ZXa INTELLIGENT MULTI PROTOCOL FIRE ALARM CONTROL PANEL

PRODUCT SPECIFICATION

FEATURES

- **Designed To Meet The Requirements Of EN54**
- **Expandable From 1 To 2 Loops As Standard**
- **A Variety Of Networking Options**
- **Fully On-Site Programmable, "Auto Learn" Facility**
- **Off-Line Configuration Facility**
- **Automatic Test Mode**
- **External Serial Printer Option**
- **Multiple Language Support**
- **Support For Morley-IAS, System Sensor, Apollo (Series 90, XP95 And Discovery), Hochiki And Nittan Protocols**

700-001

ZXa INTELLIGENT MULTI PROTOCOL FIRE ALARM PANEL

GENERAL

The ZXa intelligent multi protocol fire alarm control panel provides a cost-effective platform for a fire alarm system that is both flexible and expandable. The ZXa offers system designers and end users a technically sophisticated range of facilities and functions whilst maintaining ease of programming, installation, and operation.

The ZXa control panel can support Morley-IAS, System Sensor, Apollo (Series 90, XP95 and Discovery), Hochiki and Nittan protocols. This makes the ZXa the perfect solution for retrofit jobs as well as new projects.

Each ZXa control panel can support up to two analogue addressable loops. Each loop can support up to 99 analogue sensors and 99 modules with Morley-IAS and System Sensor protocols, giving the ZXa a maximum capacity of 396 addresses. With all other protocols, each loop supports up to 126 addresses thus giving a maximum ZXa capacity of 252 addresses.

The ZXa can be networked with other ZXa and ZXe intelligent multi protocol fire alarm control panels using Master-Slave architecture. Furthermore, if a graphic based PC front end is required, the panels can be connected to Morley-IAS's own graphical display program 795-043-485. Each panel supervises its own detection system and is designed to function independently of all others in the network in case of a communication failure.

A full range of passive and active repeater panels and serial peripheral devices, complements the ZXa. A mixture of 31 RS485 serial peripheral bus devices, can be connected to one ZXa panel.

709-101

PASSIVE REPEATER

795-001

ACTIVE REPEATER

System

The ZXa will control a combination of up to 99 heat, smoke or multi-criteria sensors on each loop and a combination of 99 call points, monitor, control, conventional zone interface modules and addressable sounders using Morley-IAS or System Sensor protocol.

When used with Apollo, Hochiki and Nittan loop controllers each loop supports up to 126 devices (detectors and modules).

Depending on the arrangement of user specified zones, isolation modules may also be added to the system although they are not required at loop ends.

The same protocol must be used in a ZXa panel. Different protocols cannot be used in the same panel.

In multi-loop systems, the loops are scanned simultaneously.

Communication

The ZXa control panel can support up to two optional serial communication ports. These are identified as Port C and Port D.

Port C can be installed as RS485 or RS232 links and support PC front-end and panel network connections.

Port D is used for peripheral devices only and must be an RS485 link.

A third serial port, Port A, is reserved for a PC (for programming) or local printer connection.

Serial Peripheral Devices

A full range of repeater panels and serial peripheral devices complements the ZXa. These devices are connected to the panel through optional serial RS485 port, Port D. Up to thirty one peripheral loop devices can be connected to one ZXa.

The ZXR5 Active Repeater is a compact repeater unit, which mimics all the main indications and controls on the ZXa. It has an LCD, 6 general status LEDs and four control switches for Accept/Mute, Silence/Resound, Sound Alarms and System Reset.

The ZXR4 Passive Repeater is a compact repeater unit, which mimics all the main indications on the ZXa. It has an LCD display and 6 general status LEDs.

An external printer may be connected to the ZXa using Port A. Alternatively a remote printer can be connected on the RS485 peripheral bus.

For custom mimic panels, a programmable 40-way LED driver board is also available.

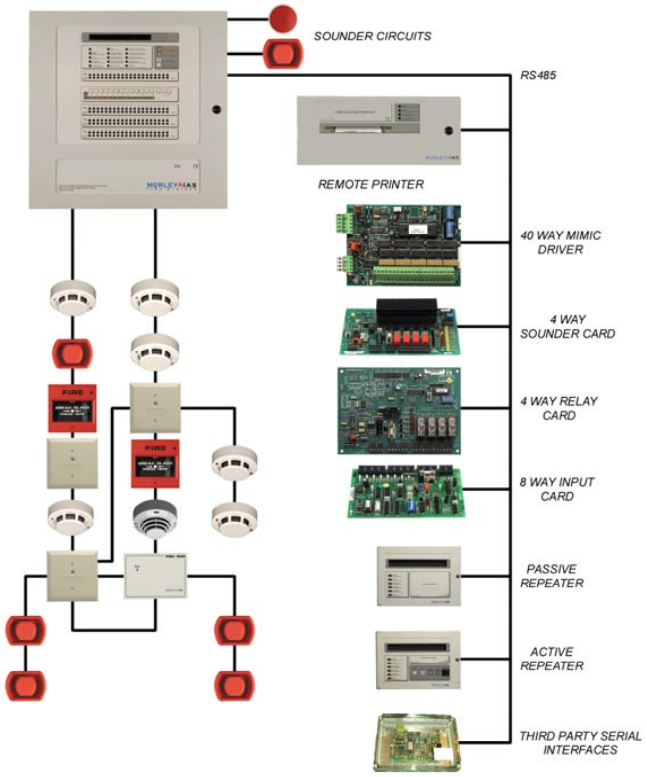
Any other third party devices and systems can be easily connected to ZXa using the 8-way input and 4-way output cards.

System Configuration

The ZXa can be fully programmed on-site using the multi-function alphanumeric keypad and the three programming keys (YES, NO, ENTER).

The AUTO LEARN facility saves considerable time and effort when installing a system, or when changing sensor configuration. It allows the system to learn for itself what devices have been installed on a particular loop.

Alternatively the ZXa can also be programmed using PCLINK; the PC based Upload/Download software. This option allows for the engineer to connect a laptop PC to the control panel through a dedicated serial port (Port A) and upload panel configuration, make alterations in the installation information, and finally download the new configuration into the panel. This is particularly convenient for panels or systems when significant amounts of location text, or complex cause and effect patterns are required.



Typical System Configuration

Displays and Printer

The ZXa has 14 general panel status information warning LEDs and an alphanumeric liquid crystal display with 2 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 LCD display, the ZXa comes with 20 pairs of zone status indicators as standard ("FIRE" and "FAULT/TEST/DISABLED" indications).

User definable text messages can be read directly from the LCD 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 LCD. Additionally, when the optional printer is used, this information can be printed to provide a hard copy.

The LCD 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

User controls on the front panel are password protected. Pressing any key on the panel will prompt for the appropriate level password to be entered. Authorised access to higher level functions including device isolation and configuration data entry is available through the panel keyboard and is again password 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. System reliability is optimised by running a fault diagnosis program, which identifies problems, which may not be found during normal system testing.

Networking

The ZXa can be networked with other ZXa and ZXe panels using Master/Slave architecture. Up to 13 panels can be inter-connected. The networks can be configured in two ways:

a. Shared Zone Network: The panels act as one large system sharing zones and functions. For single site/building applications.

b. Report and Control Network: The panels work individually or as sub-systems networked for reporting and control purposes only. For multiple site/building applications.

Several sub-networks can be inter-connected using dedicated Superior Master and Sub-Master panels (ZXe only). When using this configuration up to 99 panels can be inter-connected.

SPECIFICATIONS

Operating Voltage:
110V 60Hz AC or 230V 50Hz AC
(+10%, -15% voltage tolerance)

Max. PSU Rating:
2.5 Amps total, comprising:

Battery Charger:	0.7 Amps
Internal & External Loads:	1.8 Amps

Standby Batteries:
24V sealed lead acid batteries

Minimum Capacity:	2x 12V 6Ah	(internally fitted)
Maximum Capacity:	2x 12V 12Ah	(internally fitted)
Maximum Capacity:	2x 12V 17Ah	(externally fitted)

Power Supply:
Input(s): 24V and 7VAC (from integral mains transformer)
Output(s): 24V, +1.5V, and -1.5VDC

Dimensions:
400mm (15.7”) W x 400mm (15.7”) H x 135mm (5.3”) D

Weight:
9.3 kg (21 lbs) without batteries
17.3 kg (38 lbs) with 2x 12Ah batteries

Environmental Operating Limits:
Temperature: 0°C to +49°C (32°F to 120°F)
Humidity: 10% to 93% non-condensing

Construction:
Sheet steel painted, sealed to IP30
Front panel: flush PVC fascia
Recess mount bezel available.

Cable Entry:
14x 20mm (0.8”) knock-outs in top of cabinet
2x 20mm (0.8”) knock-outs in bottom of cabinet

Loop Capacity:
1 to 2 loops expandable

Morley-IAS and System Sensor Protocols:
Max. 99 sensor and 99 module addresses per loop
Apollo, Nittan and Hochiki Protocols:
Max. 126 devices (detectors and modules) per loop

IMPORTANT NOTE!
Mulitiple sensor protocols cannot be used in the panel simultaneously.

Zones:
Up to 20 zone with individual LED indicators

A maximum 120 can be programmed with up to 100 software zones with no LED indication

Internal Sounder:
Intermittent buzzer indicates a fault condition
High-pitched continuous buzzer indicates a fire condition

External Outputs:
Sounder Outputs:
2 programmable outputs. Open and short circuit monitoring. 1A maximum per output.

Auxiliary Relays:
EN54 format at 1 fault relay and 1 programmable relay voltage free, changeover outputs Contacts rated at 24V AC/DC, 1A, 0.6 pF maximum

User Controls:
MUTE/ACCEPT
SILENCE/RESOUND
SOUND ALARMS
SYSTEM RESET

All controls are protected by password control.

Programming Controls:
Alphanumeric multi-level keypad with 15 keys and three control keys: YES, NO (CANCEL/ESC), and ENTER

Indicators:
LED type general panel status indicators:

- FIRE (Twin LEDs)
- FAULT
- ACCEPTED
- DISABLEMENT
- TEST
- SOUNDER FAULT
- DELAYED MODE
- RELAYS DISABLED
- EARTH FAULT
- SYSTEM/CPU FAULT
- SOUNDERS DISABLED
- ALARMS SILENCED
- SUPPLY FAULT
- POWER

LED type zone Indicators (for 20 zones):
- FIRE
- FAULT/TEST/DISABLED

Display:
2x40-character LCD alphanumeric display with back-light.

Serial Interface:
2 serial ports with connections for optional RS485 or RS232 plug-in communication modules.

Port C: used for central front-end and network communication. RS485 or RS232.
Port D: used for communication with peripheral devices. RS485 only.

Port A: Dedicated serial port for software Upload/ Download or printer connection.

Networking:
Maximum of 13 panels can be networked using one Master (ZXe only) and 12 Slave (ZXa or ZXe) panels

Maximum 99 panels can be networked using a Master Network and connected Sub-Networks.

Approvals:
CE
UL (please order UL listed part numbers)

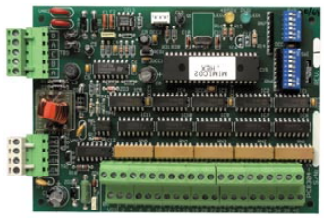
Ordering Details:

Module Type	Europe (EN54) Part No.	UL Listed Part No.
1 to 2 Loop Addressable Panel, 20 zone LEDs, 230VAC, English	700-001	700-301
1 to 2 Loop Addressable Panel, 20 zone LEDs, 110VAC, English	**NS**	700-201

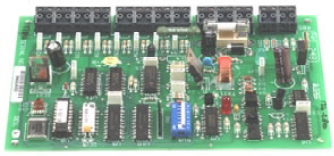
795-060-002 External Printer

Accessories:

Module Type	Europe (EN54) Part No.	UL Listed Part No.
Plug-In Loop Driver Modules (supports one loop):		
Morley-IAS Loop Card	**TBA**	**TBA**
System Sensor Loop Card	795-068	794-068
Apollo Loop Card (Series 90)	795-048	**NS**
Apollo Loop Card (XP95 and Discovery)	795-066	794-066
Hochiki Loop Card	794-058-003	794-058
Nittan Loop Card	795-044	**NS**
Plug-In Serial Communication Modules:		
RS-232 Communication Module	795-005	794-005
RS-485 Communication Module	795-004	794-004
Hi-485 High Integrity RS485 Loop Module	795-038-001	794-038 **P**
Peripheral Devices:		
ZXR5B Active Repeater	709-001	709-201
ZXR4B Passive Repeater	709-101	709-301
4-way relay module	795-014	**NS**
4-way sounder module	795-015	794-015
8-way input module	795-029	**NS**
Modbus Interface (boxed)	795-057	**NS**
Self-contained external printer, 110VAC	**NS**	794-060-001 **P**
Self-contained external printer, 230VAC	795-060-002	794-060-002 **P**
40-way mimic (LED) driver	795-065	794-065 **P**
Pager interface module	795-067-001	**NS**
Power Supply Units:		
3A, 24Vdc PSU with charger and sounder booster, boxed, 230VAC	795-016	794-071 **P**
8 Amp boxed PSU, 230VAC	795-063	**NS**
8 Amp Chassis mounted PSU, 230VAC	795-064	**NS**
Software:		
PC-LINK Programming Tool c/w Cable Adaptor	795-023	
Windows graphical front end software c/w dongle and RS485 converter	795-043-485	**NS**
Panel Accessories:		
ZXa Flush Mounting Bezel	797-053	
Battery Box (500mmx500mmx185mm)	797-025-001	

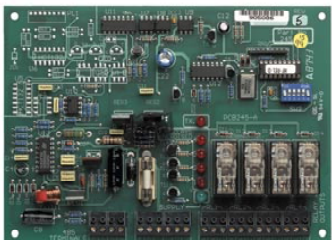


795-065 40-way remote mimic (LED) driver



795-029 8-way input module

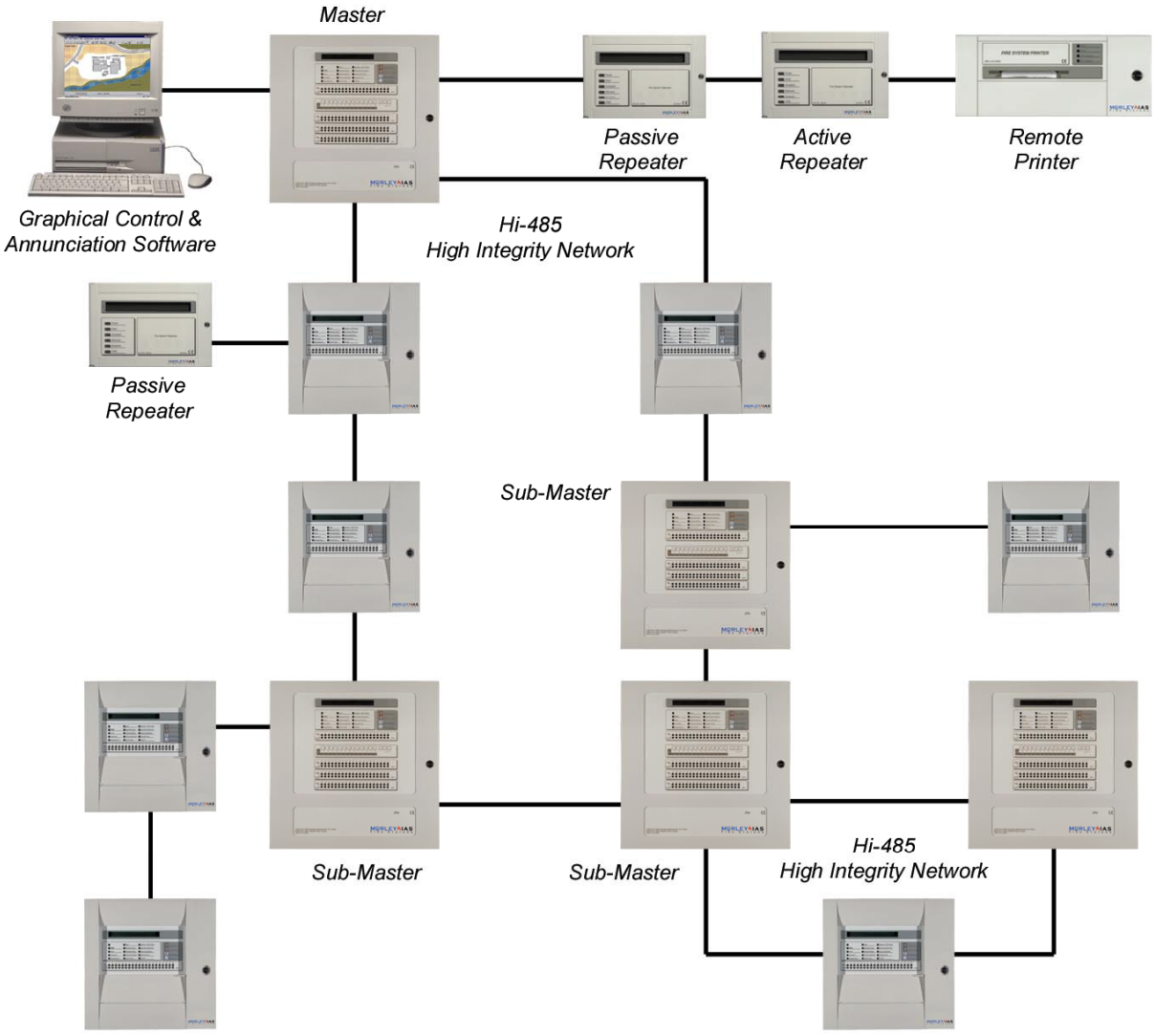
795-015 4-way sounder module



795-014 4-way relay module

NOTES:
NS = Not supported
P = Pending
TBA = To be announced

ZX Network – Typical Configuration:



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