

CO Heat Multisensor

58000-305APO

Instruction Sheet
R10077GB0



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1 CO Heat Multisensor 58000-305APO

CO Heat Multisensor contains an electro-chemical carbon monoxide sensor and a heat sensor. Combination of these sensors makes the CO Heat Multisensor suitable for early warning applications.

The CO Heat Multisensor is compatible with the FX-ALC loop controller in Esmi Sense FDP and FX 3NET panels.

1.1 Features

- Early warning of carbon-based smouldering fires
- Ideal for protecting small volume sleeping risk areas
- Resistance to false alarms caused by steam, dirt and dust

1.2 Application

Carbon monoxide (CO) detectors are suitable when there is a risk of a deep-seated, smouldering fire. These typically produce large amounts of CO. They should be used in an enclosed space with a floor size of not more than 50m² and where there is a likelihood of stratification.

The use of a heat-sensitive element, the thermistor, to create a CO/heat multisensor widens the scope of the detector to cover the risks which might not produce sufficient quantities of carbon monoxide but would create heat.

If the protected area is an escape route or corridor CO/heat multisensor detectors should be used for supplementary detection and not as the main means of detecting fires.

They should not be used if the protected area is exposed to sources of CO, eg, vehicle exhausts, to hydrogen vapour or alcohol vapour as emitted by some cleaning agents.

1.3 Detector siting and spacing

CO/heat multisensors should be sited and spaced according to the recommendations of BS5839: Part 1 or other applicable local code of practice for designing a fire detection system.

As CO is a gas, it further spreads—like smells—by diffusion. For this reason CO may reach a detector faster than smoke would. This potential advantage can be exploited when designing a fire protection system and CO detectors may be used for supplementary detection. Equally, the opposite effect might occur, with CO moving away from a detector.

The behaviour of CO is therefore unpredictable and diffusion should not be relied on when designing a fire protection system.

1.4 Operating modes

The CO Heat multisensor has five operating modes which are a combination of response and time to alarm. See the table below.

Mode	CO Sensivity (ppm)	Temperature Sensivity	Response Type	Minimum time to alarm (seconds)
1	30	>21°C increase	Multisensor	20
2	33	No response to heat	Carbon Monoxide	30
3	40	>21°C increase	Multisensor	20
4	45	>21°C increase	Multisensor	20
5	No response to CO	A1R	Heat Rate of Rise; Static limit of 58°C	15

1.5 Maintenance and service

In a typical environment, the life of the cell is seven years. High temperature or low relative humidity can, however, reduce the life significantly.

1.6 Health and safety guidelines

This product contains a sealed electro-chemical cell and in normal usage represents no chemical hazard in the sense of COSHH and the Health and Safety at Work Act 1974. Chemical hazard can, however, arise if the following notes on storage, handling and disposal are not observed.

For maximum life, the product should be stored before installation in clean dry conditions between 0° C and 20°C. It should not be exposed to temperatures outside the range – 40°C to +60°C or to organic vapours.

The electrochemical cell contained in this product is fitted into sockets on the printed circuit board; to avoid damage to the cell do not remove it. The electrochemical cell contains sulphuric acid in a relatively concentrated state. In the event of leakage (which may be caused by mechanical damage or use outside the operating specification for the cell) the cell should be removed from the detector using protective gloves. Avoid contact with any liquid. If skin or eye contact with the electrolyte occurs, wash immediately with plenty of water and obtain medical advice. All traces of electrolyte should be washed away with copious amounts of clean water.

The cell should be disposed of according to local waste management requirements and environmental legislation. It should not be burnt since it may release toxic fumes.

1.7 Product Codes

Product	Product codes
CO Heat Multisensor 58000-305APO	FFS0672 0262
EBI-10 Standard Mounting Base	FFS0672 0010
EBI-12 Deep Base	FFS0672 0012
EBI-20 Relay Base	FFS0672 0020