



HEAT & SMOKE DETECTORS – CONVENTIONAL SERIES 65 DETECTORS

GENERAL DESCRIPTION

The Series 65® range incorporates well-proven sensing technologies, together with advances in materials and electronics technology.

Offering a wide operating voltage of 9 to 33V, the S65 detectors can be integrated into security systems when used with a relay base.

SERIES 65 OPTICAL SMOKE DETECTOR



Optical smoke detectors incorporate a pulsing LED located in a chamber within the housing of the detector. The chamber is designed to exclude light from any external source.

At an angle to the LED is a photo-diode which normally does not register the column of light emitted by the LED. When smoke from a fire enters the chamber, the light pulse from the LED will be scattered and registered by the photo-diode. If the photo-diode “sees” smoke on the two following pulses, the detector changes into the alarm state, and the indicator LED lights up.

The detector housing has an indicator LED which is clear when in a quiescent state but produces red light in alarm.

SERIES 65 HEAT DETECTORS



The A1R, BR and CR (rate-of-rise) heat detectors use a matched pair of thermistors to sense heat. One thermistor is exposed to the ambient temperature; the other is sealed. In normal conditions, the two thermistors register similar temperatures, but upon the development of a fire, the temperature recorded by the exposed thermistor will increase rapidly, resulting in an imbalance, causing the detector to change into the alarm state.

Rate-of-rise detectors are designed to detect a fire as the temperature increases, but they also have a fixed upper limit at which the detector will go into alarm if the rate of temperature increase has been too slow to trigger the detector earlier.

The CS (static response) heat detector has only one thermistor and changes to the alarm state at a preset temperature.

Externally, the heat detectors are distinguishable from the smoke detectors by having wide openings to the surrounding atmosphere to allow adequate movement of air around the external thermistor.

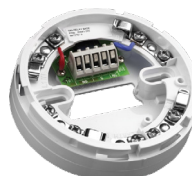
SERIES 65 BASES



Series 65 bases have been designed to enable detectors to be plugged in without any need for force – a useful feature when fitting to suspended ceilings. All S65 bases have a one-way fit and are lockable.

The S65 relay base incorporates one volt-free changeover contact. It is used for both latching and non-latching applications.

Since the detector operates the base, an S65 Smoke or Heat detector is required for it to function. The base has been designed to operate over a voltage range of 9 VDC to 15 VDC.



FEATURES

- Wide operating voltage
- Advanced electronic technology
- Flashing LED option
- Magnetic test switch option
- Can be used on security systems
- Proven detection performance
- Designed to meet approvals worldwide
- Range of bases available

APPROVALS

Series 65 detectors have been tested and approved to the following standards:

- EN 54-7 Optical smoke detectors
- EN 54-5 Heat detectors



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TECHNICAL SPECIFICATIONS

	Optical AP-S65-O	Heat AP-S65-H, AP-S65-HBR, AP-S65-HCR, AP-S65-HCS
Supply Voltage	9 to 33 V	9 to 33 V
Average Quiescent current at 24 V	40 μ A	45 μ A
Average Quiescent current at 9 V	35 μ A	40 μ A
Alarm current at 24 V	52 mA	52 mA
Alarm current at 9 V	17 mA	17 mA
Alarm indication	Clear LED, Red in alarm	Red LED
Normal operating temperature (no condensation or icing)	-20 to +60 °C	-20 to +90 °C
Humidity (no condensation)	0% to 95% relative humidity	0% to 95% relative humidity
Dimensions (length & diameter)	42 x 100 mm	42 x 100 mm
Max wind continuous	not affected	not affected
Remote output (R-)	Current sink to -ve line, limited to 17 mA	
Characteristics Note	When using a remote indicator a current-limiting series resistor may be required	

Heat Detector Activation Temperatures

Product Code	Class	Application Temperature °C		Static Response Temperature °C	
		typical	max	min	max
AP-S65-H	A1/R	25	50	54	65
AP-S65-HBR	B/R	40	65	69	85
AP-S65-HCR	C/R	55	80	84	100
AP-S65-HCS	C/S	55	80	84	100

ORDERING INFORMATION

Product Code	Product Description
AP-S65-H	Series 65 ROR Heat Detector; Class A1/R (65°C)
AP-S65-HBR	Series 65 ROR Heat Detector; Class B/R (85°C)
AP-S65-HCR	Series 65 ROR Heat Detector; Class C/R (100°C)
AP-S65-HCS	Series 65 Fixed Temperature Heat Detector; Class C/S (100°C)
AP-S65-O	Series 65 Optical Smoke Detector (9-33VDC)
AP-S65-B	Series 65 Standard Base
AP-S65-RB	Series 65 Detector Relay Base
AP-RI	Apollo Remote Alarm Indicator
TEC-RI	Technoswitch Remote Indicator

• **DISCLAIMER:** Although the contents of our product literature have been prepared with the greatest care, Technoswitch can accept no liability whatsoever for any direct or indirect damages of any kind that may arise due to either errors or omissions in them, or amendments to products or other specifications following publication.



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