ACS Series Annunciators
ACM/AEM-24AT, ACM/AEM-48A

Protectwell®
Fire alarm system solution

General

The ACS Annunciators provide a modular line of products for annunciation and control of the PROTECTWELL Series Intelligent Fire Alarm Control Panels, Network Control Annunciators. The ACS line provides arrays of LEDs to indicate point status and, in some versions, switches to control the state of output circuits. These ACS units use a serial interface and may be located at distances of up to 6,000 feet (1,828.8 meters) from the panel.

Features

- Speaker control mode for use with XPIQ. Enables the ACS to control operation of groups of multi-channels mapped to groups of multi-speakers.

- Compatible with existing annunciators.

- Color-programmable LEDs.

- On-board end-of-line resistors can be enabled/disabled by setting a switch.

- Alarm/Circuit On and Trouble LED per-point option or more dense Alarm-only option.

- Touch-pad control switch option for remote control of system relays; or silence, reset, and evacuate.

- LEDs may be programmed to display status of indicating circuits or control relays as well as system status conditions.

- System Trouble LED indicator.

- On-Line/Power LED indicator.

- Alarm and trouble resound with flash of new conditions.

- Local sounder for both alarm and trouble conditions with silence/acknowledge button (program options).

- May be powered by 24 VDC from the panel or by remote power supplies.
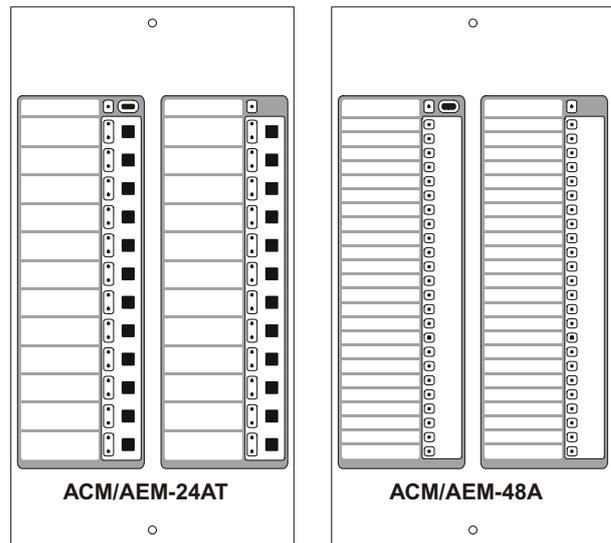
Construction

The ACS modules are provided in two basic controller modules, each with its expander module. The ACM-24AT provides 24 annunciation and control points per module, each with a red, green, or yellow Alarm/Circuit On LED, a yellow Trouble LED, and a touch-key switch.

The ACM-48A provides 48 annunciation points per module, each with a red, green, or yel-low Alarm/Circuit On LED (for annunciating control relays, the LED indicates ON/OFF).

On the ACM-24AT, each LED point is individually color-programmable. On ACM-48A, each column of 24 LED points can be color-configured using a DIP switch.

Temperature and humidity ranges: This system meets NFPA requirements for operation at 0°C to 49°C (32°F to 120°F); and at

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a relative humidity (non-condensing) of 85% at 30°C (86°F) per NFPA, However, the useful life of the system's standby batteries and the electronic components may be adversely affected by extreme temperature ranges and humidity. Therefore, it is recommended that this system and all peripherals be installed in an environment with a nominal room temperature of 15°C to 27°C (60°F to 80°F).

Installation

The ACS Series annunciator and control subsystems use modular hardware assemblies which allow the custom configuration of the annunciator panel to fit the individual job requirements.

Standard backboxes and mounting hardware schemes, including special remote cabinets, allow the annunciators to be constructed and configured with other system components.

When used with the PTW-3300 panel, the ACS modules can be used for manual selection of speaker and telephone circuits. In this application, they are typically mounted in the main control near the microphone and telephone handset.

For remote annunciation applications, the modules are typically mounted in special ABF or ABS boxes. Control switch key locks (AKS-1B) are available.

Communication between the ACS Series annunciators and the host Fire Alarm Control Panel is made through an EIA-485 multi-drop loop, eliminating the need for costly wiring schemes. Four wires are required, two for the EIA-485 communications (twisted pair), and two for 24 VDC regulated power.

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Retrofit of ACS Series annunciators into existing systems is easily accomplished. Software may require upgrading, and some legacy panels may require an interface board.

All field-wiring terminations use removable, compression type terminal blocks for ease of installation, wiring, and circuit testing.

Installation

The ACS Series annunciator and control system provides the PROTECTWELL system with up to 32 remote serially connected annunciators, each with a capacity of 96 points, for a total capacity of 3,072 points (subject to the capability of the FACP). The PTW-3300 and PTW-NCA are capable of using the full 96 points.
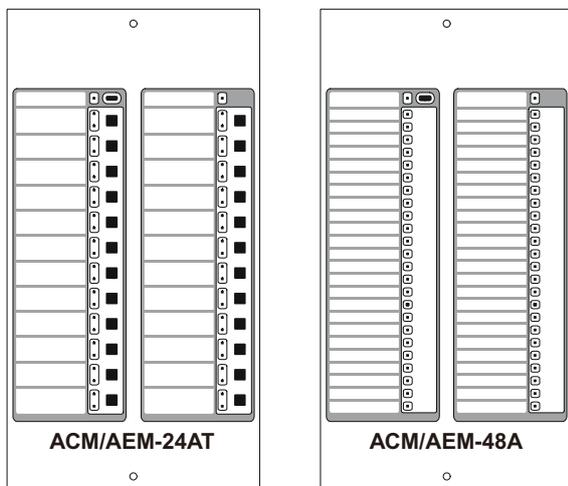
Local or remote power supplies and serial communications allow the ACS to be located virtually anywhere in the protected premises.

On PTW-3300 and PTW-NCA panels, system alarm and/or trouble conditions may be annunciated on a per-point basis, or in a grouped or zone configuration.

Control of system operational controls, such as Signal Silence, System Reset, and local annunciation controls (such as Local Acknowledge and Lamp Test) may be accomplished through the module's rubber keypad.

Product Line Information

ACM-24AT: (see figure) The Annunciator Control Module-24AT contains 24 color-programmable (red/green/yellow) Active and 24 yellow Trouble LEDs, 24 momentary touch-pad switches, a System Trouble LED, an On-Line/Power LED, and a local piezo sounder with a silence/acknowledge switch for audible indication of alarm and trouble conditions. Includes instructions. 8.375" (21.27 cm) high; 4.375" (11.11 cm) wide.
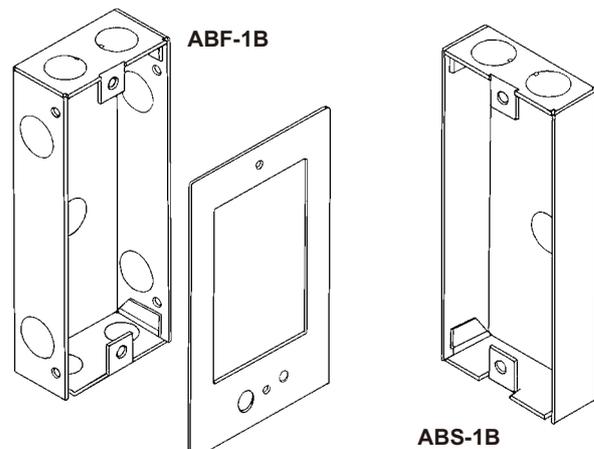

ACM/AEM-24AT

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AEM-24AT: The Annunciator Expander Module-24AT expands the ACM-24AT by 24 system points. The AEM-24AT is identical in size and in frontal appearance to the ACM-24AT. Up to three of these expander modules can be supported by an ACM-24AT, for a maximum of 96 system points. 8.375" (21.27 cm) high; 4.375" (11.11 cm) wide. NOTE: The AEM-24AT cannot be used to expand the ACM-48A.

ACM-48A: (see figure) The Annunciator Control Module-48A contains 48 color-programmable (red/green/yellow) Active LEDs, a System Trouble LED, an On-Line/Power LED, and a local piezo sounder with a Silence/Acknowledge switch for audible indication of alarm and trouble conditions. Includes instructions. 8.375" (21.27 cm) high; 4.375" (11.11 cm) wide.

AEM-48A: The Annunciator Expander Module-48A expands the ACM-48A by 48 system points. The AEM-48A is identical in frontal appearance to the ACM-48A. One expander module can be supported by an ACM-48A, providing a maximum of 96 points (subject to the capability of the FACP). 8.375" (21.27 cm) high; 4.375" (11.11 cm) wide.

NOTE: The AEM-48A cannot be used to expand the ACM-24AT.

ABS-1B: (see figure) The Annunciator Surface Box-1B (black) provides for the remote mounting of one annunciator module in a surface-mount enclosure. Knockouts are provided for use with 1/2" (1.27 cm) conduit. The annunciator mounts directly to the ABS-1B without a dress plate. 8.5" (21.59 cm) high x 4.5" (11.43 cm) wide x 2" (5.08 cm) deep. NOTE: The ABS-1B will not support the installation of the AKS-1B Annunciator Key Switch.

ABF-1B

ABS-1B

ABS-1TB: The ABS-1TB is an attractive surface-mount backbox for mounting one ACS Series Annunciator. Unlike the ABS-1B, the ABS-1TB has an increased depth that allows mounting of the AKS-1B Annunciator Key Switch. Black,
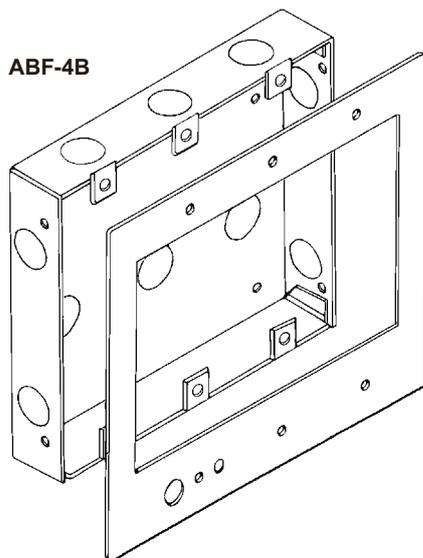
9.938" (25.24 cm) high x 4.625" (11.75 cm) wide x 2.5" (6.35 cm) deep. ***NOTE: An earlier gray model, ABS-1TB, will not accommodate the ACM/AEM-24AT or ACM/AEM-48A. The slightly deeper ABS-1TB will accommodate both the ACM/AEM-24AT or ACM/AEM-48A models and the ACM-16AT/ACM-32A Series.***

ABS-2B: The Annunciator Surface Box-2B (black) provides for the surface mounting of one ACM-24AT/AEM-24AT combination or one ACM-48A/AEM-48A combination. Knockouts are provided for use with 1/2" (1.27 cm) conduit. The annunciators mount directly to the ABS-2B without a dress plate. 8.5" (21.59 cm) high x 8.92" (22.66 cm) wide x 2" (5.08 cm) deep. NOTE: The ABS-2B will not support the installation of the AKS-1B Annunciator Key Switch.

ABF-1B: (see figure) The Annunciator Flush Box-1B (black) provides for the remote mounting of a single annunciator module in a flush-mount enclosure. Knockouts are provided for use with 1/2" (1.27 cm) conduit. The ABF-1B includes a painted black metal trim plate [11" (27.94 cm) high x 6.25" (15.875 cm) wide], mounting hardware, and an adhesive-backed annunciator label for the dress plate. 9.938" (25.24 cm) high x 4.625" (11.75 cm) wide x 2.5" (6.35 cm) deep.

ABF-2B: The Annunciator Flush Box-2B (black) provides for the flush mounting of two annunciator modules. Includes a painted black metal trim plate [11" (27.94 cm) high x 10.625" (26.99 cm) wide] and adhesive-backed annunciator label. 9.938" (25.24 cm) high x 9.188" (23.34 cm) wide x 3.75" (9.525 cm) deep.

ABF-4B: (see figure) The Annunciator Flush Box-4B (black) provides for the remote mounting of one to four annunciator modules. Knockouts are provided for use with 1/2" (1.27 cm) conduit. The flush-mounted ABF-4B includes a painted black metal trim plate [11" (27.94 cm) high x 19.375" (49.21 cm) wide] and an annunciator label. 9.938" (25.24 cm) high x 17.75" (45.09 cm) wide x 2.5" (6.35 cm) deep.
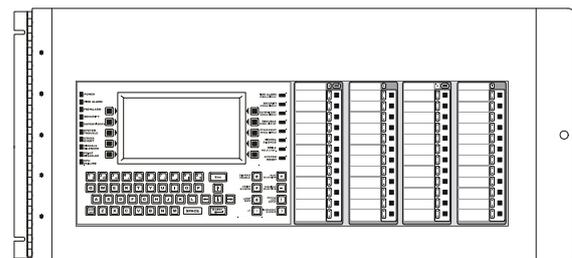
ABF-1DB, ABF-2DB, ABS-4D: The ABF-1DB, ABF-2DB and ABS-4D are semi-flush mount backboxes for ACS Series Annunciators. The ABF-1DB mounts one annunciator module; the ABF-2DB mounts two modules; the ABS-4D mounts up to four modules. The ABS-4D Series can also accommodate the PTW-NCA network annunciator, using the PTW-NCA Retro Kit (NCA Retro); the PTW-NCA is mounted in the center position with a blank plate (BMP-1) mounted on each side. Black with an attracted smoked glass door and keylock. The **ABS-4D** is hinged on the bottom for stability.

- DIMENSIONS, ABF-1DB: Box only: 9.938" (25.24 cm) high x 4.625" (11.75 cm) wide x 2.5" (6.35 cm) deep. Door: 11" (27.94 high x 6" (15.24 cm) wide x 0.75" (1.9 cm) deep.

- DIMENSIONS, ABF-2DB: Box only: 9.938" (25.24 cm) high x 9.188" (23.34 cm) wide x 3.75" (9.525 cm) deep. Door: 11" (27.94 cm) high x 10.375" (26.35 cm) wide x 0.75" (1.9 cm) deep.

- DIMENSIONS, ABS-4D: Box only: 11.97" (30.40 cm) high x 19.87" (50.47cm) wide x 3.50" (8.89 cm) deep. Door: 11.97" (30.40 cm) high x 19.87" (50.47 cm) wide x1.25" (3.18 cm) deep.

ABS-2D: This surface (or semi-flush) mount backbox is used with the ACS annunciators, the SCS series, PTW-NCA and the PTW-NCA Black.

ADP-4B: The Annunciator Dress Panel-4B (black) provides for the cabinet mounting of one to four modules. The ADP-4B hinge-mounts to the CAB-4 Series cabinet. Modules mount directly to threaded studs on the dress panel.

DP-DISP: (see figure) The Dress Panel-Display allows one to four modules to be mounted in the top row of the CAB-4 Series backbox. Modules mount directly to threaded studs on the DP-DISP.

DP-DISP Dress Panel with PTW-NCA Network Control Annunciator in left two positions, and two ACM-24AT Annunciators at right.

BMP-1: Annunciator Blank Module is a flat black dress plate that covers unused module positions in the annunciator backbox or in the ADP-4B. 8.375" (21.27cm) high x 4.375" (11.11 cm) wide. Studs for a variety of module mounting options are available.

ABF-4B

AKS-1B: The Annunciator Key Switch-1B (black) provides access security for the control switches on the ACM/AEM-24AT. The key switch kit includes a key and hardware for mounting to the ABF-1B. Also included is an adhesive-backed annunciator label for use with the key switch/dress plate assembly. ***NOTE: The AKS-1B can only be employed with the ABS-1TB.***

Agency Listings and Approvals

The listings and approvals below apply to the ACM/AEM-24AT and the ACM/AEM-48A. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- UL: S24647
- FM: Approved