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TGS-29 Evolution Detector Calibration procedures

Evolution Smoke sensor devices are engineered to high quality standards for reliable performance. Each detector is calibrated at the factory to ensure the fire response is within the EN54 requirements. Over time the detector may become contaminated depending on the environment of the installation. The Control panel will undertake a regular drift compensation algorithm to ensure that the sensitivity of the sensor is maintained. Obviously the compensation can only be performed within certain limits to ensure reliable operation.

When a sensor is first commissioned or learnt onto a system the panel will carry out a Calibration routine in order to establish a base point for the drift compensation. It is important when this occurs that the detector has a good clean environment to ensure optimum performance. We recommend that the Plastic dust cover is kept on the sensor during system build up to reduce contamination from building dust. Dust covers should then be removed when commissioning starts. Prior to the learning or configuration of the system it is worth allowing some settling time and avoid carrying out smoke tests etc. until the initialisation of the sensors has been carried out. This process is fully automatic within the panel.

Over time the panel will then carry out the drift compensation. Eventually the sensor may be reported by the panel as a 'dirty detector' or 'drift limit reached'. This will mean that the sensor has reached a point where action is required. It may be possible to clean the sensor using the following guidelines

Cleaning: ***Note: The detector head should NOT be disassembled.***

i) Carefully remove the detector head from its base.

ii) Use a soft, lint-free cloth, moistened with alcohol for sticky deposits, to clean the plastic casing.

iii) Using a soft bristle brush (e.g. an artist's paint- brush) carefully brush between the vanes in a linear motion away from the smoke entry apertures.

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iv) It is permissible to blow dust from the chamber, without removing the cover, using a clean air line.
v) If the unit needs further cleaning, or is damaged or corroded, please return the complete detector to Nittan Europe Ltd. for service.

Following cleaning or device replacement the sensor will need to be calibrated by the control panel. A slightly different procedure is called for depending on the control panel used.

1) Evolution 1:- Run the loop learn process, even though the device is unchanged or the same address. This will trigger the recalibration of the device.
2) EVO+ In the loop commissioning menu select the 'Calibrate' option to rerun the calibration. Otherwise the panel will still use the previous device drift value and report the 'dirty detector' fault again but for the new device.

If you need any further guidance please contact Nittan Technical Support:

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