

Annotation

The purpose of this thesis is to develop a device for determining the concentration of carbon dioxide in the air

The first section describes the problem of air pollution and its change over time. Indoor concentration standards and the European standard were considered. The influence of different concentrations of carbon dioxide on the human condition is analyzed.

In the course of the work the methods of measuring the concentration of carbon dioxide were considered. After analyzing the pros and cons of each method, the optical method was chosen.

Structural, functional and basic schemes were developed. After the schemes were developed, the components were carefully selected and the principle of operation of the device and the sensor was described.

A program for a microcontroller was created to operate the device, which allows you to correctly determine the concentration of carbon dioxide and adjust the device.

The diploma project consists of an explanatory note of 41 pages, includes 12 illustrations, 6 tables, 6 drawings, 9 references, 1 appendix and 11 formulas.