### 25 Years of Manufacturing Excellence





Hard & Soft Addressable Fire Alarm Systems



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Zeta Alarm Systems, a trading name of GLT Exports Ltd, was founded in 1985 and is a privately held UK manufacturer of Fire Alarm, Gas Detection and Emergency Systems.

Our brand name is well known throughout the industry and is acclaimed in over forty countries worldwide. We are currently represented in the UK, Europe, Africa, the Middle East, Southern Asia & South America and this list continues to grow.

#### **Complete System Supplier**

To meet the requirements of our ever-changing market, we pride ourselves on being a complete system supplier. This means our customers can rely on us for their entire system requirements.

One of the main advantages of using a complete system supplier, compared with a component supplier, is that system wide compatibility is assured and there is one point of contact.

Marketing our products as systems has played a vital role in our worldwide success.

#### The Future

Our continued inward investment and constant endeavour to offer the very best products is recognised by our increased turnover year-on-year. Our mission is to support our existing & future customers by providing them with the highest quality products, at the most competitive prices.

#### Customer Support & Product Warranty

We value our customers greatly and to ensure they have the best experience we have a dedicated support team who are able to assist with sales, technical or logistical queries.

Our products carry a full 24 month manufacturers' guarantee from the date of purchase. Our network of authorised agents is fully trained on the use of our products and will provide a helpful & friendly service.



### Research & Development

As with all electronic equipment there is an ever present drive to manufacture products that are increasingly effective whilst becoming more cost sensitive. To meet this objective we spend a significant percentage of our profits on the continued development of products, whether it be introducing new items, or improving existing ones. We have a team of engineers & designers all of whom have vast industry knowledge & experience.

As a manufacturer we always follow the market needs closely to evaluate how we should adapt our product range. This, combined with welcomed customer feedback, has proved to be a successful formula for meeting the current and future industry needs.

#### **Statement Of Quality Policy**

We maintain a Quality System, which conforms to BS EN ISO9001:2008. We are committed, where applicable, to manufacture in compliance with all appropriate legislation & regulatory requirements.



### Fyreye MkII Protocol Technical Overview



### Zeta Premier Partner Training Centre

#### **Protocol Statement**

As a company who invests heavily in the development of our products we made a decision in 2011 to design a brand new addressable protocol which we have named the Fyreye MKII Protocol.

#### Why change protocol?

While the existing protocol has served Zeta Alarm Systems well for many years, it is a dated protocol, which has several limitations. The new Fyreye MKII Protocol has been designed to be flexible, with plenty of room for future expansion. This will allow us to continue developing innovative new products, without being restricted by protocol limitations imposed by the existing protocol.

A weak point of the existing protocol is error checking. We have taken the opportunity to increase the error checking capability eight fold. While this level of error protection could be considered overkill, we believe that the robustness this gives, will allow Fyreye MKII Protocol systems to function error free, even under extreme conditions.

#### Is the protocol backwards compatible?

In order to achieve the extra protocol commands required to accommodate our future plans, the decision was taken to totally change the protocol structure. Unfortunately this means that the protocol is not backwardly compatible. However our helpful staff will be glad to clarify any product compatibility queries you may have. Of course, we will ensure that spare parts & replacement devices will be available for existing systems for many years to come.

#### What differences will I see?

It is our intention for the first release of devices to keep "user interface" differences to a minimum, so to all intents & purposes, it will look the same as an existing protocol system. Over the next few years, we intend to add improved fault reporting from devices, notification of isolator operation, and configurable multi sensor operation, to name but a few of the future plans.

### Extra Features Already Incorporated

- 250 devices per loop
- 255 types of devices
- ✓ Up to 3 analogue value readings
- ✓ Read optical detector drift compensation value
- Manufacturing date can be stored in each addressable device
- Display battery level/signal strength of wireless devices
- ✓ Improved sounder synchronisation
- ✓ Quick start/stop loop powered sounders
- Panels can trigger sounder with alert tone, alarm tone or emergency tone
- Alarm tone selection from control panel (choice of 16 tones - 11 defined, 5 for future use)
- $\checkmark$  Panel can read the device's software version
- ✓ 8 bit checksum for reliable communication
- All devices can be softly addressed via a hand held programming tool
- ✓ Approximately 50% of protocol commands are free for future expansion and development

### MkII Handheld Programmer (MKII-TOOL)

The MkII Handheld Programmer is designed to compliment all MkII devices and to assist the

comissioning engineer on site.



#### Features

- Smoke and heat detectors can be tested when plugged on the programmer and alarm LED's can be verified prior to installation.
- The unit will softly address all devices without using the incorporated dipswitch on the field devices.
- The MkII Programmer can re-program the opto-heat detectors to either heat or smoke detector.

We believe that with all life safety systems, a proper insight into the correct operation of the system is essential and the best way this can be achieved is by hands-on training.

With this in mind, we have invested in building a brand new training facility at our Head Office in Swansea, UK where all of our systems are available for training and live demonstrations.

A typical training session covers the Simplicity Systems, the Quatro Systems and the Datalog Alarm Manager Graphics Package, covering the initial set-up, the Output Actions programming, and linking the Quatro to the Datalog Alarm Manager.

But training is flexible, and can be tailored to individual customers needs, on whichever equipment is required.

### Zeta Premier Partners

Zeta has developed a worldwide network of distributors known as Zeta Premier Partners. Each partner has been specially selected based on their extensive product knowledge of the Zeta range and capacity to supply & support product with the very highest standards expected.



You will find contact details for each of the Premier Partners in the Local Distributor section of the Zeta website - zetaalarmsystems.com



#### Benefits of being a Zeta Premier Partner Include:

- ✓ In depth technical knowledge
- ✓ Ability to design & engineer systems
- Comprehensive technical support
- Local stock holding
- Product training



### Premier Quatro 4 Loop Analogue Addressable Fire Alarm Panel

The Quatro control panel is designed, manufactured and tested to fully meet the requirements of EN54 part 2 and part 4. This panel is of a modular nature and can be supplied in 1, 2, 3, and 4 loop versions.

A specially designed Quatro Connect software is available for configuring the panel or multipanels and download to the system via USB connection.

Up to 64 panels/repeaters can be networked over 10,000m of data cable and a special alarm management system can provide all needs for very large projects such as university campus, hospital complex etc.

#### Features

- ✓ 1-4 loop, expandable by loop cards
- ✓ 20 zone LEDs
- ✓ 250 programmable zones
- ✓ Multi-language support (currently English & Spanish, 3 more languages TBC)
- 🗸 Real Time Clock
- ✓ 3072 entry event log
- ✓ 20 character device text
- ✓ 20 character zone text
- ✓ Zone or Device Disablement
- 2 x conventional sounder circuits
- ✓ Aux 24V supply
- 🔨 1 x fire relay
- 🔨 1 x fault relay
- ✓ Outputs programmable by zones
- Can be configured via PC or via Panel.



Model	QT/1	QT/2	QT/3	QT/4	QT/1/100Z	QT/2/100Z	QT/3/100Z	QT/4/100Z	QT/1P/100Z	QT/2P/100Z	QT/3P/100Z	QT/4P/100Z	QT/1P	QT/2P	QT/3P	QT/4P	QT/REP
Part No	37-500	37-501	37-502	37-503	37-570	37-571	37-572	37-573	37-590	37-591	37-592	37-593	37-580	37-581	37-582	37-583	37-583
Supply Voltage	230V +10%/-15% @ 50-60 Hz																
System Voltage	29.5V Nominal																
Number of loops	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	0
Loop Capacity	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	0
Zonal Indication - LED	20	20	20	20	120	120	120	120	120	120	120	120	20	20	20	20	0
Zonal Indication - LCD	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250
Fault Output	t Normally Energised Relay: 30V @ 1A								None								
Fire Output								Re	elay: 30V @ 1A								None
Alarm Output								2 x Conv Sc	ounder Output @	9 450mA							None
Printer	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	NO
Dimensions	485 x 477.5 x 125 3						375 x 335 x 125										
Max Battery size	ize 17Ah							7Ah									
IP Rating									IP30								
Operating Temperature	-5°C to + 40°C																







QT/1P/100Z





### Premier Quatro Addressable System Network

The Quatro system network has the facility to monitor, indicate and control the functions of a fire alarm installation, thus allowing signals to be distributed around a large site.

The network operates as a global communication system and does not require a master panel or computer. This approach reduces cost and no single panel/equipment failure will disable the entire system.

Each item of equipment connected to the network is referred to as a node. Up to 64 nodes may be connected.

Each node is programmed independently to listen to all the nodes, or to a single node on the network

The network uses RS 485 data communication. Up to a total network cable length of 64km is possible. All panels will continue to function in stand-alone mode, even if the network fails.

The operation of the network is such that each node has total stand alone capability in that its local operation is not directly affected by its connection to or disconnection from the network. The ability of a local control panel to observe events means that it can be programmed to respond to events elsewhere on the network. The effect of this capability is that any control panel is able to respond to any sensor device connected anywhere on the network. This provides a possible effective 256 loop control panel distributed around a single site as a number of smaller units. Network repeater panels provide the ability to observe and control elements of the network via a compact unit which may be conveniently mounted at manned control points and still provide all essential display and control facilities.

Network communication takes place over a single pair of wires providing a link to all nodes.

#### **Features**

- Peer-to-Peer network wide communication
- ✓ Network together:-
  - ✓ Premier Quatro panels
  - ✓ Network repeaters
- ✓ Up to 64 panels or 256 loops may be networked together

#### QT-NC

This network card provides the following:

- ✓ RS 485 repeater output
- $\checkmark$  Serial port for either panel printer or external printer (desk top)
- ✓ RS 485 network connection for use with standard network data cable

#### **OT-NC/FP**

This network card provides network connection for use with fibre-optic multi-mode. No printer or repeater out is available with this card.





# Gateway Network Card

Further to the network described on page 8, a QT-GNC (special Gateway card) can be used on any **ONE** Quatro panel (stand alone or part of a network) to provide the facility of connecting that stand alone panel and/or the network through a LAN connection to provide TCP-IP remote viewing on HTM for the last 64 events in that stand alone panel or network.



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### **Quatro Connect Panel Configuration Software**

The Quatro Connect Panel Configurator Software is an easy yet powerful tool for programming the Quatro range of panels. There is no special programming leads required to connect to the panel, just a standard USB A-B lead (the type used on printers). It consists of three main windows:

#### Main Screen

This screen allows the engineer to quickly access the editing and programming feature. Country Connect Configurator File Options USB Help Configurator File Options Help Configurator File Options USB Help Configurator File Options USB Help Configurator File Options Help Fi



#### **Editor Screen**

This screen allows the engineer to add and edit text information for the point locations and also the zones. Associated sounder can also be added on this screen.

tem's tree	Bement type	Element description	Zone	Zone description	Has Sounde
W facility					
ZETA ALARM SYSTEM					
a 👸 loop 1					
element 1	Zeta MCP v3	FRONT DOOR	1	GROUND FLOOR	
element 2	Fyreye Optical	RECEPTION	1	GROUND FLOOR	Yes
element 3	Fyreye Optical	ELECTRIC ROOM	2	MAINS ROOM	Yes
E element 4	I/O Module v3	LIFT SHUTDOWN	3	LIFT MOTOR ROOM	
element 5	Sounder Module	RECEPTION	1	GROUND FLOOR	
element 126	Sounder Module	Sounder Module	4	Empty zone	

#### **Cause and Effect Screen**

The software also allows for the download of event logs, and to print off loop and cause and effect information.



### **Graphical Alarm Manager**

(QT-DL/1, QT-DL/5, QT-DL/20, QT-DL/64)

## **Graphical Alarm Manager**

(QT-DL/1, QT-DL/5, QT-DL/20, QT-DL/64)

The Quatro Addressable system has a PC graphics package called Datalog Alarm Manager. This is an advanced system, based on



our software partner's many years experience in the event logging industy. The system is of a modular design, with the aim of the end user just purchasing the modules required.

The configuration is powerful but intuitive, allowing large systems to be configured with ease. The configuration of the system is done with different software package to the normal operation software, so that an inquistive operator has no facility to accidently change the system. The configuration software is avalible as a single site licence, allowing the user to

#### Lite (QT-DL/1)

For Connection to a Single Quatro Panel



The system is avalible in a number of sizes, ranging from a single panel, to 64 panel network. This allows the user to select the size that suits their system.

A separate software module (QMS) is available that allows a screen to be used as a mimic, allowing a simpler solution to the usual LED mimic often used in large buildings

Our software partners offer a 3D rendered site map service, to give the Datalog alarm manager a hugely impressive first point of contact.

#### QT-DL/5, QT-DL/20 & QT-DL/64

For Connection of Up to 64 Panels via a Single Zeta Panel Network











QT-DL/5

#### Features

- $\checkmark$  The panel network can be via hard wire or via LAN and a maximum of 5 panels (nodes) can be networked on the DL5
- ✓ Any panel connected via LAN requires a Gateway Network Card QT-GNC
- $\checkmark$  Any hard wired network would require a QT-NC Network Card
- ✓ Mimic output is via video output in CPU
- Repeater must be hardwired to any panel

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Model	QT-DL/1	QT-DL/5	QT-DL/20	QT-DL/64		
Part No.	37-550	37-551	37-552	37-553		
Max Network Nodes	1	5	20	64		
Mimic Output	1	1	1	1		
Connection to Computer	Hardwire or LAN					

### **Fyreye MkII Addressable Detectors**

(FEII-AOP, FEII-AOH, FEII-AHF, FEII-AHR)



The Fyreye MkII optical smoke detector (MKII-AOP) uses a pulsing IR LED & photodiode to detect IR scatter caused by smoke entering the chamber.

The detector is particularly suitable for detecting optically dense smoke, involving materials such as soft furnishings, PVC, plastic, foam and all similar materials which produce small visible particles (0.5 to 10µm).



The Fyreye MkII Rate of Rise heat detector (MKII-AHR) uses a thermistor arrangement to sense a quick rise in temperature and also a final threshold temperature of 57°C. The Fyreye fixed heat detector (MKII-AHF) has a single thermistor arrangement that gives an alarm at a temperature of 90°C.

The Fyreye MkII range of addressable detectors have extra LED's to improve detector identification in an alarm condition.

The detectors will work with most modern fire alarm control panels and come supplied with a locking grub screw to prevent unauthorised head removal.

#### **Features**

✓ Designed to meet EN54 requirement

- ✓ Lockable to base to stop unauthorised removal
- ✓ Remote LED output
- $\checkmark$  8 LEDs for improved, 360° visibility
- ✓ Compatible with all Fyreye MkII bases
- ✓ Addressed with dip switches or hand-held programmer

Model	MKII-AOP	MKII-AOH	MKII-AHF	MKII-AHR		
Part No.	80-210	80-216	80-214	80-212		
Detector Class	Optical Smoke	cal Smoke Combined Smoke & Fi Heat A1 A		Rate of Rise & Fixed Heat Detector A1R		
Design Standard	EN54 part 7	EN54 parts 5 & 7	EN54 part 5	EN54 part 5		
Approval	LPCB					
Operating Voltage	17 to 28V DC					
Quiescent Current	500μΑ					
Alarm Current @ 24V DC	5mA					
Operating Temperature	-10°C to +50°C					
Minimum Continuous Temperature	0°C					
Maximum Humidity	95% RH non-condens	ing				
Alarm Condition	0.09dB/m to 0.11dB/m	0.09dB/m to 0.12dB/m	Fixed heat trigger @57°C	Rate of rise or fixed heat trigger @ 57°C		
Coverage	100m <sup>2</sup>		50m²			
IP Rating	IP43					
Start-up Time	10 Seconds					
Size (with Base)	100 x 48 mm	101 x 64 mm	100 x 48 mm	100 x 48 mm		
Weight (with Base)	75g (133g)					
Remote Output	20mA at 24VDC					

#### Fyreye MkII Addressable Detector Base

The MKII range of detectors can be mounted on 3 different bases, a shallow base, a deep base and an isolator base.





Model	MKII-CB	MKII-CB/D	MKII-IB	MKII-ISO	
Part No.	80-220	80-221	80-0908	80-0918	
Туре	Common base	Common base (Deep)	Isolator base	Isolator base and cover	
Supply Voltage	9-33V DC		17-28V DC		
Quiescent Current @ 24V	ΟμΑ		50µA		
Alarm Current @ 24V	0mA		7mA		
Operating Temperature	-20°C to 90°C (non-cond	lensing or icing)			
Max. Wind Speed	Not affected				
Connections	L1in, L1out, L2, -R & Ear	rth	IN+, IN-, OUT+, OUT-		
Size	100 x 15mm	100 x 34mm	100 x 25mm	100 x 33mm	
Weight	48g	60g	85g	90g	

### Fyreye Mkll Sandwich Sounder

(MKII-SSB)

### **Remote LED Indicators**

(MKII-ARL/W & MKII-ARL/C)



The Fyreye II Sandwich sounder base is a platform sounder that works with the Zeta Fyreye II protocol. The sounder can be triggered from it's detectors remote LED output, allowing the sounders to be triggered individually. It can also be triggered using the Protocol's common sounder group command, meaning that it can be triggered even if it's detector has been removed.

This sounder has been designed to be sandwiched between a common base and an addressable Fyreye II Detector. All loop cables are terminated at the detector base, with the sounder base clipping onto the common base. The sounder should then be secured with it's grub screw to prevent unauthorised removal. The sounder does not need to be addressed. If it is to be started individually, it is controlled by the detector's remote LED output.

Model	MKII-SSB
Part Number	80-224
Operating Voltage	17 - 28V DC
Quiescent Current	650µA
Alarm Current	5.5mA
Sound Output	Aprox 85 dB (Depending on tone - See Table)
Minimum Operating Temp.	0°C
Operating Temperature	-10°C to +55°C
Max Humidity	95% RH Non Condensing
Ip Rating	IP 21C
Size (mm)	100 x 40 (Without Detector)
Weight	160g

#### **Alarm Tone Selection**

The Sandwich sounder Supports alarm tone selection. The alarm tone can be set for the whole loop via the control panel. One of 16 tones can be chosen for the alarm tone.

No	Tone Description	Pattern	Frequency	Rate	dBA (Reverb.
					Chamber)
0	BS Fire (Default Zeta tone)	Alternating	800 & 970	1Hz (500ms-500ms)	96 (+/- 2dB)
1	BS Fire	Alternating	800 & 970	2Hz (250ms-250ms)	95 (+/- 2dB)
2	BS Fire	Sweep	800 to 970	1Hz (1 per second)	98 (+/- 2dB)
3	BS Fire	Sweep	800 to 970	7Hz (7 per second)	99 (+/- 2dB)
4	BS Fire	Sweep	800 to 970	50Hz (50 per second)	99 (+/- 2dB)
5	BS Fire	Alternating	510 & 610	1Hz (500ms-500ms)	100 (+/- 2dB)
6	German fire (DIN 33 404)	Sweep (DIN)	1200 to 500	1Hz	99 (+/- 2dB)
7	French fire (NFS 32-001)	Alternating	554 & 440	100ms-400ms	95 (+/- 2dB)
8	Dutch fire (NEN 2575)	Slow whoop	500 to 1200	3.5s sweep, 0.5 s silence, then repeat	98 (+/- 2dB)
9	PFEER Toxic Gas	Continuous	970	Steady	95 (+/- 2dB)
10	PFEER alert	Intermittent	970	0.5Hz (1s On/1s Off)	92 (+/- 2dB)
11/12/13 14/15	Reserved	-	-	-	-





MKII-ARL/W

Model	MKII-ARL/W	MKII-ARL/C
Part No.	48-034	48-033
Quiescent Current	450μΑ	450μΑ
Alarm current	2.10mA	2.10mA
Dimensions (mm)	(W) 85.5 x (H) 85.5 x (D) 60	(Dia) 100 x (D) 40
IP Rating	IP43	IP43
System Voltage	17 to 28 Vdc	17 to 28Vdc





Each unit is equipped with 8 LEDs and mimics the detector LED in alarm condition.

#### Features

- The indicators can be hard addressed via 8 way dip-switch OR
- ✓ Softly addressed using the MKII handheld programmer
- Each indicator can be programmed for one device or up to 12 devices
- Each indicator will be connected directly on to the detection loop



### **Addressable Call Points**

(ZT-CP3/AD, ZT-CP3/WP/AD)

## Premier Power Pack EN 54-4 Power Supply with LCD Screen (PP-2/12, PP-5/17)

#### ZT-CP3/AD









ZT-CP3/WP/AD

77,000

CP3-CV

The ZT-CP3/AD and ZT-CP3/WP/AD addressable call points are unique in that they mimic the feel of breaking glass whilst offering the user the benefits and environmental advantages of a re-settable operating element.

Addressing these call points is via an 8 way dip switch on the back of the call point.



#### Features

- ✓ EN54-11 approved
- ✓ Waterproof tested to IP67 (ZT-CP3/WP/AD only)
- ✓ Glass appearance maintains operator deterrence
- ✓ Positive activation that mimics the feel of breaking glass
- ✓ Visible warning flag confirms activation
- ✓ Simple key to reset operating element (no broken glass)
- ✓ Complete functional test with every activation
- ✓ Available in two colours

Model	ZT-CP3/AD ZT-CP3/WP/AD				
Input Voltage	17-28V DC				
Element Type	Resettable				
Quiescent Current	450µA Maximum				
Alarm Current	2.3mA Maximum				
Operating Temperature	-20 degrees C to +60 degrees C				
Max Humidity	95%RH Non-Condensing				
IP Rating	IP32	IP67			
Size (W x H x Dmm)	87 x 87 x 23	119 x 119 x 62			

#### **Optional Extra**

Order Code	Description
CP3-CV	Perspex Cover for CP3 Series Manual Call Point
CP3-FMB	Flush Mount Bezel For Indoor CP3 Series Manual Call Points



#### Screen Information

S	yste	em l	Vor	mal	Sc	ree	n	_	_		_	_					_	_		Model	PP-2/12	PP-5/17
Z	E	Т	Α		А	L	А	R	Μ		S	Y	S	т	Е	Μ	S			Part No.	46-300	46-305
Ρ	R	Е	Μ	Ι	Е	R		Ρ	0	W	Ε	R	-	Ρ	А	С	Κ			Input Voltage	170-264V AC 47-63 H	łz
R	Α	Т	T	Ν	G		3	0	۷		D	С		2		0	Α			Output Voltage	28V DC Nominal	28V DC Nominal
S	Y	S	Т	Е	Μ		Ν	0	R	Μ	А	L								Power Rating	75W	150W
S	cree	≏n 1	- 1	l∕air	n In	for	mat	ior	1											Efficiency	79%	86%
м	A	1	Ν	S	:		0	K		В	Α	Т	Т	S	:		0	K		Total Power Output	2.0 Amp	5.0 Amp
v	(	A	)	=	2	9		5		۷	(	В	)	=	2	9	•	5		Power Supply Outputs	2 Fused Outputs	2 Fused Outputs
C	U	R	R	E	Ν	Т	6	0		1	2		A	Μ	Ρ	S				Maximum Current Per Output	0.625mA	2.0 Amps
B	A	T	T	E	R	Y		1	Μ	Ρ	:	0	•	0	0	3	7			Battery Charging Current	750mA	920mA
C	Н	Α	R	G	E	R		۷	0	L	Т	:	2	5	•	4	5		۷	Fault Relay Rating	SELV 1A	SELV 1A
C	Н	A	R	G	E		Т	Y	Ρ	E	:		В	0	0	S	Т			IP Rating	IP30	IP30
В	A	Т	Т	E	R	Y		S	Т	A	Т	Ε	:	G	0	0	D			Size	375 x 335 x 128mm	375 x 403 x 128mm
S	cree	en 3	- 1	۸isc																		
E	A	R	Т	Н	:	2		4	4	7	۷					G	0	0	D			
C	Н	Α	R	G	Е	R		С	Ι	R	С	U	Ι	Т	:		0	Κ				
В	A	D		В	А	Т	Т	Ε	R	Y		L	۷	L		Х		Х	R			
S	cree	en 4	S	oft	wai	re I	nfo	rma	atio	n												
S	0	f	t	w	a	r	e		Ρ	S	U	:		2	۷	0	0					
S	0	f	t	w	a	r	е		L	С	D	:		2	۷	0	0					

The Premier Power Pack Power supply uses an innovative design that allows the engineer to view system status through the on board LCD screen. The screen can display several power supply parameters, including output voltage, and output current.

The power supply itself uses a 3 state charger which uses BOOST, FLOAT, and PULSE modes, depending on the state of the battery.

The PSU will disconnect the batteries under mains fail condition, when the batteries are fully discharged to prevent damage to the batteries.

The PSU will also monitor the battery for high internal resistance, and signal a fault if that condition is detected.

### Fyreye MkII Addressable Input Module With Isolator (ZAI-MI)

### Fyreye MkII Addressable Input/Output Module With Isolator (ZAIO-MI)





#### Typical Wiring Diagram



### **Electrical Data**

Model	ZAI-MI
Part Number	48-101
Operating Voltage	17-28V DC
Quiescent Current @ 24V	1.0mA (20KΩ E.O.L fitted)
Switch Input Closed (LED OFF)	1.25mA
Switch Input Closed (LED ON)	3.60mA
Mimimum Operating Temp.	0°C
Operating Temperature	-10°C to +55°C
Max Humidity	95% RH Non Condensing
IP rating	IP43
Size (mm)	150 x 90 x 45
Weight	220g

The ZAI-MI is an input module supplied in a modern enclosure (2 gang box size) with well protected electronic circuit board to minimize any damages during installation.

It is supplied with a back box suitable for surface mount indoor installation. Designed and manufactured to meet the requirement of EN54-18 2005 and EN54-17 2005.

#### **Applications**

The ZAI-MI is used to monitor and raise alarm from any ancilliary equipment such as sprinkler flow switch, aspiration detectors, secondary fire control panel, beam detectors, external power supplies etc.

For more details and connection information consult the installation guide.

#### **Special Features**

- ✓ Loop powered (60 devices per loop as maximum)
- ✓ Hand addressed using the 8 way dip switch OR
- ✓ Softly addressed using our handheld MKII Programmer (part no. 48-004)
- ✓ Equipped with short circuit line isolator
- Extensive front unit indications

#### **Front Unit Indications**

Status	LED Indication
Alarm	Illuminated red when the Input Module is in alarm
Fault	Illuminated yellow when the Input Module is in fault
Polling	Flashed green when the Input Module communication with panel
Isolating	Illuminated yellow when the loop is short or wrong connection circuit





#### **Typical Wiring Diagram**



#### **Electrical Data**

Model	ZAIO-MI
Part Number	48-108
Operating Voltage	17-28V DC
Quiescent Current @ 24V	1.0mA (20KΩ E.O.L fitted)
Switch Input Closed (LED OFF)	1.25mA
Relay Operated (LED ON)	2.0mA (Max 2 LEDs on)
Mimimum Operating Temp.	0°C
Operating Temperature	-10°C to +55°C
Max Humidity	95% RH Non Condensing
IP rating	IP43
Size (mm)	150 x 90 x 45
Weight	220g

The ZAIO-MI is both an input and output module in a modern enclosure (2 gang box size) with well protected electronic circuit board to minimize any damages during installation.

It is supplied with a back box suitable for surface mount indoor installation. Designed and manufactured to meet the requirements of EN54-18 2005 and EN54-17 2005.

#### **Applications**

The ZAIO-MI is used when both an input needs to be monitored and at the same time a local output (relay output) needs to be triggered to switch ancilliary equipment on or off during an alarm condition.

Typical output triggering includes: controlling lift operation during an alarm, starting fire pump, stopping ventilation fans etc.

For more details and connection information consult the installation guide.

#### **Special Features**

Loop powered (60 devices per loop as maximum)

- ✓ Hand addressed using the 8 way dip switch OR
- Softly addressed using our handheld MKII Programmer (part no. 48-004)
- Equipped with short circuit line isolator
- Extensive front unit indications

Status	LED Indication
Switch closed	Illuminated red when monitored field contact is activated
Relay on	Illuminated red when relay is ener- gized
Fault	Illuminated yellow when the input is open or short circuit
Polling	Flashed green when the device is polled by control panel
Isolating	Illuminated yellow when the loop is short or wrong connection circuit

#### **Front Unit Indications**

### Fyreye MkII Addressable Sounder Control Module With Isolator (ZASC-MI)

### Fyreye MkII Addressable Zone Monitor Module With Isolator (ZAZM-MI)





#### Typical Wiring Diagram



#### **Electrical Data**

Model	ZASC-MI
Part Number	48-112
Operating Voltage (Loop)	17-28V DC
Operating Voltage (Ext. Power)	9-32 V DC
Quiescent Current @ 24V	0.6mA
Fault Current	0.6mA
Sounder Operated Current	0.8mA
Ext Power Quiescent @ 24V	2mA
EXT power: sounder on @ 9V	2.5mA (+ sounder load)
EXT power: sounder on @ 32V	9.5mA (+ sounder load)
Mimimum Operating Temp.	0°C
Operating Temperature	-10°C to +55°C
Max Humidity	95% RH Non Condensing
IP rating	IP43
Size (mm)	150 x 90 x 45
Weight	220g

The ZASC-MI is supplied in a modern enclosure (2 gang box size) with well protected electronic circuit board to minimize any damages during installation.

It is supplied with a back box suitable for surface mount indoor installation. Designed and manufactured to meet the requirement of EN54-18 2005 and EN54-17 2005.

#### **Applications**

The ZASC-MI can be used to supply a monitored 24Vdc to operate external relays and as a conventional sounder circuit to run bells or beacon flashers where the current consumption prohibits the use of addressable loop powered devices. The unit also includes input connections to monitor the external power supply status and report the findings to the addressable control panel.

For more details and connection information consult the installation guide.

#### **Special Features**

- This is not a loop powered device and an adequate 24Vdc input (with battery backup) is needed.
- ✓ Hand addressed using the 8 way dip switch OR
- ✓ Softly addressed using our handheld MKII Programmer (part no. 48-004)
- ✓ Equipped with short circuit line isolator
- Extensive front unit indications

#### **Front Unit Indications**

Status	LED Indication
Alarm	Illuminated red when the Sounder Control Mod- ule is in alarm
Fault	Illuminated yellow when the Sounder Control Module is in fault
Open	Illuminated yellow when the sounder input is in open state
Short	Illuminated yellow when the sounder input is in short state
Polling	Flashed green when the module is communicat- ing with the panel
Isolating	Illuminated yellow when the loop is short or wrong connection circuit
Ext Power	Illuminated green when Ext Power is connected correctly
Input	Illuminated green when the Ext Power is active





#### **Typical Wiring Diagram**



#### **Electrical Data**

Model	ZAZM-MI
Part Number	48-117
Operating Voltage	17-28V DC
Quiescent Current @ 24V	3.5mA (6.2KΩ E.O.L fitted)
Alarm Current (LED off)	12.6mA
Alarm Current (LED on)	13.2mA
Mimimum Operating Temp.	0°C
Operating Temperature	-10°C to +55°C
Max Humidity	95% RH Non Condensing
IP rating	IP43
Size (mm)	150 x 90 x 45
Weight	220g
Max Humidity	95% RH Non Condensing
IP rating	IP43
Size (mm)	150 x 90 x 45
Weight	220g

The ZAZM-MI is supplied in a modern enclosure (2 gang box size) with well protected electronic circuit board to minimize any damages during installation.

It is supplied with a back box suitable for surface mount indoor installation. Designed and manufactured to meet the requirement of EN54-18 2005 and EN54-17 2005.

#### **Applications**

The ZAZM-MI is a conventional zone that can be used for conventional devices and/or for special detectors that are not available in addressable form such as UV detectors, Aspiration detectors etc.

For more details and connection information consult the installation guide.

#### **Special Features**

- ✓ This is a loop powered device, however loop load calculation must be performed to determine the permissable quantity of ZAZM-MI per loop.
- ✓ Hand addressed using the 8 way dip switch OR
- ✓ Softly addressed using our handheld MKII Programmer (part no. 48-004)
- Equipped with short circuit line isolator
- Extensive front unit indications

#### **Front Unit Indications**

Status	LED Indication
Alarm	Illuminated red when conventional detector zone is in alarm
Polling	Flashed green when the zone monitor is com- municating with panel
Isolating	Illuminated yellow when the loop is short or wrong connection circuit

### **Maxitone Addressable Sounder and Combined**

Sounder/Flasher (MKII-AMT/R, MKII-AMT/W, MKII-AMTSF/R & MKII-AMTF/R)

### Miditone Addressable Sounder & Combined Sounder/Flasher (MKII-AMD/8R, MKII-AMD/8W, MKII-AMSF/R & MKII-AMF/R)







The Maxitone addressable sounder is a large horn sounder suitable for many applications. It has been upgraded to work on the Zeta Fyreye Il protocol. The sounder is available in red or white, and the sounder flasher version is available in transparent red.

It has a large back box with knock-out cable entries, which has plenty of room for fitting the cables.

It has an internal 8 way dip switch for setting the device address, and a sound output of 94dBA @ 1m.

#### Features

- ✓ High output
- ✓ 16 selectable alarm tones
- ✓ Volume control

Model	MKII-AMT/R	MKII-AMT/W	MKII-AMTSF/R	MKII-AMTF/R				
Part No.	42-620	42-621	42-622	42-623				
Colour	Red	White	Red	Red Flasher Only				
Quiescent Current	600µA	600µA	610µA	600µA				
Alarm Current @ 24V	7mA	7mA	10.6mA	5.5mA				
Sound Output	See Chart Below							
Operating Voltage	17vdc - 28vdc							
Operating Temperature	-10°C to 50°C							
Minimum Operating Temperature	0°C							
IP Rating	IP65							
Size	124 x 130 x 100mm							
Weight	357g							

Tone No.	Tone Description	Pattern	Frequency	Rate	dB Output
0	BS Fire (STD Zeta)	Alternating	800 & 970	1Hz (500ms-500ms)	107 (+/- 2dB)
1	BS Fire	Alternating	800 & 970	2Hz (250ms-250ms)	104 (+/- 2dB)
2	BS Fire	Sweep	800 & 970	1Hz (1 per second)	103 (+/- 2dB)
3	BS Fire	Sweep	800 & 970	7Hz (7 per second)	103 (+/- 2dB)
4	BS Fire	Sweep	800 & 970	50Hz	103 (+/- 2dB)
5	BS Fire	Alternating	510 & 610	1Hz (500ms-500ms)	102 (+/- 2dB)
6	German Fire (DIN 33 404)	Sweep (DIN)	1200 to 500	1Hz	103 (+/- 2dB)
7	French Fire (NFS 32-001	Alternating	554 & 440	100ms - 400ms	101 (+/- 2dB)
8	Dutch Fire (NEN 2575)	Slow Whoop	500 to 1200	3s sweep, 0.5s silence, then repeat	101 (+/- 2dB)
9	PFEER Toxic Gas	Continuous	970	Steady	105 (+/- 2dB)
10	PFEER* Alert	Intermittent	970	0.5Hz (1s On/1s Off)	102 (+/- 2dB)









Model	MKII-AMD/8R	MKII-A					
Part No.	42-600	42-601					
Sound Output	See Chart Below						
Colour	Red	White					
Operating Voltage	17vdc - 28vdc						
Quiescent Current	650µA						
Alarm Current @ 24V	4.5mA						
Operating Temperature	-10°C to 50°C						
Minimum Operating Temperature	0°C						
IP Rating	IP21						
Size (with Back Box)	85 x 85 x 35mm (85	x 85 x 6					
Weight (with Back Box)	100g (150g)						

Tone No.	Tone Description	Pattern	Frequency	Rate	dB Output
0	BS Fire (STD Zeta)	Alternating	800 & 970	1Hz (500ms-500ms)	95 (+/- 2dB)
1	BS Fire	Alternating	800 & 970	2Hz (250ms-250ms)	95 (+/- 2dB)
2	BS Fire	Sweep	800 & 970	1Hz (1 per second)	95 (+/- 2dB)
3	BS Fire	Sweep	800 & 970	7Hz (7 per second)	95 (+/- 2dB)
4	BS Fire	Sweep	800 & 970	50Hz	95 (+/- 2dB)
5	BS Fire	Alternating	510 & 610	1Hz (500ms-500ms)	95 (+/- 2dB)
6	German Fire (DIN 33 404)	Sweep (DIN)	1200 to 500	1Hz	95 (+/- 2dB)
7	French Fire (NFS 32-001	Alternating	554 & 440	100ms - 400ms	93 (+/- 2dB)
8	Dutch Fire (NEN 2575)	Slow Whoop	500 to 1200	3s sweep, 0.5s silence, then repeat	95 (+/- 2dB)
9	PFEER Toxic Gas	Continuous	970	Steady	94 (+/- 2dB)
10	PFEER* Alert	Intermittent	970	0.5Hz (1s On/1s Off)	90 (+/- 2dB)

Following customer demand, we have reintroduced our miditone addressable sounder, and upgraded it to work with the Zeta Fyreye II protocol.

It is a small high output sounder that can be installed either surface mount (with the supplied back box), or flush mounted, using a standard UK 1 gang back box.

It is available as either a sounder only, in red or white, or as a combined sounder. LED flasher.

#### **Features**

✓ Complies to EN54 part 3

✓ 95dB @ 1m sound output

✓ Flush or surface fixing

MD/8W	MKII-AMSF/R	MKII-AMF/R
	42-602	42-603
	Red	Red
	7.5mA	
67mm)		
	112g (162g)	

### **Xtratone Addressable Sounder**

(MKII-AXT/R & MKII-AXT/W)

## Xtratone Addressable Sounder Flasher

(MKII-AXTSF/R, MKII-AXTF/R & FL-AXT/W)



The Xtratone sounders are small, high output addressable devices which are designed to meet EN54 part 3 and are CE marked.

The device is a compact unit that fits a standard European back box and can be either surface or semi-flush mounted.

The Xtratone sounder has been designed so that field cables can be terminated in the back box as a first fix.

#### Features

✓ Complies to EN54 part 3

- $\checkmark$  16 tones can be selected from control panel
- ✓ Hard addressed via 8 way dip-switch OR
- ✓ Softly addressed via MKII Handheld Programmer

No	Tone Description	Pattern	Frequency	Rate	dBA (Reverb.
					Chamber)
0	BS Fire (Default Zeta tone)	Alternating	800 & 970	1Hz (500ms-500ms)	102 (+/- 2dB)
1	BS Fire	Alternating	800 & 970	2Hz (250ms-250ms)	101 (+/- 2dB)
2	BS Fire	Sweep	800 to 970	1Hz (1 per second)	95 (+/- 2dB)
3	BS Fire	Sweep	800 to 970	7Hz (7 per second)	96 (+/- 2dB)
4	BS Fire	Sweep	800 to 970	50Hz (50 per second)	96 (+/- 2dB)
5	BS Fire	Alternating	510 & 610	1Hz (500ms-500ms)	93 (+/- 2dB)
6	German fire (DIN 33 404)	Sweep (DIN)	1200 to 500	1Hz	96 (+/- 2dB)
7	French fire (NFS 32-001)	Alternating	554 & 440	100ms-400ms	95 (+/- 2dB)
8	Dutch fire (NEN 2575)	Slow whoop	500 to 1200	3.5s sweep, 0.5 s silence, then repeat	96 (+/- 2dB)
9	PFEER Toxic Gas	Continuous	970	Steady	101 (+/- 2dB)
10	PFEER alert	Intermittent	970	0.5Hz (1s On/1s Off)	101 (+/- 2dB)
11/12/13 14/15	Reserved	-	-	-	-

Model	MKII-AXT/R	MKII-AXT/W
Part Number	42-610	42-611
Colour	Red	White
Operating Voltage	17 - 28V Dc	17 - 28V Dc
Quiescent Current	650mA	650mA
Alarm Current	4.5mA	4.5mA
Sound Output	Aprox 90 dB (Depending On Tone - See Table)	Aprox 90 dB (Depending On Tone - See Table)
Colour	Red	White
Minimum Continuous Operating Temperature	0°C	0°C
Operating Temperature	-10°C To +55°C	-10°C To +55°C
Max Humidity	95% Rh Non Condensing	95% Rh Non Condensing
Ip Rating	Ip 21C	lp 21C
Size mm (with back box)	100 x 100 x 47mm (100 X 100 X 80mm)	100 x 100 x 47mm (100 X 100 X 80mm)
Weight	200G	200G





Model	MKII-AXTSF/R	MKII-AXTF/R	FL-AXT/W
Part Number	42-612	42-613	42-616
Operating Voltage	17 - 28V DC	17 - 28V DC	17-28V DC
Quiescent Current	650µA	650µA	n/a
Alarm Current	7.3mA	5.5mA	n/a
Sound Output	Aprox 90 dB (Depending On Tone - See Table)	none	n/a
Colour	Red body, Clear Lens	Red body, Clear Lens	Clear lens
Minimum Continuous Operating Temperature	0°C	0°C	0°C
Operating Temperature	-10°C To +55°C	-10°C To +55°C	-10°C To +55°C
Max Humidity	95% Rh Non Condensing	95% Rh Non Condensing	95% Rh Non Condensing
Ip Rating	IP21C	IP21C	IP21C
Size mm (with back box)	105x 105 x 47mm	105x 105 x 47mm	105 X 105 X 27 (n/a)
	(105 X 105 X 80mm)	(105 X 105 X 80mm)	
Weight	220g	200g	100g

As a compliment to the Xtratone sounder, the family also includes an Xtratone sounder flasher, and an Xtratone flasher.

The flasher only version has to be purchased as a complete item.

The sounder flasher can either be purchased as a complete item, or a flasher unit can be added to an Xtratone sounder to convert it into a sounder flasher. The sounder recognises that a flasher unit is fitted, and changes it's type code, so that the panel is aware that the device is now a sounder flasher.

The Standard model uses White LEDs with a clear lens, to give the highest flash output. Other colours available on request

#### **Features**

- ✓ Complies to EN54 part 3
- $\checkmark$  16 tones can be selected from control panel
- ✓ Hard addressed via 8 way dip-switch OR
- ✓ Softly addressed via MKII Handheld Programmer

## Zeta Beam Motorised Reflective Optical Beam

Smoke Detector (ZT-BEAM, ZT-BEAM/KIT80, ZT-BEAM/KIT100)

### UV/IR & Triple IR (IR3) Flame Detectors

(ZT-20P, ZT-20EX & ZT-500EX)







#### ZT-BEAM/KIT80

T-B	EAN	VKIT	100

Developed to overcome the problems of old outdated technology in beam detection, this motorised beam now means that beam detection can be used reliably to produce cost effective solutions for protecting large areas.

Building movement and accessibility have in the past, made beam detection unreliable, difficult, time consuming to commission and hard to maintain, but now by using the advanced motorised technology of thefirebeam unreliability is no longer a problem. The ZT-BEAM will self align itself to the centre of the reflector when commissioning and will automatically keep alignment with the reflector when building movement occurs. This intelligent motorisation will mean less false alarms therefore saving time, resources, reputations and ultimately money.

#### Features

- ✓ Motorised head unit
- ✓ Controller unit (mounted at low level)
- $\checkmark$  Designed to comply with EN54 part 2
- ✓ Compatible with most major fire panels
- $\checkmark$  Very low power consumption
- ✓ Uses only 3mA at all times

#### Additional System Components

- ✓ ZT-BEAM/KIT80 Mid range kit for distances between 40 and 80 metres.
- ZT-BEAM/KIT100 Long range kit for distances between 80 and 100 metres.

Order Information	
For 40m Beam	ZT-BEAM
For 80m Beam	ZT-BEAM + KIT/80
For 120m Beam	ZT-BEAM + KIT/100
For Zone Monitor Module	ZAZM-MI







#### **Applications**

#### Non Hazardous (ZT-20P)

- ✓ Non-Hazardous Areas
- ✓ Semiconductor Process Equipments
- 🗸 Warehouse
- ✓ Waste disposal facilities

#### Hazardous (ZT-20EX & ZT-500EX)

- ✓ Offshore Oil & Gas Installations
- ✓ Onshore Oil & Gas Installations and Pipelines
- Petrochemical plants
- 🗸 Chemical plants
- 🗸 Shipbuilding facility
- ✓ Automotive industry
- ✓ Storage tank farms
- ✓ Power generation facility
- Painting industry
- ✓ Warehouse
- ✓ Waste disposal facility
- Explosive & Munitons

The new range of UV/IR and Triple IR Flame Detectors detect fuel and gas fires at long distances with the highest immunity to false alarms.

The ZT-20P and the ZT-20EX can detect a  $0.1m^2$  gasoline pan fire at 30m in less than 5 seconds. The ZT-500EX can detect the same fire at 65m in less than 5 seconds.

New features include RS484/RS232 compatabilities for digital communications; lower power requirements; and a compact, lighter design.

ZT-20EX and ZT-500EX series are approved to ATEX by DNV for explosion-proof.



#### Features

- ✓ UV/IR Spectrum for medium distance detection and high false alarm immunity (ZT-20P & ZT-20EX)
- Triple IR Spectrum for longer distance detection and high false alarm immunity (ZT-500EX only)
- ✓ Compact and lightweight design
- ✓ ZT-20EX & ZT-500EX Enclosure options:
  - Aluminium
  - Stainless (ST 316L) for offshore facilities
- ✓ User Selectable (Senitivity/Functions)
- 🗸 Multiple output options
- Relays for Alarm and Fault
- 0-20mA (stepped)
- RS-485/RS-232 spectrum monitoring
- Lower power requirement
   (35mA standby / 75mA alarm)
- Ex cable gland /2 metre cable assembled & provided for users' easy installation
- Certifications
- ATEX approved by DNV for explosion-proof
- CE marking

### **Product Compatibility Chart**

### Device Current Consumption

	Rej Pa	peat anel	er s	Ado	dres	sabl	e De	tect	ors				Add	ress	able	Sou	nde				Ac I	ldre: nter	ssab face	le ?	De E	tect Bases	or S	Re	emo	te Le	ed
	REP/AD	QT-REP	DATALOG	MKII-AOP	MKII-AOH	MKII-AHR	MKII-AHF	ZT-CP3/AD	ZT-CP3/AD/WP	MKII-AMD/x	MKII-AMDSF/x	MKII-AMDF/×	MKII-AXT/x	MKII-AXTSF/x	MKII-AXTF/x	MKII-AMT/x	MKII-AMTSF/x	MKII-AMTF/x	MKII-SSB	MKII-SSFB	ZAI-MI	ZAIO-MI	ZASC-MI	ZAZM-MI	MKII-CB	MKII-CB/D	MKII-IB	MKII-RL/C	MKII-RL/W	MKII-ARL/C	MKII-ARL/W
implicity 64	$\checkmark$	х	х	~	√	√	√	√	√	$\checkmark$	√	√	√	√	√	√	√	$\checkmark$	√	✓	√	√	√	✓	√	√	√	Ρ	Ρ	√	$\checkmark$
Max Per loop		-		64	64	64	64	64	64	64	48	48	64	48	48	48	32	32	64	48	64	64	64	16	64	64	32	32	32	32	32
Simplicity 126	$\checkmark$	х	х	~	√	√	$\checkmark$	√	√	√	√	√	√	√	√	√	√	~	√	√	√	√	√	√	√	√	~	Ρ	Ρ	√	$\checkmark$
Max per loop				126	126	126	126	126	126	64	48	48	64	48	48	48	32	32	64	48	64	64	64	16	126	126	32	32	32	32	32
Simplicity 252	$\checkmark$	х	x	~	√	√	√	√	√	√	√	√	√	√	√	√	√	$\checkmark$	√	√	√	√	√	√	√	√	~	Ρ	Ρ	√	$\checkmark$
Max per loop	-	-	-	126	126	126	126	126	126	64	48	48	64	48	48	48	32	32	64	48	64	64	64	16	126	126	32	32	32	32	32
Premier Quatro	х	√	√	~	√	√	√	√	√	$\checkmark$	√	√	√	√	√	√	√	$\checkmark$	√	√	√	√	√	√	√	√	~	Ρ	Ρ	√	$\checkmark$
Max Per loop	-	-	-	250	250	250	250	250	250	64	48	48	64	48	48	48	32	32	64	48	64	64	64	16	250	250	32	32	32	32	32

#### (in Micro-Amps)

Device	Quiescent	Alarm
MKII-AOP	0.5	5
MKII-AOH	0.5	5
MKII-AHR	0.5	5
MKII-AHF	0.5	5
ZT-CP3/AD	0.45	2.3
ZT-CP3/AD/ WP	0.45	2.3
MKII-AMD/x	0.65	4.5
MKII-AMDSF/x	0.7	7.5
MKII-AMDF/x	0.65	5.5
MKII-AXT/x	0.62	4.5
MKII-AXTSF/x	0.62	7.3
MKII-AXTF/x	0.62	5.5
MKII-AMT/x	0.74	6.8
MKII-AMTSF/x	0.77	10.6
MKII-AMTF/x	0.74	5.5
MKII-SSB	0.6	3.5
MKII-SSFB	0.6	5.5
ZAI-MI	1	3.6
ZAIO-MI	1	2
ZASC-MI	0.6	0.8
ZAZM-MI	3.5	19
MKII-CB	n/a	n/a
MKII-CB/D	n/a	n/a
MKII-IB	0.05	7
MKII-ARL/C	0.5	5
MKII-ARL/W	0.5	5

#### Key

~	Compatible, and can be connected directly to the panel
x	Not compatible with the panel
Ρ	Compatible, but requires some extra setup programming

#### About

This chart is aimed to assist identifying which devices or repeaters will work with each control panel.

If you have any questions or doubts, contact your local representative, or contact our technical support team via email on technical@gltexports.com.

### **Cable Comparison**

Туре	Voltage drop (mV/A/m)
FDC 1.0	44
FDC 1.5	29
FDC 2.5	18

#### **Voltage Drop Considerations**

On an addressable system, loop voltage drop has to be taken into consideration. Due to variations in load distribution along the cable length, it is not always practical to try to calculate the exact voltage drop.

The addressable devices are rated down to 17V, so every point on the loop must be at least 17V at all times.

So when considering the question "how long can my loop be ?", the actual question to be answered is "how long can my loop be with my maximum alarm load, and chosen cable thickness, before the loop voltage drops below 17 V DC?". There is always the option to use a thicker cable gauge.

The below tables give a rough indication of "worst case voltage drop" for different loads and cable lengths for the 3 main fireproof cable sizes.

Load	100m	250m	500m	750m	1000m	1250m	1500m	1750m	2000m
100mA	26.56	25.9	24.8	23.7	22.6	21.5	20.4	19.3	18.2
200mA	26.12	24.8	22.6	20.4	18.2	16	13.8	11.6	9.4
300mA	25.68	23.7	20.4	17.1	13.8	10.5	7.2	3.9	0.6
400mA	25.24	22.6	18.2	13.8	9.4	5	0.6	N/A	N/A
500mA	24.8	21.5	16	10.5	5	N/A	N/A	N/A	N/A

#### Cable Length (1.0mm cable)

#### Cable Length (1.5mm cable)

Load	100m	250m	500m	750m	1000m	1250m	1500m	1750m	2000m
100mA	26.71	26.28	25.55	24.83	24.1	23.38	22.65	21.93	21.2
200mA	26.42	25.55	24.1	22.65	21.2	19.75	18.3	16.85	15.4
300mA	26.13	24.83	22.65	20.48	18.3	16.13	13.95	11.78	9.6
400mA	25.84	24.1	21.2	18.3	15.4	12.5	9.6	6.7	3.8
500mA	25.55	23.38	19.75	16.13	12.5	8.88	5.25	1.63	N/A

#### Cable Length (2.5mm cable)

Load	100m	250m	500m	750m	1000m	1250m	1500m	1750m	2000m
100mA	26.82	26.55	26.1	25.65	25.2	24.75	24.3	23.85	23.4
200mA	26.64	26.1	25.2	24.3	23.4	22.5	21.6	20.7	19.8
300mA	26.46	25.65	24.3	22.95	21.6	20.25	18.9	17.55	16.2
400mA	26.28	25.2	23.4	21.6	19.8	18	16.2	14.4	12.6
500mA	26.1	24.75	22.5	20.25	18	15.75	13.5	11.25	9

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