

ANALOGUE, ADDRESSABLE
SMOKE & HEAT MONITORS



XP95

- EXTENDED PROTOCOL
- ADDRESSED BY XPERT CARD
ELECTRONICS FREE BASE



XP95

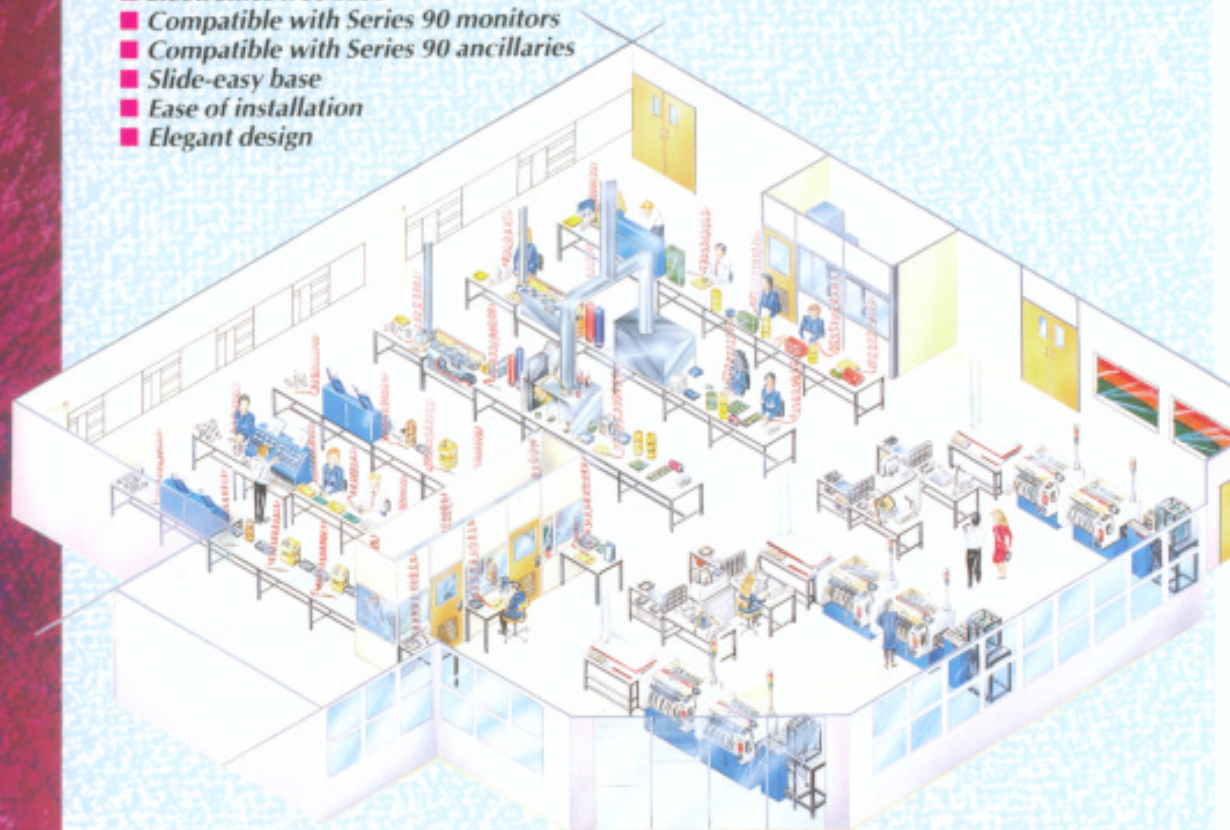
XP95 ANALOGUE, ADDRESSABLE FIRE MONITORS

XP95 fire monitors are a major development of the Apollo Series 90 range of monitors. They are advanced in design, improved in performance and offer benefits to both the installer and the end user.

The XP95 range comprises an ionisation and optical smoke monitor, temperature monitors and a compatible manual call point.

A communications chip has been developed by Apollo's Research and Development team to provide an extension to the Series 90 protocol. The use of this chip virtually doubles the amount of information that XP95 monitors can relay to control equipment. A unique, patented address mechanism ensures that the address data is stored in the base while keeping the base free of electronic parts that could be damaged during installation. XP95 monitors incorporate all the design advances of Series 60, including high environmental performance, ease of installation and maintenance and a design to meet approvals world-wide.

- Alarm Flag for fast alarm reporting
- Alarm Address for fast location of alarm
- Automatic addressing with XPERT card
- Electronics free base
- Compatible with Series 90 monitors
- Compatible with Series 90 ancillaries
- Slide-easy base
- Ease of installation
- Elegant design



Apollo's corporate story is one of achievement, with fire detection products that are among the most reliable in the world. The many awards won by Apollo are a testimony to this.

Apollo Fire Detectors Limited is part of the Halma Group of companies. Apollo carries out all its design, development and manufacturing at one site in Havant on the south coast of England – this is also the home of the Finance, Sales and Marketing departments.

The company has been assessed by LPCB and is Quality Assured to BS EN ISO: 9002: 1994.



THE QUEEN'S AWARD FOR
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apollo
FIRE DETECTORS LIMITED

XP95 SMOKE AND HEAT MONITORS

The XP95 range uses the same outer casing as the Series 60 range of conventional detectors, maintaining the elegant, unobtrusive design, finished in pure white polycarbonate.

XP95 monitors are distinguished from Series 60 by the XPERT address card bearing the address number of the individual fire monitor.

XP95 IONISATION SMOKE MONITOR

The sensing chamber of the XP95 ionisation smoke monitor operates in exactly the same way as the Series 60 ionisation smoke detector. The air in the dual chambers is irradiated to produce ions that travel to the positive and negative electrodes and hence create a current flow in the chambers. Smoke entering the outer chamber causes a drop in the current flow and an increase in the voltage measured at the junction between the outer and inner chambers. Unlike the Series 60, however, XP95 does not operate on a threshold basis. The analogue voltage signal produced in the sensing chamber is converted to a digital signal by the electronic circuitry and transmitted to the control equipment on interrogation. The micro-processor in the control equipment then compares the signal with stored data and initiates a pre-alarm or fire alarm as smoke density increases. When the equipment determines that a fire condition exists, it instructs the monitor to switch on its indicator LED and the pre-planned alarm routine is initiated.

Part no. 55000-500

XP95 OPTICAL SMOKE MONITOR

The XP95 optical smoke monitor uses the same optical arrangement as the Series 60 optical smoke detector, with an internal pulsing LED and a photo-diode at an obtuse angle. In clear air conditions the photo-diode in the XP95 monitor receives no light from the LED and produces a corresponding analogue signal. This signal increases when smoke enters the chamber and light is scattered onto the photo-diode. The signal is processed by the electronic circuitry and transmitted to the control equipment in exactly the same way as in the case of the ionisation smoke monitor.

The optical smoke monitor is externally identical to the ionisation monitor but is distinguished by having a clear indicator LED which emits red light when the monitor is in alarm.

Part no. 55000-600

XP95 TEMPERATURE MONITOR

The XP95 temperature monitor is distinguishable from XP95 smoke monitors by its low air-flow resistance case which allows good contact between the sensing thermistor and the surrounding air.

The device monitors temperature by using a single thermistor network which provides a voltage output proportional to the external air temperature. The voltage signal is processed and transmitted to the control equipment in the same way as in the case of the ionisation smoke monitor.

A temperature monitor for use in ambient safe temperatures of up to 50°C and which reaches the alarm level at 90°C is also available.

Part nos. 55000-400 (standard)
55000-401 (high temperature)

XP95 MANUAL CALL POINT

When activated, the XP95 manual call point not only interrupts the polling cycle to indicate to the control panel that it has been operated, but also reports its address. Thus an alarm and its location can be reported in less than 0.2 seconds.

Part no. 55000-905 (for surface mounting)

Part no. 55000-906 (for flush mounting)

INTERFACES

A comprehensive range of interface units is available, see Apollo publication PP2025.

XP95 ISOLATOR

Isolators are designed to protect the XP95 loop in the event of a short circuit fault. They divide a loop of fire monitors and ancillary devices into groups of 20 as a rule, so that, in the event of a short circuit, no more than 20 devices will be inoperable. The XP95 isolator has particularly low non-isolating resistance.

Part no. 55000-700



XP95 SPECIFICATION SUMMARY

Typical at 23°C and 24 VDC unless otherwise stated	XP95 Ionisation	XP95 Optical	XP95 Temperature	XP95 High Temperature	XP95 Manual Call Point	XP95 Isolator
Device Part No.	55000-500	55000-600	55000-400	55000-401	55000-905/906	55000-700
Base Part No.	45681-210	45681-210	45681-210	45681-210	—	45681-211
Size of Device in Base Height × Diameter (mm)	50 × 100	50 × 100	50 × 100	50 × 100	87 × 87 (Height & Width)	32 × 100
Supply Voltage	17-28 VDC	17-28 VDC	17-28 VDC	17-28 VDC	17-28 VDC	17-28 VDC
Quiescent Current	280µA	340µA	250µA	270µA	230µA	non-isolating 100µA isolating 8mA
Normal Surge Current (Synchronised to ADC Operation)	500µA	600µA	310µA	310µA	270µA	—
Alarm Indication	Red LED	Clear LED Red in Alarm	Red LED	Red LED	Red LED	Yellow LED lit in isolate mode
Alarm LED Current	2mA	4mA	2mA	2mA	2mA	45 ± 5mA pulsed
Normal Operating Temperature (no icing)	-20° to +60°C	-20° to +60°C	-20° to +70°C	-20° to +70° C	-20° to +70°C	-20° to +70°C
Humidity (no condensation)	0-95%	0-95%	0-95%	0-95%	unaffected	unaffected
Max wind (continuous)	10 m/s	unaffected	unaffected in fixed temperature use	unaffected in fixed temperature use	unaffected	unaffected

XP95 MOUNTING BASE AND XPERT CARD

The base has been designed to enable monitors to be plugged in without any need for force and to have a "one-way-only" fit. By means of a unique, patented "XPERT card" the address information is held in the base while keeping the base entirely free of electronic parts. This coded plastic card is inserted into the base on commissioning, so that the address remains the same, no matter how often the monitor is replaced by similar devices for servicing purposes.

Part no. 45681-210



AUTOMATIC ADDRESSING WITH THE XPERT CARD

Depending on the combination of pips removed, switches in the monitor head are operated to produce the correct address, when the monitor head is inserted.

XP95 smoke and heat monitors have been approved by a number of approvals bodies throughout the world, including LPCB in the UK and VdS in Germany. They comply with the EMC directive 89/336/EEC and are CE marked. XP95A monitors are UL listed.



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Quality Systems Certificate No 010
Assessed to ISO 9002

