Electro-Detectors

Zerio Plus

EDA-R5000 Radio Smoke Detector Installation Instructions

The EDA-R5000 Radio Optical Smoke Detector is used as part of the Zerio Plus Radio Fire Alarm System. It cannot be used with other ranges of Electro-Detectors products.

To fix the unit to the ceiling
The smoke detector should be fitted in an appropriate position as detailed in BS5839 Part 1. The base plate should be separated from the unit by rotating the detector anti-clockwise and pulling apart. The base should be screwed to a flat surface using 2 x No 6 screws of appropriate length for the material that the unit is being mounted on. It is recommended that the base should be used as a template for the screw holes. If the surface is not flat, the unit may buckle and cause tamper conditions, when screwed tightly to the surface. It is recommended that the units not be secured too tightly or a rigid mounting plate be fixed to the wall first. The units should not be fitted covering holes in ceilings where water could possible drip through. Any hole should be made good prior to installing the detector. The unit should be fitted away from any metal objects or electrical items to avoid radio interference and a radio survey for the position should have been carried out prior to installation.

Adding the device to the system
Before the unit will operate on a system, it must be programmed via the control panel. To program the unit the panel must be set in the appropriate mode to add a device to the system. If a device is being added or replaced on the system then the appropriate menu option should be selected on the control panel. Please refer to the panel manual for further information. Before adding/replacing the device on the system you will need to know what unit number/address the unit is to be programmed to. The zone number, sensitivity and text location information should also be to hand but this can be added/changed later.

Zone Number
The zone number is a logical way of grouping devices and is used as a way of indicating where the alarm is in a building. Careful attention to BS5839 should be exercised when allocating devices to zones and would usually be defined when the system is designed. The number of zones available depends on the type of control panel that is being installed. There are 8, 20 and 100 zone models available.

Sensitivity

The sensitivity can be adjusted by the control panel to the following settings.

High: 0.08dB/m (1.8%)
Medium: 0.12dB/m (2.7%)   *Type approved to EN54 Part 7*
Low: 0.20dB/m (4.4%)

Alarm Verify

The time period, in seconds, that a detector remains in alarm before sending an alarm signal.
Range: 1 to 20 seconds
The recommended value which conforms with third party type approval tests is 2 Seconds

To put the smoke detector into log mode, follow the procedure below:-

1.   The panel will need to be put into 'add device', 'replace device' or new set-up mode
2.   Remove the base by rotating the detector anti-clockwise and pulling apart.
3.   Ensure the power jumper is removed.
4.   Press and hold the unit removal peg and the reset button on the front of the detector simultaneously.
5.   With these buttons both pressed down, fit the power link.
6.   If the mode is successfully selected the LED on the front of the unit will glow green.
7.   Both buttons can now be released.
8.   The panel will indicate that it has found a device of type smoke detector.
9.   Confirm this on the panel and select the correct zone number.
10.   The panel will now ask whether to use default values or custom settings. Select which option you require.
      Default values will meet the relevant parts of EN54.
11.   Follow the instructions on the screen selecting the appropriate values. The selections can be made by using the
      cursor keys. The available settings in the advanced menu, which are described above, are as follows.
            Zone Number
            Sensitivity
            Alarm Verify

Fitting the unit to the ceiling.

If not already fitted, the power link should be fitted on the ON position. When applied, the unit will beep and the LED will flash initially green. It will then flash red once a second indicating the unit removal condition. When fitting the unit to its base the red marking on the base should be aligned with the led on the outer case. The detector should be located in the base and rotated clockwise. Once mounted correctly press the reset button for about a second until it beeps. The LED should stop flashing if the unit is mounted correctly.

Should enough smoke enter the chamber, the unit will indicate the alarm condition by illuminating the LED red. The internal buzzer on the detector will also beep. An alarm transmission will be made to the control panel and the alarm will be indicated on the panel.

To change the battery in the detector:- replacement part: 1 x EDA-Q690

The battery should last approximately five years in the smoke detector. Always use batteries supplied by Electro Detectors otherwise this will invalidate the certification. Many similar battery technologies are available but only the ones that meet certain properties can be used with these units. The battery pack is fitted with 2xAA Lithium Thynol Chloride cells. Min voltage 3.0V, Max 3.7V. When the battery is approaching its end of life the unit will transmit a low battery condition, which will be indicated on the control panel. The system will still function for at least a further 60 days in this condition before the unit fails to operate. Once the batteries are too flat to operate, the unit will either

indicate a "verify fail" fault, because the panel has lost communication with the device, or a battery fault will be displayed. Should either of these be witnessed, the batteries should be changed immediately. If the unit detects a fault with the battery a 'battery fault' will be indicated on the panel. Therefore:-

1. Remove the detector from the base by rotating the detector anti-clockwise and separating the unit.
2. Remove the power link.
3. Remove the back plate by removing the two screws
4. Remove the old battery pack.
5. Fit the new battery pack making sure the battery's pins are lined up and pressed down.
6. Re-fit the back plate.
7. Press and hold the unit removal and reset button simultaneously.
8. With these buttons pressed down, fit the power link.
9. Let the unit go into its log-on mode, (it will beep) and keep the buttons pressed down.
10. After another 5 seconds a second BEEP will sound, at this point release the buttons. This will re-set the battery counter after a further 15 minutes. If you realise that you didn't want to reset the counter, then power the unit down by removing the power pin. Leave for 5 seconds and re-apply the power. The counter will not reset.
11. Refit the device onto its base.

Faults displayed on the control panel from smoke detectors:-

Low Battery: The batteries are approaching their end of life. The unit will continue to operate for a further 60 days within which time the batteries should be changed.

Verify Fail: The panel has lost communication with the device, this could be caused by the batteries being flat, the unit failing to operate, something obstructing the radio signal path or the device not being installed correctly with an adequate signal strength.

Battery Fault: The unit has detected a problem with the battery.

Unit Removal: If the unit is removed from its base, the panel will display a unit removal/tamper fault.

Tx/Rx Fault: A failure with the transmit / receive module of the device. It is suggested that the fault should be reset and if the same fault occurs within 60 minutes the unit be replaced.

Int Fault: The unit has detected an internal problem with the way it is operating. There are several faults that can cause this but the usual way of solving the problem is to replace the unit or return it for repair. It is suggested that the fault should be reset and if the same fault occurs within 60 minutes the unit be replaced. The faults can relate to the operation of the sensing head, if fitted, the micro-processor controlling the device, its internal memory and a host more.