



AC-1

I/O MODULE

The AC-1, *Continuum's* access control module, provides full I/O for an access controlled door or portal in one compact module. The AC-1 can be located near an access controlled door for localized control and reduced wiring costs; or several AC-1 modules can be grouped together and DIN rail-mounted for centralized control.

The AC-1 provides a Wiegand card input for Wiegand swipe and proximity type cards, reading up to 64 bits per card. Reader power is 50 mA at 5V. The module itself can be powered by a voltage source that can range from 10-28 VDC.

The AC-1 has two 5 A, Form C relays—one for the door lock and a second for local alarm annunciation. Each output has an integral hand-off-auto switch for manual operation, and software feedback of the switch position.

Up to three supervised alarm inputs can be used for door status contacts, request-to-exit devices, a cabinet tamper switch, or any other two-state or three-state (on/off/trouble) alarm device.

KEYPAD CONTROL

The AC-1 supports Wiegand output keypads. To simplify installation and reduce wiring costs, a combination Wiegand output reader/keypad may be used. In this case, the keypad data comes into the module via the reader data lines. In addition, the AC-1 allows *separate* wiring of both a Wiegand output keypad *and* reader.

ACCESS CONTROL

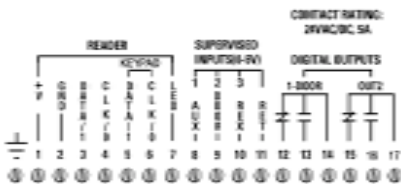
During normal operation of the AC-1, access decisions are made in the *Continuum* NetController CPU, which provides storage for up to 75,000 "local" personnel records. In addition, the NetController's event buffer is software-configurable to allow for the most optimized memory usage. If network communications are interrupted, the AC-1 will revert to a programmable degrade mode of operation, providing uninterrupted card access using site codes and other degrade mode parameters stored in non-volatile EEPROM in each AC-1 module.

A door can be configured to operate based on site code only, site code plus card, card plus personal ID number (PIN), or keypad only. The door's operating mode can even be changed based on time-of-day or other events for optimum flexibility through Andover Controls' easy-to-use *Plain English*® programming language. Each keypad can also permit entry of a duress alarm code that can initiate an alarm sequence at any AC-1 controller or at the *Continuum* workstation.

Time-based anti-passback and entry/egress anti-passback are available to prevent tailgating. Entry/egress anti-passback is system-wide and can be performed by readers located on different AC-1 controllers across the network.

Using *Plain English*, the AC-1 can also be used for custom access control sequences such as two-man rule, optical turnstile control, and man trap configurations.

SPECIFICATIONS



ELECTRICAL

Power Consumption: 2.0 W at 10-28VDC plus reader power consumption.

Overload Protection: 0.5 A resettable fuse with transient voltage suppressor (TVS) and reverse polarity protection

INPUTS/OUTPUTS

Inputs

Card Readers: 1

Card Reader Type: Supports Wiegand swipe and proximity readers

Maximum Number of bits/Card: 64

AC-1 I/O MODULE CONTINUED

Card Reader Power:	5 VDC, \pm 3%, 50 mA, Current Limited
Distance, Card Reader to AC-1:	500 ft. max. using 18-ga. wire 200 ft. max. using 22-ga. wire
Alarm Inputs:	Up to 3 supervised inputs. Single or double resistor supervision, series or parallel.
Input Protection:	Transient voltage suppressor (TVS) on each input
Outputs	
Door Outputs:	2 Form C relays
Output Rating:	5 A @ 24 V AC/DC
Output Protection:	5,000 V isolation 270 V metal oxide varistors (MOVs) on each output
Overrides:	3-position manual override switch on each output for manual control of relay. LED override status indicator.
Override Feedback:	Override detection and software feedback provided for each output.
Reader LED Output:	Open collector; up to 100 mA.
Inputs/Output Connections:	Two-piece, 18-position removable terminal block

USER LEDS/SWITCHES

Status Indicator LEDS	Power	Power Indicator
	Comm	TD Indicator
	Override	Common Override Indicator
	Status	Service/Wink Indicator
	Out1 - Out2	Two Output Status Indicators
	+5 V Reader Power	5 V Reader Power Indicator
	Switches	
	Commission	
	Reset	



AC-1Plus

I/O MODULE

The AC-1Plus, *Continuum's* full-feature access control module, provides full I/O for an access controlled door or portal in one compact module. The AC-1Plus supports multiple card formats, ADA (Alternate Door Access) doors, and multiple reader LED patterns. In addition, built-in reader supervision is provided—one LED will periodically check for voltage, absence of voltage, or shorts, and expose any of these conditions to the user for security purposes. The AC-1Plus can be located near an access controlled door for localized control and reduced wiring costs; or several AC-1Plus modules can be grouped together and DIN rail-mounted for centralized control.

The AC-1Plus provides a Wiegand card input for Wiegand swipe and proximity type cards, reading up to 64 bits per card. The AC-1Plus also supports CardKey cards, reading up to 34 bits per card, and ABA card readers. Card reader power is 50 mA at 5V.

The AC-1Plus has two 5 A, Form C relays—one for the door lock and an auxiliary output for local alarm annunciation, for example. Each output has an integral hand-off-auto switch and software feedback of the switch position.

The AC-1Plus provides five supervised input channels, configurable as an exit request, door switch sensor, ADA exit request, bond sensor, or as a general purpose supervised input point.

KEYPAD CONTROL

The AC-1Plus supports Wiegand output keypads. To simplify installation and reduce wiring costs, a combination Wiegand output reader/keypad may be used. In this case, the keypad data comes into the module via the reader data lines. In addition, the AC-1Plus allows *separate* wiring of both a Wiegand output keypad *and* reader.

ACCESS CONTROL

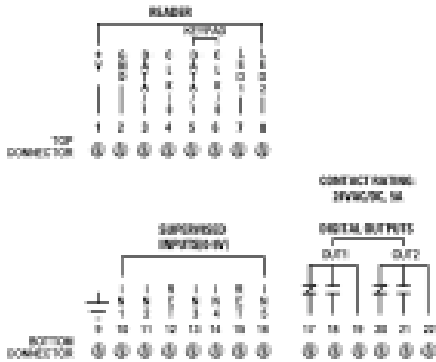
During normal operation of the AC-1Plus, access decisions are made in the *Continuum* NetController CPU, which provides storage for up to 75,000 "local" personnel records. In addition, the NetController's event buffer is software-configurable to allow for the most optimized memory usage. If network communications are interrupted, the AC-1Plus will revert to a programmable degrade mode of operation, providing uninterrupted card access using site codes, card formats, and other degrade mode parameters stored in non-volatile EEPROM such as multiple card types (including custom format) and four site codes per each card type. ADA doors are also supported in degrade mode.

A door can be configured to operate based on site code only, site code plus card, card only, card plus personal ID number (PIN), or keypad only. The door's operating mode can even be changed based on time-of-day or other events for optimum flexibility through Andover Controls' easy-to-use *Plain English*[®] programming language. Each keypad can also permit entry of a duress alarm code that can initiate an alarm sequence at any AC-1Plus controller or at the *Continuum* workstation.

Time-based anti-passback and entry/egress anti-passback are available to prevent tailgating. Entry/egress anti-passback is system-wide and can be performed by readers located on different AC-1Plus controllers across the network.

Using *Plain English*, the AC-1Plus can also be used for custom access control sequences such as two-man rule, optical turnstile control, and man trap configurations.

SPECIFICATIONS



ELECTRICAL

Power Consumption:	2.0 W at 10-28VDC plus reader power consumption.
Overload Protection:	0.5 A resettable fuse with transient voltage suppressor (TVS) and reverse polarity protection

INPUTS/OUTPUTS

Inputs

Card Readers:	1
Card Reader Type:	Supports Wiegand, Proximity, CardKey, and ABA readers
Maximum Number of bits/Card:	64 for Wiegand and Proximity; 34 for CardKey
Card Reader Power:	5 VDC, ± 3%, 50 mA, Current Limited
Distance, Card Reader to AC-1Plus:	500 ft. max. using 18-ga. wire 200 ft. max. using 22-ga. wire

Alarm Inputs: 5 supervised inputs. Single or double resistor supervision, series or parallel.

Input Protection: Transient voltage suppressor (TVS) on each input

Outputs

Door Outputs:	2 Form C relays
Output Rating:	5 A @ 24 V AC/DC
Output Protection:	5,000 V isolation 270 V metal oxide varistors (MOVs) on each output
Overrides:	3-position manual override switch on each output. LED override status indicator.
Override Feedback:	Override detection and software feedback provided for each output.
Reader LED Outputs:	2 open collector; up to 100 mA. Choice of 3 LED patterns
Inputs/Output Connections:	Removable terminal blocks: (2) 8-position; (1) 6-position

USER LEDS/SWITCHES

Status Indicator LEDS

Power	Power Indicator
Comm	TD Indicator
Override	Common Override Indicator
Status	Service/Wink Indicator
Out1 - Out2	Two Output Status Indicators
+5 V Reader Power	5 V Reader Power Indicator

Switches

Commission
Reset