
 <b>TI2100e</b>	<b>Product 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 NDIR - self calibrating - dual channel CO2 sensing element</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%; border-collapse: collapse;"> <thead> <tr> <th data-bbox="169 1487 341 1653">Order Code</th> <th data-bbox="341 1487 470 1653">Power Supply</th> <th data-bbox="470 1487 600 1653">Sensor Output CO2</th> <th data-bbox="600 1487 729 1653">Measuring Ranges</th> <th data-bbox="729 1487 858 1653">Accuracy</th> <th data-bbox="858 1487 987 1653">IP- Protection</th> </tr> </thead> <tbody> <tr> <td data-bbox="169 1653 341 2069" style="text-align: center;">GRW1.BA</td> <td data-bbox="341 1653 470 2069" style="text-align: center;">AC/DC 24V (±10%)</td> <td data-bbox="470 1653 600 2069" style="text-align: center;">0 ... 10V</td> <td data-bbox="600 1653 729 2069" style="text-align: center;">Air Quality (CO2) = 0 ... 2.000PPM</td> <td data-bbox="729 1653 858 2069" style="text-align: center;">CO2+ max. ±50ppm and ±3% of measured value</td> <td data-bbox="858 1653 987 2069" style="text-align: center;">IP20 according to EN 60529</td> </tr> </tbody> </table>	Order Code	Power Supply	Sensor Output CO2	Measuring Ranges	Accuracy	IP- Protection	GRW1.BA	AC/DC 24V (±10%)	0 ... 10V	Air Quality (CO2) = 0 ... 2.000PPM	CO2+ max. ±50ppm and ±3% of measured value	IP20 according to EN 60529
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*All Information and technical data are subject to alteration*

Sensor Specification	Sensor Specification	Measured	CO2
		Sensor Characteristics	Active
		Sensor Output (s)	0...10V
		Sensor Type	NDIR, self calibrating, dual channel
		Accuracy	± 50PPM +3% of reading
		Measuring Range (s)	0...2000PPM CO2
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	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	White ASA, RAL 9010 (Pure White)
		Housing Bottom	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
		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.BA

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**Installation Notes**

Observe the following general regulation for engineering and implementation:



Caution

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

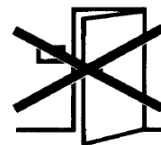
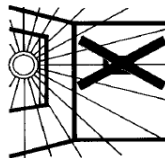
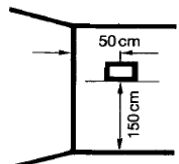
Third party specifications, e.g. general contractors or constructors.

Advices

**Mounting Advices**



Caution



**Disposal Notes**

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

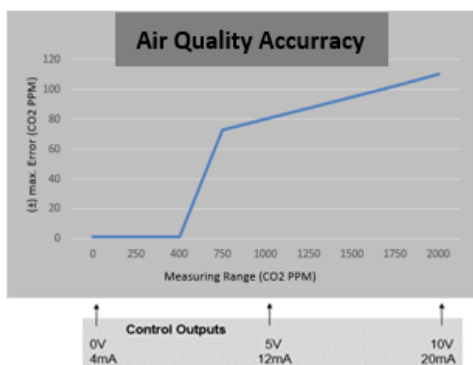


The device may not be disposed as domestic garbage.

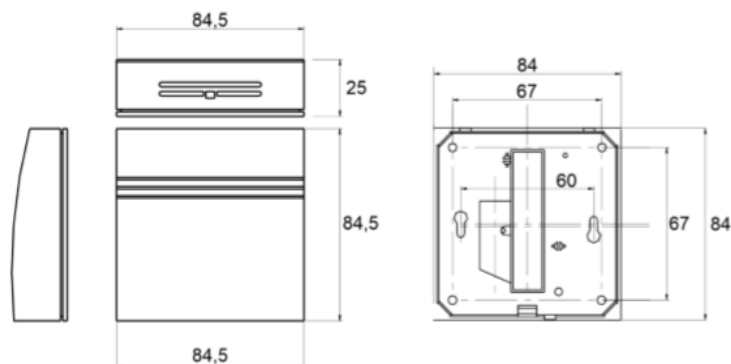
The device must be disposed through channels provided for this purpose.

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

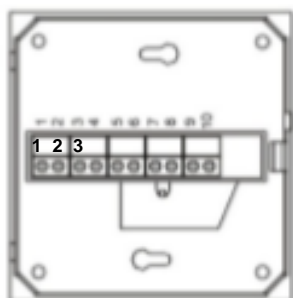
Accuracy Curve



Dimensional Drawing



Connections



T1 Ground

T2 UB+ (24V AC/DC)

T3 CO2