



# INTEGRAL TECHNOLOGIES

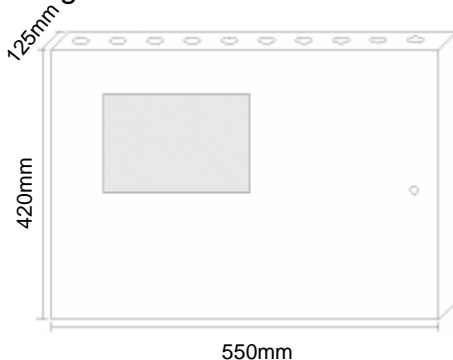
## FA-ACP-1X Series Analogue Addressable Control Panel



APPROVED TO THE REQUIREMENTS OF EN54 Pt 2 & Pt 4 1999

### Specifications:

Loops	1-12 Networkable up to 96 loops
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	65W or 150W
Quiescent Current (Without Devices)	130mA
Auxiliary Relay Ratings	50V AC / DC 1 Amp Resistive (Min 100mA, 6V)
Repeater Outputs	Open Collector 24V DC 100mA Max
Dimensions	W 550mm x H 420mm x D 125mm
IR Keypad Batteries	2 x AAA
Fuses	Battery: 3A Printer: 1A
Box *	1.5mm Aluminum Or Mild Steel Coated White
Cable Entries	Back Through Cut Out / Top By 6 Removable Plugs
Battery Capacity	Up To 2 x 12V 12A/H
Weight	6.6 Kgs



### CE DECLARATION OF CONFORMITY

This Panel is CE Marked to Show that it Conforms to the Requirements of the Following European Community Directives:

- Electromagnetic Compatibility Directive 89/336/EEC (and the Amending Directive 92/31/EEC)
- Low Voltage Directive 73/23/EEC





# INTEGRAL TECHNOLOGIES

## FA-ACP-0X Series

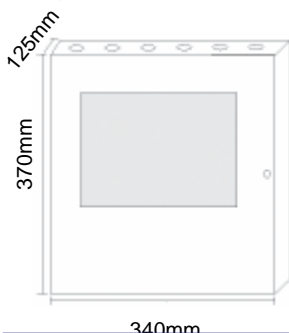
### Analogue Addressable Control Panel



APPROVED TO THE REQUIREMENTS OF EN54 Pt 2 & Pt 4 1999

#### Specifications:

Loops	1 or 3 Networkable up to 96 loops
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	65W or 150W
Quiescent Current (Without Devices)	130mA
Auxiliary Relay Ratings	50V AC / DC 1 Amp Resistive (Min 100mA, 6V)
Repeater Outputs	Open Collector 24V DC 100mA Max
Dimensions 1~3 Loops	W 340mm x H 370mm x D 125mm
IR Keypad Batteries	2 x AAA
Fuses	Battery: 3A Printer: 1A
Box *	1.5mm Aluminum Or Mild Steel Coated White
Cable Entries	Back Through Cut Out / Top By 6 Removable Plugs
Battery Capacity	Up To 2 x 12V 12Ah
Weight	4.2 Kgs



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- Low Voltage Directive 73/23/EEC



# INTEGRAL TECHNOLOGIES

## FA-ABG

### Addressable Break Glass



**FA-ABG-01**



**FA-ABG-WP**

#### Features:

- Two Wire Connection for Easy Installation
- Compatible with Standard Single-Gang Mounting Boxes
- Suitable for Flush Mounting or Surface Mounting
- Simple DIP switch Setting
- Integral LED Controlled from Panel
- Tested to BS5839 Part 2

#### Description:

The FA-ABG is Designed to be Used as a Component of a Compatible Fire Control System Using Intech Analogue Addressable Devices. It is a Dedicated Addressable Break Glass Unit for Installation on a Two Wire Communication Circuit Providing Both Signaling of Alarm to the Monitoring Control Panel and Local LED Indication of Activation.

The FA-ABG may be Installed as Either a Flush or Surface Mounted Device in a Normal Internal Environment. It is not Intended for Use in an Externally Exposed or Hazardous Location.

The FA-ABG May be Flush Mounted to Compatible Electrical Boxes.

#### Specifications:

Minimum Operating Voltage:	15V
Maximum Operating Voltage:	32V
Standby Current:	40 uA
Alarm Current:	20 mA

#### Models available

FA-AGB-01	Standard (indoor)
FA-ABG-F	Standard (indoor) with FLIP cover
FA-ABG-WP	Weatherproof (outdoor)



# INTEGRAL TECHNOLOGIES

## FA-ABL-XX Series Addressable Fire Alarm Bell

### Features:

- High Efficiency Low Current Consumption  
24 VDC Bells.
- Terminals will Accept 2.5mm Cables.
- Simple Installation Via Multi-Fixing Base  
Plate for All Types of Locations.
- Designed for Installation on a Standard  
4" Square Electrical Box (WP Model).
- Adaptors Allow Surface, Semi-Flush,  
Flush and Weatherproof Mounting  
(WP Model).
- Fully Suppressed and no Interference with  
Other Equipment.
- Manufactured According to UL Standards.
- Address setting by DIP switch

### Specifications:

Dimensions:	6" (152mm)
Voltage:	24 VDC
Current:	25mA
Sound Output:	96dB @ 1 M
Operating Temperature:	-35°C to 60°C @ 95% RH
Movement:	Motor & Striker (01) or Solenoid (WP)
Gong:	Steel Secured with Screw
Weight:	0.9 Kgs (Approx.)
Models available:	
FA-ABL-01	Standard Indoor
FA-ABL-WP	Weatherproof



FA-ABL-01



Weatherproof Box

FA-WBB-01



# INTEGRAL TECHNOLOGIES

## FA-ACP-EX Series

### Analogue Addressable Fire Alarm Control Panel

The **FA-ACP-EX** range of analogue addressable control panels features single loop expandable to two loops models, and it provides a cost effective solution for small to medium sized installations.

Designed and manufactured to comply with the requirements of EN54 standards, it supports 125 devices per loop.

Using advanced communications up to 32 individually addressed Loop sounders can be connected in each loop. An LCD display of 4 rows gives clear textual information of FIRE/FAULT conditions to end user.

There are also 16 zones Fire LED indicators.

Repeaters can be connected via RS422/RS485, Fiber Optic or TCP/IP interfaces.



#### Features:

- Single loop expandable to two loops, 125 devices per loop.
- Universal Automatic power input 90-260 VOLTS 50/60 Hz.
- Detector loops monitored for integrity.
- 2 supervised/ monitored conventional sounder circuits
- 384 fully programmable zones
- 512 fully programmable sounder groups
- 512 fully programmable INPUT/OUTPUT groups.
- Event log (rolling 2000 entries).
- Backlit LCD display with 4 rows of 40 characters
- Programming by Software.
- 2 Relay outputs fire and fault
- Power supply 1,7A at 28 Vdc
- Fully EN54 part 2 and 4 compliant
- ABS Fire retardant enclosure
- Repeater output via RS422/485, Fiber Optic or TCP/IP interfaces.
- Up to 32 individually addressed Loop sounders can be connected.



# INTEGRAL TECHNOLOGIES

## FA-ACP-EX Series

### Analogue Addressable Fire Alarm Control Panel

## Technical Specifications

Mains supply voltage	85-264v 50/60Hz
Internal power supply	Min.20V DC-Max.30V DC (28.5V DC nominal) Max. Ripple 1V peak-peak
Total output current	1,7A @230 Vac
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 – 20mm
Battery Fuse	1.6 Amp resettable – Electronic Fuse
Max Current Draw from Battery (Mains Fails)	1.5 Amp Max. @ Max. Operating Temperature

### Detection Circuit Specification

Number of loops	One expandable to two
Max number of devices	125 per loop
Max cable capacitance	120 pF/m
Max. loop cable length	1.2 Km
Recommended cable	0.5 – 2.5 sq. mm
Cable type	Shielded
Cable category	FPLR
Max number of addressable sounders	32 per loop
Addressable sounder type	Low current

### Sounder Circuit Specification

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

### Auxiliary Outputs

Aux power output	27.5 V DC Nominal – Max. Current Drawn 300mA
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

### Quiescent power

Internal circuits	100 mA
Battery charger	1 A
Analogue loop	275 mA

### Dimensions

Size	274 (W) x 404 (L) x 109 (H) mm
Weight without batteries	1,6 Kgs

### Operating Conditions

Operating Temperature	0 to +40 C
Max Relative Humidity	85% non condensing



# INTEGRAL TECHNOLOGIES

## FA-ADD-400 Series Addressable Duct Detector

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### Features:

- Easy Installation
- Detects Smoke in High Speed Air-Flows
- Remote LED Option
- Simple address selection by DIP switch
- Quick Detector Head Removal and Cleaning



**FA-CDD-XX**

### Specifications:

Operating Voltage:	24 VDC from the FACP or 24 110 / 220 V AC
Max Standby Current:	42 $\mu$ A
Max Alarm Current:	60 mA
Operating Temperature:	0° C to 70° C
Air Duct Velocity:	2.5 to 20 m/s
Dimensions:	368 x 128 x 100 mm
Weight:	2 Kgs
Sampling tube	Available in various lengths

### Models available:

FA-ADD-24	24 VDC
FA-ADD-AC	24 / 110 / 220 AC 50/60 Hz





# INTEGRAL TECHNOLOGIES

## FA-AGD-XX Series

### Addressable GAS detector



**FA-AGD-C**



**FA-AGD-W**

#### Features:

- Model FA-AGD-X Series Detectors for Sensing and Monitoring LPG, CO and Natural Gas.
- Easy to Install in Wall or Ceiling.
- Using Microprocessor for Circuit Control and Gas Monitoring to Assure Performance Stability and Reliability.
- Sounding a Loud Alarm Signal of 85 dB at Alarm Mode.
- Simple address selection by DIP switch
- Ergonomic Design of Detector Casing.
- No Battery is Required for Circuit Control.
- Relay Output Provides Relay NO/NC (Normal Open/Normal Close) Contact for Connection with a Central Monitoring System or Other Applications (Exhaust Fans, Gas Valve Etc.).

<b>Model</b>	<b>Mount Type</b>
FA-AGD-C	Ceiling
FA-AGD-W	Wall

#### Specifications:

Power Supply	24V DC or 220 VAC, 50/60Hz
Power Consumption	7W
Dimensions	
FA-AGD-C	120D – 51H mm
FA-AGD-W	120H – 68W – 40D mm
Operating Temperature	0°C ~ 40°C
Sensitivity	Less Than 15% LEL





# INTEGRAL TECHNOLOGIES

## FA-ALI LINE ISOLATOR MODULE

### Description

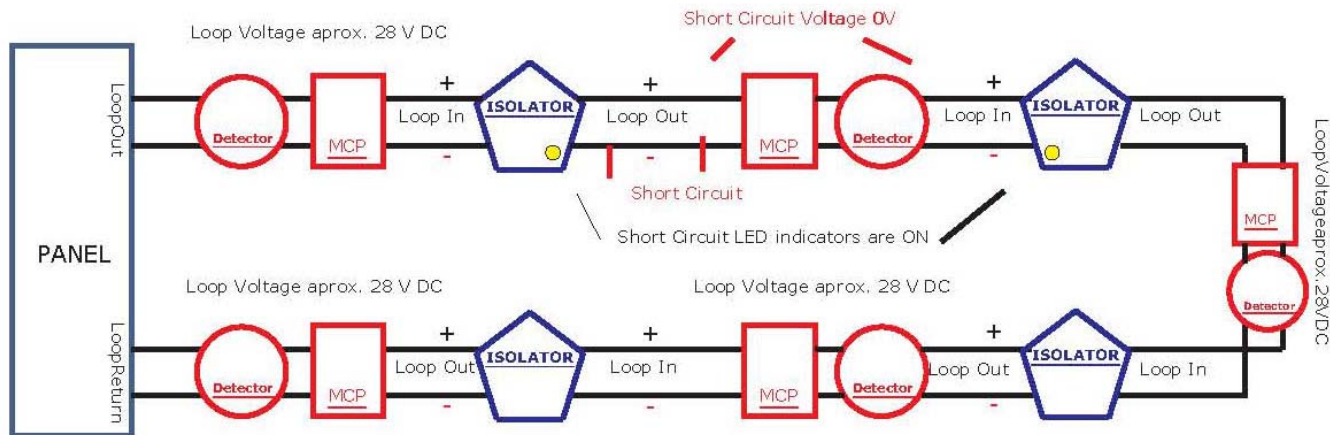
The INTECH FA-ALI isolator is designed to provide protection against short circuits faults in FA-ACP-E and FA-ACP-XX systems. In case of short circuit the isolator disconnects the faulty part of the loop and automatically reconnects it to the system when the short is rectified.

The isolator is housed in a box with two (2) YELLOW LEDS for easy identification which side of the device is a short circuit.



Up to 32 devices may be fitted between two isolators as per EN54 standards.

**WARNING:** The isolator is polarity sensitive and can be damaged if connected in reverse polarity.



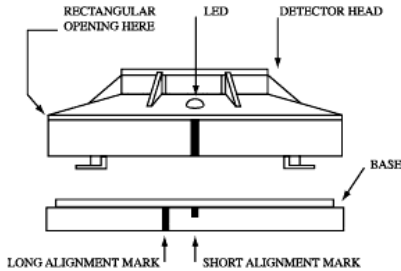
### Specifications

Minimum operating voltage	17 VDC
Maximum Operating Voltage	40 VDC
Quiescent current	150 uA @ 24 V
Current in isolated state	5.4 mA @ 24 V
Maximum loop current	1 A
Operating humidity	0-95% RH non-condensing
Operating temperature	-20 to +60 deg. C
Storage temperature	-30 to +80 deg C
Dimensions	Dia: 100 mm H: 40 mm with lid



## FA-APD/AHD

### Addressable Smoke and Heat Detectors



#### FA-APD Optical Smoke Detector:

The Optical Smoke Detector has an Internal Pulsing LED and Photo-Diode at an Obtuse Angle. In Clear Air Conditions the Photo-Diode Receives no Light from the LED and Produces a Corresponding Analog Signal. When Smoke Enters the Chamber it Scatters the Light onto the Photo-Diode, Increasing the Signal Transmitted to Control Equipment. The Clear LED Emits Continuous Red Light when the Detector is in Alarm Stage and Blinks Green in Standby Position.

#### FA-AHD Heat Detector:

The Heat Detector has a Low Air Flow Resistant Case for Good Contact Between Sensing Thermistor and Surrounding Air. Temperature is Measured by a Single Thermistor Network which gives a Voltage Output Proportional to the External Air Temperature. The Signal is Processed and Transmitted to Control Equipment.



**EN-54**

#### Specifications:

Model	FA-APD	FA-AHD
Size of Device in Base H x D mm	46 x 100	46 x 100
Supply Voltage	17 – 28 VDC	17 – 28 VDC
Quiescent Current	340 $\mu$ A	250 $\mu$ A
Normal Surge Current (Synchronized to ADC Operation)	600 $\mu$ A	310 $\mu$ A
Alarm Indication	Red LED	Red LED
Alarm LED Current	4 mA	2 mA
Normal Operating Temperature	-20° to +60°C	-20° to +70°C
Humidity (No Condensation)	0-95%	0-95%
Maximum Wind (Continuous)	Unaffected	-



# INTEGRAL TECHNOLOGIES

## FA-ASM CONTROL MODULE

The FA-ASM is an External Powered Sounder Control Module, Designed Mechanically to be Mounted Inside a Standard Module Box.

The Main Features of this Module is its Capability to Drive and Monitor a Bell Output With a Maximum Output of 1A. The Wiring to the Sounders is Monitored for Short and Open Circuit in Quiescent Mode Requiring a Single 10Kohm Resistor to be Placed at the End of the Monitored Line.

A Six Way DIL Switch of Which Only the First Five Sections are Used Allows Programming of Addresses 94 to 125.

The Output of the Modules is by a Two Way Terminal Block Where the Line of Sounders to be Driven is Connected. The Output Can Either be Pulsed or Continuous and the Sounders can be Connected as Single Frequency or Sweep.

The Protocol Used by the FA-ASM is Compatible with FA-ACP. When Exposed to a FA-ACP Interrogation Format the Module Just Continues its Power Management Function Without Disturbing the Communication of Eventual INTECH Devices in the Loop.

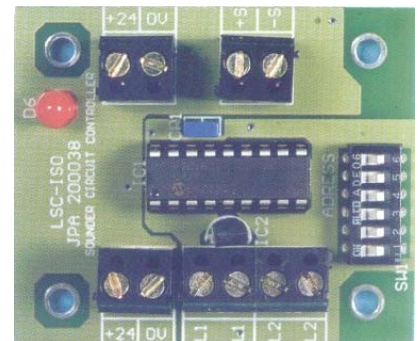
The FA-ASM Responds only to the FA-ACP Protocol Extension Implemented by INTEGRAL TECHNOLOGIES in its Control Panels and Which Allows Synchronization of All Sounders in a Loop. A Maximum Number of 32 Modules Can be Connected to Each Addressable Loop.

The Current Derived to the Sounder Output is Limited to 1 A Which Protects the Output from Overloading if the Output is Accidentally Shorted.

When the Line Monitored is Correctly Terminated by a 10Kohm Resistor an Analogue Value of 16 is Returned Upon Interrogation of the Device. If the Sounder line is Either Interrupted or Short Circuited at any Point, a Fault Value of 4 is Returned. When in Alarm, the Analogue Value Reported by the Device is Always 17. This Signals to the Control Panel that the Sounder Controller has Responded to its Activation Command.

### Technical Characteristics

Working Voltage	17-40 Volts DC
Output current	1 A
Quiescent Current Consumption	750uA Max.
Alarm Current Consumption	1.5mA Max.
Operating Temperature	0 - 85°C
Humidity	30 – 95%
	Non-Condensing
Dimensions	57mm x 48mm



### External Supply

Working Voltage	12 – 30 Volts DC
Quiescent Current Consumption	1.9mA Max.
Alarm Current Consumption	23mA Max

## FA-ASX-24 Series Addressable Sounder & Sounder Strobe



**FA-ASO-24**

### Features:

- Special Electronic Alarm effect
- Unique Design to Substitute the Traditional Mechanical Bell of Hydrant Box.
- High output and small size
- Waterproof Characteristic.
- All Material UL Recognized.
- Built in Polarity Reverse Protection.
- Available in various tones
- Address setting by DIP switch

### Specifications:

Operating Voltage:	24V DC
Power Consumption:	25 mA (Average)
Siren Output:	105 +/-5 dB
Operation Frequency:	1.0KHz – 1.5KHz
Power Cord:	30 cm in General
Color:	Red
Dimensions	82 x 82mm
Can be Directly Fit into MK Back Box	



**FA-ASS-24**

### Features:

- We Developed this Model Intending to Replace Traditional Mechanical Alarm Bells
- Especially the Models Combined with Strobes that Strengthen Alarm Functions
- Special Audio Alarm Effect Increases the Effectiveness of the Fire Warning
- Waterproof, Easy to Install Design
- 8 HIGH INTENSITY LEDS
- Address setting by DIP switch

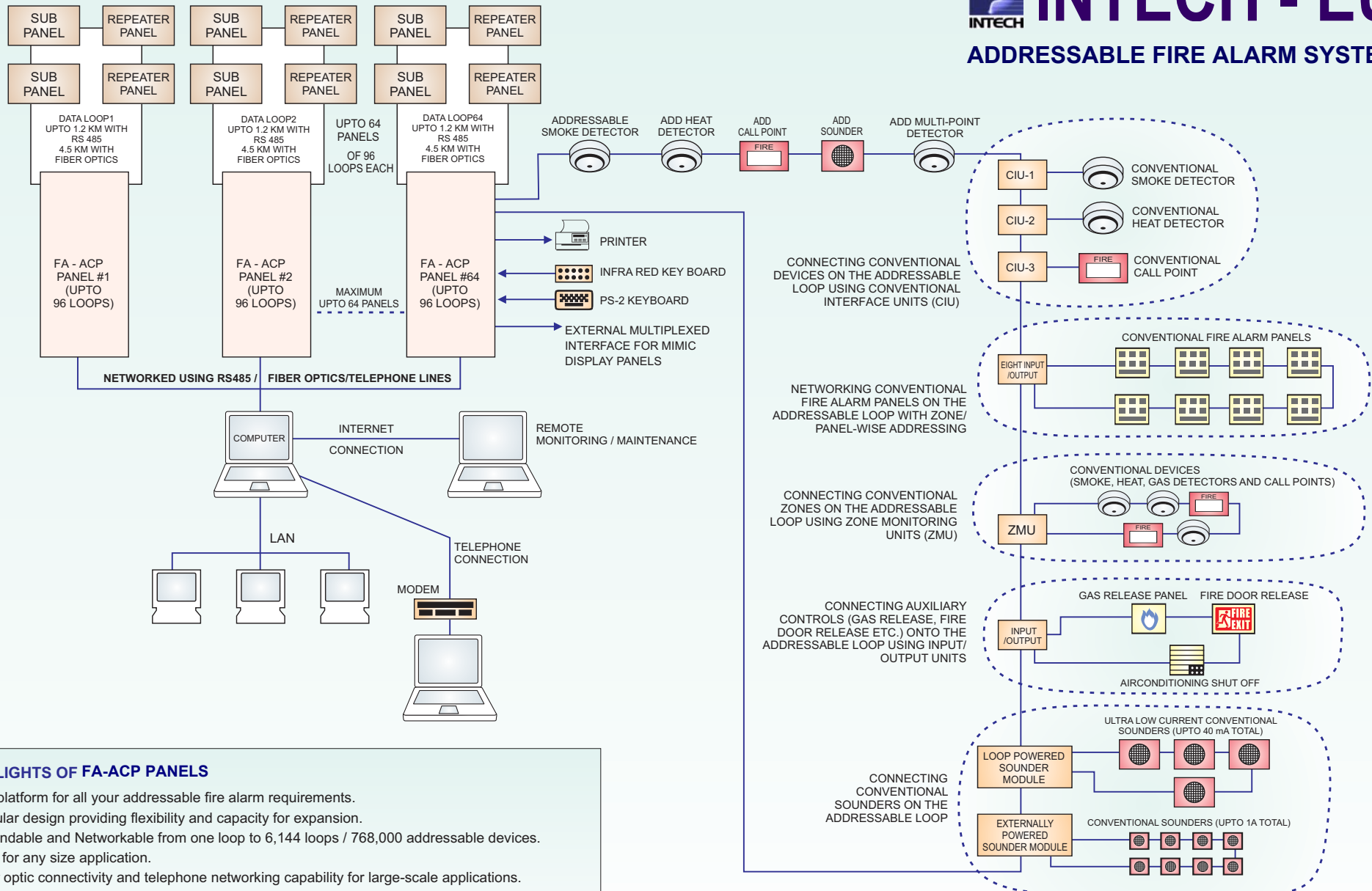
### Specifications:

Operating Volt.	24V DC
Current:	43 mA
Siren Output:	105 +/- 3dB(at 1m)
Operation Frequency:	1.0KHz – 1.5KHz
Power Cord:	30 cm in General
Color:	Red + Red Lens
Dimensions	82W x 82H mm
Can be Directly Fit into MK Back Box	



# INTECH - EU

## ADDRESSABLE FIRE ALARM SYSTEM



### HIGHLIGHTS OF FA-ACP PANELS

- One platform for all your addressable fire alarm requirements.
- Modular design providing flexibility and capacity for expansion.
- Expandable and Networkable from one loop to 6,144 loops / 768,000 addressable devices.
- Ideal for any size application.
- Fiber optic connectivity and telephone networking capability for large-scale applications.
- Reduced life-cycle costs and component level service and support.
- Windows based graphics software, AutoCAD interface & BMS connectivity.
- Online system monitoring and maintenance from wherever and whenever you want.
- Can network existing conventional fire alarm panels of any make on the addressable system.





# INTEGRAL TECHNOLOGIES

## FA-ARP-XX

### Addressable repeaters

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**FA-ARP-EX**



**FA-ARP-XX**

#### Features:

The Intech FA-ARP-XX Addressable repeaters (annunciators) provide a Compact, Attractive Means of Remotely Indicating Fire Alarm Conditions. Although the Units are Intended to for use with Fire Alarm Detection and Signaling Panels, they can be used whenever Visual Annunciation is Required.

Wiring to the Annunciator is Secured by Pressure Type Screw Terminals.

These repeaters (Annunciators) duplicate the indications and controls of the panels to which are connected.

- FA-ARP-EX is used with the INTECH FA-ACP-EX panels.
- FA-ARP-XX is used with the FA-ACP-XX panels.

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#### FA-ARP-EX

This is a microprocessor Repeater for use with the FA-ACP-EX Panels.

Controls are similar to the main panel.  
Other housings available on request.

#### Specification

Size 274x404x109 mm

Weight without batt.1,6 Kgs

#### FA-ARP-XX

This is a repeater panel which duplicates the indications and control of the panel connected. It is networkable as the main panels

#### Specification

Size: W 340mm x H 370mm x D 125mm

Weight: 4.2 Kgs