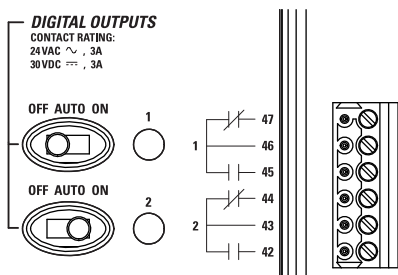


Model 5720

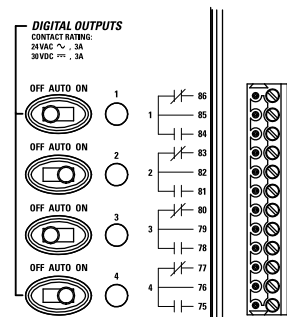


Model 5740

### OUTPUT CONNECTIONS

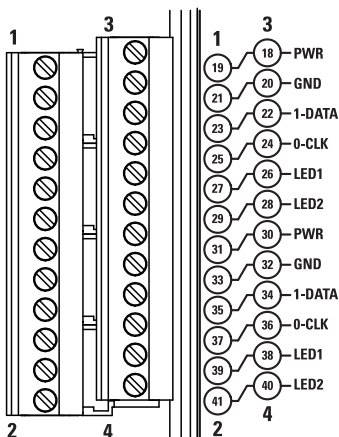


Model 5720

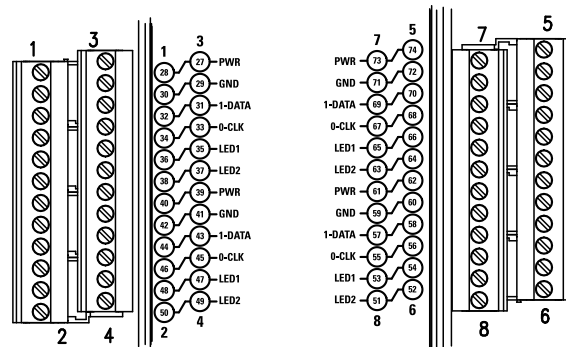


Model 5740

### CARD READER CONNECTIONS



Model 5720



Model 5740

# ACX Series

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### Specifications

#### ACX Series Access Controller



#### Electrical

##### Power

24 VAC, 50/60 Hz  
12-28 VDC auto-sensing  
+10% -15%, 50/60 Hz

##### Power Consumption

90 VA (AC)  
50 W (DC)

##### Real Time Clock

Battery-backed by an internal battery

#### Mechanical

##### Operation Environment

32°-122°F (0-50°C),  
10-90% RH (non-condensing)

##### Dimensions

8.25"W x 9.5"L x 2.25" H  
(209.6 W x 241.3 L x 57.2 H mm)

##### Weight

1.73 lbs. (0.78 kg.)

##### Enclosure Type

UL open class, flammability rating  
of UL94-5V, IP 10

##### Mounting

Wall mount using attached fasteners.  
(Andover Continuum NEMA 1-style  
enclosure available.)

#### Battery

##### Internal Battery

NiMH, 3.6 VDC, 800 mAh

##### Battery Backup

Minimum 7 days DDR SDRAM  
and real-time clock

#### Communications

##### Comm. Error Checking

International Standard CRC 16

##### Ethernet LAN Interface

10/100 Ethernet; ethernet cable  
with RJ-45 connector.

##### Serial Comm. Interface

One RS-485 programmable port,  
software configurable for Infinet, wireless  
adapter, RoamIO<sub>2</sub> or third-party system.

#### Connections

##### Power

3-position connector on left side of  
module for direct connection to a 24 VAC  
or 12-28 VDC external power source.

##### Ethernet

RJ-45 connector for 10/100 Ethernet

#### Inputs

##### Cabinet Tamper Input

2-pin connector for cabinet tamper switches  
located on the cabinet door and wall.

##### Universal Inputs

6 (Model 5720) or 12 (Model 5740)  
Voltage (0-5.115 VDC); Temperature -30°F  
to 230°F (-34°C to 110°C), Digital (on/off),  
Counter (up to 4Hz at 50% duty cycle,  
125 ms min. pulse width).

Supervised Alarm (single or double resistor).

Current input (0 - 20 mA) using external  
250 ohm resistor

##### Input Voltage Range

0-5.115 volts DC

##### Input Impedance

10K ohm to 5.120V or 5M ohm  
with pull-up resistor disabled

##### Input Resolution

5.0 mV

##### Input Accuracy

±15mV (±0.56°C from -23°C to +66°C or  
±1°F from -10°F to +150°F)

#### Alarm Inputs

6 (Model 5720) or 12 (Model 5740)  
supervised inputs. Single or double  
resistor supervision, series or parallel.

#### Card Reader/Keypad Inputs

4 (Model 5720) or 8 (Model 5740) inputs. Each  
input can be connected to a card reader, dedi-  
cated keypad, or reader/keypad combination.

#### Card Reader/Keypad

##### Card Reader Type

Wiegand, ABA, or CardKey  
(jumper selectable)

##### Max Number of Bits/Card

Up to 260 bits/card

##### Card Reader Power

+5 VDC @ 120 mA  
+12 VDC @ 180 mA

(jumper selectable)

##### Max Wiring Distance (Reader to ACX)

500 ft. (152.4 m) using 18 AWG  
200 ft. (60.96 m) using 22 AWG

#### Door Outputs (Form C Relay)

##### Door Outputs

2 (Model 5720) or 4 (Model 5740) Form C  
relays with a manual override switch

##### Output Rating

24 VAC/30 VDC @ 3 A

##### Card Reader LED Output

(2) each, open collector;  
up to 100 mA

##### Output Protection

5000 V isolation, 47V MOV  
on each output

##### Overrides

3-position manual override switch on each  
output for manual control of relay.  
LED override status indicator.

# ACX Series

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### Specifications (continued)



## ACX Series Access Controller

### User LEDs

#### Status Indicator LEDs

CPU CPU Active

RS-485

TX: Transmit Data

RX: Receive Data

ETHERNET

ACT/LINK: Indicates status of Ethernet activity and link.

10/100 Mbps: Not lit for 10 Mbps  
Orange for 100 Mbps

EXP PORT POWER

Expansion module 24 VDC power.

### Push Button Switches

#### Clear Memory

RESET/Clear Memory

#### Reset IP Address

(On PC board) Resets network address settings in flash memory and restores all non-volatile settings to factory defaults.

### Dip Switches

Universal inputs, 10 K ohm  
pull-up disable/enable

### General

#### Microprocessor

Freescale "Coldfire" MCF5275  
running at 150 MHz

#### Memory

DDR SDRAM: 128 MB  
Flash: 32 MB

### Agency Listings

FCC Class A, ICES-003, CE,  
C-Tick, WEEE, UL/CUL 916,  
UL 294, UL 1076

### Models

#### ACX-2-0000000

ACX 5720, 4 Readers,  
0 Andover Continuum Infinet nodes,  
6 in, 2 DO, 10/100bT

#### ACX-4-0000000

ACX 5740, 8 Readers,  
0 Andover Continuum Infinet nodes,  
12 in, 4 DO, 10/100bT

### Options

008 8 Infinet Nodes  
032 32 Infinet Nodes  
H High Encryption  
X XDriver Enabled for  
third-party communications  
A Advanced Alarming  
(includes SNMP Alarming)  
C Critical Security  
(includes Condition  
"Threat" Level feature)

### Export Classification

The ACX Series Access Controller is classified in ECCN 5A002 and its software package is classified in ECCN 5D002. These items are controlled by the Bureau of Industry and Security (BIS), U.S. Department of Commerce, because of their encryption functionality. BIS authorized the export and reexport of the ACX Series Access Controller and its software package under License Exception ENC in CCATS # G055204.

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