

OL0119-G2 CO₂ Traffic Light

Item number: 0221000119020729



Image similar

Safety and warning instructions



This electronic module must not be used if the safety of persons in the associated application depends on the correct functioning of the module (not a safety component according to the EU Machinery Directive).

Installation, replacement and maintenance of the meter may only be carried out by qualified personnel.

Please read the manual carefully before commissioning the measuring device and the associated software!

Technical data

Power supply	1 x 3.6V AA Lithium primary cell 2.6Ah or External DC power supply 5V/1A to internal USB Micro-B socket
Battery life (primary cell, depending on measurement frequency and display options)	0.5 - 2 years
Measurement method	NDIR CO ₂ Sensor
Measuring channels and measuring range	CO ₂ , 0ppm...5.000ppm
Measuring accuracy at 25°C ambient temperature	CO ₂ , +/- (50ppm +3% of measured value) in the range 400ppm – 2000ppm Out of range +/- (50ppm +5% of reading) Specifications apply to proper use of automatic self-adjustment (see text)
NDIR sensor lifetime (see text)	>15 years with proper use of automatic self-adjustment (see text)
Calibration (see text)	Factory adjusted and linearized Continuously temperature compensated In addition, automatic cyclical self-adjustment of the CO ₂ sensor over the entire service life

Datasheet

Limit values for traffic light function	Green < 1000ppm Yellow 1000ppm – 1999ppm Red >= 2000ppm	Limit values can be adjusted according to default ex work with the help of a PC Tool via USB connection.
Display	In red, green or yellow backlit surface realizes the traffic light function With battery operation pulsed otherwise continuous light Acoustic alarm when the upper limit value is exceeded (can be switched off)	
Measuring frequency (factory settings)	20s for measurements Display for green measuring range (also corresponds to "ready for operation") every 60s Display for yellow measuring range every 30s Display for red measuring range (+acoustic notification) every 15s	
USB port	In case, Micro-B socket for power and communication	
Case, mounting	ABS plastic, stainless steel table stand, wall mount via integrated opening for screws	
Weight (without table stand)	approx. 70g incl. batteries	
Dimensions	99mm Ø, 30mm deep	
Protection class	IP20	
Temperature range Ta	Storage -40°C – 70°C Operation 0°C - +50°C	
RoHS Compliant	yes	

Intended use

The limit values for the assignment of the CO₂ concentration to the colored display are preset ex works, but can be individually adjusted with the help of a PC-Tool via USB. The built-in acoustic alarm is active in the default setting (when the upper limit value is exceeded), but can also be switched off with the help of the PC-Tool. If required, flashing and measuring times can also be set individually using the PC-Tool.

The power supply can be provided either by an external DC power supply or by a single lithium primary cell. The external power supply is fed via a standard USB cable with Micro-B connector inside the device. Thus, inexpensive and widely available USB chargers with type-A connector can be used. For the battery, it applies that an AA cell with a voltage in the range of 3.6V-3.7V must be used. The lifespan of up to 2 years only applies to a non-rechargeable lithium primary cell with 3.6V and 2.6Ah. The battery life also depends heavily on the type of use, but also how often and long the yellow and especially the red area is active in traffic light function.

The device has a switch on the back for

switching on or off. All parameters are stored retentively and are retained even when switched off. However, please note the remark in the next chapter about continuous self-adjustment!

The internal CO₂ sensor has a very high basic accuracy. To realize this, the measurements are continuously temperature compensated. In addition, the CO₂ traffic light also implements an algorithm for continuous self-adjustment over the entire service life so that the traffic light is maintenance-free.

In order for the self-adjustment to work effectively, it must be ensured that the device is repeatedly exposed to unpolluted ambient air for several minutes over a period of 7 days. This usually happens automatically if the room in which the CO₂ traffic light is located is ventilated according to the general recommendations.

The basis for the self-adjustment is the value of 400ppm CO₂ which can generally be assumed for the ambient air. The results of the continuous self-adjustment are also stored retentively in the device and are thus available even if the device is switched off in between via the switch on the back.

Datasheet

However, it should be noted that the self-adjustment is only ever renewed in a fixed 7-day rhythm. During these 7 days, the device **must remain switched on continuously**.

If the device is switched off during this period, the 7-day cycle starts again from the beginning with the next switch-on. In extreme cases, i.e. when the device is switched on and off regularly, a new self-adjustment would therefore never take place!

If this cannot be avoided or if it cannot be ensured that the device comes into contact with unpolluted ambient air during this 7-day cycle, then a manual adjustment can also be carried out at any time with the aid of the PC-Tool.