



Wired and Hybrid Wire to
Wireless Fire Solutions

TECHNOLOGY POWERED SOLUTIONS



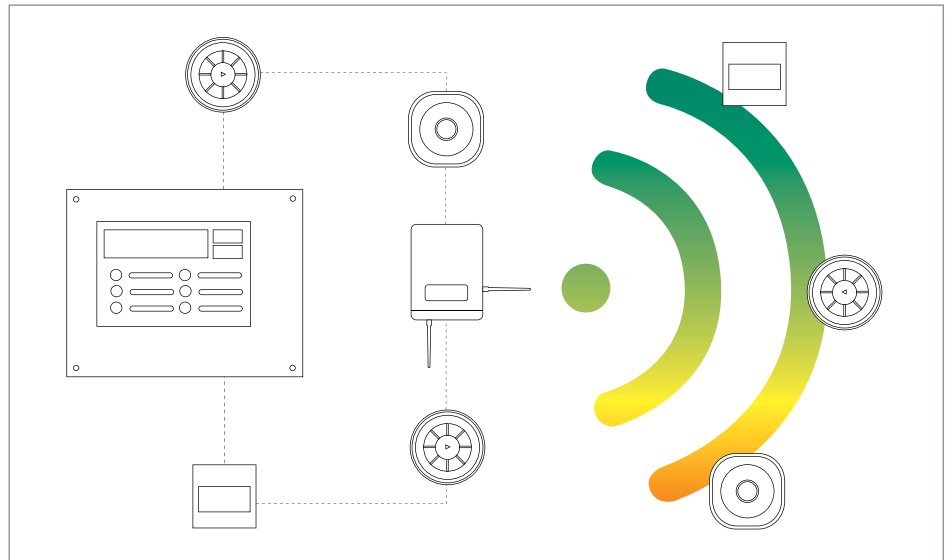
Hyfire...the complete wired and wireless addressable fire system solution

The **Hyfire** intelligent addressable family consists of two ranges, offering a fire detection solution for all applications. The hybrid wireless range, enables fully wireless systems to be created or, when combined with the analogue wired range the technology enables wired systems to be extended with wireless communications into difficult to reach areas. The **Hyfire** package enables fire engineering companies to purchase a total equipment package from a single equipment supplier.

Hyfire wireless

The wireless family is a complete range of fully addressable, battery-powered detectors, call points, sounders and modules communicating through a sophisticated wireless protocol providing high reliability and rapid installation. **Hyfire** wireless offers a convenient and reliable method of economically extending existing or new hardwired intelligent fire detection systems, particularly into areas of high architectural sensitivity or where access is restricted. The wire free installation of components offers rapid installation and minimal disturbance to the surroundings.

The **Hyfire** system is based on a proven protocol and wireless technology derived from the European security industry. Designed in accordance with prEN54:25, the latest European draft standard, and operating on the new European frequency of 868 MHz, its bi-directional communication provides the highest level of transmission security and reliability. The encrypted signal operates across seven independent channels and the multidirectional antennae ensure that signal corruption and fade are virtually eliminated. All devices have a notional range of 150m in free air; the system includes an Expander Module to enhance transmission strength in areas of difficult structural architecture.



Wireless device special features

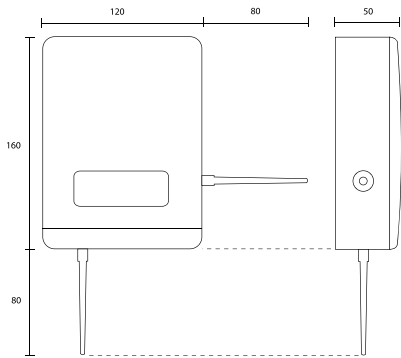
- Bidirectional radio communication with the wire to wireless Translator Module
- 868Mhz frequency with 7 transmission channels
- Highly secure and reliable transmission
- Central bi-colour LED (red/green) guarantees 360° visibility
- Programmable sensitivity
- Fast, simple and economic installation
- 3 volt primary and secondary battery status monitored

The wireless systems consists of a complete programme of smoke detectors, compliant with EN54 Part 7, battery powered wall sounder-strobe, sounder and strobe units, manual call points and input and output modules. These devices integrate seamlessly onto the intelligent fire system loop wiring via a wire to wireless Translator Module that manages up to 32 wireless devices.

Multiple Translator modules may be put on each intelligent loop. The Translator delivers full intelligent sensor integration and allows analogue values, fire and fault information and device type codes to be transmitted to the system control panel. Programming of the **Hyfire** system components is easily accomplished at the loop Translator Module through an onboard keypad or remote PC.

System design and detector placement is greatly simplified by an onboard bicolour LED, which indicates device status and communication strength. A Survey and Testing Kit is available or a radio survey can be undertaken by one of our network of trained distributors from which telephone technical support is available.





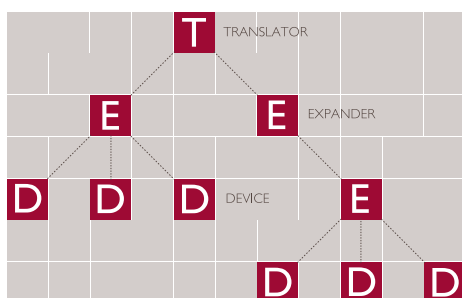
Hyfire translator module

Powered by the control panel loop, the translator and its connected devices are identified with individual addresses. The key to the system, the Translator Module is fully featured:

- Patented double orthogonal antenna to guarantee reliable communication
- Unique frequency hopping algorithm
- High noise immunity
- Bi-directional communication protocol between all wireless devices
- 7 transmission channels
- Up to 32 devices per translator
- System can be programmed through an onboard keypad or a PC

Hyfire expander module

The expander module provides the ability to communicate with devices over greater distances and in difficult radio environments. It utilises a unique and powerful "Microcell" structure with a capacity of up to seven expanders and 32 radio devices, which can be any combination of detectors, call points, including upto 16 sounders or modules.



All battery-powered wireless detectors and other components operate on freely available, low cost 3v lithium batteries, providing a five-year life on the primary cell and a further two months life on the secondary cell. The status of all batteries is continually monitored from the central fire control panel. The detectors also feature a bi-colour red/green LED that provides comprehensive information on the device status, signal strength and battery status.

Hyfire addressable wired system

A complete package of control equipment from a one loop panel upto a four loop panel with up to 64 node network connectivity, multi-criteria, optical and thermal detectors, manual call point, sounders and modules. The fully digital communications protocol supports up to 240 devices per loop and the system features auto or soft addressing. An impressive set of features, configuration and expansion options makes the Hyfire wired family one of the most sophisticated addressable fire systems available.

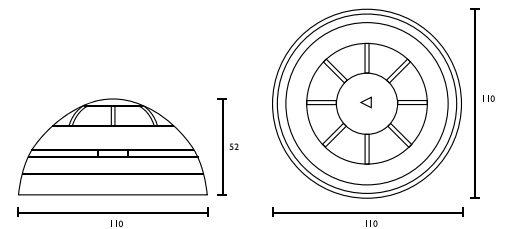
Wired device special features

- All devices are fitted with bi directional isolation to protect and maintain communication on the loop in the event of a short circuit
- The protocol identifies reduced line quality and provides the panel with information to adjust the communication parameters to maintain an acceptable signal transmission, or display a fault if levels are outside the adjustment range
- Priority communications from devices ensure messages are received and outputs activated within 1 second
- Sensors are monitored for chamber contamination which allows the panel to predict when maintenance should be due
- The protocol can support a high duty cycle of >90% which provides the necessary power requirements for a practical quantity of loop powered devices, such as sounders and beacons

Device general features

Multi-criteria optical-thermal detector

An advanced algorithm determines the alarm status by analysing the status of the optical chamber and the temperature sensor, giving a high rejection rate to spurious potential alarms as well as reliable detection.



Optical smoke detector

A symmetrical smoke chamber guarantees optimal smoke sensitivity from all directions. The double dust trap protects the smoke chamber from airborne contamination and a dust compensation algorithm stabilises the sensitivity between routine maintenance.

Thermal detector

Temperature compensation guarantees steady and reliable operation in low and high temperature limits.



All detectors are low profile, have separate easy to wire bases and all are identical in shape and size. The unique optional Decorline finish enables the detectors to be even less noticeable when installed in heritage sites or other premises where the integrity of the overall appearance has to be maintained.

Call point

The resettable manual call point is designed in accordance with EN54-11. The wireless version features a bi-colour red/green LED that provides comprehensive information on the device status, signal strength and battery status.

Sounder-strobes, sounders and strobes

The addressable wall mounted warning devices are available in red or white housings in a choice of three configurations: a combined sounder-strobe unit, a sounder and a strobe. The 100dB(A) sounder design gives a wide-angle uniform distribution. The battery-powered wireless versions feature a bi-colour red/green LED that provides comprehensive information on the device status, signal strength and battery status. A wired detector base sounder is also available.

Modules

The wired supervised single input, single output and combined input / output modules are available in four form factors: standard, mini, micro and DIN rail mounted. The input module can be used for connecting and monitoring external devices or interfacing with conventional fire detection zones. The output module enables the control of external devices from the control panel via its integral relay. Battery-powered wireless versions of the single input and single output modules feature bi-colour red and green LED indicator displays showing module operating modes, condition of power supplies and a mode for evaluating radio signal quality.

Control Panel

Hyfire HFI Control Equipment

- One, two or four loop variants
- Up to 96 zone indicators
- Up to 500 software fire zones
- Up to 240 devices per loop
- Up to 64 panels or repeaters can be networked (two & four loop unit only)
- RS232 and RS485 serial ports
- 4 way conventional zone, 6 way sounder, 8 way relay and 16 channel I/O boards via RS485
- Approved to BS: EN54-2 and BS: EN54-4

Availability Overview

Product	Wireless	Addressable Wired
Detectors		
Multi-criteria	✓	✓
Optical	✓	✓
Thermal	✓	✓
Bases		
Standard	✗	✓
Deep	✓	✓
Relay	✗	✓
Manual Call Point	✓	✓
Warning Devices		
Combined Sounder Strobe	Red & White ✓	Red & White ✓
Wall Sounder	Red & White ✓	Red & White ✓
Wall Strobe	Red & White ✓	Red & White ✓
Detector Base Sounder	✗	White ✓
Modules		
Single Input	Standard ✓	Standard, Mini, Micro & DIN Rail ✓
Single Output	Standard ✓	Standard, Mini, Micro & DIN Rail ✓
Input / Output	✗	Standard, Mini & DIN Rail ✓
Translator Module	✓	✓
Expander Module	✓	✗
Control Panel	✗	One, Two or Four Loop ✓



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