

BETTER AIR QUALITY

ROTRONIC CO₂ DISPLAYS FOR SCHOOLS IN VAUD, SWITZERLAND

A study by the Swiss Federal Office of Public Health from 2013 shows that the quality of air in more than two thirds of the schools investigated is bad. To counteract this, the Department of Education, Youth and Culture of the Canton of Vaud ordered 178 CO₂ displays from Rotronic for use in classrooms.

From this summer onwards, 178 Rotronic CO₂ displays will be used in schools in Vaud to improve air quality.



Good air is important for an optimal learning environment and has a big influence on the performance of both students and teachers. Poorly ventilated rooms can also have a negative impact on health, and symptoms such as fatigue or headaches can occur more frequently. However, it is often not enough to simply open a window briefly to achieve a lasting improvement in air quality. Lessons sometimes start in the morning in unventilated rooms, which has a negative effect on air quality during the day. An appropriate system for room ventilation is therefore important.

CO₂ Displays from Rotronic in use

This is where Rotronic, with its professional measuring instruments, comes in to play. The company has developed a CO₂ display that can measure air quality, temperature and humidity in a room simply and practically. The compact instrument is easy to use and displays the data without complication. The displays are placed in the classrooms and are visible to both teachers and students. In this way, it is possible to combine the monitoring of air quality with the educational aspect, and children can learn how important ventilation is for health and a good learning environment. In addition to this, the

instruments can be used to determine in which rooms air quality is particularly problematic. The Department of Education, Youth and Culture of the Canton of Vaud has ordered 178 displays from Rotronic for its classrooms. They will be delivered in early summer.

Bad atmosphere from airtight buildings

Some 25 to 35 cubic meters of fresh air are needed per person per hour in an enclosed room, given normal activities. This ensures that the carbon dioxide (CO₂) content remains below 1,000 ppm (ppm = parts per million [value of the proportion of carbon dioxide in the air]), and that the volatile substances exuded by humans are extracted to a sufficient degree. Since many buildings are airtight nowadays and basic ventilation is no longer guaranteed, the quality of indoor air suffers, resulting in, for example, mildew. An airtight building therefore needs an efficient ventilation concept. This also applies to all products installed. The aim is to use materials that do not outgas harmful substances as far as possible.

CO₂ guidelines in “parts per million” (ppm)

350 – 450 ppm	400 – 1200 ppm	> 1000 ppm	5000 ppm (0,5%)	38000 ppm (3,8%)	> 100000 ppm (10%)
Fresh air outdoors	Room air	Fatigue and loss of concentration become apparent	Maximum permissible value at the workplace during an 8-hour workday	Breathing air (direct exhalation)	Nausea, vomiting, loss of consciousness and death

CO₂ Display from Rotronic

The wall or benchtop CO₂ display from Rotronic can visualize measured values such as temperature, humidity and air quality in a room very quickly. The compact instrument is easy to use and displays the data without complication. The CO₂ display is good value for money. The free Rotronic software SW21 can be used to analyze the data. To do so, the data are downloaded to a USB drive.

You can find further information on our website: www.rotronic.com

About Rotronic

Rotronic is an international development and manufacturing company that offers a wide range of products and solutions in the B2B segment. Founded in 1965, the company is headquartered in Switzerland and develops and manufactures solutions for measuring and monitoring relative humidity, temperature, CO₂, differential pressure, pressure, flow, dew point and water activity. The company already began the digital transformation in the year 2000, investing in automated data transfer (machine-to-machine). With the development and launch of its RMS monitoring software, Rotronic further strengthened its position as a key supplier of measurement solutions.

Rotronic is a member of the PST Group (Process Sensing Technologies). As a result, our customers benefit from a broader product range and sales network.

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