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**Self-contained smoke alarms using scattered light or
transmitted light**

独立式感烟火灾探测报警器

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3 Terms and definitions

3.1 m value: smoke concentration measured by the optical method. Note: see A.2 of Annex A.

3.2 y value: smoke concentration measured by the ionization method. Note: see A.3 of Annex A.

3.3 Fire alarm status: the working state of a self-contained smoke fire detection alarm when it is emitting a fire alarm signal.

3.4 Normal monitoring status: the normal working state of a self-contained smoke fire detection alarm in which it is emitting neither a fire alarm signal nor a fault signal.

3.5 Average current: the average value of the supply current of a self-contained smoke fire detection alarm in the normal monitoring status.

4 Classification

4.1 By working mode, alarms are divided into single-point alarms and interconnected alarms.

4.2 By response threshold, alarms are divided into type A, with an adjustable response threshold, and type B, with a fixed response threshold.

4.3 By transmission mode, alarms are divided into those having a wireless communication function and those having none.

5.2 Appearance requirements

The surface of the alarm shall be free of corrosion, of peeling or blistering of the coating, and of obvious mechanical damage such as scratches, cracks or burrs; fastened parts shall not be loose.

The surface of the alarm shall carry the product marking and a quality inspection conformity marking.

The alarm shall have complete factory packaging, and the packaging shall contain an instruction manual in Chinese.

5.3 Performance of the main parts and components

5.3.1 Power supply mode. The alarm shall be powered by an internal battery only.

5.3.2 Detection principle. The alarm shall detect smoke on the scattered-light or transmitted-light principle; detection by the radioactive-source ionization principle shall not be used.

5.3.3 Indicator lamps. A red alarm confirmation lamp is required, which lights when the smoke parameter of the monitored area meets the alarm condition. A yellow sensing-element contamination lamp is also required, which lights when contamination of the sensing element affects normal use of the alarm and stays lit until the contamination is removed. Where the alarm confirmation lamp is used to indicate other working states of the alarm, those states shall be clearly distinguishable from the fire alarm status. When lit, an indicator lamp shall be clearly visible 6 m directly in front of it under an illuminance not exceeding 500 lx.

5.3.4 Protection against ingress of foreign bodies. The alarm shall be able to prevent a spherical body of (1.3 ± 0.05) mm diameter from entering the detection chamber.

5.3.5 Switches, keys and buttons. Keys and buttons shall operate flexibly and reliably and their function shall be marked in Chinese, the marking being clear and durable. The surface of the alarm shall carry a self-test key and a silence key.

5.3.6 Connection of external equipment. Where the alarm has a function for connecting external equipment such as a remote monitor, a control relay, a wireless communication device, a transceiver unit or a field-end platform, an open circuit or a short circuit in the line to that equipment shall not affect the normal operation of the alarm.

5.3.7 Structural elements. Apart from the battery, the base and the subscriber identity module, the alarm shall have no components that the user can remove or repair. A clear warning shall be given when the battery is taken out; where the battery is connected by a plug-in connector, a clear warning shall be given when the plug is not connected.

5.3.8 Factory settings. The factory settings of the alarm shall not be capable of being changed except by a special means, such as a dedicated tool or a password, or by breaking a seal.

5.3.9 Instruction manual. The alarm shall have an instruction manual in Chinese whose content meets GB/T 9969.

5.3.10 Transceiver unit. A transceiver unit mated with the alarm shall meet Annex B.

5.4 Functions

5.4.1 Fire alarm function. When the smoke parameter of the monitored area reaches the