Evikon

HOW TO CHOOSE THE RIGHT GAS DETECTOR

ANALYZE APPLICATION AND OBJECTIVE:

- Specify which gas(es) and/or vapour(s) need to be detected. If there are multiple, consider whether they appear separately or simultaneously.

- Specify the objective to determine measuring unit and detection range:

  For toxicity prevention, the target gas is measured in parts per million (ppm). Time-weighted average (TWA) and short-term exposure limits (STEL) are considered for detection range.

  For explosion prevention, the target gas is measuredin % of lower explosive limit (LEL). Lower Explosive Limit is the minimum concentration of a gas in air, above which an ignition source will cause an explosion.

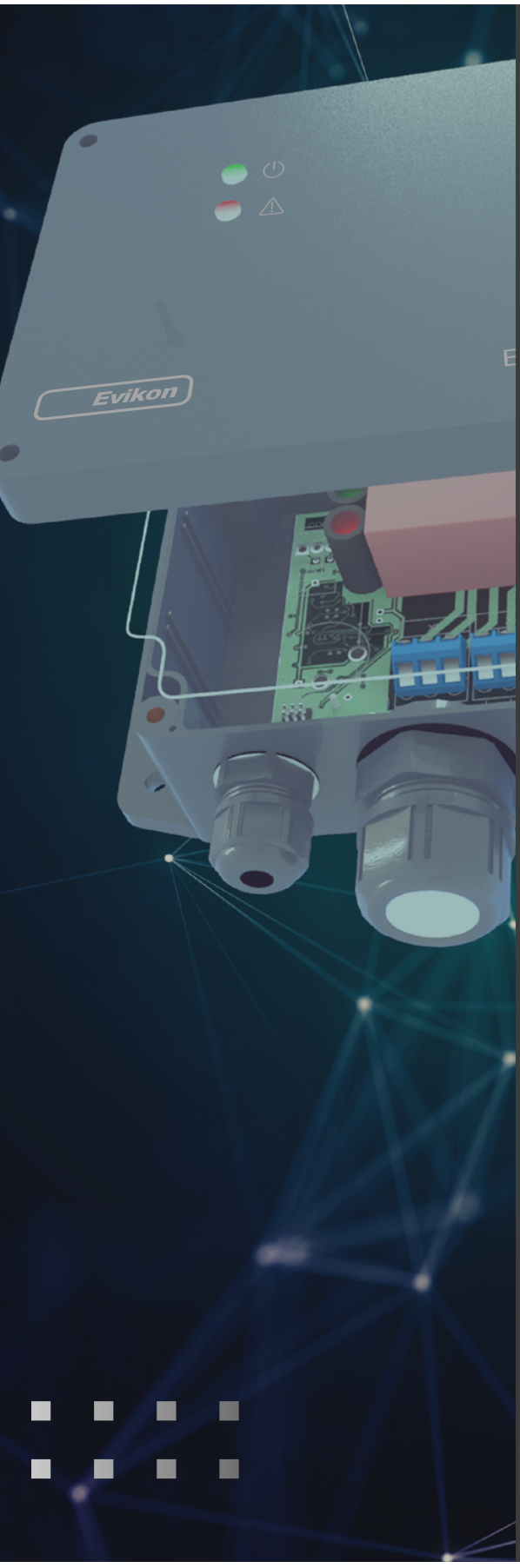
IDENTIFY AMBIENT CONDITIONS IN THE APPLICATION:

- Presence of other potentially interfering gases, dust, corrosives, fumes, mists, etc – this is important for choice of sensor in the detector as not all sensors are selective and some gases exhibit cross-sensitivity to others

- Presence of oxygen – if the oxygen levels are normal (~21% O_2), all sensor technologies can be used but if the environment is oxygen-deficient, semiconductor, electrochemical and catalytic sensors might not work. Oxygen-enriched atmospheres increase the risk of explosion.

- Temperature – gas sensors have a specified operating temperature which limits the temperature range for the detector

- Humidity – depending on the sensor, gas detectors work properly in up to 95 % relative humidity (non condensing). This is very important to keep in mind as too much humidity can cause water condensation on the sensor and ruin it



SPECIFY THE FEATURES OF THE DETECTOR BASED ON THE PROJECT'S NEEDS:

- Analog output – the reading can be done through 4-20mA or 0-10V analog output or Modbus RTU communication protocol – in addition to reading measurement, it allows for configuration of the devices
- Relays – used for turning on alarms and switching on/off ventilation or initiating other automated tasks
- Acoustic and visual alarms – alert people when gasconcentration is reaching acon-cerning level
- LCD indicator – for reading measurements on the spot
- Mounting version – depending on the application, gas detectors should be mounted on the wall, in the ventilation duct or have a remote probe
- Power supply – 24VAC, 24VDC, 230VAC
- Flame proof enclosure – if the application environment has an explosive atmo-sphere, the gas detectors have to conform to the ATEX directive

Based on these aspects, you can find the best solution to measure and control the application environment, ensure safety and avoid incidents.

Η εταιρεία μας είναι πάντα πρόθυμη να σας βοηθήσει να βρείτε την καλύτερη επιλογή για την εφαρμογή σας.

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