



**GLOBAL**  
FIRE EQUIPMENT

# **PRODUCT INFORMATION**



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FIRE EQUIPMENT

# DATA SHEET

## **JUNO-NET**

### Analogue Addressable Control Panel

**EN54** TESTED

(1 to 3 Loop Panel)

**Juno-Net** is a powerful Analogue Addressable fire Alarm control system with networking capabilities that facilitate the configuration of complex wide area Fire detection systems.



1 to 3 Loops  
EN54 APPROVED

Modular construction and distributed intelligence allow systems of up to 96 Loops to be constructed. With a high level of built in redundancy and emergency back up features the **Juno-Net** is fully equipped to control the most complex installations.

Using its wide array of interfacing capabilities the **Juno-Net** is ideally placed to provide an efficient and effective solution to the logistics of protecting large institutions. Universities, Airports, industrial complexes etc which may have many individual Fire Alarm systems but require central reporting and control can easily be accommodated by the advanced capabilities of the **Juno-Net**.

**Juno-Net** is available as a standalone system of up to 12 Loops in a single cabinet and can be expanded to up to 96 Loops via a networked array of sub-panels which can be supplied in a blank box version or combined with a repeater to allow remote display and

control of the system. Networking is by a monitored redundant RS422/485, Fibre optic loop or TCP/IP network. The **Juno-Net** networking capabilities are further enhanced by a wide range of programming options which provide the capability to customise the system according to the needs of the customer. Flexible

cause and effect programming of I/O devices and warning devices ensure that Fire or Fault warnings trigger the appropriate response.

An interactive Graphic representation of the system can be displayed on the users' computer via the Odyssey Graphics software(Optional). All the devices on the system can be displayed on a building plan showing their status in real time. In the event of Fire or fault the customer can control the system and access all the necessary information with a few mouse-clicks.

Automatic Device detection at start up reduces time spent at the commissioning stage. In Installation mode the Juno-Net detects and



1 to 12 Loops

recognises addressed and connected devices with the system being fully operational in less than two minutes. The default programming ensures that the system is ready to detect Fire / fault alerts from the moment that power is applied. Additional programming, to customise the system can be implemented via the onboard keypad, IR programmer, PS 2 Keyboard or with a laptop PC running the GFE Loader software which is available free of charge on the Global Fire website.



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## **JUNO-NET**

### Analogue Addressable Control Panel

#### **Key Features**

- Fully expandable system from 1-96 Loops with distributed intelligence for added security.
- 125 device addresses per loop Apollo / WizMart, 254 Hochiki Protocol
- Up to 96 Loop sounders with 32 individually programmable addresses per Loop Apollo/WizMart protocol, 127 with Hochiki protocol.
- 2 Fire output changeover relays
- Open collector outputs for Fire, Fault and pre-alarm remote indication.
- 2 fully monitored sounder outputs on main panel and each sub panel.
- Repeaters with optional integrated Sub-Panels
- Black box option for Sub Panels
- Detector loops fully monitored for integrity
- 384 programmable zones
- 512 fully programmable sounder and I/O groups
- Event Log 2000 entries FIFO
- Backlit LCD display 4 \* 40
- Multiple programming options, onboard keypad, Remote IR(Optional), PS2 Keyboard
- Windows™ based Loader Software for Programming with Laptop PC.
- Windows™ based PC Graphics package for alarm management and reporting(Optional)
- Multiple Language support(menu selectable)
- BMS output RS 232(Optional)
- Evacuate / Class Change input

SPECIFICATIONS	1 & 3 LOOPS	4 to 12 LOOPS
LOOPS	1 to 3 loops - max 250mA per loop	4 to 12 loops - max 250mA per loop
DISPLAY	LCD 4 row/40 characters per row	LCD 4 row/40 characters per row
SOUNDER OUTPUTS	2 at 24Vdc/400mA each	4/6/8 24Vdc/ 500mA each
SOUNDER GROUPS	512	512
AUX. RELAYS FIRE	2 rated 50 VAC/DC 1A resistive	2 rated 50 VAC/DC 1A resistive
AUX. RELAY FAULT	1 rated 50 VAC/DC 1A resistive	1 rated 50 VAC/DC 1A resistive
AUX POWER OUTPUT	24Vdc 460mA	24Vdc 1A
ADDITIONAL OUTPUTS	Multiplexed up to 384 Programmable	Multiplexed up to 384 Programmable
PRIMARY SUPPLY	85 - 265 Vac, 50/60Hz	85 - 265 Vac, 50/60Hz
SECONDARY SUPPLY	24 Vdc Nominal	24 Vdc Nominal
POWER SUPPLY RATING	65w	150w
QUIESCENT CURRENT (NO DEVICES)	130mA	130mA
BATTERIES (INTERNAL)	2 x 12V 12 AH	2 x 12V 12 AH
DIMENSIONS	H: 370 W: 340 D: 127 mm	H: 420 W: 550 D: 127 mm
WEIGHT (NO BATTERIES)	5,1 Kg (no batteries)	8,1 Kg (no batteries)
OPERATING TEMPERATURE	0°C to +40°C	0°C to +40°C
STORAGE TEMPERATURE	-10 to +50°C	-10 to +50°C
HUMIDITY	max 85% no condensation	max 85% no condensation
PROTECTION CATEGORY	IP	
EMC - Same for all models	EMC Directive 89/336 and amendment 92/31 EEC & Low Voltage Directive 72/23 EEC	



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## TECHNICAL SPECIFICATIONS

JUNO-NET

Please note that these specifications apply to the stand-alone Juno Net Analogue Addressable panel, 1 or 3 loops models, equipped with a 2.4 Amp power supply.

<b>Weight:</b>	Empty:	5.1 Kg
	Including sealed lead acid batteries:	
	2 x 12 V 7 AH I	10.5 Kg
	2 x 12 V 12 AH	13.5 Kg
<b>Operating temperature:</b>	0°C to + 40°C	
<b>Relative Humidity:</b>	85% (non-condensing)	
<b>Conventional Sounder Circuits:</b>	2 individually programmed. Both circuits current limited and monitored for both open and short circuit fault conditions. 10k Ohm E.O.L. resistors are used. Maximum current rating/sounder circuit 400mA.	
<b>Auxiliary Relay Outputs:</b>	2 voltage free changeover relay outputs used for fire indication. 1 voltage free relay output for fault indication. Remains energised (normally closed) under normal condition and de-energises when any fault condition appears on the system. Maximum current rating for each relay contact 1A @ 50 V AC/DC resistive.	
<b>Sensor / Loop Circuits:</b>	1 loop or 3 loop models. Supports analogue addressable devices over a 2 wire combined power and digital data transmission loop. Maximum single loop current loading is 250 mA. Maximum total current load for 3 loops is 750mA. Maximum recommended loop length is 1 Km with 1.5 mm <sup>2</sup> wire cross-section. Maximum cable capacitance 120 pF/m. Minimum cable cross-section: 0.5 mm <sup>2</sup> Maximum cable cross-section: 2.5 mm <sup>2</sup>	
<b><u>Power Supply and Charger</u></b>		
<b>Input Operating Voltage:</b>	85-264 V AC.	
<b>Power supply protection:</b>	4 Amp - Fast Action 20 mm HRC Fuse located on electrical mains connector TB, placed on top of the aluminum PSU cover.	
<b>Maximum Continuous Primary Power Supply Rating:</b>	2.4 Amps @ 28 V DC nominal, comprising: 1 Amp max. temperature compensated, short circuit protected, battery charger. 1.4 Amp used for internal electronic circuits and external ancillary circuits: A maximum of 750 mA is available for loop power (250 mA/loop). Maximum of 150 mA for internal electronic circuits. 460 mA for auxiliary power supply output. Under alarm conditions a maximum of 1 Amp current available for conventional sounder circuits.	



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## TECHNICAL SPECIFICATIONS

JUNO-NET

<b>Power Budget Quiescent Condition:</b>	a - 150 mA internal circuits b - 460 mA auxiliary supply outputs c - 750 mA for analogue loop power d - 1 Amp for battery charger.
<b>Alarm Condition:</b>	800 mA for conventional sounder circuits +a+b+c
<b>DC Output Voltage:</b>	Maximum 27.5 V DC Minimum 18.9 V DC
<b>Max. Ripple Voltage:</b>	1 V peak-to-peak @maximum output loading.
<b>Battery Charger Output:</b>	27.5 V DC nominal @ 20°C
<b>Secondary Supply:</b>	24 V sealed lead acid batteries. Minimum capacity 2 x 7 AH Maximum capacity 2 x 12 AH Both fitted internally. Battery Fuse 3 A - 20 mm HRC

### Repeater

Supply voltage	24V DC nominal
Quiescent current (without devices)	130mA
Dimensions	W 340mm x H 370mm x D 125mm

### Standard Sub-panel

Primary supply voltage	85 - 264 VAC
EMC Standard	EN55022 class B EN61000-4-2,3,4,5,6,8,11 EN61000-3-2,3
Secondary supply voltage	24V DC nominal
Power supply rating	150W
Quiescent current (without devices)	80mA
Repeater outputs	Open collector 24V DC 100mA max
Dimensions 1-9 loops	W 340mm x H 370mm x D 125mm

**WARNING:** In case of a short circuit or interruption of the analogue detection loop, only a maximum of 32 detectors or call points (per loop) can be prevented, at any given time, of transmitting a fire alarm. In order to assure compliance with this clause, loop isolators have to be installed every 32 devices in the loop

# DATA SHEET

## **JUNO-NET-REPEATER**

### Analogue Addressable Repeater Panel

### Juno-Net- Repeater

The Juno net repeater panel fully replicates the control panel information and control



facilities allowing multiple operating points within the system. The J-Net repeater communicates with the master control panel via an RS-422/RS-485, Fiber Optic or TCP/IP network.

Sub-Panels can be integrated into the repeater panel to allow the connection of up to three additional detection loops, per sub-panel, to the system. Ideal for multiple building complexes; where display and control of the system is required in various locations.

Depending on control panel loading, power for the J-Net-Rep can be supplied from the control panel's auxiliary power output, an external 24Volt power supply or optionally can be supplied complete with a built in 24V, 2,4A or 5A power supply unit. (Required if a sub-panel is installed in the repeater housing.)

### Repeater

Supply voltage	24VDC nominal
Quiescent current (without devices)	130mA
Dimensions	W 340mm x H 370mm x D 125mm

# DATA SHEET

## MINI-REPEATER

### Analogue Addressable Repeater Panel

#### Mini-Repeater

The mini-repeater is a fully functional mini version of the Juno-Net Repeater which can be used with any distributed or self contained Juno-Net based Fire Alarm system.



Its reduced dimensions make it ideal for installation in reception areas or security booths where it would be impractical and unattractive to install a full size control panel. Like its big brother, the J-Net-Repeater, the Mini-Rep permits full control of the system from

multiple locations. Connection to the Juno-Net or Junior is via an RS422/RS485, Fibre Optic or TCP/IP interface. The Mini-Rep is supplied complete with an RS422/RS485 interface as standard. Depending on control panel loading, power for the Mini-Rep can be supplied from the control panel's auxiliary power output or an external 24 Volt power supply.

#### Mini-Repeater

Supply voltage	24V DC nominal
Quiescent current	90mA
Dimensions	W 250mm x H 190mm x D 52mm

# DATA SHEET

## **JUNO-NET-SUB-PANEL**

### Analogue Addressable Sub- Panel

#### **Juno-Net Sub-Panel**

Juno-Net sub-panels allow expansion of the system in groups of 1 to 9 loops supplied in an



enclosed cabinet with independent primary and secondary power supplies. Up to 9 Loops may be installed in each cabinet which also contains a 5.4A PSU/Charger unit and space for standby rechargeable batteries. One RS422/RS485, Fibre Optic or TCP/IP interface is required per cabinet to enable networking with the rest of the system.

Each sub-panel board controls up to 3 Analogue addressable detection loops via its own independent processor. In the event of communications failure with the main control unit, the sub panel is capable of operating independently, detecting fire/ fault events and activating its own sounders and I/O devices.

#### **Standard Sub-panel**

Primary supply voltage	85 - 264 VAC
EMC Standard	EN55022 class B EN61000-4-2,3,4,5,6,8,11 EN61000-3-2,3
Secondary supply voltage	24V DC nominal
Power supply rating	150W
Quiescent current (without devices)	80mA
Alarm Outputs	2 monitored 10K EOL resistor, current limited 400mA,
Relay Outputs	2 programmable Alarm relay outputs 50V/1A, 1 Fault relay N/C
Dimensions 1-9 loops	W 340mm x H 370mm x D 125mm



# DATA SHEET

## **JUNIOR V4**

### Single Loop Analogue Addressable Control Panel Expandable to Two Loops

The Global Fire **Junior V4** is a single loop Analogue addressable control panel which can be expanded to two loops. It provides a cost effective solution for small to medium sized installations. The **Junior V4** can support up to 125 addressable devices on each loop which are compatible with Apollo, Hochiki or WizMart communications protocols.



Using Global Fires advanced communications mechanism up to 32 individually addressed Loop sounders can be connected to each of the **Junior V4** detection Loops. The **Junior V4** also supports **Shadow** sounders and GFE's new Vulcan 2 addressable Sounder-Beacon-Isolator along with all other GFE Interface devices.

The panel is equipped with a backlit LCD display of 4 rows each with 40 characters to give clear textual indications of Fire / Fault occurrences to the end user.

There are also 16 Zone Fire LED indicators.

Mini-repeaters can be connected via an RS422/RS485, Fibre Optic or TCP/IP interface to facilitate remote display and control of the system.

Automatic Device detection at start up reduces time spent at the commissioning stage. In Installation mode the Junior V4 detects and recognises addressed and connected devices with the system being fully operational in less than two minutes.

The default programming ensures that the system is ready to detect Fire / fault alerts from the moment that power is applied. Additional programming, to customise the system can be implemented using a laptop PC running the GFE Loader software which is available free of charge on the Global Fire website.

**AVAILABLE IN 3 COLORS**  
RED-BLACK-WHITE

#### ORDERING INFO

<b>JNR-V4-1</b>	1 Loop Junior V4 Addressable Control Panel
<b>JNR-V4-2</b>	2 Loop Junior V4 Addressable Control Panel
<b>JNR-V4-Card</b>	Junior V4 Loop card to expand 1 Loop to 2 Loops
<b>J-NET-INT-485-NEW</b>	Rs422/485 Interface Board to connect to Mini-Rep repeater panel
<b>LOADER</b>	Programming Software freely downloadable from the Global Fire Website

# **JUNIOR V4**

## Single Loop Analogue Addressable Control Panel Expandable to Two Loops

### **Key Features**

- Single loop panel - Expandable to two Loops using JNR-V4-Card
- Supports connection to Mini-repeaters via RS422/485, Fibre-Optic or TCP/IP interfaces
- 125 device addresses per loop
- 96 VULCAN (addressable) ultra low current base sounders (32 address limit) per Loop
- 32 individually programmable sounder addresses per Loop
- Full SAM (Self Addressable Module) & MAM (Manually Addressable Module) support (WizMart Protocol version)
- 2 Fire output relays (change-over) and 1 Fault relay (Normally closed)
- 2 conventional alarm outputs (Individually programmable)
- Detector loops monitored for integrity
- 384 fully programmable zones
- 512 fully programmable sounder groups
- 512 fully programmable Input and Output groups
- Event log (rolling, 2000 entries)
- Compatible with Apollo S90™/XP95™, Discovery™, Hochiki and Wizmart Protocols
- Compatible with all our own low cost ancillary modules
- Backlit LCD display with 4 rows of 40 characters
- Programming by Loader Software.
- Multiple language support (menu selectable)
- Integrated 16 zone LED fire zone indication
- Interactive Discovery™ functions in the Apollo version

## **TECHNICAL SPECIFICATIONS**

### **JUNIOR V4**

Please note that these specifications apply to the Junior V4 Analogue Addressable panel, 1 loop model, equipped with a 1.7 Amp power supply @ 28.5V DC nominal.

<b>Weight:</b>	Empty:	1.6 Kg
	Including sealed lead acid batteries: 2 x 12 V 7 AH	7.0 Kg
<b>Dimensions:</b>	W 274 x L 404 x H 109 mm	
<b>Operating temperature:</b>	0°C to + 40°C	
<b>Relative Humidity:</b>	85% (non-condensing)	
<b>Conventional Sounder Circuits:</b>	2 individually programmed. Both circuits current limited and monitored for both open and short circuit fault conditions. 10k Ohm E.O.L. resistors are used.	
	Maximum current rating/sounder circuit 500mA.	
<b>Auxiliary Relay Outputs:</b>	2 voltage free changeover relay outputs used for fire indication.	
	1 voltage free relay output for fault indication. Remains energised (normally closed) under normal condition and de-energises when any fault condition appears on the system.	
	Maximum current rating for each relay contact 1A @ 50 V AC/DC resistive.	
<b>Sensor / Loop Circuits:</b>	1 or 2 loops	
	Max. number of devices per loop: 125	
	Supports analogue addressable devices over a 2 wire combined power and digital data transmission loop.	
	Maximum recommended loop length is 1 Km with 1.5 mm <sup>2</sup> wire cross-section. Maximum cable capacitance 120 pF/m.	
	Minimum cable cross-section: 0.5 mm <sup>2</sup>	
	Maximum cable cross-section: 2.5 mm <sup>2</sup>	



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## TECHNICAL SPECIFICATIONS

### JUNIOR V4

#### Power Supply and Charger

Primary Supply:	85-264 V AC.
Input Operating Voltage:	4 Amp - Surge protected (slow blow) 20 mm HRC
Mains electrical fuse:	Fuse located on electrical mains connector TB, placed above the PSU inside the box.

**WARNING:** In case of a short circuit or interruption of the analogue detection loop, only a maximum of 32 detectors or call points (per loop) can be prevented, at any given time, of transmitting a fire alarm. In order to assure compliance with this clause, loop isolators have to be installed every 32 devices in the loop

Maximum Continuous Primary Power Supply Rating:	1.7 Amps @ 28,5 V DC nominal, comprising:  1 Amp max. temperature compensated, short circuit protected, battery charger.  400mA used for internal electronic circuits and external ancillary circuits.  Maximum of 100 mA for internal electronic circuits.  300 mA for auxiliary power supply outputs.  Under alarm conditions a maximum of 800mA current available for conventional sounder circuits.
Power Budget Quiescent Condition:	a - 100 mA internal circuits b - 300 mA auxiliary supply outputs c - 275 mA for analogue loop power (550mA for 2 Loops) d - 1 Amp for battery charger.
Alarm Condition:	800 mA for conventional sounder circuits +a+b+c
DC Output Voltage:	Maximum 28,5 V DC
Max. Ripple Voltage:	1 V peak-to-peak @ Maximum output loading.
Battery Charger Output:	27,5 V DC nominal @ 20°C
Secondary Supply:	24 V sealed lead acid batteries. Maximum capacity 2 x 7 AH Both fitted internally. Min. Voltage 21,0 V DC (Vb min) Max. Voltage 27,2 V DC Max. Current Output 1.7 Amp Battery Fuse 1.7 A - Resettable Electronic Fuse

The **Orion** range of conventional control panels features three models with 2, 4 and 8 Zones of detection.

Housed in a stylish modern ABS housing, the **Orion** is the ideal control panel for smaller installations.

Designed and manufactured to comply with the requirements of EN54 parts 2 and 4(1998) the **Orion** uses active End of Line monitoring to permit head removal protection as required by Bs5839. (detector bases must be fitted with Diode)

Programmable Zone coincidence and alarm delay timer (0-10 min) are standard features to help reduce false alarms.



The one man test facility enables simple and rapid testing of the system at commissioning and during maintenance operations.

#### **Features:**

#### **AVAILABLE IN 3 COLORS**

RED-BLACK-WHITE

- Two, four and eight zone non-expandable control panels.
- Up to 32 conventional smoke and/or heat detectors per zone.
- Active End of Line monitoring
- Programmable non-latching zones
- Delay timer programmable on/off per zone
- Zone coincidence programmable for adjacent zones.
- Two Access Levels
- One man test
- Supervised auxiliary 24 volt output
- 2 supervised/ monitored sounder circuits
- 2 programmable inputs for Class change, remote silence, remote reset etc.
- 2 Relay outputs fire and fault
- Power supply 1,5A at 28Vdc
- Fully EN54 part 2 and 4 compliant

#### **Future Features**

- Repeater output
- Multiplexed output for Leds and additional relay outputs per zone
- Addressable Loop Interface card

ORDERING INFO
<b>ORION 2</b>
<b>ORION 4</b>
<b>ORION 8</b>

## **Technical Specifications**

Mains supply voltage	85-264V 50/60 Hz
Internal power supply	Min. 20 V DC – Max. 30 V DC (28.5 V DC nominal) Max. Ripple 1 V peak-peak
Total output current	1,7A @230Vac
Supply and battery charger monitored?	YES
Batteries monitored	YES
Max Battery size	2 x 12V 7AH SLA
Mains Fuse	4 A – 250 V Slow Blow – 20 mm
Battery Fuse	1.6 Amp Resettable – Electronic Fuse
Max Current Draw from Battery (Mains Fail)	1.5 Amp Max. @ Max. Operating Temperature
<b>Detection Circuit Specification</b>	
Number of circuits	2,4 or 8
Max Cable resistance	40 Ω
Max Cable Capacitance	0,470 μF
Zone current quiescent	Max 5 mA
Zone current Alarm	60mA max
End of Line Monitoring	Active EOL – CAPACITOR
BS5839 Detector removal compliant	YES provided diodes are fitted to detector base
Max. Number of Smoke/heat detectors per zone	32 – according to EN54 pt.2
Call point resistor value	470 to 680 Ohms
<b>Sounder Circuit Specification</b>	
Number of circuits	2
End of Line Resistor value	10 K Ohms
Monitoring	Open and short circuit
Alarm Voltage	27.5 V DC
Sounder circuit Fuse	1.1 Amp resettable ( Electronic Fuse )
Max. Current available	1 Amp @ 27,5 V DC Nominal
<b>Auxiliary Outputs</b>	
Aux power output	27.5 V DC Nominal – Max. Current Drawn 300 mA
Fire relay	Active in Fire condition, load 30V DC/1A resistive
Fault relay	Normally closed, fail safe open on any fault, load 30V DC/1A resistive
<b>Auxiliary Inputs</b>	
Class Change / Evacuation	Non-Latching – Voltage free contact
Remote Reset	Non-Latching – Voltage free contact
Remote Silence	Non-Latching – Voltage free contact
<b>Dimensions</b>	
Size	274 (W) x 404 (L) x 109 (H) mm
Weight without batteries	1,6 Kgs
<b>Operating Conditions</b>	
Operating Temperature	0 to +40°C
Max Relative Humidity	85% non condensing

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## **QUAD-ZMU**

### Quad Zone Monitoring Unit

#### Features:

The QUAD-ZMU is a fully monitored interface module which is used to connect up to four individually addressed zones of current limited conventional detection devices to the Global Fire Addressable control panel via the detection loop.



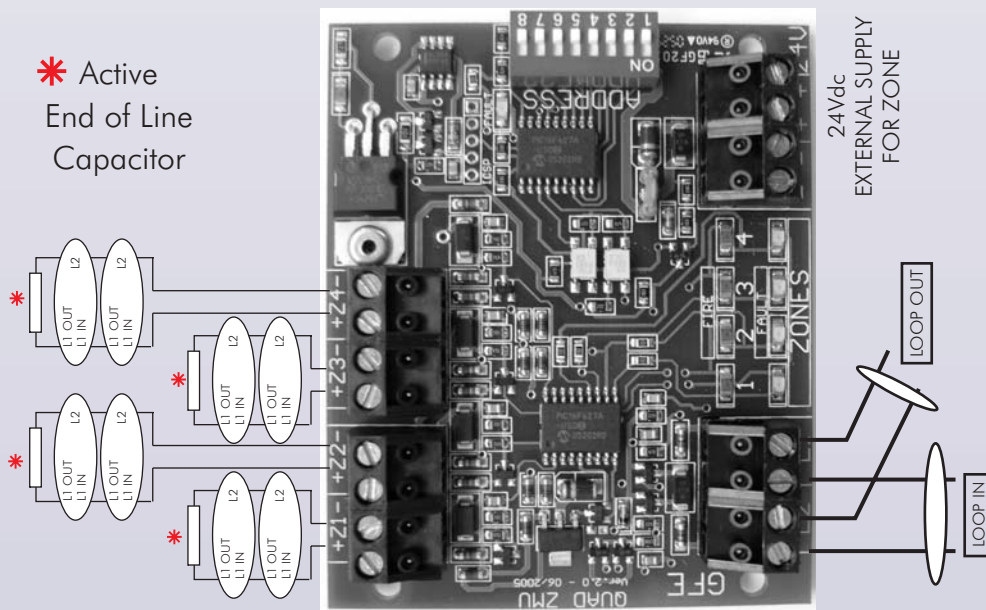
The module requires an external 24 volt power supply. Active End of Line Monitoring with BS5839 Detector Removal compliance when Diode bases are used (New Feature).

The detection Zones and their supply voltage are optically isolated from the addressable detection loop which allows the use of a local power supply.

If that supply fails, a fault condition is reported at the control panel. The status of each zone is indicated by two LEDs. A red LED signals Fire, Yellow indicates Fault on that zone. The normal state is indicated by neither LEDs being illuminated. A Green LED indicates the presence of 24 Volts.

Irrespective of how many Zones are actually used, each QUAD-ZMU occupies four consecutive addresses on the loop

Irrespective of how many Zones are actually used, each QUAD-ZMU occupies four consecutive addresses on the loop



#### SPECIFICATIONS

SUPPLY	Loop Power	DIMENSIONS (UNBOXED)	87 x 72 x 15mm
LOOP CURRENT QUIESCENT	2,9mA	WEIGHT (UNBOXED)	130 grams
LOOP CURRENT ALARM	3,1mA	OPERATING TEMPERATURE	0 - 40°C
LOOP CURRENT FAULT - OPEN/SHORT	1,5/1,5mA	STORAGE TEMPERATURE	-10 - 50°C
EXTERNAL SUPPLY VOLTAGE	24 Vdc nom	HUMIDITY	<85%Rh non condensing
EXTERNAL CURRENT QUIESCENT	7mA	MAX. N° OF DETECTORS PER ZONE	32
EXTERNAL CURRENT ALARM	30mA	MAX CABLE SIZE	2,5 mm <sup>2</sup>
EXTERNAL CURRENT FAULT - OPEN/SHORT	1,5/60mA	MAX N° OF QUAD-ZMU PER LOOP	31
ISOLATION	500 Vdc Max.	ORDERING INFORMATION	QUAD-ZMU



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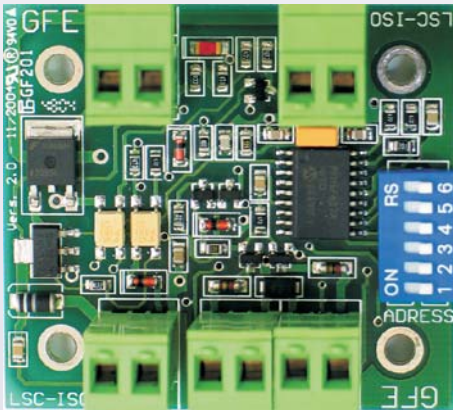
# DATA SHEET

## **LSC-ISO**

### Loop Sounder Control Module (with 1Amp monitored output)

#### Features:

The LSC-ISO Module is a fully monitored interface which is used to connect a line of conventional sounders to the Global Fire Addressable control panel via the detection loop.

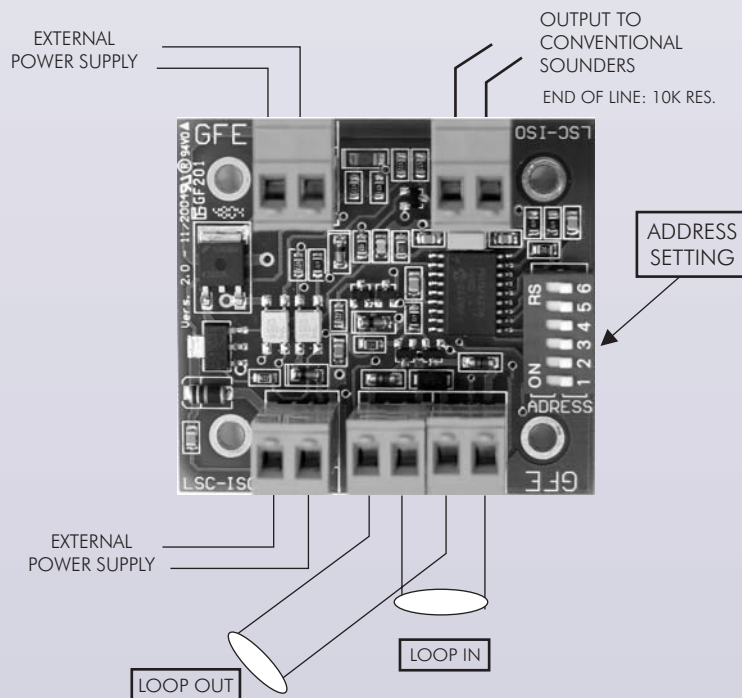


The module requires an external 24 volt Dc power supply and can supply up to 1A at the sounder output which is monitored for both open and short circuit faults. A 10K ohm end of line resistor is connected to the last sounder to provide line monitoring.

The LSC-ISO uses the Global Fire proprietary sounder control protocol and therefore is only compatible with the GFE range of control panels.

The output can be programmed as pulsed or continuous. A maximum of 32 LSC-ISO can be connected to each Loop using address numbers 94 -125 inclusive.

Also available complete with housing.



#### SPECIFICATIONS

SUPPLY	Loop Power	DIMENSIONS (UNBOXED)	58 x 48 x 20 mm
LOOP CURRENT QUIESCENT	1,3mA	WEIGHT (UNBOXED)	30 grams
LOOP CURRENT ALARM	1,5mA	OPERATING TEMPERATURE	0 - 40°C
EXTERNAL SUPPLY VOLTAGE	24 Vdc nom	STORAGE TEMPERATURE	-10 to +50°C
EXTERNAL CURRENT QUIESCENT	1,9mA	HUMIDITY	<85%Rh non condensing
EXTERNAL CURRENT MAX.	1A	MAX CABLE SIZE	2,5 mm <sup>2</sup>
ISOLATION	500 Vdc Max.	ORDERING INFORMATION	LSC-ISO





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## I/O

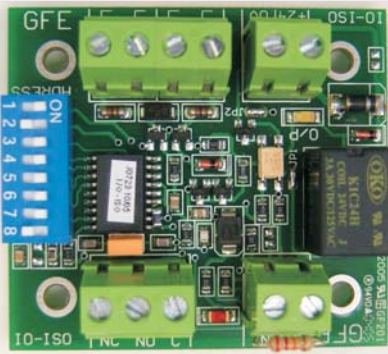
### Addressable Input/Output Module

#### Features:

The Addressable Input/Output Module is a fully monitored device which permits the interfacing of third party equipment with the Fire Alarm Control panel using normally open dry contact connections while also providing a changeover output relay to control ancillary equipment.

The connection to the input is monitored for fault (open or short circuit) and Alarm conditions.

The output relay can be powered from the detection loop (default) or optionally by an external 24Vdc supply. Relay operation is confirmed by an onboard yellow LED.



The interface is used to monitor the contacts of an external system which must be interfaced to the Fire Alarm System, for example a Flow Switch in a sprinkler system to indicate if the sprinklers have been activated or extinguishant level monitoring in Gas Extinguishing systems etc.

The output relay can be programmed to close fire doors, activate smoke removal systems etc. The factory default setting is for the relay to receive its operating power from the Loop. Opening a link on the underside of the PCB allows the use of external power which is optically isolated from the detection loop. This option is recommended in the event that many I/O units are connected to the same Loop.

The Addressable I/O module is available as an electronic module with four fixing holes or as a boxed unit for field installation.

#### Resistance values: for Input

Fault - Short circuit to 2K2  
or 50k to Open Circuit

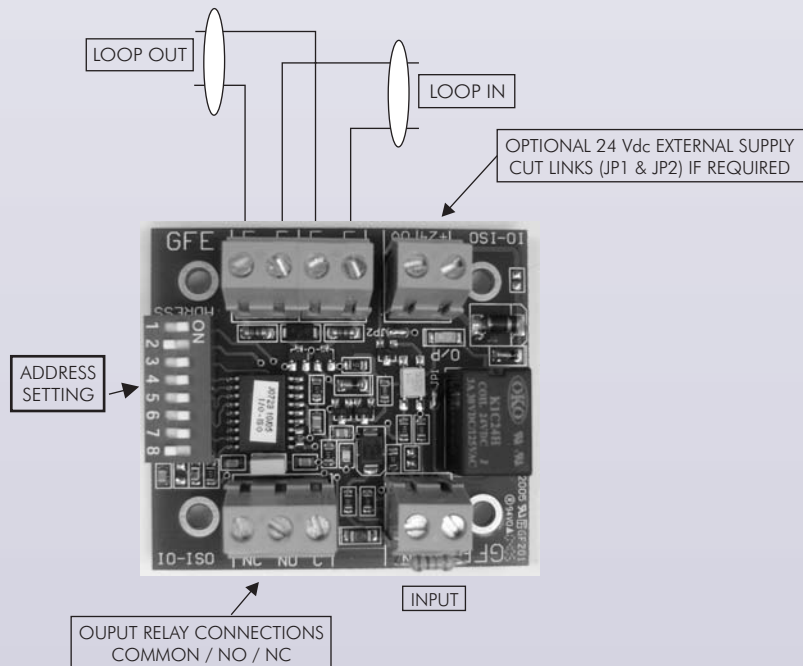
Normal - 8K2 to 50k

Fire - 2K2 to 8K2

#### Output Relay:

N/O or N/C

Contact rating 50Vdc,  
1A Resistive Loading



#### SPECIFICATIONS

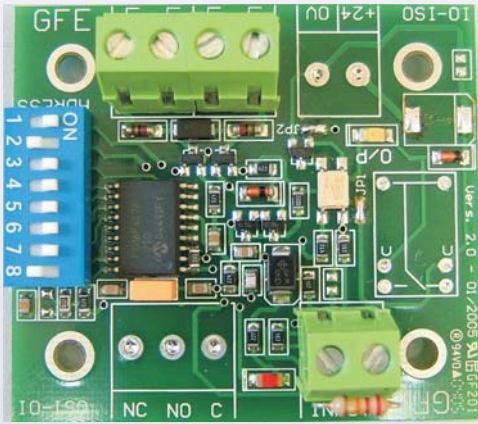
SUPPLY		Loop Power / 24Vdc	DIMENSIONS (UNBOXED)		57 x 52 x 15 mm
LOOP CURRENT QUIESCENT		0,7mA	WEIGHT (UNBOXED)		30 grams
LOOP CURRENT INPUT ALARM		3,1mA	OPERATING TEMPERATURE		0 - 40°C
LOOP CURRENT MAX. RELAY ACTIVE		18,1mA	STORAGE TEMPERATURE		-10 - 50°C
RELAY CONTACT RATING		50 Vdc / 1A Resistive	HUMIDITY		<85 %Rh non condensing
EXTERNAL SUPPLY VOLTAGE		24 Vdc nom	PROTECTION CATEGORY		N/A
EXTERNAL CURRENT QUIESCENT		N/A	MAX CABLE SIZE		2,5 mm <sup>2</sup>
EXTERNAL CURRENT MAX.		3,1mA	ORDERING INFORMATION		IO-ISO

# DATA SHEET

## INPUT

### Addressable Input Module

#### Features:



The Addressable Input Module is a fully monitored device which permits the interfacing of third party equipment with the Fire Alarm Control panel using normally open dry contact connections.

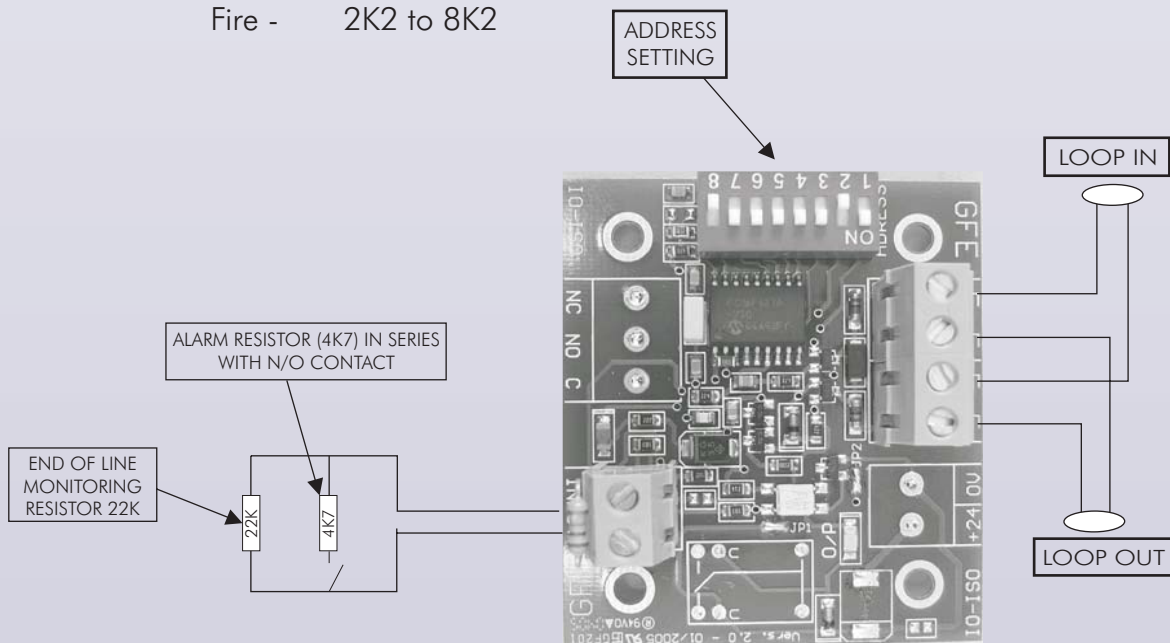
The connection to the input is monitored for fault (open or short circuit) and Alarm conditions.

The interface is used to monitor the contacts of an external system which must be interfaced to the Fire Alarm System, for example a Flow Switch in a sprinkler system to indicate if the sprinklers have been activated or extinguishant level monitoring in Gas Extinguishing systems etc.

The module is powered by the detection loop and is available as an electronic module with four fixing holes or as a boxed unit for field installation.

**Resistance values**

- Fault - Short circuit to 2K2 or 50k to Open Circuit
- Normal - 8K2 to 50k
- Fire - 2K2 to 8K2



SPECIFICATIONS			
SUPPLY	Loop Power	DIMENSIONS (UNBOXED)	50 x 45 x 20mm
LOOP CURRENT QUIESCENT	0,7mA	WEIGHT (UNBOXED)	30 grams
LOOP CURRENT MAX. (Alarm, LED illuminated)	3,1mA	OPERATING TEMPERATURE	0 - 40°C
PROTECTION CATEGORY	N/A	STORAGE TEMPERATURE	-10 - 50°C
MAX CABLE SIZE	2,5 mm <sup>2</sup>	HUMIDITY	< 85%Rh non condensing
		ORDERING INFORMATION	INPUT



**GLOBAL**  
FIRE EQUIPMENT

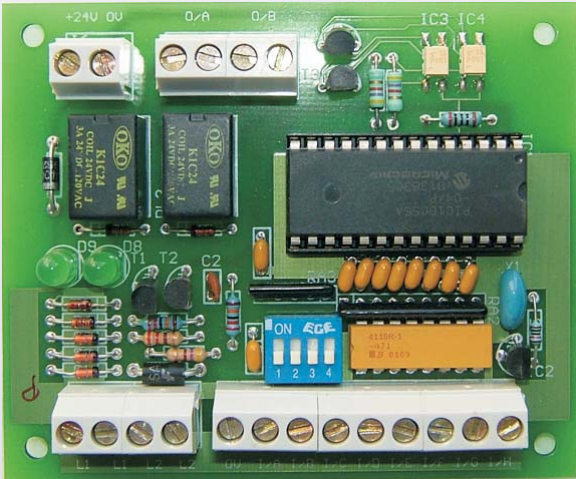
# DATA SHEET

## CCPI

### Conventional Control Panel Interface

#### Features:

The Control panel interface provides eight individually addressed normally open inputs and two pre-defined outputs. The interface permits the connection of a conventional fire alarm control panel with up to eight Zones to the Global Fire Analogue Addressable Fire Control panel via the detection loop.



The outputs are pre-defined as Silence and Reset and allow these functions on the conventional panel to be executed from the Addressable system. An external 24 volt DC supply is required to power the onboard relays. This supply is optically isolated from the detection Loop. The silence and reset relay operations are indicated by two green LEDs.

Each CPI occupies 8 addresses on the Loop even when not all inputs are used. See address setting chart below.

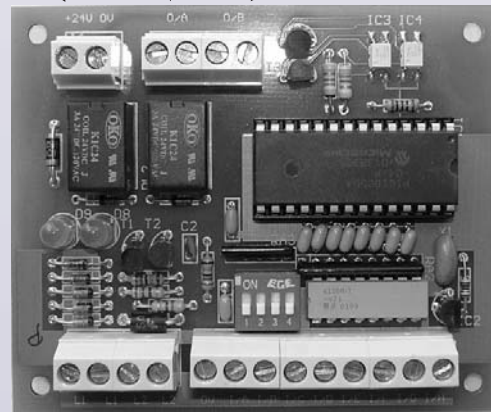
#### Inputs

Inputs A- H ( Zones 1-8)  
driven by Zone repeater  
outputs of conventional panel.



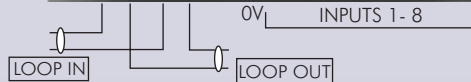
#### Output Relays

Two N/O.  
Output A Reset function  
Output B - Silence  
Contact rating 50Vdc, 1A Resistive Loading



**1234**

0000	= 1 TO 8
1000	= 9 TO 16
0100	= 17 TO 24
1100	= 25 TO 32
0010	= 33 TO 40
1010	= 41 TO 48
0110	= 49 TO 56
1110	= 57 TO 64
0001	= 65 TO 72
1001	= 73 TO 80
0101	= 81 TO 88
1101	= 89 TO 96
0011	= 97 TO 104
1011	= 105 TO 112
0111	= 113 TO 120



#### SPECIFICATIONS

SUPPLY		Loop Power	DIMENSIONS (UNBOXED)		88 x 74x 20 mm
LOOP CURRENT QUIESCENT		0,7mA	WEIGHT (UNBOXED)		60 grams
LOOP CURRENT INPUT ALARM		N/A	OPERATING TEMPERATURE		0 - 40°C
LOOP CURRENT MAX. RELAY ACTIVE		N/A	STORAGE TEMPERATURE		-10 - 50°C
RELAY CONTACT RATING		50 Vdc / 1A Resistive	HUMIDITY		<85 % Rh non condensing
EXTERNAL SUPPLY VOLTAGE		24 Vdc nom	PROTECTION CATEGORY		N/A
EXTERNAL CURRENT QUIESCENT		3 mA	MAX CABLE SIZE		2,5 mm <sup>2</sup>
EXTERNAL CURRENT MAX.		15mA	ORDERING INFORMATION		CCPI

# DATA SHEET

## ZMU

### Zone Monitoring Unit

#### Features:

The ZMU is a fully monitored interface module which is used to connect a number of current limited conventional detectors to the Global Fire Addressable control panel via the detection loop. These detectors are then seen as one address at the addressable control panel.

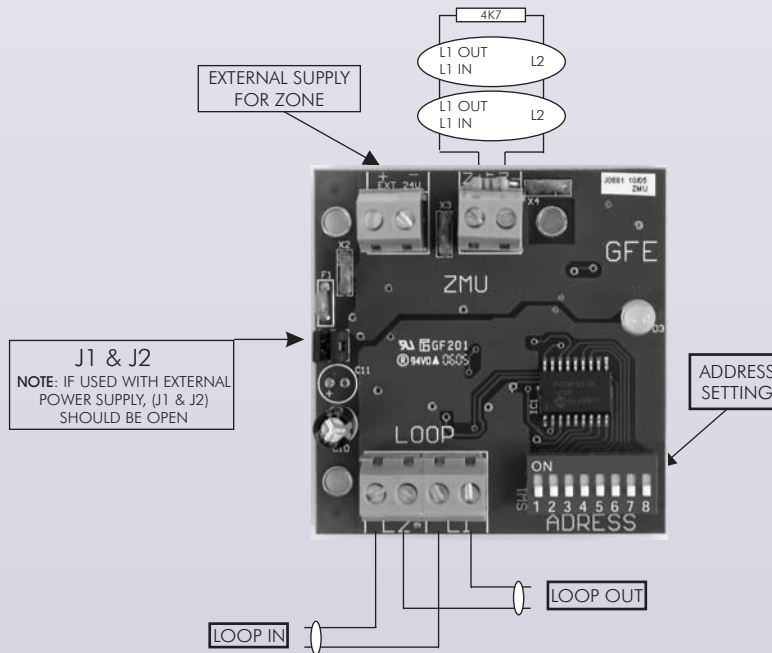


The module can be powered from the Loop or optionally by an external power supply in which case the jumpers J1 and J2 should be removed. The detector line is monitored by a 4K7 resistor. A bi-colour LED is used to signal the status of the module.

Green Normal  
Red Alarm  
Extinguished - Fault

The external power, if used, is also monitored with the module reporting a Fault if external power is not present.

As the current drawn from the loop can be significant, particularly in Fire and Short Circuit fault conditions, the number of ZMUs that can be connected to a loop is limited to six depending on Loop load.



#### SPECIFICATIONS

SUPPLY	Loop Power / 24Vdc	DIMENSIONS (UNBOXED)	60 x 60 x 20 mm
LOOP CURRENT QUIESCENT	2,9mA	WEIGHT (UNBOXED)	30 grams
LOOP CURRENT ALARM	3,1mA	OPERATING TEMPERATURE	0 - 40°C
LOOP CURRENT FAULT - OPEN/SHORT	1,5/1,5mA	STORAGE TEMPERATURE	-10- 50°C
EXTERNAL SUPPLY VOLTAGE	24 Vdc nom	HUMIDITY	<85 %Rh non condensing
EXTERNAL CURRENT QUIESCENT	7mA	MAX CABLE SIZE	2,5 mm <sup>2</sup>
EXTERNAL CURRENT ALARM	30mA	MAX N°OF ZMU PER LOOP	Load dependent- 6 Max
EXTERNAL CURRENT FAULT - OPEN/SHORT	1,5/60mA	ORDERING INFORMATION	ZMU
ISOLATION	500 Vdc Max.		



**GLOBAL**  
FIRE EQUIPMENT

# DATA SHEET

## 3 I/O

### Triple Input / Output Module

#### Features:

The Triple Input/Output Module is a fully monitored device which permits the interfacing of third party equipment with the Fire Alarm Control panel using three normally open dry contact connections while also providing three changeover output relays to control ancillary equipment. The connections to the input are monitored for fault (open or short circuit) and Alarm conditions.

The output relays require an external 24Vdc supply. Relay operation is confirmed by an onboard red LEDs, a yellow general Fault LED is also provided.

The 3 I/O occupies three consecutive addresses on the detection Loop.

The interface is used to monitor the contacts of an external system which must be interfaced to the Fire Alarm System, for example a Flow Switch in a sprinkler system to indicate if the sprinklers have been activated or extinguishant level monitoring in Gas Extinguishing

systems etc.

The output relays can be programmed to close fire doors, activate smoke removal systems etc. An external 24 volt DC power supply is required to power the relays, this supply is optically isolated from the Address Loop. The Addressable I/O module is available as an electronic module with four fixing holes.

#### Resistance values: for Input

Fault - Short circuit to 2K2 or 50k to Open Circuit

Normal - 8K2 to 50k

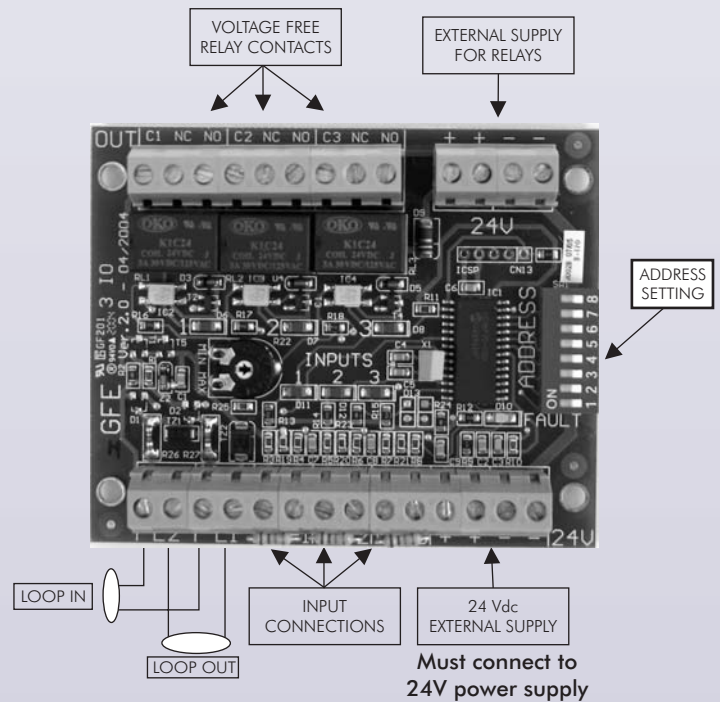
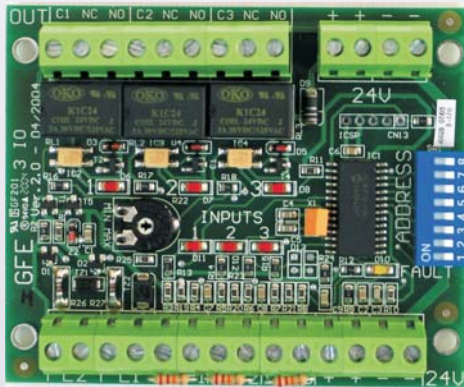
Fire - 2K2 to 8K2

#### Output Relay:

Three N/O or N/C contacts.

Contact rating 50Vdc,

1A Resistive Loading



#### SPECIFICATIONS

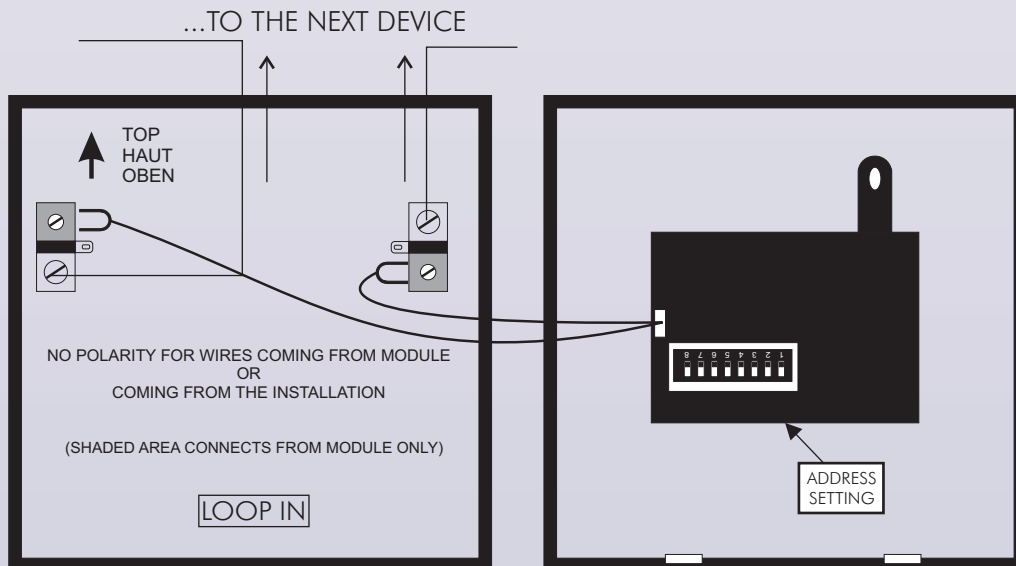
SPECIFICATIONS			
SUPPLY	Loop Power	DIMENSIONS (UNBOXED)	88 x 72 x 20 mm
LOOP CURRENT QUIESCENT	0,7mA	WEIGHT (UNBOXED)	80 grams
LOOP CURRENT INPUT ALARM	3,1mA	OPERATING TEMPERATURE	0 - 40°C
LOOP CURRENT MAX. RELAY ACTIVE	18,1mA	STORAGE TEMPERATURE	-10 - 50°C
RELAY CONTACT RATING	50 Vdc / 1A Resistive	HUMIDITY	<85 %Rh non condensing
EXTERNAL SUPPLY VOLTAGE	24 Vdc nom	PROTECTION CATEGORY	N/A
EXTERNAL CURRENT QUIESCENT	3,1mA	MAX CABLE SIZE	2,5 mm <sup>2</sup>
EXTERNAL CURRENT MAX.	18,1mA	ORDERING INFORMATION	3 I/O

# DATA SHEET

## **MCPA-KAC**

### KAC MANUAL CALL-POINT

The MCPA-KAC is a BS 5839 compliant surface or flush mounting addressable manual call point compatible with all GFE Addressable control panels. With its enhanced communications mechanism, the typical response time is approximately one second, depending on the number of call points per loop. A bi-colour LED flashes Green when the unit is interrogated by the control panel and is illuminated Red when activated. The command to illuminate the Red LED is emitted by the control panel in response to activation of the individual call point thus confirming that the Alarm signal has been received at the control panel. The individual address, up to 125, of each call point is set via an eight way DIL switch. The unit is supplied with a surface mount back box



#### SPECIFICATIONS

SUPPLY	Loop Power	DIMENSIONS (UNBOXED)	87 x 87 x 50 mm
LOOP CURRENT QUIESCENT	0,35mA	WEIGHT (UNBOXED)	150 grams
LOOP CURRENT MAX (Alarm, LED Illuminated)	3,1mA	OPERATING TEMPERATURE	0-85°C
MAX. RECOMMENDED PER LOOP	30	HUMIDITY	<85%Rh non condensing
MAX CABLE SIZE	2,5 mm <sup>2</sup>	PROTECTION CATEGORY	IP 240
		ORDERING INFORMATION	MCPA-KAC

# DATA SHEET

## MCPA-LP-FLAP

### ADDRESSABLE MANUAL CALL POINT LOW PROFILE WITH PROTECTIVE COVER

The MCPA-LP-Flap is a low profile surface mounting addressable manual call point compatible with all GFE Addressable Control panels.



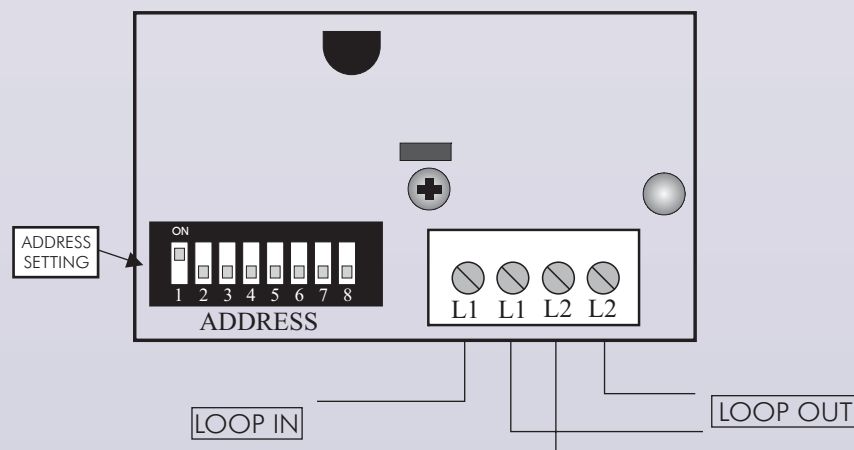
With its enhanced communications mechanism the typical response time is approximately one second, depending on the number of call points connected to the loop. A bi-colour LED flashes Green when the unit is interrogated by the control panel and is illuminated Red when in Alarm.

The command to illuminate the Red LED is emitted by the control panel in response to activation of the individual call point thus confirming that the Alarm signal has been received at the control panel.

The individual address, up to 125, of each call point is set via an eight way DIL switch.

The unit is supplied complete with a hinged flap which protects the trigger element from accidental activation and reduces malicious activations as two actions are required to activate it.

Another convenient feature of the MCPA-LP-Flap is that after an activation the plastic insert is easily reset using the supplied key, replacement is not required.



SPECIFICATIONS			
SUPPLY	Loop Power	DIMENSIONS (UNBOXED)	90 x 90 x 28 mm
LOOP CURRENT QUIESCENT	0,35mA	WEIGHT (UNBOXED)	80 grams
LOOP CURRENT MAX (Alarm, LED Illuminated)	3,1mA	OPERATING TEMPERATURE	0-50°C
MAX. RECOMMENDED PER LOOP	30	HUMIDITY	<85%Rh non condensing
MAX CABLE SIZE	2,5 mm <sup>2</sup>	PROTECTION CATEGORY	IP 24
ORDERING INFORMATION			MCPA-LP-FLAP



**GLOBAL**  
FIRE EQUIPMENT

# DATA SHEET

## GFE-MCPA

### ADDRESSABLE MANUAL CALL POINT

The GFE-MCPA is an Analogue Addressable Manual Call Point, designed and manufactured to comply with EN-54 part 11, compatible with all GFE Addressable Control panels.



With its enhanced communications mechanism the typical response time, when in alarm, is approximately one second, depending on the number of call points connected to the device loop.

A bi-colour LED flashes Green when the unit is interrogated by the control panel and is illuminated Red when in Alarm.

The command to illuminate the Red LED is emitted by the control panel in response to activation of the individual call point thus confirming that the Alarm signal has been received at the control panel.

The individual address, up to 125, of each call point is set via an eight way DIL switch.

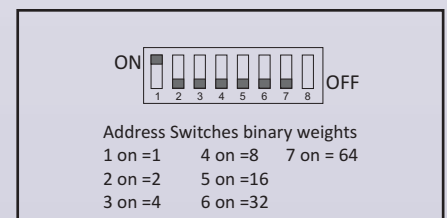
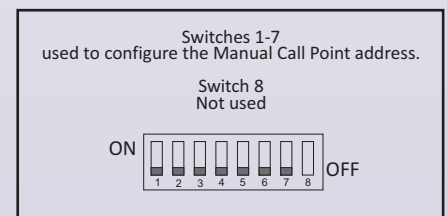
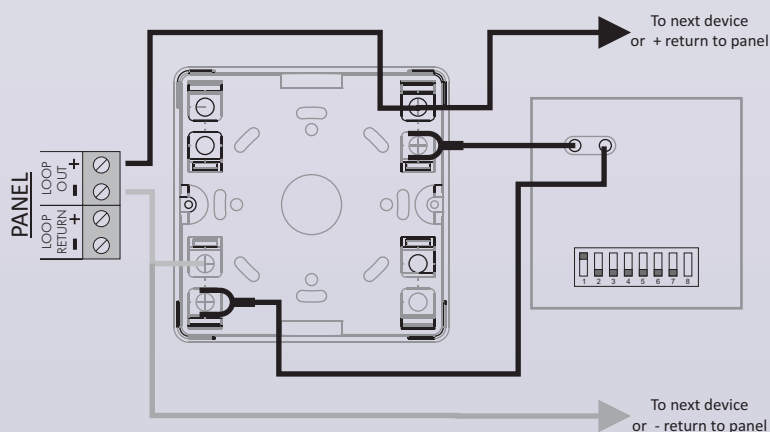
The unit is supplied complete with a hinged flap which protects the trigger element from accidental activation and reduces malicious

activations as two actions are required in order to activate the device.

This unit can be both surface and flush mounted and it can be easily reset using the supplied key after activation.

#### CONNECTIONS

Although this device is not polarised, please ensure that both loop connections, are kept on the same terminal in all the modules. This is a wiring policy that should apply to all devices in the loop regardless of them being non-polarity sensitive.



#### SPECIFICATIONS

<b>SUPPLY</b>	Loop Power	<b>DIMENSIONS (UNBOXED)</b>	92 x 92 x 54 mm
<b>LOOP CURRENT QUIESCENT</b>	0,5mA	<b>WEIGHT (UNBOXED)</b>	152 grams
<b>LOOP CURRENT MAX (Alarm, LED Illuminated)</b>	4mA	<b>OPERATING TEMPERATURE</b>	-10°C to +50°C
<b>MAX. RECOMMENDED PER LOOP</b>	30	<b>HUMIDITY</b>	95% - non condensing @ 40°C
<b>MAX CABLE SIZE</b>	2,5 mm <sup>2</sup>	<b>PROTECTION CATEGORY</b>	IP 24
<b>COLOUR/CASE MATERIAL</b>	RED/ABS - Flame Retardant	<b>ORDERING INFORMATION</b>	GFE-MCPA



# DATA SHEET

## MCPC-LP-FLAP

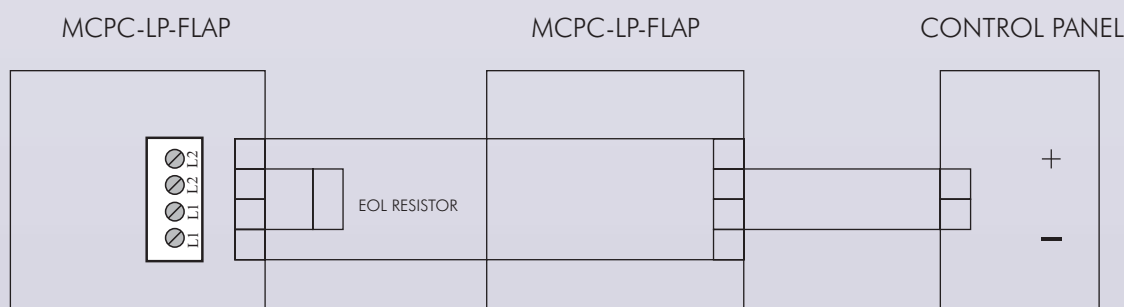
### CONVENTIONAL MANUAL CALL POINT LOW PROFILE WITH PROTECTIVE COVER



The MCPC-LP-FLAP is a low profile surface mounting Conventional manual call point. A bi-colour LED flashes Green when the unit is connected to a control panel and is illuminated Red when in Alarm.

The unit is supplied complete with a hinged flap which protects the trigger element from accidental activation and reduces malicious activations as two actions are required to activate it.

Another convenient feature of the MCPA-LP-Flap is that after an activation the plastic insert is easily reset using the supplied key, replacement is not required.



#### SPECIFICATIONS

SUPPLY	N/A	DIMENSIONS (UNBOXED)	90 x 90 x 28 mm
CURRENT QUIESCENT	0,35mA	WEIGHT (UNBOXED)	80 grams
CURRENT MAX (Alarm, LED Illuminated)	3,1mA	OPERATING TEMPERATURE	0-50°C
MAX. RECOMMENDED PER LOOP	N/A	HUMIDITY	<85%Rh non condensing
MAX CABLE SIZE	2,5 mm <sup>2</sup>	PROTECTION CATEGORY	IP 24
		ORDERING INFORMATION	MCPA-LP-FLAP

## GFE-MCPC

### CONVENTIONAL MANUAL CALL POINT

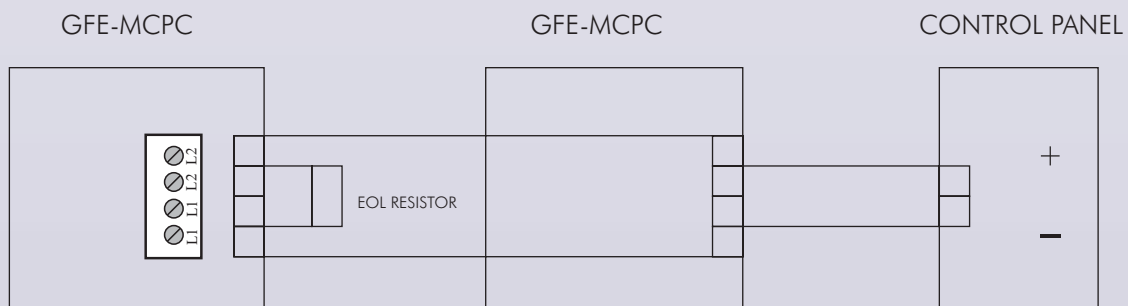


The GFE-MCPC is a surface mounting Conventional manual call point.

A bi-colour LED flashes Green when the unit is connected to a control panel and is illuminated Red when in Alarm.

The unit is supplied complete with a hinged flap which protects the trigger element from accidental activation and reduces malicious activations as two actions are required to activate it.

Another convenient feature of the GFE-MCPC is that after an activation the plastic insert is easily reset using the supplied key, replacement is not required.



SPECIFICATIONS			
SUPPLY	N/A	DIMENSIONS (UNBOXED)	92 x 92 x 54 mm
CURRENT QUIESCENT	0,5mA	WEIGHT (UNBOXED)	152 grams
CURRENT MAX (Alarm, LED Illuminated)	4mA	OPERATING TEMPERATURE	-10°C to +50°C
MAX. RECOMMENDED PER LOOP	N/A	HUMIDITY	95% - non condensing @ 40°C
MAX CABLE SIZE	2,5 mm <sup>2</sup>	PROTECTION CATEGORY	IP 24
COLOUR/CASE MATERIAL	RED/ABS - Flame Retardant	ORDERING INFORMATION	GFE-MCPC



**GLOBAL**  
FIRE EQUIPMENT

# DATA SHEET

## **VULCAN-2**

### ADDRESSABLE SOUNDER - BEACON

#### **Features:**

With 15 different variations, the Vulcan 2 brings an exciting flexibility to the Global Fire Equipment range of warning devices and interfaces. Up to 96 Vulcan 2 devices can be connected to a single Loop depending on Loop Loading. In the case of combined Sounder and Beacon devices the maximum number of devices should not exceed 64.



The addressable Vulcan 2 is available as an Addressable Sounder, Beacon or combined Sounder / Beacon which may be field configured as a Shadow Sounder / Beacon or Auxiliary Sounder / Beacon. There are also versions available incorporating an isolator.

All Vulcan 2 devices have dip-switch Address setting while Tone selection is via a jumper. Shadow Sounder and Auxiliary Sounder settings are also achieved using the 8 way dip switch and a jumper

respectively. There is also a potentiometer which may be used to adjust the sound level if required.

Normally the Vulcan 2 will be used in conjunction with a detector however a White or Transparent lid is available as an option for the Addressable Vulcan 2.

#### **VULCAN 2 VARIANTS DESCRIPTION**

##### **SHADOW Sounder / Beacon.**

The Vulcan 2 Addressable Sounder / Beacon can be configured as a Shadow Sounder/ Beacon using the 8 way dip switch provided. A Shadow Sounder / Beacon does not have an individual address thus freeing up addresses for more detection devices. Shadow sounders / Beacons do not report back to the control panel so their presence on the Loop is not monitored, however they do draw current from the Loop and must be included in Loop load calculations. The number of combined Sounder / Beacons connected to a Loop should not exceed 64 or 96 in the case of a Beacon or Sounder only.

##### **Auxiliary Sounder / Beacon**

When the Vulcan 2 is configured as an Auxiliary device the Sounder / Beacon shares the same address as the detector with which it is co-located. Configuration of this mode is done via the jumper provided. When operating in this mode the Vulcan 2 monitors the Address loop for the command from the control Panel to the detector to illuminate it's LED. When this command is received the Vulcan 2 is also activated. If a Fire is confirmed the remaining sounders may be activated using the Evacuate command. This reduces the inconvenience to other guests in the event of a false alarm while at the same time giving early warning to the occupant of the room in the case of an actual Fire event. Pressing Sounder silence at the panel silences all active sounders.

The maximum number of Auxiliary Sounder/Beacons is 63 and they can be allocated between address 1 and 63.

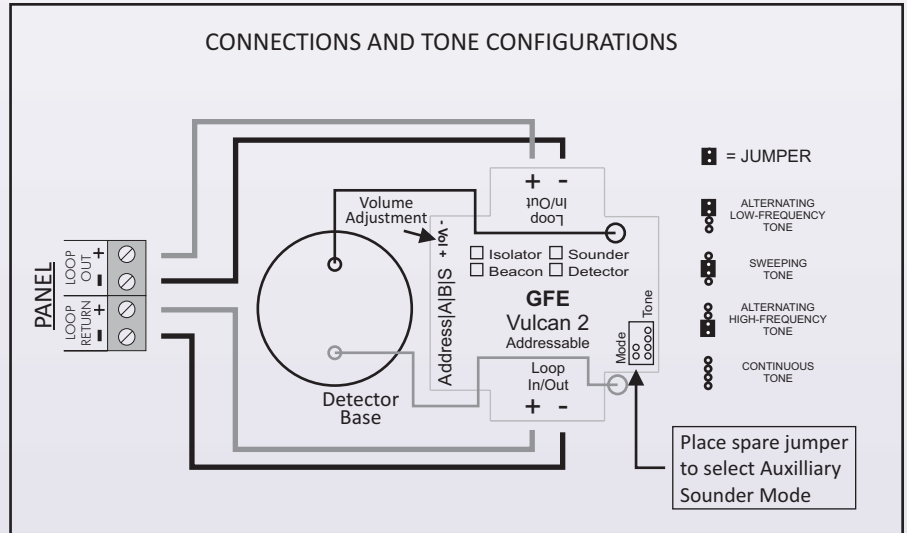


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# DATA SHEET

## VULCAN-2

### ADDRESSABLE SOUNDER - BEACON



Switches 1-5 used to configure the Sounder/ Beacon address.

Switch 6 Only used for Auxilliary Sounders

Switch 7  
OFF Beacon stops with ALARM SILENCE  
ON Beacon stops with RESET

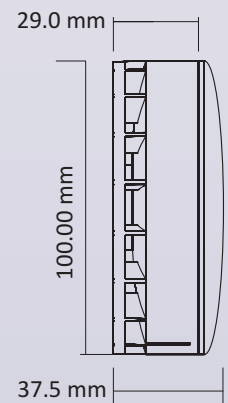
Switch 8  
OFF Shadow Sounder Operation.  
ON Normal sounder operation.

ON OFF

Address Switches binary weights

1 on =1	3 on =4	5 on = 16
2 on =2	4 on =8	6 on = 32

Order Code	Product Description
VULCAN 2 AS	VULCAN 2 ADDRESSABLE BASE SOUNDER
VULCAN 2 ASI	VULCAN 2 ADDRESSABLE BASE SOUNDER WITH ISOLATOR
VULCAN 2 ASB	VULCAN 2 ADDRESSABLE BASE SOUNDER WITH BEACON
VULCAN 2 ASBI	VULCAN 2 ADDRESSABLE BASE SOUNDER WITH BEACON WITH ISOLATOR
VULCAN 2 AB	VULCAN 2 ADDRESSABLE BEACON
VULCAN 2 ABI	VULCAN 2 ADDRESSABLE BEACON WITH ISOLATOR
VULCAN 2 L	LID FOR VULCAN 2
VULCAN 2 LT	TRANSPARENT LID FOR VULCAN 2



SPECIFICATIONS			
<b>SUPPLY</b>	Loop Power	<b>DIMENSIONS</b>	Dia: 100mm H: 37.5mm
<b>SOUND OUTPUT - Low Frequency 800-1000Hz</b>	80 dB @ 1 metre	<b>WEIGHT</b>	120 grams (incl. lid)
<b>SOUND OUTPUT - High Frequency 2400-3000Hz</b>	85 dB @ 1 metre	<b>OPERATING TEMPERATURE</b>	0-50°C
<b>CURRENT CONSUMPTION - QUIESCENT</b>	1,1mA	<b>HUMIDITY</b>	<85%Rh non condensing
<b>CURRENT CONSUMPTION - SOUNDER - LOW FREQ</b>	4mA	<b>PROTECTION CATEGORY</b>	Ip44
<b>CURRENT CONSUMPTION - SOUNDER - HIGH FREQ</b>	7mA	<b>ENCLOSURE MATERIAL</b>	Flame Retardant rating 94V0
<b>CURRENT CONSUMPTION - BEACON</b>	2.5mA		
<b>CURRENT CONSUMPTION - COMBINED - LOW FREQ</b>	5.5mA		
<b>CURRENT CONSUMPTION - COMBINED - HIGH FREQ</b>	8.5mA		

# DATA SHEET

## VULCAN-WSA

### ADDRESSABLE WALL SOUNDER

#### Features:

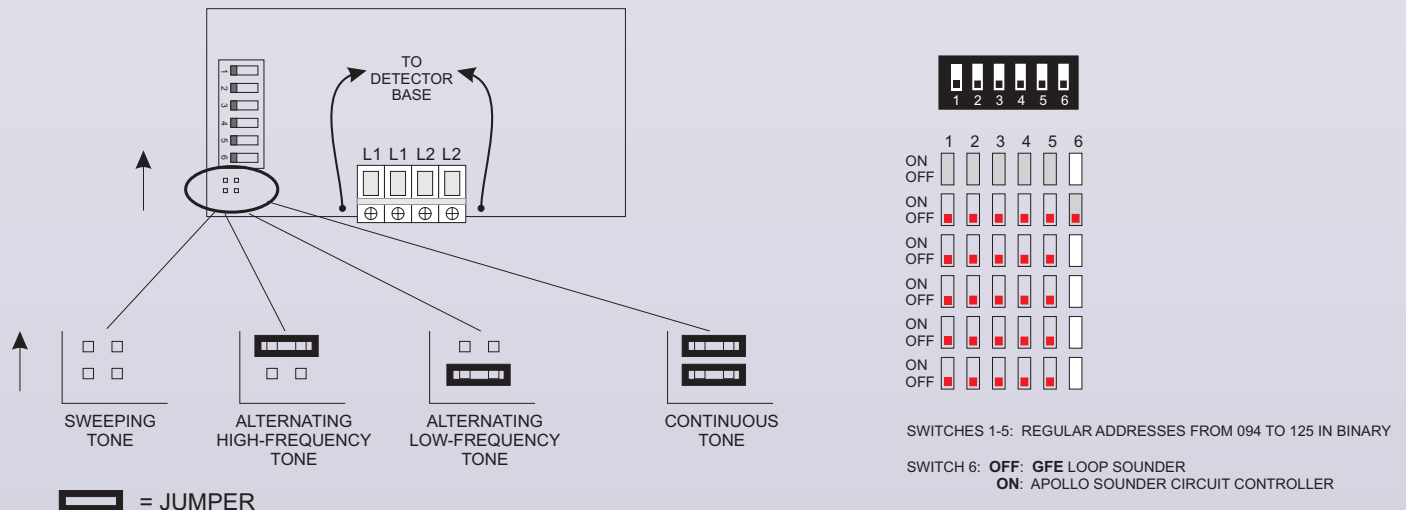
The VULCAN-WSA is a surface mount Addressable sounder with low power consumption available in either Red or White housings. Up to 32 individually addressed sounders can be installed per loop occupying address 94 to 125. The address is set using switches 1 to 5 of the 6 way DIL switch.



Four different tones are available and selected by jumpers. The Sound level can be lowered if required using the potentiometer.

When individual address reporting is not required, VULCAN-WSA can be ordered as a Shadow sounder. In this case sounders do not have an address number thus freeing up addresses for more detection devices.

Shadow sounders do not report back to the control panel so their presence on the loop is not monitored. Shadow sounders draw current from the loop (3.5mA in alarm) and must be included in loop load calculations.



SPECIFICATIONS			
SUPPLY	Loop Power	DIMENSIONS	Dia: 100mm H: 67mm
LOOP CURRENT QUIESCENT	0,9mA	WEIGHT	125 grams
LOOP CURRENT ALARM	3,5mA	OPERATING TEMPERATURE	0-50°C
MAX CABLE SIZE	2,5 mm <sup>2</sup>	HUMIDITY	<85%Rh non condensing
SOUND OUTPUT - Continuous/Sweep/Alternating LF	85dB @ 1 metre	PROTECTION CATEGORY	Ip44
SOUND OUTPUT - Alternating HF	92dB @ 1 metre	ADDRESS RANGE	94-125
		ORDERING INFORMATION	VULCAN-WSA VULCAN-WSA/S for Shadow:

# DATA SHEET

## VULCAN-WSC

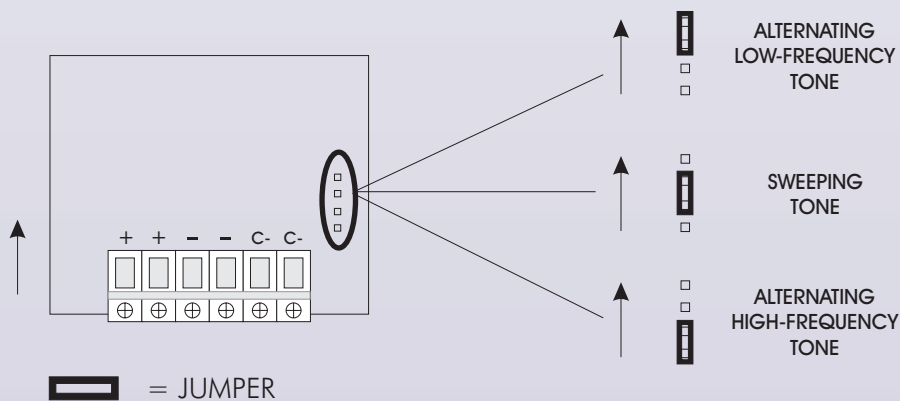
### CONVENTIONAL WALL SOUNDER



#### Features:

The Vulcan WSC is a low consumption sounder designed to be used as an unobtrusive low profile sounder or as a base sounder to be installed in conjunction with a conventional detector. This leads to reduced installation costs and improves the aesthetics of the fire alarm system.

Four different tones are available and selected by jumpers. The Sound level can be lowered if required using the potentiometer.



**NOTE:** TO OBTAIN CONTINUOUS TONE  
CONNECT 0V TO C- TERMINALS (SHORT BETWEEN - AND C-)

SPECIFICATIONS			
SUPPLY	17-40 Vdc	DIMENSIONS	Dia: 100mm H: 67mm
CURRENT QUIESCENT	0,9mA	WEIGHT	125 grams
CURRENT ALARM	3,5mA	OPERATING TEMPERATURE	0-50°C
MAX CABLE SIZE	2,5 mm <sup>2</sup>	HUMIDITY	<85%Rh non condensing
SOUND OUTPUT - Continuous/Sweep/Alternating LF	85dB @ 1 metre	PROTECTION CATEGORY	IP44
SOUND OUTPUT - Alternating HF	92dB @ 1 metre	ORDERING INFORMATION	VULCAN-WSC



































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FIRE EQUIPMENT

# DATA SHEET





















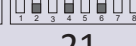

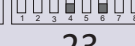
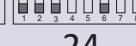
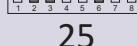
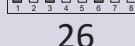
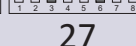
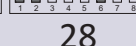
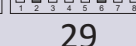
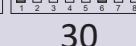
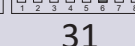

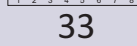
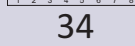
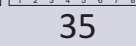

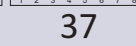

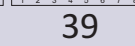
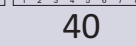









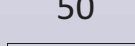
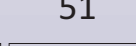
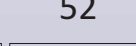
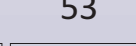
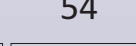
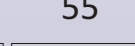
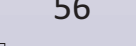
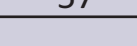
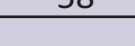
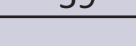
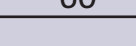
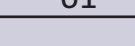
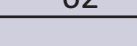
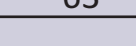
## SOUNDERS

### ADDRESS SETTING

#### Sounder/ Beacon Address Settings

Sounder 1  94	Sounder 2  95	Sounder 3  96	Sounder 4  97	Sounder 5  98	Sounder 6  99	Sounder 7  100	Sounder 8  101
Sounder 9  102	Sounder 10  103	Sounder 11  104	Sounder 12  105	Sounder 13  106	Sounder 14  107	Sounder 15  108	Sounder 16  109
Sounder 17  110	Sounder 18  111	Sounder 19  112	Sounder 20  113	Sounder 21  114	Sounder 22  115	Sounder 23  116	Sounder 24  117
Sounder 25  118	Sounder 26  119	Sounder 27  120	Sounder 28  121	Sounder 29  122	Sounder 30  123	Sounder 31  124	Sounder 32  125

#### Auxilliary Sounder/ Beacon Address Settings

 01	 02	 03	 04	 05	 06	 07	 08
 09	 10	 11	 12	 13	 14	 15	 16
 17	 18	 19	 20	 21	 22	 23	 24
 25	 26	 27	 28	 29	 30	 31	 32
 33	 34	 35	 36	 37	 38	 39	 40
 41	 42	 43	 44	 45	 46	 47	 48
 49	 50	 51	 52	 53	 54	 55	 56
 57	 58	 59	 60	 61	 62	 63	



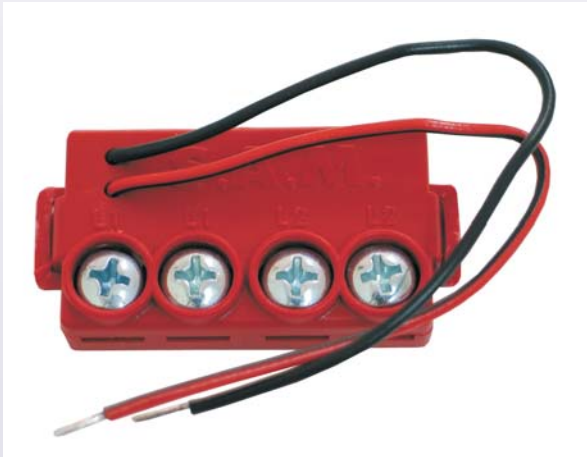
**GLOBAL**  
FIRE EQUIPMENT

# DATA SHEET

## **SAM**

### SELF ADDRESSABLE MODULE

Following GLOBAL's strategy of providing competitive products for our esteemed customers, we are pleased to



announce the launch of SAM. This tiny, very low cost, module provides any conventional detector with an address without the inconvenience of using a manual addressing unit or DIP switch. The SAM is simply attached to the conventional detector and the detector address is automatically assigned to each SAM by the JUNO-NET or JUNiOr control panel during commissioning and testing. A SAM based system tolerates loop branches and can monitor loop interruptions and head removal. SAM is ideal for low budget retrofits

where fire point identification is needed but the cost of fitting a fully analogue system is too high. SAM is also an option in low budget installations that would normally be implemented with 4 to 8 zone conventional systems. It gives you the cable savings possible (see below) with an addressable system, together with the loop sounder capability but without the extra costs of analogue addressable heads. Compatible with most conventional detectors, the SAM is fully encapsulated in a plastic case, unobtrusive and easy to connect to the detector base.

#### **CONNECTION INFORMATION**

**Verify that all SAM connections, both to the loop and the associated conventional device (i.e. smoke sensor/detector, call point, etc.) are properly made and that the conventional device connections follow the manufacturer's instructions, in particular those regarding polarity. Reversal of the supply polarity can cause failure or malfunction and prevent a SAM from being programmed.**

SPECIFICATIONS			
SUPPLY	Loop Power	DIMENSIONS	48 x 24 x 9 mm
LOOP CURRENT QUIESCENT	1,1mA	WEIGHT	85 grams
LOOP CURRENT ALARM	10mA	OPERATING TEMPERATURE	0-50°C
MAX CABLE SIZE	2,5 mm <sup>2</sup>	HUMIDITY	<85%Rh non condensing
ADDRESS RANGE	1-125	PROTECTION CATEGORY	IP44
		ORDERING INFORMATION	SAM



# DATA SHEET

## MAM

### MANUALLY ADDRESSABLE MODULE



Following the success of our Self Addressing Module (SAM) which permitted the connection and individual addressing of conventional detectors and manual call points to our Junior and Juno-Net control panels, Global Fire Equipment is pleased to introduce the Micro Address Module(MAM).



The MAM takes the SAM concept to a higher level permitting not only the connection and addressing of conventional detectors and call points but also offering a Micro Input, Micro Output and conventional Sounder or Beacon driver/address Module.

(MAM-LSC)



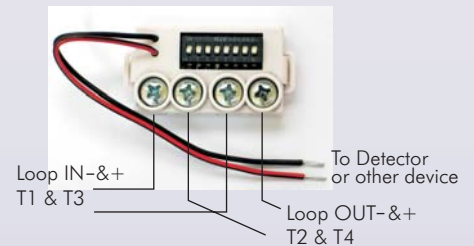
With its small physical size and convenient 8 way DIL switch for address setting and configuration, the MAM provides the facility to upgrade all the components of a conventional system to a full addressable system, ideal for retrofit installations. The MAM is fully compatible with all our standard address modules, addressable sounders, addressable manual call points and WizMart detectors facilitating extensions to existing systems.

To assist easy identification the MAM is supplied in 3 coloured plastic housings.

**Red:** Manual call point interface / Micro Input Module

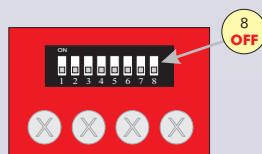
**Mustard:** Micro Output Module / LOOP SOUNDER/ BEACON Controller

**White:** Smoke / Heat Detector interface.

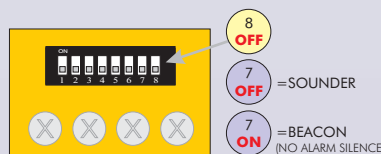


#### CONNECTION INFORMATION

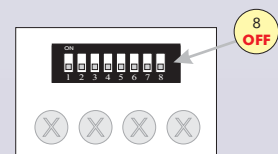
Verify that all MAM connections, both to the loop and the associated conventional device (i.e. smoke sensor/detector, call point, etc.) are properly made and that the conventional device connections follow the manufacturer's instructions, in particular those regarding polarity. Reversal of the supply polarity can cause failure or malfunction of the conventional device.



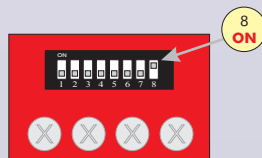
CALL-POINT



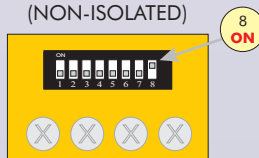
LSC  
(NON-ISOLATED)



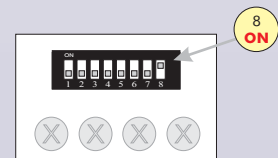
SMOKE



MICRO-INPUT  
(UNMONITORED)



OUTPUT  
(NON-ISOLATED)



HEAT

#### SPECIFICATIONS

SUPPLY	Loop Power	DIMENSIONS	48 x 24 x 9 mm
LOOP CURRENT QUIESCENT	1,1mA	WEIGHT	85 grams
LOOP CURRENT ALARM	10mA	OPERATING TEMPERATURE	0-50°C
MAX CABLE SIZE	2,5 mm <sup>2</sup>	HUMIDITY	<85%Rh non condensing
ADDRESS RANGE	1-125	PROTECTION CATEGORY	IP44
		ORDERING INFORMATION	MAM

# DATA SHEET

## **J-NET-INT-FO**

### FIBRE OPTIC INTERFACE

The J-NET-INT-FO interface modules allow GFE's range of panels to be interfaced to repeaters and/or sub-panels using fibre optic cable using a common data communication loop in a ring topology. These units also use a double-redundant data communication loop for extra security and reliability.

These modules are used in the fire alarm control panel to provide a communications interface for the following:

- 1) An Orion conventional panel and its repeater(s).
- 2) A Junior, analogue addressable panel, and its mini-repeater(s).
- 3) A Juno Net panel and Juno Net Repeater(s), Mini-Repeater(s) and or Sub-Panels.

The interface module is compatible with the following panels, repeaters and sub-panels:

- 1) Orion Conventional Panel 2, 4 and 8 zones.
- 2) Orion Repeater.
- 3) Junior, 1 loop analogue addressable panel, non-expandable.
- 4) Mini-Repeater.
- 5) Juno Net, expandable analogue addressable panel.
- 6) Juno Net Repeater
- 7) Sub-Panel.

These interfaces can be used in parallel with other similar modules using other interface technologies such as RS-232, RS-485 and TCP/IP, providing the installer with the tools to interface and create a network of panels, repeaters and sub-panels using mixed data communication technologies, catering for the most demanding applications and networking requirements.

Each panel, repeater and sub-panel will require one of these interface modules. The maximum ring distance is 4 Kms.

Fibre optic cables to be used in conjunction with these modules should be multi-mode 62.5/125um and terminated using the industry standard ST connectors.

Custom made versions of these modules can be produced for connection to GFE's proprietary MPX protocol to connect leds, mimic displays, relays and conventional sounder circuits to GFE's extensive range of conventional and analogue addressable panels. Please consult GFE for further information.

**Warning:** Disconnect all power sources including primary (electrical mains) and secondary (batteries) supplies, before connecting or disconnecting these interface modules and/or any other internal circuit boards.

SPECIFICATIONS			
SUPPLY VOLTAGE	18-29 V DC (28 V DC nominal)	SOFTWARE COMPATIBILITY	Juno Net, Junior, Juno Net Repeater
CURRENT CONSUMPTION	15 mA		Mini Repeater and Sub-Panels
CONNECTOR TYPE (FO)	ST Connectors		(all software versions)
FIBRE OPTICS CABLE	Multi-mode 62.5/125 um	MAX DATA LOOP LENGTH	4 Kms
HARDWARE COMPATIBILITY	Juno Net, Junior, Juno Net Repeater	DIMENSIONS	135 - 35.6 mm
	Mini Repeater and Sub-Panels	WEIGHT	32 grams
	(all board versions)		

# DATA SHEET

## J-NET-INT-FO

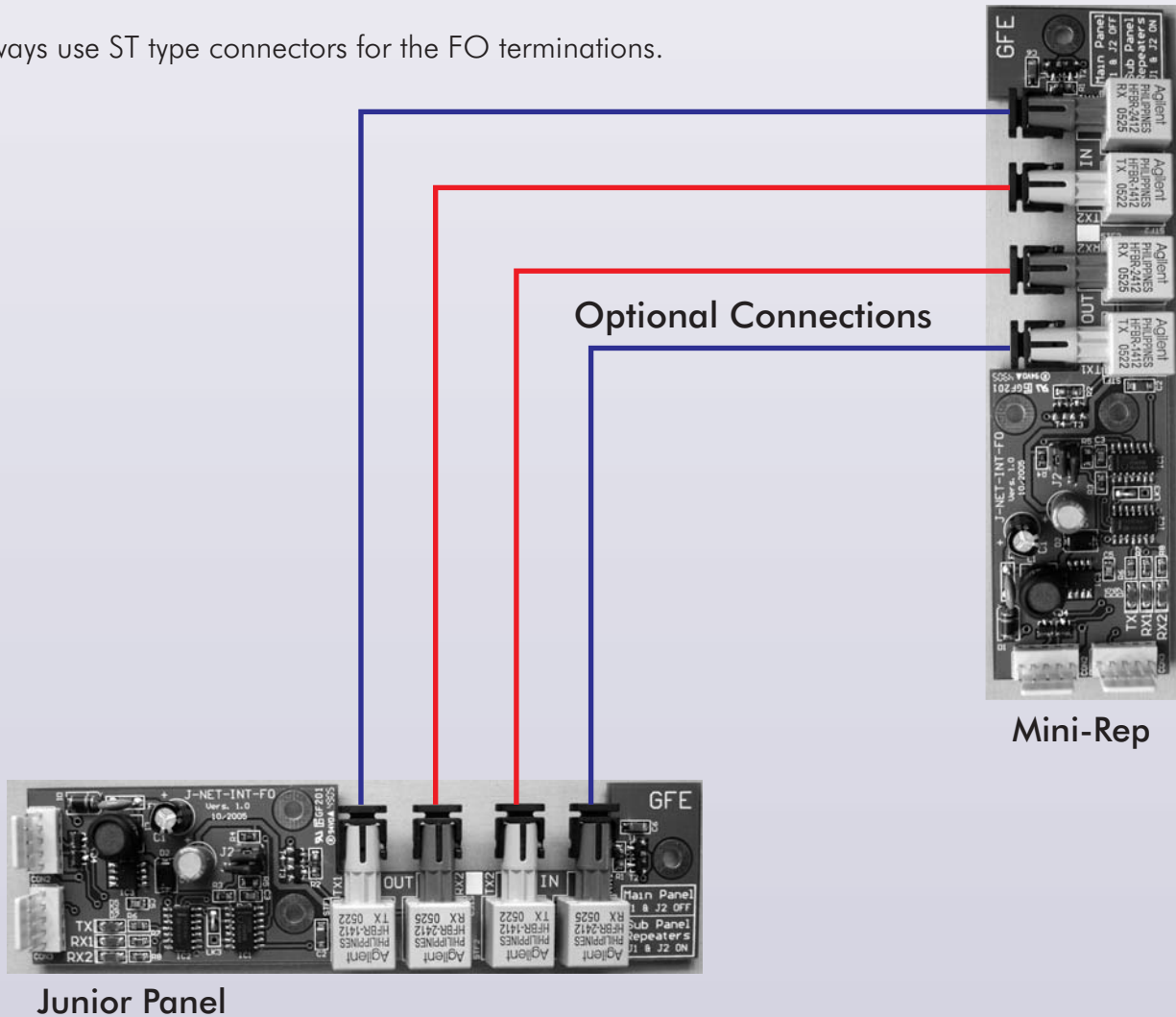
### FIBRE OPTIC INTERFACE

Notes:

- On Junior Panel interface JP1 and JP2 should be removed.
- On Mini-Rep interface JP1 and JP2 should be ON

Interface CON2 or CON3 should be connected to DATA CON on Junior Version 3 panel and to CON3 or CON4 on Mini-Rep or Junior Version 2 main board.

Always use ST type connectors for the FO terminations.





**GLOBAL**  
FIRE EQUIPMENT

# DATA SHEET

## GFE-AD

### ANALOGUE ADDRESSABLE DETECTORS

The GFE-AD series of Analogue Addressable Detectors have been designed to be fully compatible with the Global Fire Equipment range of intelligent control panels, Junior and Juno-Net. Compliant to EN54 (parts 5 6 7) and certified by DIFT for CPD compliance, the GFE-AD series detectors are available in optical, Heat and combined Smoke/Heat detector versions.

EN54 certificate:

GFE-AD-SL: EN54 pt7:2000 Certificate n° 0845-CPD-232-1483

GFE-AD-HL: EN54 pt5:2000 Certificate n° 0845-CPD-232-1482

GFE-AD-SHL: EN54 pt5 & pt7:2000 Certificate n° 0845-CPD-232-1484

#### Product Features:

- Dual LEDs for 360° visibility
- Advanced detection and communication protocols
- Easy installation and maintenance
- Sleek low-profile housing
- Durable sensor head, no need for replacement
- SMD circuit board design. High quality and reliability guaranteed.
- Five year limited warranty
- Sensor Base Option: Regular 4 or 5 inch base.



#### THIS RANGE INCLUDES

MODEL	SMOKE	HEAT	REMOTE LED	EN-54 APPROVAL	CE APPROVAL
GFE-AD-SL	X		X	X	X
GFE-AD-HL		X	X	X	X
GFE-AD-SHL	X	X	X	X	X

#### SENSOR SPECIFICATION

MODEL	THERMAL	VOLTAGE DC	STANDBY CURRENT (MAX.)	ALARM CURRENT (MAX.) LED ON	SURGE CURRENT (MAX.)	START-UP TIME (MAX.)	BASE MODEL
GFE-AD-SL		15 - 30V	370µA	4mA	370µA	30 sec	P/N774912
GFE-AD-HL	57°C	15 - 30V	370µA	4mA	370µA	30 sec	P/N772912
GFE-AD-SHL	57°C	15 - 30V	370µA	4mA	370µA	30 sec	P/N774912

Smoke Sensitivity: 2.66 +/-1.11%/FT Obscuration (UL standard), 0.10-0.157dB/m (EN54 standard)  
 Coverage: 100 m2 (Smoke), 50m2 (Heat) - Height dependent  
 Start-Up Current: 370µA Maximum  
 Reset Time: less than 10 seconds  
 Alarm Indicator: Red LED  
 Remote Output: 15mA max., diode gate  
 Temperature Range: -10°C to 50°C  
 Humidity: 0 to 95% RH, no condensation or icing  
 Dimensions: 100mm (dia) x 46mm (ht) with base  
 Weight: 188g/set with base



**GLOBAL**  
FIRE EQUIPMENT

# DATA SHEET

## GFE-C

### CONVENTIONAL DETECTORS

The GFE series conventional detectors have been designed and tested to EN54 and UL standards. Available in optical Smoke, heat and combined Smoke/Heat detector versions, the GFE conventional detectors are both reliable and aesthetically pleasing.

EN54 certificate:

GFE-S-2L: EN54 pt7:2000 Certificate n° 0845-CPD-232-1489

GFE-H-2L: EN54 pt5:2000 Certificate n° 0845-CPD-232-1488

GFE-SH-2L: EN54 pt5:2000 Certificate n° 0845-CPD-232-1490

#### Product Features:

- Dual LEDs for 360° visibility
- Advanced detection and discrimination algorithms
- Easy installation and maintenance
- Sleek low-profile housing
- Durable sensor head, no need for replacement
- SMD circuit board design. High quality and reliability guaranteed.
- Integrated heat detector for GFE-SH-2L
- Sensor Base Option: Regular 4 or 5 inch base.



#### THIS RANGE INCLUDES

MODEL	SMOKE	HEAT	REMOTE LED	EN-54 APPROVAL	CE APPROVAL
GFE-S-2L	X		X	X	X
GFE-H-2L		X	X	X	X
GFE-SH-2L	X	X	X	X	X

#### SENSOR SPECIFICATION

MODEL	THERMAL	VOLTAGE DC	STANDBY CURRENT (MAX.)	ALARM CURRENT (MAX.)	SURGE CURRENT (MAX.)	START-UP TIME (MAX.)	PERMISSIBLE CURRENT (MAX.)	BASE MODEL
GFE-S-2L		12 - 30V	90µA	70mA	130µA	60 sec	80mA	P/N774912
GFE-H-2L	57°C	10 - 35V	55µA	55mA	150µA	60 sec	80mA	P/N772912
GFE-SH-2L	57°C	12 - 30V	100µA	70mA	130µA	60 sec	80mA	P/N774912

Smoke Sensitivity:	2.31 +/-1.37%/FT Obscuration (UL standard), 0.10-0.14 dB/m (EN54 standard)
Coverage:	100 m2 (Smoke), 50m2 (Heat) - Height dependent
Start-Up Current:	160µA Maximum
Alarm Load:	340 ohms + 3 volt drop
Reset Voltage:	less than 1 volt
Reset Time:	less than 1 second
Alarm Indicator:	LED continuously emitting red light
Remote Output:	15mA max., diode gate
Temperature Range:	-10°C to 50°C
Humidity:	0 to 95% RH, no condensation or icing
Dimensions:	100mm (dia) x 46mm (ht) with base
Weight:	130g/set with base

# DATA SHEET

## GFE-AD-ISOLATOR



The GFE-AD-ISOLATOR has been designed to provide protection against short circuit faults on a GFE Junior or Juno-Net Analogue Addressable systems. The isolator protects the loop in the event of a short circuit by disconnecting the section of the loop where the short circuit has occurred. When the fault has been rectified the isolating circuitry reconnects the affected part of the System.

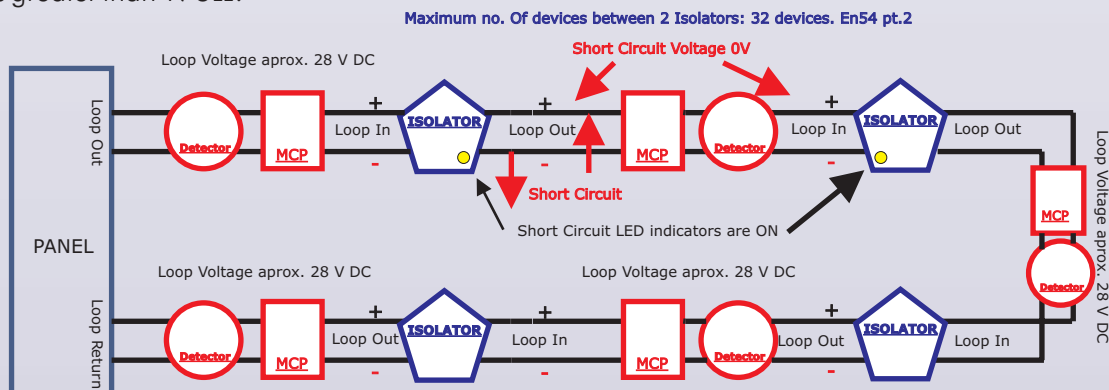
The GFE-AD-Isolator is delivered in a White round junction box with knockouts that permit easy cable entry. Two Yellow LED indicators are provided to indicate on which side of the Device there is a short circuit (Loop In and Loop Out). This facilitates easy localisation of the fault as it is

not necessary to look for two isolators to confirm the location of the affected section.

The GFE-AD-Isolator is polarity sensitive and can be damaged if connected with reverse polarity. Please be sure to note the polarity indicated at the wiring terminals.

Up to 32 devices may be fitted between each isolator (EN54) or 20 devices for BS5839 compliance.

Under Normal conditions the GFE-AD-Isolator provides a low resistance of  $0.3\Omega$  in either direction. When a short circuit condition is detected the isolator switches to the open state thereby isolating the Loop "IN" and Loop "OUT" lines. The isolated section is tested every 3 seconds with a voltage pulse and is automatically reconnected when the load resistance is greater than  $175\Omega$ .



During the duration of the short circuit condition, between 2 isolators, the loop voltage will be removed (0V) and the 2 led indicators (Yellow), 1 on each isolator, associated with the section where the short circuit is present will be lit.

Panel will report an open/short on the loop fault. Devices between 2 isolators will be removed. If panel is in ACTIVE mode (green status led permanently on) there will be a number of "Device Removed" faults. The total number of these faults will depend on the number of devices that are connected between the isolators with the short circuit fault. See function 7.1 on the panel.

As soon as the short circuit condition is removed the loop voltage (28V DC nominal) is reapplied and normal working conditions on the loop are restored. Although there is no need for the panel to be reset, in order to clear the faults the panel has to be reset.

# DATA SHEET

## **GFE-AD-ISOLATOR**

### Commissioning

It is important that the system be fully tested after installation. In normal operating conditions, apply short circuits to the wiring at various points to confirm the correct operation of the Isolators. The LED indicator in the direction of the short circuit should be illuminated on 2 isolators. On one device it will be the Loop In Led on the other it will be the Loop out Led.

### Troubleshooting

Before investigating individual units for faults it is necessary to ensure that the system wiring is fault free. Earth faults on a data loop or ancillary Zone wiring may cause communications errors. Many fault conditions in Addressable systems are the result of simple wiring errors.

PROBLEM: LED illuminated constantly      POSSIBLE CAUSE: Short circuit on loop  
 PROBLEM: Failure to isolate a short circuit      POSSIBLE CAUSE: Incorrect wiring

### Technical Data

Minimum Loop operating voltage in normal conditions	17VDC
Maximum Loop operating voltage	40V DC
Minimum protocol pulse	5V to 9V
Power up time	<1.5mS
Operating current	see Table 1
Maximum Loop current	1A continuous 3A short circuit switching
On resistance	0.2Ω
Isolation indication	2 yellow Leds, Loop In and Out
Reconnection resistance	175Ω
Isolation Time	50i S
Reconnection test	See table 2
Dimensions	Dia:99mm H: 40mm (with lid)
Operating humidity	0-95% RH, non-condensing
Operating temperature	-20 to +60°C
Storage temperature	-30 to +80°C
Design environment	Indoor use only

TABLE 1	18V	24V	28V
Quiescent current	120μA	150μA	180μA
Current in isolated state	4mA	5.4mA	6.4mA

TABLE 2	SPUR CONNECTIONS	LOOP CONNECTIONS
Reconnection current pulse amplitude	35-50mA	60-100mA
Reconnection current pulse duration	60-100mS	60-100mS
Reconnection current pulse spacing	3-4 seconds	3-4 seconds
Reconnection resistance limit	300-450 Ω	150-225 Ω