

Mobile air quality measuring system

Specification

The measuring system determine with an infrared sensor a carbon dioxide of the air and a traffic light displays the air quality. Pictographs support are the simple displayed. Acoustic signals underline the optical ones. There is no need installation by an expert. The device can be put into operation simply by plugging the power supply unit into the socket outlet.

CO ₂ concentration (ppm)	optic signal (LED)	acoustic signal (peep)	air quality
0 bis 1500	😊 green		good
1500 bis 2500	😐 yellow	once	middle air re-commend
2500 bis 3000	😞 red	twice	bad let air in
Über 3000	😞 red blink	five	very bad be sure to air

Applications

- ✍ special suitable for classrooms and all rooms with many persons
- ✍ Assembly by expert not necessary
- ✍ No calibration required

MF420-IR-Mobile



What is air quality ?

Air quality is a measure in interiors for the quality of the air. Objective measurand of the air quality is the carbon dioxide (Co₂).

This farb and odorless gas is breathed out by the man. The CO₂ concentration hesitates between 360 ppm (parts by million) in pure air areas and 700 ppm in the open in towns.

The recommended maximum value for interiors is 1000 for ppm CO₂, the limiting value for offices 1500 ppm.

The CO₂ concentration rises depending on the pupil number and the size of the room strongly in the classroom during a lesson. Values of 3500 ppm aren't a rareness so.

Technical Data

Transmitter

external power supply:	power supply	230VAC
	current consumption	350 mA (24VDC)
surround temperature:	-10 .. +50 °C	
air pressure:	900 .. 1100 hPa	
perm. humidity:	15 .. 95 % rel.humidity	
case:	plastic	white
safety class case:	IP30	
wight case:	ca. 150 g	
dimension case:	ca. L78 x B78 x H35 mm	
optical measurement indication:	green LED	CO ₂ < 1500 ppm
	yellow LED	1500 .. 2500 ppm
	red LED	2500 .. 3000 ppm
	red LED blink	CO ₂ > 3000 ppm
acoustic measure indication:	Summer 1x	1500 .. 2500 ppm
	Summer 2x	2500 .. 3000 ppm
	Summer 5x	CO ₂ > 3000 ppm
error	Hard-or Software	yellow LED blink

Sensor

gas admission	per Diffusion
range:	0 ..3000 ppm
heating time:	5 min
precision:	+/- 2% (end of scale)
reproducible:	+/- 1%
reaction time:	ca. 30 s