ACURT2 & ACURT4
Networked Intelligent Controllers

Overview

The ACURT2 and RT4 access control and alarm monitoring panels set the industry standard for performance, reliability, flexibility and cost effectiveness. They are designed and manufactured for use with the Topaz Intelligent Access Control software. Based on a true 32-bit platform, each panel contains 16 MB of battery backed-up RAM allowing high speed transactions and support for up to 16,000 cardholders. The ACURT2 provides connection for up to two readers. The ACURT4 provides connection for up to four readers. On-board programmable relays and supervised alarm inputs are provided on each panel. I/O capability can be expanded through the use of RIM and RRM modules connected remotely through an RS-485 interface. The ACURT2 and ACURT4 have an on-board high speed LAN/WAN connection. They also allow for connection through RS-485, RS-232 and dial-up. This topology provides the installation flexibility required by a variety of facilities.

Reader Support

Directly supports two (RT2) or four (RT4) readers. Readers may consist of magnetic stripe, Wiegand, proximity, barcode or biometric technologies, keypad, or combined reader/keypad. Keypads may be used for controlled entry, masking and unmasking of alarm devices and activation of a duress alarm. Supports variable card formats to enable the use of a facility's existing cards. Also supports multiple site or facility codes.

Processor Speed

True 32-bit Motorola processor assures high speed downloads, fast access and real-time alarm reporting. 16 MB memory support for up to 16,000 cardholder records in each panel.

Supervised Inputs

Includes supervised inputs for door contacts, motion detectors, glass break sensors and other alarm devices as well as request to-exit devices and electric door hardware. Also provides programmable auxiliary relays (outputs) for interface with other building systems.

LAN Connection, Dial-Up Option

On-board 10BaseT LAN connection is standard. Also supports RS-485 connection for multi-dropping additional ACUs using a single IP address. Optional dial-up allows field panels to work off-line. Dial-up works for remote database download, historical activity and alarm reporting.

ACURT2

Standard Features

- **Battery Backup - up to 16 MB**
- **On-board Programmable relays and supervised alarm inputs**
- **I /O capability can be expanded**
- **On-board high speed LAN/WAN**
- **Connections can also be through RS-485, RS-232 or Dial-Up**
- **Instant Access**
- **Data Guard**
- **Local Anti-Passback**
- **FLASH Memory**

Instant Access

Instant Access ensures that there is no waiting for access during the download of information to the field panels. RS-485 (4 wire) and RS-232 connectivity is standard, up to 115 K baud.

Local Anti-Passback

Local Anti-Passback feature is a method of preventing an ID device from gaining access to an area more than once, without it first being used to exit from that area.

FLASH Memory

Operating firmware is stored in FLASH memory for easy updates from the PC; no need to go to each panel and replace chips. Updates can occur over the LAN/WAN, RS-485, RS-232 and dialup connections.

Construction & Design

Slip hinge metal enclosure with tamper switch provides ease of installation and service as well as security. Connection diagram overlay allows for easier wiring and installation as well as viewing of system diagnostic LEDs.

Battery Backup

On-board battery charger with batteries maintains the ACU board and direct-connected readers in the event of a power failure.

Data Guard

Data Guard is a unique download utility, which eliminates the potential for database corruption during downloads to field panels.

System Description

Field panels are the core of any access control system. When used with Topaz software, the 32-bit processor based ACURT2 and RT4s set a high industry standard for access control and reliability. They are designed to operate with the server using RS-485, RS-232 or an industry-standard LAN/WAN connection. All access decisions and alarm monitoring activity are performed locally at the ACURT2 and RT4 panel based on parameters that were downloaded from the server - thus minimizing network traffic, and minimizing the time from presenting a card to completion of the access transaction. Whether or not the server is on-line with the panel, the panel will continue to monitor alarms and process access requests based on which access points (doors) each cardholder is allowed to pass through, and when. The ACURT2 and RT4 can also operate in a standalone mode only connecting to the server when necessary through a dial-up phone line.

If an ACURT2 or RT4 is connected to the server through a LAN/WAN or dial-up connection, additional ACURT units may be connected via multi-drop RS-485. This reduces cost and number of IP addresses or dial-up connections required for the facility.

Up to 64 RT2s or RT4s may be connected to a single Topaz server. Each unit is mounted in a sturdy sheet metal enclosure with a removable hinged door, a keyed lock and a cabinet tamper switch. It is also supplied with a plug-in transformer, which provides power to the unit. A built-in battery charger is provided along with a set of batteries to support the unit's operation during a power failure. These backup batteries supply power to the unit, readers and to its built-in communication devices such as the LAN/WAN, serial communication ports and optional dial-up modem. If desired, an external power supply (UL-UPS-24V) can be added for door strikes, and for external ACU expansion modules, readers and devices.

The ACURT2 includes direct connections for two readers/keypads of virtually any type including magnetic stripe, proximity, bar code, biometric and others. The RT4 includes connections for up to four readers/keypads. Also on board are all of the inputs and outputs necessary to support the operation of the access controlled doors including door position switch, request-to-exit device, and electric door release hardware. In addition, auxiliary inputs and outputs are provided for most application needs. More I/O is achieved through the use of RIM and RRM modules which can be mounted remotely from the RT panels using an RS-485 connection. This reduces wiring and installation cost by putting your alarm monitor points and control relays where they are needed.

ACURT field panels support variable card formats, multiple reader technologies and multiple site/facility codes. They also support elevator control, antipassback, and programmable input to output linking. This gives them a level of flexibility unmatched by any other access control unit.

Each ACURT comes standard with 16 MB of battery backed-up RAM which supports a cardholder database of over 16,000 records including access privileges, time schedules, holiday schedules, security areas, access groups and more. The memory is dynamically allocated so that any memory not used for storing cardholder records is available to store events and transactions. Even with full use of the cardholder record memory, a minimum of 1,000 transactions may be stored for subsequent upload to the server where it can be archived for future retrieval and report generation.

System Diagram
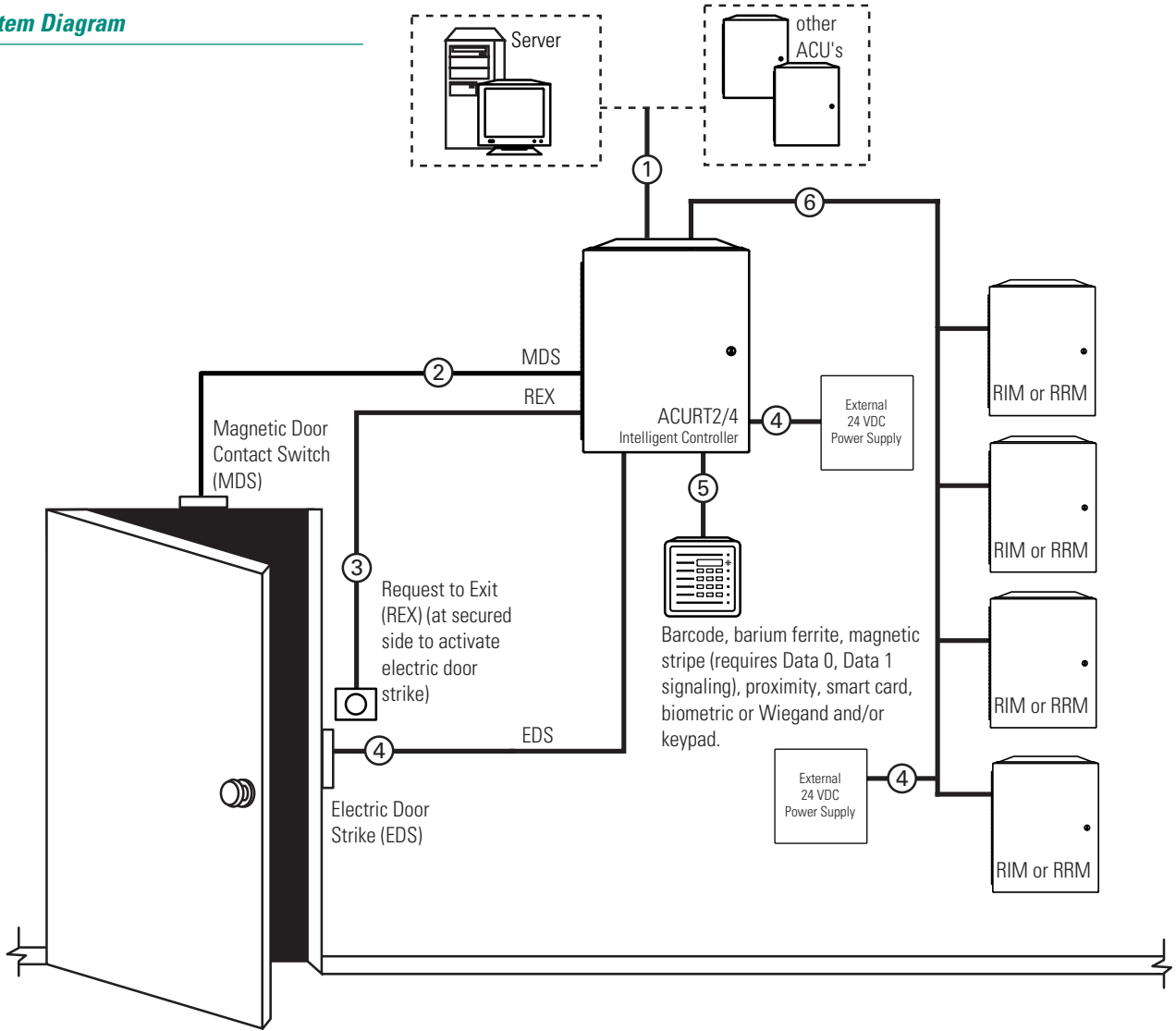
Cable Details

In the diagram above, the cables are marked by number.

This list describes cable communication, types and distance.

Drawing #	Desription	Belden Cable Number (or equal)	Maximum Distance
1	Communication (RS-485)	#9842 or Alpha #6222C, 24 AWG, 2-pair, individual shields, braid overall shield	4,000' (1,220 m) end-to-end,
or	10-Base T LAN	Category 5 (4PR)	or 328' (100 m)
2	Door Contact Input	#9407-22 AWG, 2-conductor (unshielded)	1,000' (305 m)
3	Exit Request Button / Sensor Input	#9407-22 AWG, 2-conductor (unshielded) 2 additional conductors required if sensor is powered	1,000' (305 m)
4	Door Lock Control from Controller or external power	#9409-18 AWG, 2-conductor (unshielded)	1,000' (305 m)
5	Standard Reader	#9514-22 AWG, 4 twisted pairs with overall shield and drain wire	500' (152 m)
6	Communications (RS-485) to remote modules	#9842-24 AWG, 2-pair/individual shields	4,000' (1,220 m) end-to-end

Specifications

Dimensions
- Height: 16.25" (41.28 cm)
- Width: 16.375" (41.59 cm)
- Depth: 4.125" (10.48 cm)
- Weight (with batteries): 19 lbs (8.6 kg)
- Weight (without batteries): 16 lbs (7.3 kg)

Environmental
- Maximum: +65 C (+150 F)
- Minimum: 0 C (+32 F)
- Humidity: 0 to 95% relative

Power
- Input 24 VAC @ 40 VA
- Battery backup 24 VDC (batteries included)
- Optional 24 VDC 2.5 amp external power supply

Reader Support
- 2 for ACURT2
- 4 for ACURT4

Memory
- 16 MB RAM, battery backed up
- FLASH ROM

Processor
- 32-bit Motorola ColdFire

Ordering Information

Part Number	Product Description
TPZ-RIM-1	Remote input module with enclosure and lock
TPZ-RRM-1	Remote relay module with enclosure and lock
DIAL-UP KIT	Dial-up kit for ACUs
TPZ-SYS-A	Complete two reader system (two TPZ-RPP2-60 readers)
TPZ-SYS-B	Complete two reader system (two TPZ-RPP2-50 mullion readers)
TPZ-SYS-C	Complete four reader system (four TPZ-RPP2-60 readers)
TPZ-SYS-D	Complete four reader system (four TPZ-RPP2-50 mullion readers)
ACURT2-EX-PP	Two reader control panel with two TPZ-RPP2-60 readers
ACURT2-EX-MU	Two reader control panel with two TPZ-RPP2-50 readers
ACURT4-EX-PP	Four reader control panel with four TPZ-RPP2-60 readers
ACURT4-EX-MU	Four reader control panel with four TPZ-RPP2-50 readers
ACURT2	Two reader control panel with 16 MB RAM
ACURT4	Four reader control panel with 16 MB RAM
UL-UPS-24V	UL 24 V, 2.5 amp battery back-up power supply
TPZ-NCIC-5C	RS-232 to RS-485 converter

Additional Topaz parts can be found in the price guide.

GE Security

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