Honeywell

XLS80e Intelligent
Fire Alarm Control Panel

FEATURES

- **Certified to EN54 parts 2 and 4**
- **Drift compensation**
- **Automatic or Manual "Loop Learn" options**
- **"Walk Test" function by zone for efficient commissioning**
- **On screen "test" tally (tested/untested count) for devices in zone walk test**
- **Auto-program option**
- **Automatic time control functions by day of week for "Control-by-Event" (CBE)**
- **128 Zone capacity per panel**
- **Full configuration edit capability from panel or PC**

DESCRIPTION

The XLS80e Intelligent Fire Alarm Control Panel provides a cost-effective platform for a fire alarm system that is both flexible and expandable. The panel offers system designers and end users a technically sophisticated range of facilities and functions whilst maintaining ease of programming, installation, and operation.

The XLS80e control panel is fully compatible with the full range of Honeywell's TC800 Series analogue addressable devices. This makes the XLS80e the perfect solution for retrofit jobs as well as for new projects.

Each panel can support up to 8 analogue addressable loops and each loop can support up to 198 TC800 Series devices, 99 sensors and 99 modules. This gives the XLS80e panel a maximum capacity of 1584 points.

The XLS80e can also be networked with other XLS80e controllers and repeaters in either a "Peer-to-Peer" architecture or a master/slave network. Furthermore, if a graphic based PC front end (GUI) is required, the XLS80e panels can be connected to Honeywell's Enterprise Building Integrator (EBI).

In a "Peer-to-Peer" network each panel supervises its own detection system and is designed to function independently of all others in case of a communication failure.

In a master/slave network, panels use RS485 signalling in a daisy-chain arrangement to communicate with each other.

Full function repeater panels (XLS80/FR) complement the XLS80e product range.

System

The XLS80e panel supports a combination of up to 99 Laser, thermal, optical, photo or multi-criteria sensors and a combination of 99 call points, monitor, control, conventional zone interface modules, sounders and isolators on each loop. The panel also has both a Fire and a Fault relay output, 2 sounder circuits and additional 2 Sounder/Volt-Free circuits. 2 auxiliary power outputs are also available.

Depending on the arrangement of user specified zones, isolators may also be added to the system although they are not required at loop ends. It is recommended that a maximum of 25 devices between isolators (EN54 recommends a maximum of 32 devices).

The XLS80e controllers, peripheral devices and all the system field components e.g. sensors and modules are approved to meet with the requirements of EN54.

Communication

XLS80e controllers may be networked together using the XLSNET "Peer-to-Peer" communication boards. The boards plug directly into the processor PCB in the XLS80e. (One XLSNET board is required per XLS80e). The "Peer-to-Peer" network supports up to 100 nodes with a maximum of 32 XLS80e controllers can be included in the network.

The XLSNET provides both a high speed and robust communication path, enabling "cause and effects" to be programmed across the complete XLS80e controller network.

The XLS80e is also compatible with the Honeywell Enterprise Buildings Integrator (EBI) Graphic User Interface (GUI) communicating via OPC open communication protocol. The XLS80e "OPC2net" interface link to the Honeywell EBI allows for both alarm and fault annunciation of each individual sensor/module to be displayed on the EBI operator station in either (or both) text and graphic format/s.

Peripheral Devices

A full range of repeater panels and serial peripheral devices complements the XLS80e.

The XLS80/FR Full Repeater is a compact repeater unit. It mimics all the main indications and controls on the XLS80e panel and when connected as a part of the "Peer-to-Peer" network, alarms from any other device on the network may be mapped to the repeater panel (default = all). The XLS80/FR repeater panel has a Graphic Display unit (6 lines by 40 characters), 10 general status LEDs (including 1 spare) and 6 control switches for Reset, Mute Buzzer, End Delay/Evacuate, Silence/Resound, Zones In Alarm and Change Tabs and a keyswitch to enable limited configuration access.

If a graphic based PC front end is required, the XLS80e (or Network of XLS80e controllers can be connected via a OPC interface to Honeywell's Enterprise Buildings Integrator (EBI).
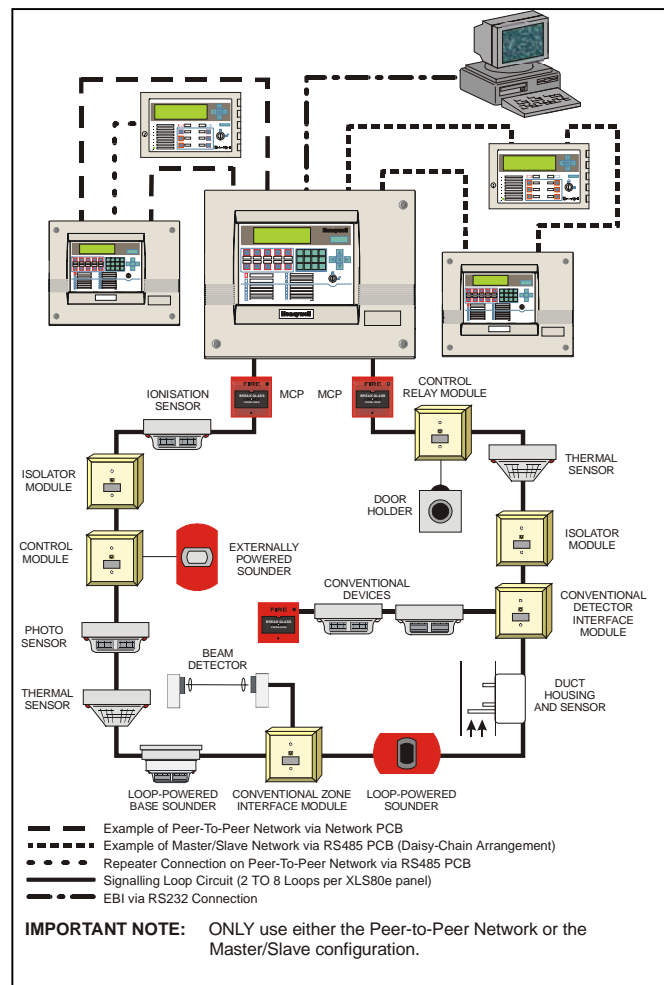
System Configuration

The XLS80e controller can be programmed on-site using either the panel control features or the Microsoft Windows PC based programming tool.

Note: The PC based programming software allows for the engineer to connect a laptop PC to the control panel through a dedicated serial port and receive panel configuration, make alterations in the installation information, and finally send the new configuration into the panel. This is particularly convenient for large panels or distributed systems when large amounts of location text, or complex cause and effect patterns are required.

Displays and Printer

The XLS80e panel has 13 (including 2 spare) general panel status warning LEDs and a graphic display unit (6 lines by 40 characters). The display is illuminated to assist viewing under dim ambient light conditions.

In addition to the general status LEDs and the graphic display unit, the panel comes with standard "FIRE" and "FAULT" indicators.

XLS80e Configuration

User definable text messages can be read directly from the graphic display unit to give details of fire and fault event locations. Optional panel functions and more detail about events and devices can be accessed using the numeric keypad and following the menu driven user level options on the display. Additionally, when the optional printer is used, this information can be printed out to provide a hard copy.

The graphic display unit serves as the primary user interface when using the manual programming option. When the numeric keypad is not in use, the display reverts to automatically scrolling through any fire alarm or fault conditions present on the panel.

Protection

The user controls are protected and can only be operated after either turning the key or entering an appropriate passcode. Authorised access to higher level functions including device isolation and configuration data entry is available through the panel keyboard and is again passcode protected.

All configuration data and event logging is retained by non-volatile memory and is, therefore, protected against corruption or complete failure of all external power supplies. The system reliability can be optimised by running the XLS80e "fault diagnosis program". This enables the identification of any problems that may not be found during normal system testing.

SPECIFICATIONS

Approvals:

EN54, CE

Mechanical:

Construction:	Sheet steel enclosure, sealed to IP30, with panels main components supplied as separate build modules. Electronic chassis module door carries all displays and controls under fascia moulding. Optional lockable, transparent user-interface doors and recess mount bezel.

Dimensions (mm) - including moulded front cover(s):

Standard:	500(w) x 400(h) x 153(d)
Deep Extended:	500(w) x 620(h) x 251(d)

Deep Back Box Extension:

500(w) x 220(h) x 251(d).

Weights (Approx.)(no batteries):

Standard	14kg
Extended extra depth	20kg
Back Box Extension extra depth	5kg

Environmental:

Climatic classification:	3K5, (IEC 721-2-3)
Operating temperature:	-5° C to +45° C, (+5° C to +35° C recommended)
Humidity:	5% to 95% R.H.
Height above sea level:	Maximum, 2000m
Panel sealing:	IP 30, (EN 60529)
Vibration:	EN 60068-2-6, 10-150Hz at 0.981ms^{-2} (Meets the requirements of EN 54-2/4)
EMC:	Emissions: EN 50081-1
	Immunity: EN 50130-4
Safety:	EN 60950

Displays and Indications:

Alphanumeric display:	240 x 64 pixel graphic display unit, used to provide 6 lines of 40 character.
LED Status Indicators:	FIRE, FAULT, DISABLEMENT, TEST, POWER, PRE-ALARM, SYSTEM FAULT, SOUNDER FAULT/DISABLED, FIRE O/P FAULT, FIRE O/P ACTIVE, DAY MODE, DELAYS ACTIVE, NON-FIRE ACTIVE.
Zone Indicators Optional:	Individual FIRE and Fault indicators for 64 and 128 (depending upon configuration options).

Controls:

Dedicated flush pushbuttons are provided for the following functions:

MUTE BUZZER, EXTEND DELAY, END DELAY/EVACUATE, SILENCE/RESOUND, RESET, DAY MODE, FIRE O/P DISABLE, CHANGE TABS, ZONES IN ALARM.

Additional pushbuttons for programming and selection of software functions:

10-KEY NUMERIC KEY-PAD

▲ ▼ ◄ ► KEYS

☑ AND ☒ KEYS

✳ KEY

System Capacity:

Number of loops:	Up to 8 depending upon configuration options.
Number of zones:	Up to 128 per panel.
Devices per loop:	99 sensors + 99 modules or 99 sensors + combination of up to 99 modules/sounders within strict limits. Use the loop & battery calculator tool.

External Connections:

Cable entry:	25 x 20mm knock-outs in top of cabinet, 15 in rear, 4 in bottom.
Terminals:	All external connections made through screw terminals, each of which will accept cable sizes between 0.5 mm^2 and 2.5 mm^2.

Electrical:

Classification	Installation Class I, (panel must be earthed).
Supply Rating	Mains supply to the panel is to be provided via an external double-pole mains isolation unit. The supply rating: 230V~ (ac) ± 15%, 5A, 50Hz ±4%.

Fuse Rating (of terminal block)

5A (T) HRC Ceramic

Power Supply Unit (PSU) Specification:

Kit PSU2.5A (PN: 020-484)

Input Fuse rating	1.6A (T) HRC Ceramic (see Appendix 1, Section 1.2).

Output ratings:

Output voltage	26-28V
Output current quiescent	0.6A
Output current alarm	2.5A
Ripple voltage	600Mv

Output ratings - Charger:

Battery voltage when charged

27.6V at 20° C (temperature compensated at -3mV/ °C/ cell)

Charging current	1.9A max. (current limited by PSU)
Maximum capacity charged to 80% in 24 hours	38Ah
Battery fuse rating	6.3A 250V HRC (T) (see Appendix 1, Section 1.2).

Batteries:

Maximum battery ratings:

Back Box & Battery Type Option:	Yuasa	Fiamm
Standard back box:	12Ah	12Ah
Deep Extended back box:	38Ah	27Ah
Externally mounted battery cabinet	130Ah	70Ah

Internal batteries	Two 12V, 12-38Ah sealed, lead-acid types MUST be used. Their lifetime depends on the ambient temperature; refer to the battery manufacturer's technical specification for guidance. (Refer to PSU specification for charger limitations).
External batteries:	Two 12V, 12-78Ah sealed, lead-acid types MUST be used. Their lifetime depends on the ambient temperature; refer to the battery manufacturer's technical specification for guidance. (Refer to PSU specification for charger limitations).

Note: With the Kit PSU2.5A, the maximum battery size is 38Ah regardless of their location.

Outputs:

i) Two dedicated Sounder Outputs

ii) Two Sounder or Volt-free Contact (VFC) - selectable outputs

iii) Two VFC outputs dedicated to Common Fire and Common Fault.

iv) Two standard, or optionally up to eight loop outputs.

v) Two 24Vdc auxiliary outputs

For fuse information refer to Appendix 1 Section 1.2.

Sounder Output Rating

Type:	Voltage reversal
Output voltage:	26 to 28V when active; -6.8V to -9V when inactive
Maximum load:	1A *
Fuse rating:	1A (T)
Monitoring:	Open- and short-circuit

Volt-free Contact (VFC) Output Rating

Type:	Single pole change-over
Maximum load:	Contacts rated 30V 1A
Fuse rating:	Not fused

24 Volt DC Auxiliary Output Rating

Output voltage range:	26 to 28 V
Maximum load:	Refer to Appendix 3, XLS80e System Design Guide, or the Loop and Battery Calculator Support Tool.
Quiescent:	150mA *
Alarm:	1A *
Ripple Voltage:	600mV
Fuse rating:	1A (T)

Note: It is recommended that the auxiliary output should not be used in the quiescent state other than to provide a supply to drive ancillary devices' power indicators.

Loop Outputs (Two Standard and Six Optional)

Output voltage:	22.5 to 26.4V
Maximum load:	0.5A*

Up to 198 loop devices (up to 99 sensors and 99 modules) may be fitted to each analogue loop. For system limitations refer to Section 4, Sensors and Modules.

Refer to Appendix 3, XLS80e System Design Guide for a list of compatible devices and loading limitations.

RS232 Serial Port (Optional)

Isolation:	Functional at 30V.
Baud rate:	Software-selectable up to 9600 Baud.
Connector:	Terminal block on RS232 PCB.
Max. cable length:	15m

RS485 Serial Port (Optional)

Isolation:	Functional at 30V.
Baud rate:	1200 Baud.
Connector:	Terminal block on RS485 PCB.
Max. cable length:	3000m (minimum of 1mm^2 screened cable recommended)

Programming

Configuration methods:	Front panel keypad, Off-line using the Off-line Configuration Tool.
Configuration access:	Keypad access is passcode-protected (user-definable) for all configuration options.

Refer to the XLS80e Series Panel Configuration Manual (ref. 997-475) for further information.

Repeaters

Refer to the Repeater Datasheet for the specification.

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