1.0 Fire Alarm Control Panel

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Inspections Division
Approved with Conditions

Date: 02/20/15

Item No.	Description	Data Sheet Part Number	Data Sh
1.1	XLS3000 Fire Alarm System	XLS3000-CPU	HON-FACP-00
1.2	Loop Control Module	LCM-320, LEM-320	HON-FACP-002
1.3	Network Communication Modules	NCM-W	HON-FACP-003
1.4	Primary Power Supply	AMPS-24	HON-FACP-004

HON-FACP-001

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XLS3000

Intelligent Addressable Fire Alarm System

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XLS3000s, XLS-DVC audio option at right

General

The Honeywell XLS3000 is an intelligent Fire Alarm Control Panel designed for medium- to large-scale facilities. Fire emergency detection and evacuation are extremely critical to life safety, and the XLS3000 is ideally suited for these applications. The XLS3000 is part of the XLS Series of products from Honeywell. The XLS3000 is ideal for virtually any application because it features a modular design that is configured per project requirements. With one to ten Signaling Line Circuits (SLCs), the XLS3000 supports up to 3,180 intelligent addressable devices.

Information is critical to fire evacuation personnel, and the XLS3000's large 640-character Liquid Crystal Display (LCD) presents vital information to operators concerning a fire situation, fire progression, and evacuation details.

The Eclipse™ line of detectors and modules introduces a new concept in fire detection. Because the devices are all individually intelligent, they have the ability to communicate directly with one another. For years the fire alarm industry has demanded peer-to-peer communication between networked control panels. The XLS3000 is the first to offer peer-to-peer communication between the detection and notification devices. This new concept in detection technology offers unparalleled response time, distributed intelligence and outstanding reliability.

A host of other options are available, including single- or multi-channel voice; firefighters telephone; LED, LCD, or PC-based graphic annunciators; fire or integration networking; advanced detection products for challenging environments, and many additional options.

When combined with a Honeywell Enterprise Buildings Integrator (EBI), the XLS3000 becomes part of an owner-operated proprietary monitoring system, allowing the connection of stand-alone or networked panels.

Features

- Certified for seismic applications when used with the appropriate seismic mounting kit.
- One to ten isolated intelligent Signaling Line Circuits (SLC) Style 4, 6 or 7.
- Up to 159 detectors and 159 modules per SLC, 318 devices per loop/3,180 per FACP or network node.
- Large 16 line, 640 character LCD backlit display or use display-less as a network node.
- Network options:
  - High-speed network for up to 200 nodes (XLS3000, XLS140-2, XLS140, XLS120(C), XLS-NCA/-NCA2 Network Annunciator, or XLS-DVC, and Honeywell Enterprise Buildings Integrator™ [EBI]).
  - Standard network or up to 103 nodes (XLS3000, XLS140-2, XLS140, XLS120(C), XLS-NCA/-NCA2 Network Annunciator, or XLS-DVC, and Honeywell Enterprise Buildings Integrator™ [EBI]). Up to 54 nodes when XLS-DVC is used in network paging.
- Built-in Alarm, Trouble, Security, and Supervisory relays.
- VeriFire® Tools online/offline program option.
- Application code is saved in Flash memory.
- With built-in Degraded Mode operation, the system is capable of general alarm if a fire alarm condition is present even if the CPU fails.
- 4,000 event history file in nonvolatile memory, plus a separate 1,000-event alarm-only file.
- Alarm Verification selection per point.
- Autoprogramming, walk test, positive alarm sequence, and time scheduling.
- Support for Eclipse Detector Protocol.
- Backwards compatible with FlashScan and CLIP SLC devices.
- Multiple central station communication options:
  - Standard UDACT
  - Internet
  - Internet/GSM
- FM6320 approved Gas Detection System with TC809C1004 module and any FM listed gas detector.
- EIA-232 printer port; EIA-485 annunciator port.
- Honeywell SMART maintenance reporting.

Description

SIGNALING LINE CIRCUITS

The Honeywell XLS3000 Intelligent Addressable Fire Alarm System supports up to ten isolated intelligent signaling line circuits with Style 4, 5, or 7. Each of the 10 circuits can have up to 159 detectors (any mix of ion, photo, laser photo, thermal, or multi-sensor) and 159 modules (Addressable pull stations, normally open contact devices, two-wire smoke, notification, or relay) with a total of 318 device per loop/3,180 per FACP or network node. Actual circuit loading is dependant on SLC communication protocol.

Weekly Occupancy Schedules allow changing sensor sensitivity by time of day, and day of week. An optional 2,040 point digital alarm communicator transmitter (DACT) is available for use with central monitoring stations. Annunciator support, including custom graphics, is provided via an EIA-485 annunciator port. An EIA-232 printer port is also provided. The history file has a 4,000 event capacity in nonvolatile memory, plus a separate 1,000 event alarm-only file. Advanced history filters allow sorting by event, time, date, or address. Alarm verification selection can be done per point, with tally. Autoprogramming and Walk test reports are provided. The panel includes positive alarm sequence (PAS) Presignal functionality. Timer options include Silence Inhibit and Auto Silence.

Field programmability, with check and compare, is provided on a PC with the Verifire Tools program. Up to 1,000 powerful Boolean logic equations can be used. Non-alarm points are provided for lower priority functions. Remote ACK/Signal Silence/System reset/Drill can be done via monitor modules. The XLS3000 supports the SCS Series smoke control system in both HVAC or FSCS modes.

Figure 1 shows some of the sample system options.

DISPLAY

The XLS3000 display is a backlit LCD with 640-character display and a program keypad. The display allows up to nine users, each with a password and selectable access levels. The display has 11 LED indicators:

- Power
- Fire Alarm
- Pre-Alarm
- Security
- Supervisory
- System Trouble
- Other Event
- Signals Silenced
- Point Disabled
- CPU Failure
- Controls Active

There are also five membrane switch controls: Acknowledge, Signal Silence, Drill, System Reset, and Lamp Test.

TC840C1000 COPTIR ADVANCED MULTI-CRITERIA DETECTOR

- Detects all four major elements of a fire (smoke, heat, CO, and flame).
- Automatic drift compensation of smoke sensor and CO cell.
- High nuisance-alarm immunity.
- Six sensitivity levels.

TC840C2010 ADVANCED MULTI DETECTOR

- Detects all four major elements of a
- Separate signal for life-safety CO de
- Optional addressable sounder bas Temp-4(CO) tone.
- Automatic drift compensation of sm
- High nuisance-alarm immunity.
- Six sensitivity levels.

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TC809C1004 GAS DETECTION MODULE

- Interface to industry-standard linear scale 4-20 mA sensors.
- Five programmable thresholds.
- FM Approved, Class 6320 (Stationary Gas Sensors/Detectors).

FlashScan® Exclusive World-Leading Detector Protocol

FLASHSCAN®

At the heart of the XLS3000 is a set of detection devices and device protocol — FlashScan. FlashScan is an all-digital protocol that gives superior precision and high noise immunity.

As well as giving 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 XLS3000 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. Up to

Figure 1 – XLS3000 Sample System Options

NOTE: *XLS3000-CPU firmware version 14.0 (and higher) can support LCD-160 on the RDP port, or LCD2-80/LCD-80 in terminal mode, but not both at the same time.*

159 outputs can be activated in less than 5 seconds. The microprocessor-based FlashScan® detectors have bicolor LEDs that can be coded to provide diagnostic information, such as device address during Walk Test.

The multicolor LEDs blink the device address during a Walk Test. FlashScan operates with a fully digital, high-precision protocol. The multi-detector algorithm involves nearby detectors in the alarm decision, and the FlashScan device also uses drift compensation.

The FlashScan protocol incorporates nine levels of pre-alarm XLS intelligent sensing, each of which can be manually adjusted. Several programmable devices are available:

- Ion – 0.5 to 2.5%/foot obscuration.
- Photo – 0.5 to 2.35%/foot obscuration.
- Laser (Pinnacle™) – 0.02 to 2.0%/foot obscuration.
- Acclimate™ – 0.5 to 4.0%/foot obscuration.
- COPTIR – 1.0 to 4.0%/foot obscuration.

The FlashScan has a self-optimizing pre-alarm, automatic detector sensitivity testing, and two levels of maintenance alert. It also provides programmable activation of sounder/relay bases during alarm or pre-alarm. The Read Status displays the level of detector cleanliness.

Intelligent Sensing

Intelligent sensing is a set of software algorithms that provide the XLS3000 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 XLS3000.

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, usually 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; (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 pre-alarm 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.

ECLIPSE

In addition to supporting FlashScan
also supports the new Eclipse device
tion protocol from System Sensor. This
tion brings an advancement to the Hor
yet unmatched in the industry in dist
system response time.

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Response

Eclipse improves on the patented
further distributing the decision making process down to the device level. Eclipse sensors and alarm modules are able to broadcast their condition directly to the output devices on the same loop, eliminating the need for the control panel to process the alarm events and send individual output commands to the field devices. Output devices such as control modules are pre-programmed with response sequences stored directly in the field device. With this communication method, all output devices on a circuit can respond simultaneously to the alarm input within 250 ms of activation.

Device Technology

Eclipse devices (TC900 series) are available in the traditional line of detection and control products including: *TC906 Photoelectric; TC907 Ionization; TC908 Thermal; S464H manual pull stations; TC909 single and dual input modules; TC910N supervised and TC910R unsupervised control relay modules; and TC941A interface modules.*

Circuit Isolation

All Eclipse devices include built-in fault isolation modules to improve system survivability in the event of a field wiring short circuit which would normally disable the entire loop. This feature is normally made available only as an option in competing systems though the use of additional hardware. By incorporating this feature directly into the base product, installation labor and material cost are reduced.

Device Auto-Adressing and Location Identification

The fault isolators are also important to the Eclipse devices as they are used during system commissioning to locate the position of devices on the circuit relative to each other and the control panel. Using this information, the control panel can then automatically assign device addresses, eliminating a normally labor intensive portion of the start up process. Device locations and addresses are then uploaded to the Verifire Tools programming tool and displayed in a graphical format for use by the installer or service person.

Device Replacement

If an Eclipse field device needs to be replaced for service purposes, the control panel automatically locates the replacement device, determines its device type and then downloads the required programming information, including device address and operating parameters without operator intervention.

SMART

With the Honeywell System Maintenance and Reporting Tool (SMART), another first in the industry, the XLS3000 system is capable of reporting the maintenance history of each field device, thus simplifying the Testing and Inspection requirements mandated by NFPA. When a device exceeds the NFPA testing limits, the user is alerted by an indication on the control panel that service should be performed. This feature can be used by owners and building inspectors alike to insure that proper maintenance is being performed on the system.

Using Verifire Tools, the owner or service company can run reports that list the devices in need of testing, as well as predictive reports to list devices that will be coming due in the

next 30, 60 or 90 day interval, thus eliminating repeat service calls.

Field Programming Options

AUTOPROGRAM

Autoprogram is a timesaving feature of the XLS3000. It is a special software routine that allows the XLS3000 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.

VeriFire® Tools

VeriFire® Tools 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 XLS3000 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.

RELEASING SERVICE

The system will release on any of ten independent hazards. There are three options of sophisticated cross-zone sensing. There is a delay timer and adjustable discharge timers, and there are four options for Abort.

EMERGENCY VOICE AND FIREFIGHTERS' TELEPHONE

The XLS3000 has digital message generation, hard-wired voice control options, and a Firefighters' telephone option. The voice message is powered by high-efficiency amplifiers (35, 50 and 75 watt DAA2/DAX Series, or 100 and 120 watt DS Series). There is an optional backup tone generator and amplifier available. For the Emerge
newly introduced Digital Voice Comma
nels of one-way alarm broadcast and f
communications with remote fire telep

XLS3000-CPU

The control panel electronics are co
circuit board (PCB) that holds the
(XLS3000-CPU). The XLS3000-CPU
or without keypad and display; conne
both versions.

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Ordering Information

CONFIGURATION GUIDELINES

Stand-alone and network systems require a main display. On single-CPU systems (one XLS3000), the display option is the XLS3000-CPUD*. On network systems (two or more networked fire panel nodes), at least one* XLS-NCA2 *is required. Options listed as follows.*

MAIN SYSTEM COMPONENTS

XLS3000-CPUD: XLS3000 with display. Includes CPU, 640 character display with keypad.

XLS3000-CPUND: XLS3000 without display. Includes CPU only.

AMPS-24: Main power supply and battery charger for the XLS3000. One required for each XLS3000 CPU. Charges 25 to 200 AH batteries. Primary input power: 110/120 VAC, 50/60 Hz, 4.5 A (maximum). Mounts in the bottom left hand section (battery row) of a XLS-CAB-4 enclosure. *See 85-3057.*

AMPS-24E: Main power supply and battery charger for the XLS3000. One required for each XLS3000 CPU. Charges 25 to 200 AH batteries. Primary input power: 240 VAC, 50/60 Hz,

Network Diagram

Figure 2 – XLS•NET Block Diagram

2.25 A. Mounts in the bottom left hand section (battery row) of a XLS-CAB-4 enclosure. *See 85-3057.*

XLS-ELCM-320: Loop Control Module, Eclipse Protocol. Provides one Eclipse SLC. XLS3000 supports up to five XLS-ELCM-320 and five XLS-ELEM-320 expanders for a total of ten SLCs. *See 85-3056.*

XLS-ELEM-320: Loop Expander Module, Eclipse Protocol. Expands an XLS-ELCM-320. Cannot be used to expand an LCM-320. *See 85-3056.*

LCM-320: Loop Control Module, CLIP/FlashScan Protocol. Provides one CLIP/FlashScan SLC. XLS3000 supports up to five LCM-320 and five LEM-320 expanders for a total of ten SLCs. *See 85-3056.*

LEM-320: Loop Expander Module, CLIP/FlashScan Protocol. Expands an LCM-320. Cannot be used to expand an XLS-ELCM-320. *See 85-3056.*

NETWORKING OPTIONS

XLS-NCA2: Network Control Annunciator. One required per XLS-NET. Provides annunciation and control of all points on XLS-NET. *See 74-4045.*

NCM-W, NCM-F: Network Communications Modules. Wire and multi-mode fiber versions available. One required for each network node (XLS3000, XLS140, XLS140-2, XLS-DVC, BACNET GATEWAY, Q7055B1039) on XLS-NET. Mounts in a standard chassis position or on a BMP-1 plate. *See 85-3007*.

XLS-NCM-EBI-W: Network Control Module, Wire. Used in applications where the Q7055B1039 (Fire Network Adaptor) is mounted remotely next to an EBI server. The XLS-NCM-EBI-W mounts inside the EBI server (in an PCI slot) and communicates with the Q7055B1039. *See 85-3007.*

XLS-NCM-EBI-F: Network Control Module, Multi-Mode Fiber. Used in applications where the Q7055B1039 (Fire Network Adaptor) is mounted remotely next to an EBI server. The XLS-NCM-EBI-F mounts inside the EBI server (in an PCI slot) and communicates with the Q7055B1039. *See 85-3007.*

HS-NCM-W/MF/SF/WMF/WSF/MFSF: High-speed network communications modules that can connect to two nodes. Wire, single-mode fiber, multi-mode fiber, and media conversion models are available. *See 74-4082.*

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). Not used with high-speed networks.*See 85-3007.*

Q7055B1039: Fire Network Adaptor. Used to connect XLS-NET or a standalone XLS3000 to Honeywell EBI. Requires one NCM-W/F or one XLS-NCM-EBI-W/F. *See 74-4017.*

BACNET-GW-3: BACnet interface for the XLS3000 or XLS-NET. Allows the XLS3000 to be connected to any BACnet capable application (subject to local AHJ approval). *See 85-3067.*

XLS-GW-EM-3: XLS•NET Gateway, embedded. *See 74-5084.*

AUXILIARY POWER SUPPLIES AND BATTERIES

EOL-CR/CW: End of line relay plate. Required for certain Canadian Applications. *See 85-3062*.

APS2-6R: Auxiliary power supply. Provides two 24 VDC circuits, each rated for 3.0 A in alarm and 2.0 A continuous. Commonly used for the operation of peripheral audio/visual devices or any other application requiring 24VDC. *See 85-3050*.

ACPS-610: 6.0 A or 10 A addressable charging power supply. *See 85-3109.*

HPF24S6: 24 VDC NAC Remote Power Supply, 6A. Provides built-in NAC synchronization. 120 VAC only. UL LISTED.

HPF24S6C: Same as HPF24S6, but U

HPF24S6E: Same as HPF24S6, but 2

HPF24S8: 24 VDC NAC Remote Pow
built-in NAC synchronization. 120 VAC

HPF24S8C: Same as HPF24S8, but U

HPR24S8E: Same as HPF24S8, but 2

BAT Series: Batteries, 12V, Sealed L
compatible with 7 AH to 200 AH batter

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AUDIO OPTIONS

NOTE: *See "Enclosures, Chassis, and Dress Plates" on page 7 for mounting harware.*

XLS-DVC Digital Audio System: XLS-DVC Digital Voice System. Networkable or standalone with a XLS3000. *See 74-4033.*

DS-DB: Digital Series Distribution Board, provides bulk amplification capabilities to the XLS-DVC while retaining digital audio distribuition capabilities. Can be configured with up to four DS-AMPs, supplying high-level risers spread throughout an installation. *See 74-5139.*

DS-AMP/E: 125W, 25 VRMS, or 100W, 70VRMS. 70VRMS requires DS-XF70V step-up transformer. Digital Series Amplifier, part of the DS-DB system. *See 74-5141.*

DS-RFM, DS-FM, DS-SFM: Fiber conversion modules for XLS-DVC, DS-DB distribution board, and DAX/DAA2 Series amplifiers. *See 74-5078.*

DAA2 Series, DAX Series: XLS-DVC Digital Audio Amplifiers. Used with the XLS-DVC digital voice system, these amplifiers communicate via the digital audio look to provide 8 channels of audio messaging and 5 channels of firefighter's telephone communication over a single twisted pair of wire or fiber pair. *See 74-5137, 74-5138, 74-4032 and 85-3121.*

AA-30, AA-100, AA-120: Traditional Audio Amplifiers. Amplifies a low level audio signal to high level audio at 30, 100 or 120 Watts. Used with the XLS-DVC-EM when the DVC-AO Analog Audio Option is used. *See 85-3044*.

RM-1: Remote paging microphone series. *See 85-3053*.

AFAWS Series: Firefighters remote telephone enclosure. *See 85-3052*.

ACT-2: Audio Coupling Transformer. *See 85-3065*.

TC810T1000: Firephone Control Module connects a remote firefighter telephone to a centralized telephone console. Reports status to panel. Wiring to jacks and handsets is supervised. *See 74-4077.*

DAA Series Digital Audio Amplifiers: Legacy DAA Series amplifiers are compatible with XLS-DVC systems running SR4.0. For specific information on DAA-50 series amplifiers, refer to 74-4032. For information on DAA-7525 Series, refer to 85-3121.

PRINTERS, ACS DEVICES AND PERIPHERALS

XLS-PRN-6: 80-column desktop dot matrix printer. *See 85-3073.*

DPI-232: Direct Panel Interface. Specialized modem for extending EIA-232 serial data links to remotely located control panels and/or peripherals. Mounts in a standard chassis position. *See 85-3006*.

ACM-24AT: ACS annunciator – provides 24 LEDS with control buttons for annunciation and control of points. Can be expanded up to 96 points with AEM-24AT expanders. Active/Alarm LEDs can be programmed by point to be red, green or yellow; the Trouble LED is always yellow. Mounts on a DP-DISP or ADP-4B. *See 85-3004*.

AEM-24AT: Same LED and switch capabilities as ACM-24AT; expands the ACM-24AT to 48, 72, or 96 points (24 points per AEM-24AT). Mounts on a DP-DISP or ADP-4B. *See 85-3004.*

ACM-48A: ACS annunciator – provides 48 programmable LEDS for annunciation of points. Can be expanded up to 96 points with an AEM-48A expander. Active/Alarm LEDs can be programmed by point to be red, green or yellow; the Trouble LED is always yellow. Mounts on a DP-DISP or ADP-4B. *See 85-3004.*

AEM-48A: Same LED capabilities as ACM-48A; expands the ACM-48A to 96 points. Mounts on a DP-DISP or ADP-4B. *See 85-3004.*

ACM-8R: ACS Relay Module. Used to provide up to 8 remote form C contacts. Can be located up to 6,000 ft (1828.8 m) from the panel. *See 85-3046.*

LCD-160: Remote Annunciator. Mimics the XLS3000 Display. Mounts in an XLS-ABS-2D(R), XLS-ABS-4D(R), XLS-ABF-2B, XLS-ABF-4B enclosure, or a DP-DISP, or ADP-4B dress plate. *See 85-3058.*

LCD2-80: Terminal mode. 80-character, backlit LCD display. Mounts up to 6,000 ft. (1828.8 m) from panel. Up to 32 per FACP. *See LCD2-80 (74-5091).*

SCS Series: Smoke control station. Used for UL listed smoke control applications. *See 85-3048.*

UZC-256: Universal Zone Coder provides non-interfering successive zone coding. Field programmable via laptop software. Mounts on a CHS-4 series chassis within XLS3000.

LDM-32: Lamp Driver module. Used to drive custom graphic annunciators. Mounts in a standard chassis position or inside a graphic annunciator. *See 85-3042.*

COMMUNICATORS (DACTS) AND TRANSMITTERS

UDACT: Universal Digital Alarm Communicator Transmitter. Provides up to 636 channels. *See 85-3049.*

UDACT-2: Universal Digital Alarm Communicator Transmitter, 636 channel. *See 74-5143.*

411 Series: 411 Series Slave Digital Alarm Communicator Transmitters. *See 85-3063.*

411 UDAC: 411UDAC Standalone Digital Alarm Communicator/Transmitter. Features remote upload and download capabilities. *See 85-3064.*

TM-4 Transmitter: Transmitter Module used for municipal box trip. Includes three reverse-polarity circuits and one municipal box circuit. Mounts in a standard chassis position. *See 85-3005.*

COMPATIBLE INTELLIGENT DEVICES

BEAMHK: Heating kit for transmitter/receiver unit of TC847A1004below. *See 74-3940.*

BEAMHKR: Heating kit for use with the reflector of TC847A1004 below. *See 74-3940.*

BEAMLRK: Long-range accessory kit, TC847A1004 below. *See 74-3940.*

BEAMMRK: Multi-mount kit, TC847A1004 below. *See 74-3940.*

BEAMSMK: Surface-mount kit, TC847A1004 below. *See 74-3940.*

TC847A1004: Intelligent beam smoke detector with integral sensitivity test. *See 74-3940.*

TC840C1000: FlashScan COPTIR Advanced Multi-Criteria Detector. *See 74-5070.*

TC840C2010: FlashScan Advanced Multi-Criteria Fire/CO Detector. *See 74-5146.*

TC807B1059: Low-profile FlashScan *85-3089.*

TC807B1076: Low-profile Flas detector.*See 74-1941.*

TC806DNR: Low-profile intelligent remote test capable. For use with DNR

TC806B1084: Low-profile FlashScan with 135°F (57°C) thermal. *See 74-194*

TC808B1041: FlashScan thermal dete *74-3354.*

TC808B1058: FlashScan thermal detector 135°F (57°C) with rate-of-rise. *See 74-3354.*

TC808B1066: FlashScan 190°F (88°C) high-temperature thermal detector. *See 74-3354.*

TC840M1021: FlashScan Acclimate low-profile multi-sensor detector. *See 74-3387.*

TC846A1013: FlashScan Pinnacle laser photo detector. *See 74-3373.*

DNR: InnovairFlex low-flow non-relay duct-detector housing (order TC806DNR separately). Replaces TC806D1049/ TC806D1056. *See 74-4076.*

DNRW: Same as above with NEMA-4 rating, watertight. *See 74-4076.*

B224RB, 14507371-003: Low-profile relay base. *See 85-3043.*

B224BI, 14507371-005: Isolator base for low-profile detectors. *See 85-3043.*

B210LP: Low-profile base. Standard U.S. style. Replaces 14507371-001. *See 85-3043.*

B501: European-style, 4" (10.16 cm) base. *See 85-3043.*

B200S: Intelligent programmable sounder base, capable of producing a variety of tone patterns including ANSI Temporal 3. Compatible with sychronization protocol. *See 85-3043.*

B200SR: Sounder base, Temporal 3 or Continuous tone. *See 85-3043.*

TC809A1059: FlashScan monitor module. *See 74-3993.*

TC809D1004: FlashScan dual monitor module. *See 74-3993.*

TC841A1000: FlashScan two-wire detector monitor module. *See 74-3993.*

TC809B1008: FlashScan miniature monitor module. *See 74-3993.*

TC809C1004: FlashScan 4-20 mA protocol monitor module.

TC810N1013: FlashScan NAC control module. *See 74-3995.*

TC810S1000: FlashScan releasing control module. *See 74-5068.*

TC810R1024: FlashScan relay module. *See 74-3995.*

TC822A1010: FlashScan dual monitor/dual relay module. *See 74-5104.*

TC906A, TC907A, TC908A: Eclipse series intelligent low-profile plug-in detectors. *See 74-3986.*

TC909A/B, TC910N/R, TC941A: Eclipse intelligent monitor, control, relay, and interface modules. *See 74-3987.*

S464G1007: Manual pull station, addressable (CLIP/FlashScan). *See 74-3365.*

S464H1006: Manual pull station, addressable (Eclipse). *See 74-4014.*

XLS-MPS series: Manual pull stations, addressable and conventional. For use in Canada only.

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TC811A1006: Isolator module. *See 77-4555.*

XP6-C: FlashScan six-circuit supervised control module. *See 85-3069.*

XP6-MA: FlashScan six-zone interface module; connects intelligent alarm system to two-wire conventional detection zone. *See 85-3070.*

XP6-R: FlashScan six-relay (Form-C) control module. *See 85-3071.*

XP10-M: FlashScan ten-input monitor module. *See 85-3068.*

ENCLOSURES, CHASSIS, AND DRESS PLATES

XLS-CAB-4 Series Enclosure: XLS3000 mounts in a standard CAB-4 Series enclosure. Backbox and door ordered seperately; requires XLS-BP2-4 battery plate. A trim ring option is available for semi-flush mounting. *See 85-3002.*

EQ Series Cabinets: EQ series cabinets will house amplifiers, power supplies, battery chargers and control modules. EQ cabinets are available in three sizes, "B" through "D". *See 85-3110.*

CHS-M3: Chassis for XLS3000 CPU for all applications unless the XLS-DVC is used with firefighter's telephones. Mounts in the top row of a XLS-CAB-4 series enclosure.

CA-2: Chassis for XLS3000 CPU when XLS-DVC is used with firefighter's telephone. Mounts in the top two rows of a XLS-CAB-4 series enclosure. *See 74-4033.*

DP-DISP: Display dress plate. Used whenever a CHS-M3 is used. Covers the top row of a XLS-CAB-4 series enclosure.

ADP-4B: Annunciator dress plate. Mounts in rows 2, 3 or 4 of a XLS-CAB-4 series enclosure. Used with ACS series annunciators.

BMP-1: Cover Plate. Used with the DP-DISP or ADP-4B whenever an annunciator position is unused and needs to be covered.

DP-1B: Solid Blank plate. Used to cover rows 2, 3 or 4. Used when the installed equipment does not require user interaction (such as audio amplifiers).

XLS-BP2-4: Battery Plate. Covers the battery row. One required for each XLS3000 system.

CHS-4L: Standard Chassis, Low Profile. Used in rows 1 through 4. Commonly used for AA series amplifiers.

CHS-4N: Standard Chassis, High Profile. Used in rows 1 through 4. Commonly used for APS-6R power supplies and other peripherals such as NCMs, LCMs, etc.

CHS-6: Chassis used with the XP6 and XP10 Multi-Modules. Mounts up to six modules in any XLS-CAB-4 series row.

BB-100: Battery Enclosure. Holds up to two 100 AH batteries.

BB-200: Battery Enclosure. Stores up to 200 AH batteries.

XLS-LBB: Battery Enclosure, Black. Holds two 60 AH batteries or one 100 AH battery.

XLS-LBBR: Battery Enclosure, Red. Holds two 60 AH batteries or one 100 AH battery.

XLS-LSP, XLS-LSPA, XLS-SSP: FS
nents. *See 74-5145.*

SEISKIT-CAB: Seismic mounting kit.
certified applications with XLS3000,
Includes battery bracket for two 26 AH

SEISKIT-LBB: Seismic kit for the XLS
bracket for two 55 AH batteries.

SEISKIT-PS/2/4: Seismic mounting
S8and CAB-PS1. Includes battery bra
AH batteries.

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AUDIO VISUAL DEVICES (RECOMMENDED)

P2 and P4 Series: SpectrAlert Advance Wall Horn/Strobes. *See 85-0304 or 85C-0304 (Canada).*

CH Series: SpectrAlert Advance Wall Chimes. *See 85-0306 or 85C-0306 (Canada).*

SP2 Series: SpectrAlert Wall Speaker/Strobes, Wall Mount. *See 85-0302.*

SP2C Series: SpectrAlert Ceiling Speaker/Strobes, Ceiling Mount. *See 85-3101.*

SP200 Series: SpectrAlert Speakers. *See 85-0301.*

PA400 Series: SpectrAlert PA400 Series Mini Sounders. *See 85-3083.*

PF24V Series: Exit Point Directional Sounder. Used to mark perimeter exits. *See 85-3059.*

SSM Series: Standard Fire Alarm Bells. *See 85-3107.*

MISCELLANEOUS

R-10, R-20, EOLR Series: Multi-Voltage conventional relays, UL Fire rated. Used for a variety of fire applications. *See 85-3111.*

FM Series: FM Series Magnetic Door Holders. *See 85-3095.*

IPDACT-2/2UD Internet Monitoring Module: Connects to primary and secondary DACT telephone output ports for internet communications over customer-provided ethernet connection. Requires compatible Teldat VisorALARM Central Station Receiver. Can use DHCP or static IP. *See 74-5097.*

IPCHSKIT: IP Communicator Chassis Mounting Kit. For mounting an IPDACT-2 onto the panel chassis or CHS-4 series chassis. Use IPENC for external mounting applications.

IPSPLT: Y-adaptor option allow connection of both panel dialer outputs to one IPDACT-2 cable input.

IPENC: External enclosure for IPDACT, includes IPBRKT mounting bracket; Red; for black, order IPENC-B.

IPGSM-DP: Internet and Digital Cellular Fire Alarm Communicator. Provides selectable configurable paths: cellular only, IP only, or IP primary with cellular backup. Connects to the primary and secondary ports of a DACT. Replaces IPGSM-COM. *See DH-60695.*

***NOTE:** For other options including compatibility with retrofit equipment, refer to the panel's installation manual, the SLC manual, and the Device Compatibility Document.*

SYSTEM SPECIFICATIONS

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System Capacity

- Intelligent Signaling Line Circuits .....1 expandable to 10
- Intelligent detectors ..... 159 per loop
- Addressable monitor/control modules ..... 159 per loop
- Programmable software zones ..... over 2000
- ACS annunciators
  per XLS3000-CPU.....32 address x 64 or 96 points

  NOTE: *The XLS3000-CPU can support up to 96 annunciator address points per ACM-24/-48.*

Specifications

Model: XLS3000 Intelligent Addressable Fire Alarm System

Primary Input Power:

– AMPS-24: 110-120 VAC, 50/60 Hz, 4.5 A maximum.

– AMPS-24E: 240 VAC, 50/60 Hz, 2.25 A maximum.

DC Output:

– 24 VDC: Up to 4.5 A

– 5 VDC: Up to 1.0 A.

Total Output Power: 24V, 4.5 A in alarm.

Temperature Ratings: Ambient: 32°F to 120°F (0° to 49°C).

Humidity Ratings: 10 to 93% RH, non-condensing.

System Capacity:

- *Intelligent Signaling Line Circuits:* 1, expandable to 10.
- *Intelligent Detectors:* 159 per loop.
- *Addressable Monitor/Control Modules:* 159 per loop.
- *Programmable Software Zones:* over 2,000.
- *ACS Annunciators per XLS3000-CPU:* 32 address x 64 or 96* points.

NOTE: *The XLS3000-CPU can support up to 96 annunciator address points per ACM-24/-48.*

Standards and Codes: The XLS3000 Intelligent Addressable Fire Alarm is designed to comply with the following standards:

- NFPA 72 Local, Auxiliary, Remote Station, Proprietary, and Emergency Voice/Alarm Fire System Requirements.
- Underwriters Laboratories Standard UL 864 (Fire), 9th Edition.
- Underwriters Laboratories Standarc
- **IBC 2000, IBC 2003, IBC 2006, IBC**
- **CBC 2007** (Seismic)

Shipping Weight

– XLS3000-CPUD: 5.95 lb (2.70 kg).

– XLS3000-CPUND: 2.90 lb (1.32 kg).

Temperature and Humidity Ranges

This system meets NFPA requirements for operation at 0 – 49°C/32 – 120°F and at a relative humidity 93% ± 2% RH (noncondensing) at 32°C ± 2°C (90°F ± 3°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°C/60 – 80°F.

Agency Listings and Approvals

These listings and approvals apply to the modules specified in this document. 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 Listed:** S470, S635 (see peripheral datasheets).
- **ULC Listed:** S470, S635 (see peripheral datasheets).
- **MEA:** 232-06-E Vol 2.
- **FDNY:** COA#6089.
- **CSFM:** 7165-1130:0256 (Commercial).
- **FM Approved.**
- **FM6320 Approved.** Class 6320 for Gas Detection.
- **City of Chicago.**
- **City of Denver.**
- **PSB Corporation.**
- **CCCF listed.**

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XLS-ELCM-320, XLS-ELEM-320, LCM-320, and LEM-320

Loop Control and Expander Modules

General

The XLS-ELCM-320 and the LCM-320 Loop Control Modules, and the XLS-ELEM-320 and the LEM-320 Loop Expander Modules provide the XLS140/XLS140-2 and XLS3000 Fire Alarm Control Panels (FACPs) with Signaling Line Circuits (SLCs). The XLS140/XLS140-2 supports one LEM-320; the XLS3000 supports up to five XLS-ELCM-320s or LCM-320s and five XLS-ELEM-320s or LEM-320s. The LEM-320 module is used to expand the XLS140/XLS140-2 to a second loop, and to expand each XLS-ELCM-320/LCM-320 used on the XLS3000 — each XLS3000 XLS-ELCM-320 or LCM-320 supports an expansion XLS-ELEM-320 or LEM-320. The LCM-320/LEM-320 support FlashScan® protocol and the XLS-ELCM-320 and XLS-ELEM-320 support Eclipse® protocol.

Features

- Up to 12,500 feet (3,810 m) on a Class B (Style 4) SLC loop (twisted-unshielded).
- Built-in degraded mode increases survivability.
- Very simple installation — plug-in style.
- Permits multiple loops in small enclosure.

Specifications

Voltage: 24 VDC nominal, 27.6 VDC maximum.

Maximum loop length: The maximum wiring distance of an SLC using 12 AWG (3.1 mm²) twisted-pair wire is 12,500 feet (3810 m) per channel. For a twisted-unshielded pair, 12 AWG (3.1 mm²) to 18 AWG (0.78 mm²):

- Distance with 12 AWG: 12,500 ft (3,810 m).
- Distance with 14 AWG: 8,000 ft (2,438 m).
- Distance with 16 AWG: 4,875 ft (1,486 m).
- Distance with 18 AWG: 3,225 ft (983 m).
- 50 ohms maximum per length of Style 6 & 7 loops.
- 50 ohms maximum per branch for Style 4 loop.
- See SLC wiring manual for latest information on acceptable wire types and distances.

Maximum current: for LCM-320 & XLS-ELCM-320: 130 mA; **for LEM-320 & XLS-ELEM-320:** 100 mA; **for single SLC loop:** 400 mA maximum.

NOTE: *Maximum short circuit — loop will shut down until short-circuit condition is corrected.*

Maximum resistance: 50 ohms (supervised and power-limited).

Temperature and humidity ranges: This system meets NFPA requirements for operation at 0 – 49°C/32 – 120°F and at a relative humidity 93% ± 2% RH (noncondensing) at 32°C ± 2°C (90°F ± 3°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°C/60 – 80°F.

Loop Control Module **Loop Expander Module**

Product Line Information

LCM-320: Loop Control Module (CLIP/FlashScan protocol). Adds SLCs to XLS3000; XLS3000 supports up to five LCM-320s and five LEM-320s.

LEM-320: Loop Expander Module (CLIP/FlashScan protocol). Expands each LCM used on the XLS3000; expands XLS140/XLS140-2 to two loops.

XLS-ELCM-320: Loop Control Module (Eclipse protocol). Adds SLCs to XLS3000.

XLS-ELEM-320: Loop Expander Module (Eclipse protocol). Used to expand the XLS-ELCM-320 only; not compatible with the XLS140/XLS140-2.

Agency Listings and Approvals

The listings and approvals below apply to the basic XLS-ELCM-320, XLS-ELEM-320, LCM-320, and LEM-320. 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.

- **UL:** S470
- **ULC:** S635/CS118
- **ULC:** S470/CS118
- **FM Approved**
- **CSFM:** 7165-1130:256, 7170-1130:255 (*LCM-320/LEM-320 with XLS3000*). 7165-1130:265, 7170-1130:264 (*LEM-320 with XLS140-2).*
- **MEA:** 232-06-E Vol 2. *(LCM-320/LEM-320 with XLS3000)*
- **FDNY:** *COA# 6030 (LEM-320 with XLS140-2*). COA#6031 (LCM-320/LEM-320 and XLS-ELCM-320/XLS-ELEM-320 with XLS3000).

NOTE: *The LCM-320/LEM-320 and XLS-ELCM-320/XLS-ELEM-320 must be installed in corresponding pairs. For example, an LEM-320 cannot be used to expand an XLS-ELCM-320.*

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NCM-W, NCM-F

Network Communications Module

NCM-W

General

The **Network Communications Module** (**NCM**) provides Honeywell Intelligent Fire Alarm Control Panels and Network Control Annunciators with a means to connect to **XLS•NET**. Two types of NCM are available: **NCM-W** for connecting nodes with twisted-pair wire, and **NCM-F** for connecting nodes with fiber-optic cable.

NOTE: *Do not mix NCM and High Speed (HS) NCM on the same system.*

NCM-W Features

- Supports twisted-pair wire medium.
- NFPA Style 4 (Class B) operation or NFPA Style 7 (Class A) operation.
- Two programmable data thresholds.
- Transformer coupling provides electrical isolation between nodes.
- Pluggable terminal wiring with strain relief.
- Pluggable service connector (feeds signal directly through) in the event that power must be removed from a node.
- 312.5 Kbaud transmission rate.
- Data is regenerated at each node.
- Two network ports to allow simultaneous connection to fire alarm control panel and to programming computer.
- Enables software and database upload/download over XLS•NET.
- Repeaters are available to increase signal.
- Repeaters may be utilized to switch media type.
- Up to 3,000 feet (914.4 m) between nodes in a point-to-point fashion (actual distance varies with wire quality).

NCM-W Interconnections: When wiring consecutive NCM-W boards, wiring may enter or exit at Port A or Port B. NCM-W port-to-port wiring is not polarity sensitive; use of Port A or Port B is arbitrary. An NCM-W may be connected to any of the following devices: **NCM-W** (in another panel), **RPT-W**, **RPT-WF**.

NCM-W Switch Functions: The NCM-W provides two sets of switches to simplify network setup. Enable ***ground fault detection*** by setting "ON" switch SW103 (Channel A); switch SW101 (Channel B). Activate ***on-board end-of-line resistors*** by setting "ON" switch SW100 (Channel A); switch 102 (Channel B). ***NOTE:*** *Correct configuration is dependent on network design; refer to the XLS•NET manual.*

For further information and diagrams, refer to the *NCM Installation Document*, 51533.

NCM-F Features

- Supports fiber-optic medium.
- NFPA Style 4 (Class B) or Style 7 (Class A) operation.
- Data is immune to all environmental noise.
- Optical isolation prevents ground loops.
- XLS•NET fiber-optic medium.
- Fiber type: 62.5/125 micrometers (multimode); or 50/125 micrometers (multimode).
- Maximum attenuation is 8 dB with 62.5/125 µm fiber and 4.2 dB with 50/125 µm fiber.
- Wavelength (1): 820 nanometers (use standard 850 nm fiber).
- Connectors: ST® style.
- 312.5 Kbaud transmission rate.
- Data is regenerated at each node.
- Two network ports to allow simultaneous connection to fire alarm control panel and to programming computer.
- Enables software and database upload/download over XLS•NET.
- Repeaters are available to increase signal.
- Repeaters may be utilized to switch media type.
- Up to 3,000 feet (914.4 m) between nodes in a point-to-point fashion (actual distance varies with wire quality).

NCM-F Interconnections: When wiring consecutive nodes/repeaters, fiber cable must exit one board on Transmit (TX) and enter the next node/repeater on Receive (RX). The fiber-optic pair (RX, TX) from Port A of one node/repeater may be connected to either Port A or Port B of another node/repeater. An NCM-F may be connected to any of the following devices: another **NCM-F**, **RPT-F**, **RPT-WF**.

Common Specifications

Temperature and humidity ranges: This system meets NFPA requirements for operation at 0°C to 49°C (32°F to 120°F); and at a relative humidity (noncondensing) of 85% at 30°C (86°F) per NFPA, and 93% ± 2% at 32°C ± 2°C (89.6°F ± 1.1°F) per ULC. 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).

Power supply: 24 VDC @ 110 mA.

Mixing Wire and Fiber on the Same Network

In some networks, it may be necessary to mix twisted-pair wire and fiber-optic cable. An RPT-WF may be used as an interface between wire and fiber.

Mounting

Both NCM-W and NCM-F can be installed in any standard chassis such as the CHS-4L, CHS-M2, CHS-M3 or CHS-4N *(see panel sheets)*. Additionally, the NCM-W can be door-mounted on the ADP-4B dress panel on a single-space blank plate (BMP-1) for mounting in an XLS-CAB-4 Series cabinet.

Agency Listings and Approvals

The following listings and approvals apply to the NCM. In some cases, certain modules or applications may not be listed by cer-

tain approval agencies, or listing may be in process. Consult factory for latest listing status.

- **UL Listed:** S470
- **ULC Listed:** UL S635
- **CSFM:** 7165-1130:0234 *(XLS140)*, *7165-1130:0256 (XLS3000),* 7165-1130:0265 *(XLS140-2)*
- **FM approved**
- **MEA:** 317-01-E *(NCM-W)*
- **FDNY:** COA#6039, COA#6060

Product Line Informatio

NCM-W: Network Communications M interface.

NCM-F: Network Communications M interface.

XLS-NCM-EBI-F: Network Communi mounts inside an EBI server. *Does not*

XLS-NCM-EBI-W: Network Commun mounts inside an EBI server. It does no

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Diagnostic LED Indicators

A HI *(green):* Illuminates to indicate the NCM-W Port A is set for high threshold *(NCM-W only)*. **B HI** *(green):* Illuminates to indicate the NCM-W Port B is set for high threshold *(NCM-W only)*. **RCD A** *(green)*: Illuminates when the NCM is receiving data from XLS•NET on Port A. **RCD B** *(green)*: Illuminates when the NCM is receiving data from XLS•NET on Port B. **STATA** *(yellow)*: Illuminates when the NCM has not received valid data from XLS•NET on Port A for at least 16 seconds. **STATB** *(yellow)*: Illuminates when the NCM has not received valid data from XLS•NET on Port B for at least 16 seconds. **RECON** *(yellow)*: Illuminates when a reconfiguration on XLS•NET is in progress. **PULSE** *(green)*: Illuminates when the NCM is transmitting XLS•NET is in progress. **RESET** *(yellow)*: Illuminates when the microcontroller fails. **POWER** *(green)*: Illuminates when +5 VDC is available.

NCM-W *(detail)*

NCM-F (detail)

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AMPS-24/E

Power Supply

for the XLS3000 and XLS-NCA2

General

The AMPS-24/E is an addressable power supply and battery charger which serves as the primary supply for the XLS3000 Fire Alarm Control Panel (FACP) or the XLS-NCA2 Network Control Annunciator.

Features

- Connects directly to the XLS3000 CPU via the RS-485 connection.
- Selectable charging current charges 7 AH to 200 AH batteries.
- Isolated Signaling Line Circuit (SLC) interface.
- Trouble bus input for use with normally-open dry contacts or open-collector circuit.
- USB Type B connector for programming installation parameters.
- Brownout detection.
- Battery/battery charger supervision.
- Secondary Power Auxiliary Outputs: 24V @ 0.5A and 5V @ 0.15A.
- AC loss detection and AC loss delay reporting.
- Mounts in a CAB-4 Series enclosure, EQ Cabinet Series enclosure, BB-25, BB-100, or BB-200 Battery Backbox.

Specifications

- Primary (AC) power:
  AMPS24: 110-120 VAC 50/60 Hz input, 5 A maximum;
  AMPS24E: 220-240 VAC 50/60 Hz input, 2.5 A maximum.
- MAIN 24V Output - filtered power-limited power. Refer to table for configuration/current information.

Charger Setting/ Battery Size	Main 24V (TB 1 on Main Control Unit) Max. Current	*Total AUX 24V (TB3 on Main Control Unit with TB2 on CPS-24) Max. Current
1A/7-26AH Batteries	5A	3A
2A/12-60AH Batteries	5A	3A
5A/55-200AH Configuration 1 Configuration 2	5A 3A	0A 1A
Disabled	5A	5A
* Maximum current for all AUX 24 volt outputs. Note that TB2 on CPS-24 is limited to 0.5A.		

- AUX 24V - provides filtered power-limited power for additional components. Refer to table above for configuration/current information.
- Secondary power (battery) charging circuit: Current-limited, sealed lead-acid battery charger which will charge 7 to 200 AH batteries.
  Selectable charging current: 1.0 A, 2.0 A or 5.0 A.
- Secondary power auxiliary outputs.
- Wire sizes: 10 AWG (5.26 mm²) to 22 AWG (0.326 mm²).
- Battery fuse (F2): 15 A, fast-acting.
- Shipping Weight: 4.25 lb

Agency Listings and Approvals

These listings and approvals apply to the AMPS-24/E power supply. 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.

- **UL:** S470
- **ULC:** CS118
- **City of Chicago**
- **City of Denver**
- **MEA:** 345-02-E
- **CSFM:** 7165-1130:256
- **FM:** Approved
- **FDNY:** #6037

Product Line Information

AMPS-24: Addressable power supply/battery charger

AMPS-24E: Same as AMPS-24: 220-240VAC operation

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