

**TECHNICAL SPECIFICATION**  
**Ei166R Optical Smoke Alarm**  
**(for use with Ei152 Remote Test & Hush Switch and MCP400 Manual Call Point)**

- 1) The Smoke Alarm carries the BSI Kitemark to indicate type testing to BS 5446: Pt. 1: 2000. It will meet and exceed the requirements of Grades D, E and F systems as defined in BS 5839: Pt.6: 2004. It carries the CE mark to indicate conformance to BS EN 60065-1994 Low Voltage, and BS EN 50081-1:1992 and BS EN 50082-1:1992 Electromagnetic Compatibility Directives.
- 2) Optical (photoelectric) sensor with large volume chamber and large high sensitivity photodiode. Insect resistant fine mesh screen with holes less than 0.030 inches.
- 3) 230V AC Mains Power Supply with built-in tamper proof Rechargeable Vanadium Pentoxide Lithium standby cells, capable of lasting at least 10 years and powering the alarm initially for at least 6 months in the event of mains power failure.
- 4) The Lithium cell manufacturer endorses a minimum 10 year life expectation for the rechargeable cells.
- 5) Alarm is supplied with an Ei127R pattress and an Ei16XR *Easi-fit* built-in surface mounting plate, with integral terminal block and cable cover. The smoke alarm connects to the mains and remote test/hush connections automatically as it slides on to the mounting plate. The smoke alarm disconnects from the mains and remote test/hush connections as it slides off the mounting plate, without the need for a lead and connector.
- 6) All mains wiring is covered by a cable cover so that the mains cable is not visible when the smoke alarm is removed from the ceiling, obviating the need for a ceiling pattress or dry lining box.
- 7) Encased horn assembly gives a minimum sound output of 85dB(A) at 3 metres. The diameter of the piezo disc in the sounder measures 40mm, and is securely held with silicone mastic to prevent creepage and premature horn failure. Additionally, soldered contacts are used in order to eliminate failures due to corrosion and arcing that are associated with commonly used pressure contacts.
- 8) Interconnection capability such that if one alarm sounds all interconnected alarms sound. Up to 36 units, ionisation, optical or heat can be interconnected in this way providing a relay is not used.
- 9) Automatic self test feature - chamber is tested every 40 seconds and unit bleeps (without red LED flash) if it is degraded.
- 10) Manual integral test/hush button to test circuitry, sensor and horn and activate all interconnected alarms in the system. Also operates 'Hush' feature to silence nuisance alarms. Red LED will flash every 10 seconds to indicate that alarm is in 'hush' mode and will automatically reset after approximately 10 minutes.
- 11) Remote test facility via switch Ei152 to test circuitry, sensor and horn and to activate all interconnected alarms in the system. Remote test and alarm activation can be achieved by using a manual call point MCP400.
- 12) Remote 'Hush' facility for false alarm control via switch Ei152. Pressing the switch will silence nuisance alarms. Red LED will flash every 10 seconds to indicate that alarm is in 'hush' mode. Automatically resets in approximately 10 minutes.
- 13) Separate green LED mains indicator light to confirm integrity of mains power supply.
- 14) Separate red LED will flash every 40 seconds to indicate full auto test of circuitry and the rechargeable cells. The red LED will flash rapidly in alarm condition and flash once every ten seconds whilst the unit is in a de-sensitive (hush) condition.
- 15) Low power cell warning signal operates with or without mains power present.
- 16) Anti tamper locking device prevents unauthorised removal of the alarm without the use of a tool.
- 17) Foam gasket built into surface mount plate to prevent dust ingress into the rear of the unit.
- 18) Ambient temperature range: 0°C to 40°C (32°F - 104°F). 0% to 95% (non-condensing) relative humidity.
- 19) Identification label on cover to differentiate between Ei140 and Ei160 Series "RECHARGEABLE LITHIUM CELLS".
- 20) Dust cover is fitted to the alarm to protect it from contamination during installation.
- 21) Supplied with two separate sets of instructions - one for the installer and one for the user.
- 22) Dimensions: 140mm dia. x 54mm depth.
- 23) Weight inclusive of packaging: 486g.
- 24) 5 Year Guarantee.

**Aico Ltd.,**  
Mile End Business Park, Maesbury Rd, Oswestry, Shropshire SY10 8NN  
Tel: 0870 758 4000 Fax: 0870 758 4012

E&OE - As our policy is one of continuous product improvement, we reserve the right to vary details without prior notice