

Air Quality Monitor

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Already back in the 1980s, OPSIS developed its first air quality monitor based on the open-path DOAS measurement principle, where gaseous air pollutants are detected and monitored based on optical absorption in the ultraviolet wavelength region. The DOAS technology has ever since been the centre of OPSIS product portfolio, although the range of monitors has been extended to also include many other types of instruments such as tuneable diode lasers, particulate monitors, and meteorological sensors.

Today, OPSIS is a one-stop-shop for virtually any need you may have within ambient air quality monitoring (AQM); whether it's about detecting traditional air quality indicators such as sulphur dioxide, ozone, nitrogen dioxide and PM10, or more specialized gases pertaining to actual or potential sources of air pollution such as petrochemical industries and other industrial production facilities. Combined with sensors for e.g. temperature, air pressure, wind direction, wind speed, solar radiation and precipitation, OPSIS can give you full knowledge and thereby control of the air you breathe.

And not only does OPSIS provide the instruments for ambient air quality monitoring, but we offer complete system solutions. This includes permanent and mobile monitoring stations for full surveillance of the air quality and the meteorological conditions. It also includes data collection, data storage and data transfer based on state-of-the-art communication and network solutions, as well as software products for data presentation and analysis. We also offer software for managing emission databases enabling air quality simulation and back-tracking of monitored pollutants to their sources.

DESIGN AND FABRICATION OF LIGHTWEIGHT ROBOTS FOR PICK AND PLACE APPLICATIONS

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The use of industrial robots is increasing in areas such as food, consumer goods, wood, plastics and electronics, but is still mostly concentrated in the automotive industry. The aim of this project has been to develop a concept of a lightweight robot using lightweight materials such as aluminium and carbon fibre together with a newly developed stepper motor prototype. The wrist also needs to be constructed for cabling to run through on the inside. It is expensive to change cables and therefore the designing to reduce the friction on cable, is crucial to increase time between maintenance. A concept generation was performed based on the function analysis, the specifications of requirements that had been established.

Keywords: Robotic arm, lightweight, industrial robots, automotive industry