
 <b>TI2101e</b>	<b>Technical Information</b>	
<b>GRW1- Series (CO2)</b>	<b>Room Air Quality (CO2) Sensor with Active Output</b>	

The GRW1- Series (CO2) is designed to measure the air quality in rooms or areas

The air quality is measured based on CO2 levels (CO2= Carbon dioxide).

The sensor is self calibrating

The sensor operates with low power supply

The air quality sensor output is active



<b>Use</b>	<p>Compatible to all common HVAC DDC and Analog Controls systems, with/without Building Automation System</p> <p>Air quality (CO2) measurement in rooms and areas</p> <p>Used in all common HVAC applications</p> <p>Used in Commercial and Industrial Buildings</p>
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<b>Features</b>	<p>Sensor with active output</p> <p>Sensor with photoacoustic sensing principle</p> <p>Applicable for 24h / 365 day operations</p> <p>Professional and practical product design, withstands rough environmental conditions</p> <p>Easy to use, install and maintain</p>
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<b>Product Range</b>	<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th data-bbox="175 1489 343 1668">Order Code</th> <th data-bbox="343 1489 470 1668">Power Supply</th> <th data-bbox="470 1489 598 1668">Sensor Output CO2</th> <th data-bbox="598 1489 726 1668">Measuring Ranges</th> <th data-bbox="726 1489 853 1668">Accuracy</th> <th data-bbox="853 1489 973 1668">IP- Protection</th> </tr> </thead> <tbody> <tr> <td data-bbox="175 1668 343 2116">GRW1.DE</td> <td data-bbox="343 1668 470 2116">AC/DC 24V (±10%)</td> <td data-bbox="470 1668 598 2116">0 ...10V (default) / 4...20mA</td> <td data-bbox="598 1668 726 2116">Air Quality (CO2) = 0 ...2.000PPM</td> <td data-bbox="726 1668 853 2116">CO2+ max. ±40ppm and ±5% of measured value</td> <td data-bbox="853 1668 973 2116">IP20 according to EN 60529</td> </tr> </tbody> </table>	Order Code	Power Supply	Sensor Output CO2	Measuring Ranges	Accuracy	IP- Protection	GRW1.DE	AC/DC 24V (±10%)	0 ...10V (default) / 4...20mA	Air Quality (CO2) = 0 ...2.000PPM	CO2+ max. ±40ppm and ±5% of measured value	IP20 according to EN 60529
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*All Information and technical data are subject to alteration*

<b>Sensor Specification</b>	Sensor Specification	Measured	CO2
		Sensor Characteristics	Active
		Sensor Output (s)	0...10V (default) / 4...20mA
		Sensor Type	Photoacoustic Sensing Principle
		Accuracy	± 40PPM +5% of reading
		Measuring Range (s)	0...2000PPM CO2
<b>Technical Information</b>	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	Max. load 3W AC 24V / 6VA DC 24V
	User Interface	n/a	n/a
	Mechanical Information	Cable Entry	~30mm x 10mm on the backside
	Color and Materials	Housing Cover	ABS, white
		Housing Bottom	ABS, white
	Environmental Conditions	Operation Temperature	0°C...+50°C
		Operation Humidity	<85 % r.h., no condensation
		Transport Temperature	-35°C...+70°C
		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 3, Directive 2015/863	
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	
<b>Miscellaneous</b>		Accessories	Accessory not included in delivery
	Shipping & Handling	Minimum Order	1 box with 1 piece
		Packaging	Rigid Cardboards Packaging
	Order Notes	Order Code	GRW1.DE

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**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

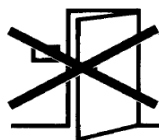
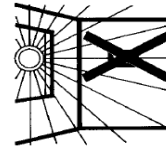
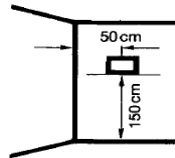
Local electrical supply authority regulations

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

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

Advices

**Mounting Advice**



**Disposal Notes**

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

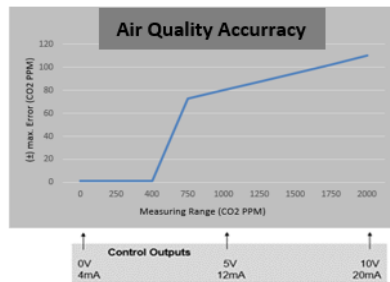


The device may not be disposed as domestic garbage.

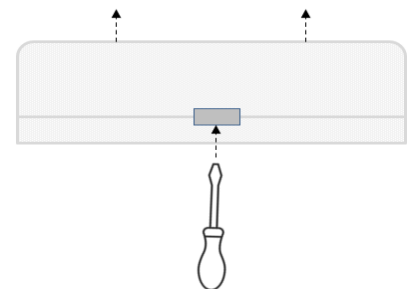
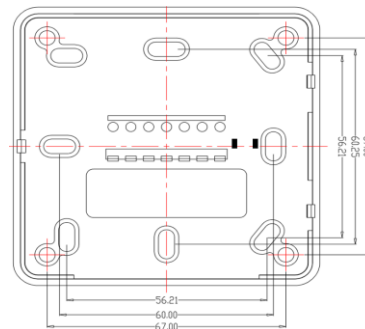
The device must be disposed through channels provided for this purpose.

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

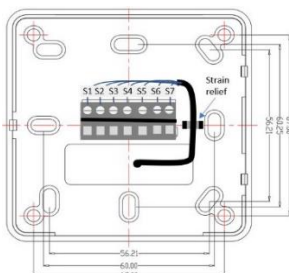
Accuracy Curve



Dimensional Drawing



Connections



<b>Terminal Connections</b>	
S1	UB+
S2	GND
S3	CO2
S4	n.a.
S5	n.a.
S6	n.a.
S7	n.a.