Sensor Types

Aico, an Ei Company, is the European market leader in home life safety. With integrated fire, CO, and environmental sensors. Their UK-standard alarms and sensors are manufactured in Ireland, while their advanced software, developed in Bristol, provides real-time insights. By combining trust and innovation, Aico aims to create safer, healthier, and more sustainable homes.

Optical



Detects the scattering of light by smoke particles.
The LED inside the chamber pulses light at 10 second intervals.
A 'receiver' is on the other side that normally would never see the pulses.
If smoke enters, the light is scattered onto the receiver and the alarm is activated.

Heat



Detects the change in temperature from a fire.
Heat passes over the thermistor heat sensor.
Alarm triggers at 58°C.
Heat alarms only respond to heat, not smoke.

Carbon Monoxide



Detects the Carbon Monoxide gas produced by burning carbon-based fuels.
A chemical reaction occurs between the CO gas and the sulphuric acid in the sensor.
This creates hydrogen ions which give a voltage and current flow across electrodes.
Current output is proportional to CO level.

Sensor Type Quiz

Put your knowledge to the test! Answer the questions below by ticking the box you think is correct.

Q1	At what temperature do Aico's Heat alarms activate in domestic properties?	Ans.
A	68 degrees Celsius	
B	48 degrees Celsius	
C	82 degrees Celsius	
D	58 degrees Celsius	✗

Q2	Which Aico Fire alarm has the widest fire response for living areas?	Ans.
A	Combined Heat & Carbon Monoxide alarm Ei3028	
B	Optical Smoke alarm Ei3016	
C	Multi Sensor Fire alarm (Optical & Heat) Ei3024	✗
D	Heat alarm Ei3014	

Q3	Which sensor type uses a radioactive source to detect smoke?	Ans.
A	Heat alarm	
B	Ionisation Smoke alarm	✗
C	Optical Smoke alarm	
D	None of the above	

Q4	Which test fire categories does a Heat alarm have to pass as part of its accreditation process?	Ans.
A	Smouldering wood TF2	
B	Flaming liquid TF6	✗
C	Low temperature (Diesel) TF8	
D	Flaming plastic TF4	