

# XLS140-2(E)

### Fire Alarm Control Panel

### General

As a stand-alone small-to-large system, or as a large network, Honeywell's XLS140-2 meets virtually every application requirement

Designed with modularity and for ease of system planning, the XLS140-2 can be configured with just a few devices for small building applications, or for a large campus or high-rise application. Simply add additional peripheral equipment to suit the application.

**NOTE:** Unless called out with a version-specific "E" at the end of the part number, "XLS140-2" refers to models XLS140-2 and XLS140-2E; similarly, "XLS140-CPU2" refers to models XLS140-CPU2 and XLS140-CPU2E.

### **Features**

- · Listed to UL Standard 864, 9th edition.
- One, expandable to two, isolated intelligent Signaling Line Circuit (SLC) Style 4, 6 or 7.
- Up to 159 detectors (any mix of ion, photo, thermal, or multisensor) and 159 modules (N.O. manual stations, two-wire smoke, notification, or relay) per SLC. 318 devices per loop/ 636 per FACP or network node.
- Standard 80-character display, 640-character large display, or display-less (a node on a network).
- Network option 103 nodes supported (XLS140, XLS140-2, XLS3000, XLS-NCA Network Annunciator, or XLS-NCA2 Network Annunciator) using wire or fiber-optic connections.
- 6.0 amp switch mode power supply with four Class A/B builtin Notification Appliance Circuits (NAC). Selectable System Sensor, Wheelock, or Gentex strobe synchronization.
- · Built-in Alarm, Trouble, and Supervisory relays.
- · Autoprogramming and Walk Test reports.
- · Optional universal 636-point DACT.
- · 80-character remote annunciators (up to 32).
- · EIA-485 annunciators, including custom graphics.
- · Printer interface (80-column and 40-column printers).
- History file with 800-event capacity in nonvolatile memory, plus separate 200-event alarm-only file.
- · Alarm Verification selection per point, with tally.
- Autoprogramming and Walk Test reports.
- Positive Alarm Sequence (PAS) Presignal.
- Silence inhibit and Auto Silence timer options.
- March time/temporal/California two-stage coding/strobe synchronization.
- Field-programmable on panel or on PC, with XPEDITE™ program check, compare, simulate.
- Full QWERTY keypad.
- Charger for up to 200 hours of standby power.
- Non-alarm points for lower priority functions.
- Remote ACK/Signal Silence/System Reset/Drill via monitor modules.
- Automatic time control functions, with holiday exceptions.
- · Surface Mount Technology (SMT) electronics.



- Extensive, built-in transient protection.
- Powerful Boolean logic equations.

### XLS-NCA2 640-CHARACTER DISPLAY FEATURES:

- Backlit, 640-character display.
- Supports SCS Series smoke control system in both HVAC or FSCS modes (XLS140-2 not UL-Listed for FSCS).
- · Printer and CRT EIA-232 ports.
- · EIA-485 annunciator and terminal mode ports.
- Alarm, Trouble, Supervisory, and Security relays.

### FLASHSCAN® INTELLIGENT FEATURES:

- · Poll 318 devices in less than two seconds.
- · Activate up to 159 outputs in less than five seconds.
- Multicolor LEDs blink device address during Walk Test.
- Fully digital, high-precision protocol (U.S. Patent 5,539,389).
- Manual sensitivity adjustment nine levels.
- · Pre-alarm intelligent sensing nine levels.
- · Day/Night automatic sensitivity adjustment.
- · Sensitivity windows:
- Ion 0.5 to 2.5%/foot obscuration.
- Photo 0.5 to 2.35%/foot obscuration.
- Laser (Pinnacle<sup>™</sup>) 0.02 to 2.0%/foot obscuration.
- Acclimate 0.5 to 4.0%/foot obscuration.
- Filtrex® 0.5 to 2.35%/foot obscuration.
- Drift compensation (U.S. Patent 5,764,142).
- Degraded mode in the unlikely event that the XLS140-CPU2 microprocessor fails, FlashScan detectors revert to degraded operation and can activate the XLS140-CPU2 NAC circuits and alarm relay. Each of the four built-in panel circuits includes a Disable/Enable switch for this feature.
- Multi-detector algorithm involves nearby detectors in alarm decision (U.S. Patent 5,627,515).
- · Automatic detector sensitivity testing.
- · Maintenance alert (two levels).
- Self-optimizing pre-alarm.

# PINNACLE™ LASER SMOKE DETECTION TECHNOLOGY:

- · Revolutionary spot laser design.
- Advanced intelligent sensing algorithms differentiate between smoke and non-smoke signals (U.S. Patent 5,831,524).
- · Addressable operation pinpoints the fire location.
- · No moving parts to fail or filters to change.
- Early warning performance comparable to the best aspiration systems at a fraction of the lifetime cost.

### **ACCLIMATE**

### LOW-PROFILE INTELLIGENT MULTI-SENSOR:

- Detector automatically adjusts sensitivity levels without operator intervention or programming. Sensitivity increases with heat
- Microprocessor-based technology; combination photo and thermal technology.
- FlashScan or CLIP (standard polling of each intelligent device) mode compatible with XLS140-2.
- Low-temperature warning signal at 40°F ± 5°F (4.44°C ± 2.77°C).

# FILTREX HOSTILE-ENVIRONMENT SMOKE DETECTOR:

 Provides early warning of smoke detection in environment where traditional smoke detectors are not practical.

- The detector's filters remove particulates down to 30 microns in size.
- Intake fan draws air into photo chamber, while airborne particles and water mist are removed.
- Requires auxiliary 24 VDC from system or remote power supply.

### **RELEASING FEATURES:**

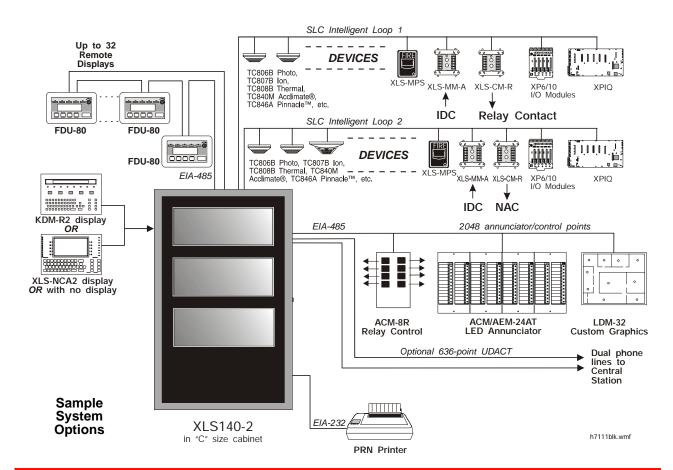
- Ten independent hazards.
- · Sophisticated cross-zone (three options).
- · Delay timer and Discharge timers (adjustable).
- · Abort (four options).
- Low-pressure CO<sub>2</sub> listed.

### **VOICE AND TELEPHONE FEATURES:**

- Solid-state digital message generation.
- · Firefighter telephone option.
- 30- to 120-watt high-efficiency amplifiers (AA Series).
- · Backup tone generator and amplifier option.
- · Multichannel voice transponder (XPIQ).

# HIGH-EFFICIENCY OFFLINE SWITCHING 3.0 AMP POWER SUPPLY (6.0 A IN ALARM):

- 120 or 220/240 VAC.
- Displays battery current/voltage on panel (with display).



# FlashScan, Exclusive New World-Leading Detector Protocol

At the heart of the XLS140-2 is a set of detection devices and device protocol — FlashScan (U.S. Patent 5,539,389). FlashScan is an all-digital protocol that gives superior precision and high noise immunity.

In addition to providing quick identification of an active input device, this new protocol can also activate many output devices in a fraction of the time required by competitive protocols. This high speed also allows the XLS140-2 to have the largest device per loop capacity in the industry — 318 points — yet every input and output device is sampled in less than two seconds. The microprocessor-based FlashScan detectors have bicolor LEDs that can be coded to provide diagnostic information, such as device address during Walk Test.

## Intelligent Sensing

Intelligent sensing is a set of software algorithms that provides the XLS140-2 with industry-leading smoke detection capability. These complex algorithms require many calculations on each reading of each detector, and are made possible by the very-high-speed microcomputer used by the XLS140-2.

**Drift Compensation and Smoothing:** Drift compensation allows the detector to retain its original ability to detect actual smoke, and resist false alarms, even as dirt accumulates. It reduces maintenance requirements by allowing the system to automatically perform the periodic sensitivity measurements required by NFPA 72. Smoothing filters are also provided by software to remove transient noise signals, such as those caused by electrical interference.

Maintenance Warnings: When the drift compensation performed for a detector reaches a certain level, the performance of the detector may be compromised, and special warnings are given. There are three warning levels: (1) Low Chamber value, usually indicative of a hardware problem in the detector; (2) Maintenance Alert, indicative of dust accumulation that is near but below the allowed limit; (3) Maintenance Urgent, indicative of dust accumulation above the allowed limit.

**Sensitivity Adjust:** Nine sensitivity levels are provided for alarm detection. These levels can be set manually, or can change automatically between day and night. Nine levels of prealarm sensitivity can also be selected, based on predetermined levels of alarm. Pre-alarm operation can be latching or self-restoring, and can be used to activate special control functions.

**Self-Optimizing Pre-Alarm:** Each detector may be set for "Self-Optimizing" pre-alarm. In this special mode, the detector "learns" its normal environment, measuring the peak analog readings over a long period of time, and setting the pre-alarm level just above these normal peaks.

Cooperating Multi-Detector Sensing: A patented feature of intelligent sensing is the ability of a smoke sensor to consider readings from nearby sensors in making alarm or pre-alarm decisions. Without statistical sacrifice in the ability to resist false alarms, it allows a sensor to increase its sensitivity to actual smoke by a factor of almost two to one.

## Field Programming Options

**Autoprogram** is a timesaving feature of the XLS140-2. It is a special software routine that allows the XLS140-2 to "learn" what devices are physically connected and automatically load them in the program with default values for all parameters. Requiring less than one minute to run, this routine allows the user to have almost immediate fire protection in a new installation, even if only a portion of the detectors are installed.

**Keypad Program Edit (with KDM-R2)** The XLS140-2 has the exclusive feature of the product line of program creation and editing capability from the front panel keypad, *while continuing to provide fire protection*. The architecture of the XLS140-2 software is such that each point entry carries its own program, including control-by-event links to other points. This allows the program to be entered with independent per-point segments, while the XLS140-2 simultaneously monitors other (already installed) points for alarm conditions.

XPEDITE is an offline programming and test utility that can greatly reduce installation programming time, and increase confidence in the site-specific software. It is Windows®-based and provides technologically advanced capabilities to aid the installer. The installer may create the entire program for the XLS140-2 in the comfort of the office, test it, store a backup file, then bring it to the site and download from a laptop into the panel.

ENTER PROG OR STAT PASSWORD, THEN ENTER <ESCAPE TO ABORT> \*\*\*\*\*

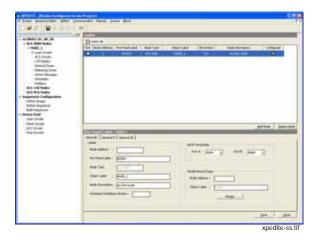
0=CLR 1= AUTO 2=POINT 3=PASSWORD 4=MESSAGE 5=ZONES 6=SPL FUNCT 7=SYSTEM 8=CHECK PRG

Above: Keypad program editing.

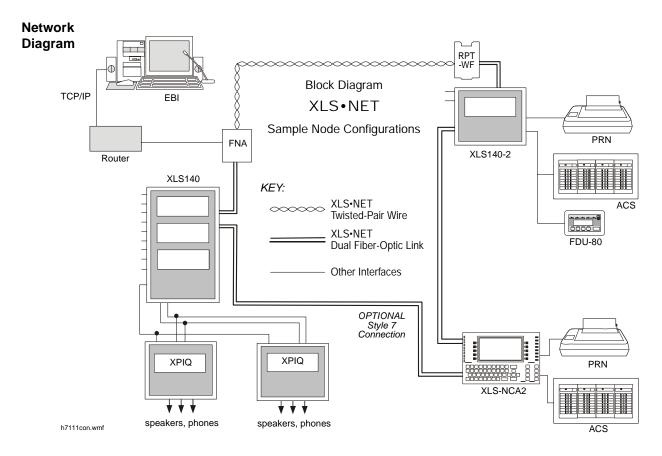
Below: Autoprogram function.

AUTOPROGRAM PLEASE WAIT

L1:80 DETS, 15 MODS L2:93 DETS, 35 MODS BELLS: 04



**XPEDITE System Programming screen** 



# Placement of Equipment in Chassis and Cabinet

The following guidelines outline the XLS140-2's flexible system design.

Rows: The first row of equipment in the cabinet mounts in chassis CHS2-M2. Mount the second, third, or fourth rows of equipment in chassis CHS-4MB (see XLS140-2 Installation Manual regarding panel output modules) or CHS-4L (for voice components, see Voice Alarm System Manual).

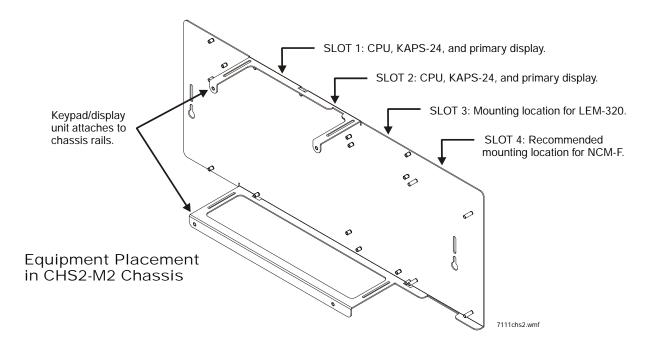
**Wiring:** When designing the cabinet layout, consider separation of power-limited and non-power-limited wiring as discussed in the XLS140-2 Installation Manual.

**Positions:** A chassis offers four basic side-by-side positions for components; the number of modules that can be mounted in each position depends on the chassis model and the size of the individual module. There are a variety of standoffs and hardware items available for different combinations and configurations of components.

It is critical that all mounting holes of the XLS140-2 are secured with a screw or standoff to ensure continuity of Earth Ground.

Layers: The CHS2-M2 accepts four layers of equipment, including the control panel. The XLS140-CPU2 fills three positions (left to right) in the first-installed layer (the back of the chassis); its integral power supply occupies (the left) two positions in the next two layers; the optional display occupies (the left) two positions at the front, flush with the door. Some equipment, such as the XLS-NCA2, may be door-mounted directly in front of the control panel. The XLS-NCA2 mounts onto the DP-DISP with NCA-2RETRO kit; see XLS-NCA2 data sheet for mounting options (74-4045). The XLS-NCA2 can be used as a primary display for the XLS140-2 (use NCA/640-2-KIT) by directly connecting their network ports (required in Canadian stand-alone applications).

**Expansion:** Installing an **LEM-320** Loop Expander Module adds a second SLC loop to the control panel. The LEM-320 is mounted onto the XLS140-CPU2, occupying the middle-right, second (back) slot on the chassis. If networking two or more control panels, each unit requires a **NCM-W** (wire) or **NCM-F** (fiber) Network Control Module. The NCM-W/-F can be installed in any panel output module position (see manual); the default position is at the back of the chassis next to the control panel. **Option boards** can be mounted in front of the LEM-320 or NCM modules; for ease of access, complete installation of those devices before mounting another layer.



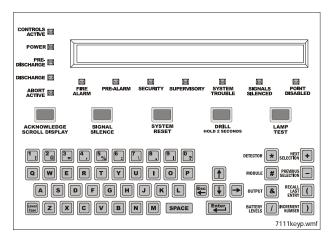
### KDM-R2 Controls and Indicators

Program Keypad: QWERTY type (keyboard layout, at right).

**12 LED indicators:** Power; Fire Alarm; Pre-Alarm; Security; Supervisory; System Trouble; Signals Silenced; Points Disabled; Control Active; Abort; Pre-Discharge; Discharge.

**Membrane Switch Controls:** Acknowledge/Scroll Display; Signal Silence; Drill; System Reset; Lamp Test.

LCD Display: 80 characters (2 x 40) with long-life LED backlight (see illustration below).



## Configuration Guidelines

Stand-alone and network systems require a main display. On single-CPU systems (one XLS140-CPU2/-CPU2E), display options are the KDM-R2 or the XLS-NCA2. On network systems (two or more XLS140-CPU2/-1402E's), at least one XLS-NCA2 is required. Other options listed as follows:

KDM-R280-character backlit LCD display with QWERTY programming and control keypad. Order two BMP-1 blank modules and DP-DISP2 mounting plate separately. Requires top row of a cabinet. Required for each stand-alone 80-character display system. The KDM-R2 may mount in network nodes to display "local" node information as long as at least one XLS-NCA-2 is on the system to display network information.

XLS-NCA2Network Control Annunciator, 640 characters. On single XLS140-CPU2/-CPU2E systems, the XLS-NCA2 is the Primary Display for the panel and connects directly to the XLS140-CPU2/-CPU2E. On network systems (two or more XLS140-CPU2/-CPU2E's), one network display (XLS-NCA2) is required for every system. On network systems, the XLS-NCA2 connects (and requires) an NCM network communications module. Mounts in a row of FACP node or in two annunciator positions. Mounting options include the DP-DISP2, ADP-4B, or in an annunciator box, such as the ABS-2D. In CAB-4 top-row applications, a DP-DISP2 and two BMP-1 blank modules are required for mounting. See XLS-NCA2 data sheet 74-4045.

**XLS140-CPU2**Central processing unit with integral 3.0 amp (6.0 A in alarm) power supply for an XLS140-2 system. Includes CPU factory-mounted to chassis **CHS2-M2**; one Signaling Line Circuit expandable to two; installation, programming and operating manuals. *Order one per system or as necessary (up to 103 network nodes) on a network system.* 

XLS140-CPU2ESame as XLS140-CPU2 but requires 220 VAC, 1.5 amp, (3.0 A in alarm).

NCA/640-2-KITBracket installation kit required to mount XLS-NCA2 to CHS2-M2 chassis with XLS140-CPU2/-640CPU2E.

**DP-DISP2**Dress panel for top row in cabinet with XLS140-CPU2/-140CPU2E installed.

ADP2-640Dress panel for middle rows with XLS140-CPU2/-140CPU2E.

BMP-1Blank module for unused module positions.

XLS-BP2-4Battery plate, required.

### **Option Modules**

**XLS-DVC:** Digital Voice Command, digital audio processor with message storage for up to 16 minutes of standard quality (2 minutes at high quality) digital audio.

**XLS-DVC-EM:** Digital Voice Command, digital audio processor with message storage for up to 32 minutes of standard quality (4 minutes at high quality) digital audio.

**DVC-KD:** Keypad for local annunciation and controls; status LEDs and 24 user-programmable buttons.

**DVC-AO:** DVC Analog Output board provides four analog output circuits for use with AA or XPIQ Series amplifiers. Four-channel operation supported.

**CA-1:** Chassis, occupies one tier of a XLS-CAB-4 Series enclosure. The left side accommodates one XLS-DVC and a DVC-KD (optional); and the right side houses a CMIC-1 microphone and its well (optional).

CA-2: Chassis assembly, occupies two tiers of a XLS-CAB-4 Series enclosure. The left side accommodates one XLS-DVC mounted on a half-chassis and one XLS-NCA-2 or BP-CA2 mounted on a half-chassis. The right side houses a microphone/handset well. The CA-2 assembly includes CMIC-1 microphone. XLS-ADDR Series doors with two-tier visibility are available for use with the CA-2 configuration: XLS-ADDR-B4, XLS-ADDR-C4, XLS-ADDR-D4 (below).

**TELH-1:** Firefighter's Telephone Handset for use with the XLS-DVC when mounted in the CA-2 chassis.

XLS-ADDR-B4: Two-tier-sized door designed for use with the CA-2 chassis configuration. XLS-ADDR Series doors are similar to XLS-CAB-4 Series "DR" doors, but a clear window space exposes the top two tiers of the XLS-CAB-4 enclosure. Use an SBB-B4 backbox with the XLS-ADDR-B4.

XLS-ADDR-C4: Three-tier-sized door designed for use with the CA-2 chassis configuration. XLS-ADDR Series doors are similar to XLS-CAB-4 Series "DR" doors, but a clear window space exposes the top two tiers of the XLS-CAB-4 enclosure. Use an SBB-C4 backbox with the XLS-ADDR-C4.

**XLS-ADDR-D4:** Four-tier-sized door designed for use with the CA-2 chassis configuration. XLS-ADDR Series doors are similar to XLS-CAB-4 Series "DR" doors, but a clear window space exposes the top two tiers of the XLS-CAB-4 enclosure. Use an SBB-D4 backbox with the XLS-ADDR-D4.

**DPA-1:** Dress panel, used with the CA-1 chassis when configured with a XLS-DVC, DVC-KD, and CMIC-1.

**DPA-1A4:** Dress panel, used with the CA-1 chassis when the CMIC-1 is not used. Provides mounting options on right two bays for two ACS annunciators, or for blank plates.

**BP-CA2:** Blank plate for CA-2 chassis, used for XLS140-2 Fire-fighters Telephone Applications with no XLS-NCA2.

**CMIC-1:** Optional microphone and microphone well assembly used with the CA-1 chassis.

**FTM-1:** Firephone Control Module connects a remote firefighter telephone to a centralized telephone console. Reports status to panel. Wiring to jacks and handsets is supervised.

**AA-30:** Audio Amplifier, 30 watts. Switch-mode power. Includes amplifier and audio input supervision, backup input, and automatic switchover, power supply, cables.

**AA-120/AA-100:** Audio Amplifier provides up to 120 watts of 25 VRMs audio power for the XLS140-2. The amplifier contains an integral chassis for mounting to a CAB-B4, -C4, or -D4 backbox (consumes one row). Switch-mode power. Includes audio input and amplified output supervision, backup input, and automatic switchover to backup tone. Order the AA-100 for 70.7 VRMs systems and 100 watts of power.

**XPIQ:** The XPIQ quad intelligent voice transponder for distributed multichannel voice evacuation systems, an integrated audio amplification and distribution subsystem controlled by FACP. Capable of playing up to four simultaneous messages. Accepts up to four 25-watt amplifiers.

### POWER SUPPLIES, STANDARD CABINETS

**HPF24S6/8:** Remote six-amp and eight-amp power supplies with battery charger.

RPT-W, RPT-F, RPT-WF: Repeater board with wire connection (RPT-W), fiber connection (RPT-F), or allowing a change in media type between wire and fiber (RPT-WF).

CHS-4: Chassis for mounting up to four APS-6Rs.

**CHS-4L:** Low-profile four-position Chassis. Mounts two AA-30 amplifiers or one AMG-E and one AA-30.

**DP-1B:** Blank Dress panel. Provides dead-front panel for unused tiers or to cover AA-30, AA-120, or AMG-E.

XLS-CAB-4 Series: The XLS-CAB-4 Series cabinets are fabricated from 16-gauge steel with unique full-front LEXAN®, reverse-silk-screened for durability. The cabinet assembly consists of two basic parts: a Backbox (SBB-\_4), and a Locking Door (XLS-DR-\_4) that may hinge right or left. Cabinets are available in four sizes, "A" through "D", with one to four tiers. A trim ring option is available for semi-flush mounting. See CAB-4 Series data sheet, 85-3002.

### COMPATIBLE DEVICES, EIA-232 PORTS

PRN-6: 80-column printer.

VS4095/S2: Printer, 40-column, 24V. Mounted in external back-

OUX.

CRT-2: Video display terminal.

### COMPATIBLE DEVICES, EIA-485 PORTS

ACS: Annunciator Control Modules ACM/AEM-24AT and ACM/AEM-28A; remote serial annunciator/control systems. See data sheet 85-3004.

**ACM-24AT:** ACS annunciator – up to 96 points of annunciation with Alarm or Active LED, Trouble LED, and switch per circuit. Active/Alarm LEDs can be programmed (by powered-up switch selection) by point to be red, green, or yellow; the Trouble LED is always yellow. *See 85-3004*.

**AEM-24AT:** Same LED and switch capabilities as ACM-24AT, expands the ACM-24AT to 48, 72, or 96 points. See 85-3004.

**ACM-48A:** ACS annunciator – up to 96 points of annunciation with Alarm or Active LED per circuit. Active/Alarm LEDs can be programmed (by powered-up switch selection) in groups of 24 to be red, green, or yellow. Expandable to 96 points with one AEM-48A. See 85-3004.

**AEM-48A:** Same LED capabilities as ACM-48A, expands the ACM-48A to 96 points. *See 85-3004.* 

XLS-FDU-80: 80 character, backlit LCD display. Mounts up to 6,000 ft. (1828.8 m) from panel. Up to 32 per XLS140-2.

**LDM:** Lamp Driver Modules LDM-32, LDM-E32, and LDM-R32; remote custom graphic driver modules.

**ACM-8R:** Remote Relay Module with eight Form-C contacts. Can be located up to 6,000 ft. (1828.8 m) from panel on four wires

**RPT-485:** Repeater, isolator, and/or fiber-optic medium; repeats EIA-485 over twisted pair or converts to fiber-optic medium.

**SCS:** Smoke control stations SCS-8, SCE-8, with lamp drivers SCS-8L, SCE-8L; eight (expandable to 16) circuits.

**TM-4:** Transmitter Module. Includes three reverse-polarity circuits and one municipal box circuit. Mounts in panel module position (single-address-style) or in CHS2-M2 position. *See 85-3005*.

**UDACT:** Universal Digital Alarm Communicator Transmitter, 636 channel.

**UZC-256:** Programmable Universal Zone Coder provides positive non-interfering successive zone coding. Microprocessor-controlled, field-programmable from IBM®-compatible PCs (requires optional programming kit). Up to 256 programmable codes.

#### **COMPATIBLE INTELLIGENT DEVICES**

BEAMHK: Heating kit for transmitter/receiver unit οf TC847A1004 below.

BEAMHKR: Heating kit for use with the reflector of TC847A1004 below.

**BEAMLRK**: Long-range accessory kit, TC847A1004 below.

BEAMMKR: Multi-mount kit, TC847A1004 below. BEAMSMK: Surface-mount kit, TC847A1004 below.

TC847A1004: Intelligent beam smoke detector with integral

sensitivity test.

TC807B1059: Low-profile FlashScan ionization detector, will replace TC807B1042. See DN-6934.

TC806B1076: Low-profile FlashScan photoelectric detector, will replace TC806B1050.

TC806B1084: Low-profile FlashScan photoelectric detector with 135°F (57°C) thermal, will replace TC806B1068.

TC808B1041: FlashScan thermal detector 135°F (57°C), will replace TC808B1025.

TC808B1058: FlashScan thermal detector 135°F (57°C) with rate-of-rise, will replace TC808B1033.

TC808B1066: FlashScan 190°F (88°C) high-temperature thermal detector.

TC806D1049: Low-flow FlashScan photo duct detector with housing.

TC806D1056: Low-flow FlashScan photo duct detector with relay and housing.

TC840M1021: FlashScan Acclimate low-profile multi-sensor

TC844A1015: FlashScan Filtrex Hostile Area Smoke Head.

TC846A1013: FlashScan Pinnacle laser photo detector, will replace TC846A1005.

TC846A1005: Low-profile Pinnacle laser photo detector.

14507371-005: Isolator base for low-profile detectors.

14507371-001: Low-profile base. Standard U.S. style.

14506414-002: European-style, 4" (10.16 cm) base. B501BH: Sounder base, includes B501 base above.

XLS-MM-A: FlashScan monitor module.

XLS-MM-D: FlashScan dual monitor module.

XLS-MM-Z: FlashScan two-wire detector monitor module.

XLS-MM-B: FlashScan miniature monitor module.

XLS-CM-N: FlashScan NAC control module.

XLS-CM-R: FlashScan relay module.

XLS-MPS: Manual fire alarm station, addressable.

TC811A1006: Isolator module.

XP6-C: FlashScan six-circuit supervised control module.

XP6-MA: FlashScan six-zone interface module; connects intelligent alarm system to two-wire conventional detection zone.

XP6-R: FlashScan six-relay (Form-C) control module.

XP10-M: FlashScan ten-input monitor module.

### Other Options

DPI-232: Direct Panel Interface, specialized modem for extending serial data links to remotely located FACPs and/or peripherals. See 85-3006.

LEM-320: Loop Expander Module. Expands each 140-2 to two Signaling Line Circuits.

NCM-W: Network Communications Module, Wire. Order one NCM per network node (XLS140-CPU2, XLS-NCA2). See 85-3007.

NCM-F: Network Communications Module, Fiber. Order one NCM per network node (XLS140-CPU2,XLS-NCA2). See 85-3007.

FNA: Fire Network Adapter. Connects to an XLS•NET network to provide a TCP/IP interface to an EBI.

BAT Series: Batteries. XLS140-2 utilizes two 12 volt, 18 to 200 AH batteries. This series of products replaces the previous PS

XLS-LBB: Battery Box (required for batteries larger than 25 AH).

XLS-LBBR: Same as above but red.

# SYSTEM SPECIFICATIONS

### System Capacity

•	Intelligent Signaling Line Circuits1 expandable to 2
•	Intelligent detectors
•	Addressable monitor/control modules 159 per loop
•	Programmable software zones
•	Special programming zones14
•	LCD annunciators per XLS140-CPU2/-CPU2E and XLS-NCA2 (observe power)
•	ACS annunciators per XLS140-CPU2/-CPU2E 32 addresses x 64 points
•	ACS annunciators

### **Specifications**

- Primary input power, XLS140-CPU2 board: 120 VAC, 50/60 Hz, 3.0 A. XLS140-CPU2E board: 220/240 VAC, 50/60 Hz, 1.5 A.
- Total output 24 V power: 6.0 A in alarm.

**NOTE:** The power supply has a total of 6.0 Amps of available power. This is shared by all internal circuits.

- · Standard notification circuits (4): 1.5 A each.
- Four-wire detector power: 1.25 A.
- · Non-resettable regulated power outputs: 1.25 A each.
- Battery charger range: 18 AH 200 AH. Use separate cabinet for batteries over 25 AH.
- Float rate: 27.6 V.

## Cabinet Specifications

Sytems can be installed in CAB-4 Series cabinets; or for approved marine applications, CAB-M Series cabinets.

## Temperature and Humidity Ranges

This system meets NFPA requirements for operation at 0 –  $49^{\circ}\text{C}/32 - 120^{\circ}\text{F}$  and at a relative humidity  $93\% \pm 2\%$  RH (noncondensing) at  $32^{\circ}\text{C} \pm 2^{\circ}\text{C}$  ( $90^{\circ}\text{F} \pm 3^{\circ}\text{F}$ ). 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 its peripherals be installed in an environment with a normal room temperature of  $15 - 27^{\circ}\text{C}/60 - 80^{\circ}\text{F}$ .

### Agency Listings and Approvals

The listings and approvals below apply to the basic XLS140-2 control panel. In some cases, certain modules may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

MEA: 128-07-E Vol. 3
 UL Listed: S470

• ULC Listed: S7564, S7566

· CSFM: 7165-1130:265; 7170-1130:264

#### Standards

The XLS140-2 complies with the following UL Standards and NFPA 72 Fire Alarm Systems requirements:

- UL 864, 9th Edition (Fire).
- UL 1076 (Burglary).
- LOCAL (Automatic, Manual, Waterflow and Sprinkler Supervisory).
- AUXILIARY (Automatic, Manual and Waterflow) (requires 4XTMF).
- REMOTE STATION (Automatic, Manual and Waterflow) (requires 4XTMF).
- PROPRIETARY (Automatic, Manual and Waterflow).
   Not applicable for FM.
- EMERGENCY VOICE/ALARM.

This document is not intended to be used for installation purposes. We try to keep our product information up-to-date and accurate. We cannot cover all specific applications or anticipate all requirements. All specifications are subject to change without notice.

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