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# APPROVAL REPORT

**Project No:** 0003054430  
**Supplements Project No.:** None  
**Class:** 3230, 3210, 3209  
**Product Name:** Series 65A Detectors  
**Product Type:** Fire Detectors  
**Name of Listing Company:** Apollo Fire Detectors Ltd  
**Address of Listing Company:** 36 Brookside Rd  
Havant Hampshire PO9 1JR  
United Kingdom  
**Customer ID:** 1000000964-1  
**Customer website** <http://www.apollo-fire.com/>

**Prepared by**

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**Reviewed by**

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**21 December 2015**

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**Date of Approval**

## 1 INTRODUCTION

1.1 Apollo Fire Detectors Ltd requested Approval of the of the Series 65A Smoke and Heat detectors, models: 55000-327, 55000-326, 55000-226, 55000-227, 55000-139, 55000-140, 55000-142, 55000-143, 55000-145 and 55000-146, listed in Section 1.4 for compliance with the standards listed in Section 1.3.as suitable for the listing categories described in Section 1.4.

1.2 This report may be freely reproduced only in its entirety and without modification.

### 1.3 Standards

#### 1.3.1 United States Standards

Title	Number	Issue Date
Heat Detectors for Automatic Fire Alarm Signaling	3210	2007
Smoke Actuated Detectors for Automatic Fire Alarm Signaling	3230	2010

### 1.4 Listing

The product will be updated in the Approval Guide, an on-line resource of FM Approvals, as follows with all changes highlighted, deletions shown with strikethroughs and additions in red text:

#### 1.4.1 US Listings

Fire Protection ☒Electrical Signaling ☒Alarm Signal Initiating Devices ☒Fire detection, Heat Actuated

Series 65A Combination Rate-of-Rise, Fixed Temperature Detectors. Models 55000-140 heat, standard, 55000-139 heat with flashing LED, temperature rating 57°C (135°F); 55000-143 heat, standard, 55000-142 heat with flashing LED, temperature rating 77°C (170°F); 55000-146 heat, standard, 55000-145 heat with flashing LED, temperature rating 93°C (200°F). RTI classification for model 55000-145 detector is Quick with a 6 m x 6 m spacing (20 x20 ft). RTI classification for models 55000-139 and 55000-142 detectors is Fast with an 8 m x 8 m spacing (25 x25 ft). Operating voltage range of 9 to 33 V dc, with the standby current of 40 to 55 µA and maximum alarm current at 52 mA. To be used with the following bases: models 45681-200USA Standard 4in; 45681-220USA Standard 6in; 45681-255 Standard Relay 4in; 45681-256 Auxiliary Relay 4in; 45681-257 12V End-of-Line Relay 4in; 45681-258 24V End-of-Line Relay 4in; 45681-232 Low Profile 6in and 45681-251 E-Z Fit 6in.

Fire Protection  Electrical Signaling  Alarm Signal Initiating Devices  Fire detection, Smoke Actuated   
Fire Detectors-Smoke

Series 65A Photoelectric Type Smoke Detectors. P/N 55000-327 with flashing LED and 55000-326 – non-flashing LED. Operating voltage range of 9.0 to 33.0 Vdc, with the standby current from 17 to 52  $\mu$ A and maximum alarm current at 52 mA. Suitable for indoor use only (unheated, but not refrigerated areas) with temperatures from 0°C to 60°C. To be used with the following bases: models 45681-200USA Standard 4in; 45681-220USA Standard 6in; 45681-255 Standard Relay 4in; 45681-256 Auxiliary Relay 4in; 45681-257 12V End-of-Line Relay 4in; 45681-258 24V End-of-Line Relay 4in; 45681-232 Low Profile 6in and 45681-251 E-Z Fit 6in.

Series 65A Ionization Type Smoke Detectors. P/N 55000-226 with flashing LED and 55000-227 – non-flashing LED. Operating voltage range of 9.0 to 33.0 Vdc, with the standby current from 17 to 52  $\mu$ A and maximum alarm current at 52 mA. Suitable for indoor use only (unheated, but not refrigerated areas) with temperatures from 0°C to 60°C. To be used with the following bases: models 45681-200USA Standard 4in; 45681-220USA Standard 6in; 45681-255 Standard Relay 4in; 45681-256 Auxiliary Relay 4in; 45681-257 12V End-of-Line Relay 4in; 45681-258 24V End-of-Line Relay 4in; 45681-232 Low Profile 6in and 45681-251 E-Z Fit 6in.

## 2 DESCRIPTION

2.2.1 Photoelectric Smoke Detector (55000-327 –flashing LED and 55000-326 – non-flashing LED). The factory set sensitivity range is 2.28 to 4.0%/foot obscuration (0.32 to 0.57 db/meter). The operating voltage range is 9.0 to 33.0 Vdc. Power must be removed from the detector in order to reset the detector.

2.2.2 Ionization Smoke Detector (55000-226 –flashing LED and 55000-227 – non-flashing LED). The factory set sensitivity range is 0.94 to 1.78%/foot obscuration (0.13 to 0.25 db/meter). The operating voltage range is 9.0 to 33.0 Vdc. Power must be removed from the detector in order to reset the detector.

2.2.3 Series 65A Heat Detectors, models 55000-140 heat, standard, 55000-139 heat with flashing LED, temperature rating 57°C (135°F); 55000-143 heat, standard, 55000-142 heat with flashing LED, temperature rating 77°C (170°F); 55000-146 heat, standard, 55000-145 heat with flashing LED, temperature rating 93°C (200°F). The detectors utilize combination of fixed temperature and rate-of-rise technique. The operating voltage range is 9.0 to 33.0 Vdc. Power must be removed from the detector in order to reset the detector.

2.2.4 Series 65A Compatible Detector Bases The following detector bases are for use with the 65A series detectors:

Model 45681-200USA Standard 4in;  
Model 45681-220USA Standard 6in;  
Model 45681-255 Standard Relay 4in;  
Model 45681-256 Auxiliary Relay 4in;  
Model 45681-257 12V End-of-Line Relay 4in;  
Model 45681-258 24V End-of-Line Relay 4in;  
Model 45681-232 Low Profile 6in;

Model 45681-251 E-Z Fit 6in;

2.2.5 An integral LED on each “LED Flashing” model detector flashes in standby conditions and lights continuously to indicate an alarm condition. In the “Non LED Flashing” or Standard models, the LED is clear in quiescent state but produces red steady light in alarm.

### **3 EXAMINATIONS AND TESTS**

#### **3.1 US Examination**

Samples were submitted for examination and testing. The samples were considered to be representative of the product line and were examined, tested, and compared to the manufacturer's drawings. All data is on file at FM Approvals along with other documents and correspondence applicable to this program.

All testing and analysis considered appropriate was conducted and verified to be in compliance with the Standards defined in Section 1.3.

### **4 MARKING**

- 4.1** Product intended for use in Canada shall be provided with caution and warning labels in both English and French.

### **5 REMARKS**

- 5.1** Extreme care should be taken with the installation of this equipment. The latest edition of the manufacturer's instruction manual must be followed completely, and any problems should be resolved by consultation with the factory or the authorized representative.
- 5.2** All installation wiring shall be in accordance with the appropriate national electrical code.
- 5.3** An Approval examination of equipment such as this can only evaluate typical configurations. Although those components identified in this report have been tested, it is beyond the scope of such an examination to test all possible configurations. It is therefore necessary, that those responsible for the setup and acceptance of specific installations take special care to verify that the equipment, including programmable functions, is configured to operate properly for the required performance of that installation.
- 5.4** Tampering and replacement with non-factory components may adversely affect the safe use of the system.

### **6 SURVEILLANCE AUDIT**

The design and manufacturing facilities at the following location(s) shall be visited on a routine basis. The facility processes and quality control procedures in place have been determined to be satisfactory to manufacture product identical to that tested and Approved. An FM Approved Products/Specification-Tested Revision Request Form shall be submitted to FM Approvals for requesting to manufacture product at any additional or alternate manufacturing facilities which are not listed below.

**Design**

Apollo Fire Detectors Ltd  
36 Brookside Rd  
Havant Hampshire PO9 1JR  
United Kingdom

**Manufacturing**

Apollo Fire Detectors Ltd  
36 Brookside Rd  
Havant Hampshire PO9 1JR  
United Kingdom

**7 MANUFACTURER'S RESPONSIBILITIES**

- 7.1 Documentation that is applicable to this approval is on file at FM Approvals and listed in the Documentation File, Section 8, of this report. No changes of any nature shall be made unless notice of the proposed change has been given and written authorization obtained from FM Approvals. The FM Approved Products/Specification-Tested Revision Request Form shall be forwarded to FM Approvals as notice of proposed changes.
- 7.2 The Manufacturer is responsible for control of the product marking and installation instructions for the System.
- 7.3 The manufacturer shall provide installation, operating, and maintenance manual[s] with each system.
- 7.4 In accordance with the Master Agreement, the manufacturer shall make full and immediate disclosure to FM Approvals of all information concerning any defect in, or potential hazard of, the product or service manufactured or provided by the Customer which is Approved by, or being examined by, FM Approvals. The manufacturer shall make all necessary arrangements for the investigation of complaints / anomalies applicable to this approval and shall keep records of all complaints / anomalies including actions taken.

**8 DOCUMENTATION**

See attached blueprint report.

**9 CONCLUSION**

The apparatus described in section 1.4.1 and 2 meets FM Approvals requirements. Since a duly signed Master Agreement is on file for this manufacturer, US Approval is effective the date of this report.

**PROJECT DATA RECORD:** 0003054430

**ATTACHMENTS:** Blueprint Report

# Blueprint Report

**APOLLO FIRE DETECTORS LIMITED (1000000964)**

**Class No 3230**

**Original Project I.D. 3054430**

<u>Drawing No.</u>	<u>Revision Level</u>	<u>Drawing Title</u>	<u>Last Report</u>	<u>Electronic Drawing</u>
47000-011	6	Series 65A HEAT Specification Data Sheet	3054430	Yes (pdf)
47000-012	5	Series 65A ION Specification Data Sheet	3054430	Yes (pdf)
47000-013	8	Series 65A PHOTO Specification Data Sheet	3054430	Yes (pdf)
55000-121CD	5	S65 Heat det Class A1R Schematic Diagram LED Flash	3054430	Yes (pdf)
55000-122CD	5	S65 Heat det Class A1R Schematic Diagram Standard	3054430	Yes (pdf)
55000-126CD	4	S65 Heat det Class BR Schematic Diagram LED Flash	3054430	Yes (pdf)
55000-127CD	4	S65 Heat det Class BR Schematic Diagram Standard	3054430	Yes (pdf)
55000-131CD	4	S65 Heat det Class CR Schematic Diagram LED Flash	3054430	Yes (pdf)
55000-132CD	4	S65 Heat det Class CR Schematic Diagram Standard	3054430	Yes (pdf)
55000-138-146	4	S65A Heat Detector General Assembly	3054430	Yes (pdf)
55000-216CD	1	S65 Ion Smoke detector Fash LED	3054430	Yes (pdf)
55000-217CD	2	S65 Ion Smoke detector Gen Assy Standard	3054430	Yes (pdf)
55000-217_2CD	2	S65 Ion Smoke detector Gen Assy Standard	3054430	Yes (pdf)
55000-226	2	S65 Ion Smoke detector Gen Assy LED Flash	3054430	Yes (pdf)
55000-316CD	6	S65 Optical Smoke Det LED Flash	3054430	Yes (pdf)
55000-317CD	6	S65 Optical Smoke detector Standard	3054430	Yes (pdf)
55000-317	3	S65 Optical Smoke detector Gen Assy Standard	3054430	Yes (pdf)
55000-326	2	S65 Optical Smoke detector Gen Assy LED Flash	3054430	Yes (pdf)
S65A Smoke & He 7		Series S65 Install Instructions	3054430	Yes (pdf)