



TI2010en

### Product Information



GRW1-Series (VOC)

Room Air Quality (VOC) Sensor  
with Active Output

The GRW1- Series (VOC) is designed to measure the air quality in rooms or areas

The air quality is measured based on VOC levels (VOC= volatile organic compounds)

The sensor operates with low power supply

The air quality sensor output is active



#### Use

Compatible to all common HVAC DDC and Analog Controls systems, with/without Building Automation System

Compatible to all common HVAC DDC and Analog Controls systems, with/without Building Automation System

Air quality (VOC) measurements in rooms or areas

Used in all common HVAC applications

Used in Commercial and Industrial Buildings

#### Features

Sensor with active output

On-site calibration possibility for air quality output

Professional and practical product design, withstands rough environmental conditions

Easy to use, install and maintain

#### Product Range

Order Code	Power Supply	Sensor Type	Sensor Output	Measuring Range	Air Quality	Protection
GRW1.AA	AC/DC 24V (±10%)	VOC (Mixed Gas Sensor - heated metal oxide)	0...10V	0..100% VOC	0...4V good air quality ; 4...7V Standard Air Quality ; 7...10V bad Air quality	IP20

Sensor Specification	Sensor Specification	Measured	VOC
		Sensor Characteristics	Active
		Sensor Output (s)	0...10V
		Sensor Type	Mixed Gas Sensor - heated metal oxide
		Output Load	Min. load 5kΩ @ AC/DC 24V
		Accuracy	n/a
		Measuring Range (s)	0...100% VOC
Technical Information	Electrical Information	Power Supply	AC/DC 24V (±10%)
		Frequency	50 / 60 Hz at AC 24V
		Terminal Clamp	Screw terminal, max. 1.5mm <sup>2</sup>
		Power Consumption	≤ 1.2W / AC 24V; ≤ 2.2 VA / DC 24V
	User Interface	n/a	n/a
	Mechanical Information	Cable Entry	~30mm x 10mm on the backside
	Color and Materials	Housing Cover	White ASA, RAL 9010 (Pure White)
		Housing Bottom	White ASA, RAL 9010 (Pure White)
		User Element	White ASA, RAL 9010 (Pure White)
	Environmental Conditions	Operation Temperature	0°C...+50°C
		Operation Humidity	<85 % r.h., no condensation
		Transport Temperature	-35°C...+70°C IP20
		Transport Humidity	< 90% r.h.
	Norms and Directives	Storage Humidity	< 85% r.h., no condensation
		IP- Rating	IP20 to IEC60529
		Safety Class	III to EN 60 730
		CE Conformities to	2004/108/EG Electromagnetic Compatibility EMV
		CE Electromagnetic Compatibility Emitted Interference	2000/EN60730-1 Emitted Interference
		CE Electromagnetic Compatibility Interference resistance	2000/EN60730-1 Interference Resistance
		RoHS Compatibility	RoHS 2011/65/EC
Operation Climatic Condition		IEC 60 721-3-3	
Operation Mechanical Condition		IEC 60 721-3-2 to class2M2	
Transport to Climatic Condition		IEC 60 721-3-2	
Transport Mechanical Condition		IEC 60 721-3-2 to class2M2	
Storage Climatic Condition		IEC 60 721-3-1	
Storage Mechanical Condition		IEC 60 721-3-1 to class2M2	
Miscellanies	Accessories	Accessory not included in delivery	TRA0.A (106mmx106mm backplate)
	Shipping & Handling	Minimum Order	1 box with 1 piece
		Product Dimension (L x W x H) / ~Weight	84.5mm x 84.5mm x 25mm / 66gr.
		Transport and Storage dimension (L x W x H) / ~Weight	90mm x 90mm x 35mm / 82gr.
		Rigid Cardboards Packaging	Rigid Cardboards Packaging
	Order Notes	Order Code	GRW1.AA

All Information and technical data are subject to alteration

**Installation Notes**

Observe the following general regulation for engineering and implementation:



All relevant national and heavy power regulations

Other country specific regulations

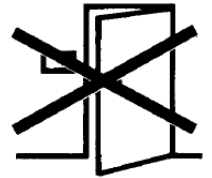
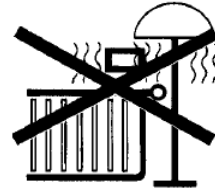
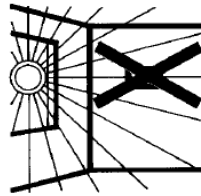
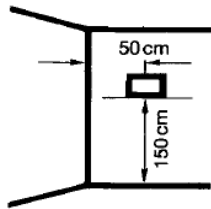
Country-specific regulations

Local electrical supply authority regulations

Schematics, cable listings, dispositions, specification and arrangements from the customer or engineering office in charge

Third party specifications, e.g. general contractors or constructors.

**Mounting Advices**



Advices

**Disposal Notes**

The device is considered an electronic device for disposal in terms of the EUROPEAN DIRECTIVE 2012/19/EU.



The device may not be disposed as domestic garbage.

The device must be disposed through channels provided for this purpose.

It is mandatory to comply with local currently applying laws and regulations.

**Calibration Notes**

The devices must be at the first use calibrated



Calibrate the sensor after the sensor was 30 minutes powered up

The air must be free of any taste of bad odor

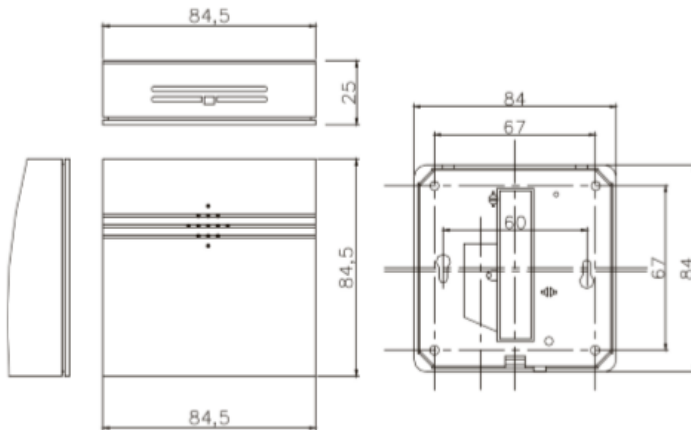
If the LED is green illuminated, the sensor is calibrated and setup

If the LED red is illuminated, turn the calibration potentiometer until the LED changes to green.

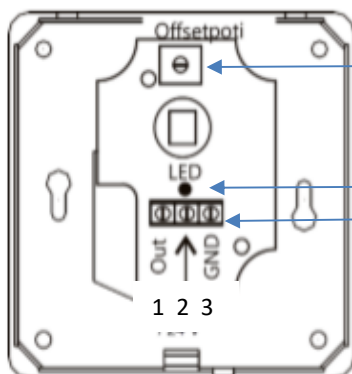
Then the sensor is calibrated and setup

This calibration can be repeated at any time during operation

Dimensional Drawing



Connections & Settings



OFF Set Potentiometer T1 VOC

T2 UB+ (24V AC/DC)

Calibration LED

T3 Ground

Connection Terminals