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|  TI2122en | Product Information |  |
| CRW5-Series (CO2&H&T) | Room Air Quality (CO2), Humidity and Temperature Sensor with Active Output | |

The CRW5- Series (CO2&H&T) is designed to measure air quality, humidity and temperature in rooms and areas

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

The sensor operates with low power supply

The air quality sensor output and humidity are active,
the temperature sensor output can be active or passive.



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| Use | <p>Compatible to all common HVAC DDC and Analog Controls systems, with/without Building Automation System</p> <p>Air quality (CO2), humidity and temperature 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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| Features | <p>Sensor with active outputs</p> <p>With self Calibration ABClogic</p> <p>Professional and practical product design, withstands rough environmental conditions</p> <p>Easy to use, install and maintain</p> |
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| Product Range | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th data-bbox="210 1400 386 1621">Order Code</th> <th data-bbox="386 1400 513 1621">Power Supply</th> <th data-bbox="513 1400 641 1621">Sensor Output CO2</th> <th data-bbox="641 1400 769 1621">Sensor Output Humidity</th> <th data-bbox="769 1400 896 1621">Sensor Output Temperature</th> <th data-bbox="896 1400 1024 1621">Measuring Ranges</th> <th data-bbox="1024 1400 1152 1621">Accuracy</th> <th data-bbox="1152 1400 1279 1621">IP- Protection</th> </tr> </thead> <tbody> <tr> <td data-bbox="210 1621 386 2056" style="text-align: center;">CDI5.FB</td> <td data-bbox="386 1621 513 2056" style="text-align: center;">AC/DC 24V (±10%)</td> <td data-bbox="513 1621 641 2056" style="text-align: center;">0...10V</td> <td data-bbox="641 1621 769 2056" style="text-align: center;">0...10V</td> <td data-bbox="769 1621 896 2056" style="text-align: center;">0...10V</td> <td data-bbox="896 1621 1024 2056"> Air Quality (CO2) = 0 ...2.000PPM Humidity + 0...100% rel. h. Temperature + 0...50°C </td> <td data-bbox="1024 1621 1152 2056"> CO2= max. ±50ppm and ±3% of measured value Humidity = ±2% within 0...100% r.h. T = ± 0.5°C over full measuring range </td> <td data-bbox="1152 1621 1279 2056" style="text-align: center;">IP20 according to EN 60529</td> </tr> </tbody> </table> | Order Code | Power Supply | Sensor Output CO2 | Sensor Output Humidity | Sensor Output Temperature | Measuring Ranges | Accuracy | IP- Protection | CDI5.FB | AC/DC 24V (±10%) | 0...10V | 0...10V | 0...10V | Air Quality (CO2) = 0 ...2.000PPM Humidity + 0...100% rel. h. Temperature + 0...50°C | CO2= max. ±50ppm and ±3% of measured value Humidity = ±2% within 0...100% r.h. T = ± 0.5°C over full measuring range | IP20 according to EN 60529 |
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All Information and technical data are subject to alteration

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| Sensor Specification | Sensor Specification | Measured | Temperature & Humidity & Gas CO2 |
| | | Sensor Characteristics | Active |
| | | Sensor Output (s) | 0...10V |
| | | Output Load | Max. 10mA @ AC/DC 24V |
| | | Accuracy | CO2 max. ±50ppm and ±3% of measured value |
| | | | Hum. ±2% within 0...100% r.h. |
| | | | Temp. ± 0.5°C over full measuring range |
| | | Temperature Dependency CO2 | <0.2% FC / C |
| | | Repeatability CO2 | <1% FS |
| | | Stability CO2 | 2% FS |
| | Calibration | not required | |
| | Measuring Range (s) | 0°C...50°C Active / 0...100% r.h. / 0...2000ppm | |
| Technical Information | Electrical Information | Power Supply | AC/DC 24V (±10%) |
| | | Frequency | 50 / 60 Hz at AC 24V |
| | | Terminal Clamp | Screw terminal, max. 1.5mm ² |
| | | Power Consumption | 24V; 3W / 6VA |
| | Mechanical Information | Cable Entry | ~30mm x 10mm on the backside |
| | | Sensing Element Position | Inside the housing, top of the housing |
| | Color and Materials | Housing Cover | White ASA, RAL 9010 (Pure White) |
| | | Housing Bottom | White ASA, RAL 9010 (Pure White) |
| | Environmental Conditions | Operation Temperature | -25°C...+70°C |
| | | Operation Humidity | <85% r.h., no condensation |
| | | Transport Temperature | -35°C...+70°C |
| | | Transport Humidity | < 90% r.h. |
| | | Storage Temperature | -10°C...+70°C |
| | | Storage Humidity | < 85% r.h., no condensation |
| | Norms and Directives | IP- Rating | IP20 to IEC60529 |
| | | Safety Class | III to EN 60 730 |
| | | Product Standard 1 | Automatic Electric. Controls for household and similar use |
| | | Product Standard 2 | 2009/EN 60 730-1 |
| | | 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 | 85mm x 85mm x 26mm / 90gr. |
| | | Transport and Storage dimension (L x W x H) / Weight | 90mm x 90mm x 35mm / 110gr. |
| | Order Notes | Package Material | Rigid Cardboards Packaging |
| | Order Code | See Product Range, Page 1, e.g. CRW5.FB | |

Advices

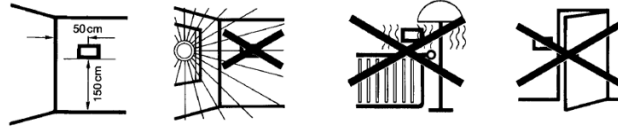
Installation Notes



Observe the following general regulation for engineering and implementation:

- All relevant national and heavy power regulation
- Other country specific regulations
- Country-specific regulations
- Local electrical supply authority regulation
- 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



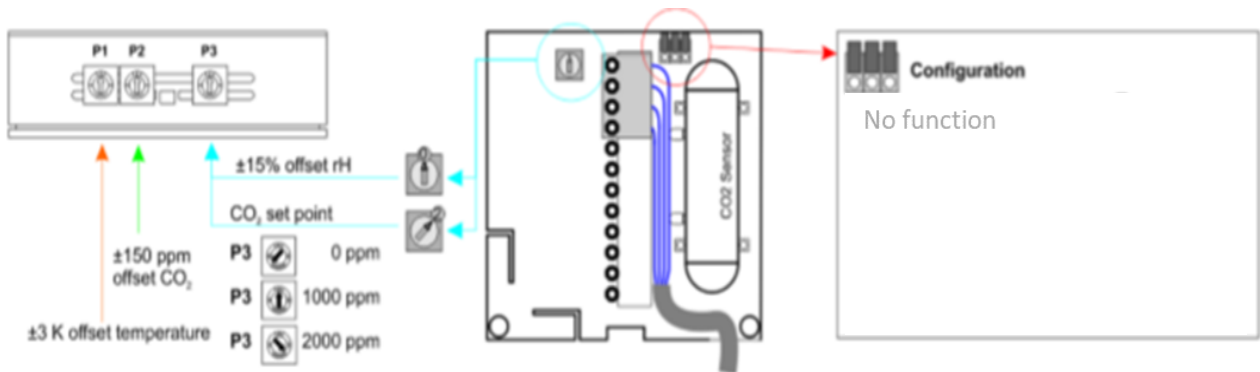
Under normal environmental conditions we recommend a recalibration interval of 2 year to maintain the indicated accuracy.
 Refrain from touching the sensitive sensor. Any touch of the same will result in an expiration of the warranty.
 At high ambient temperatures and high humidity, or when use the sensor in aggressive gases,
 an early recalibration or a change of the sensor can become necessary.
 Such a recalibration or a probable sensor change may not come under the general warranty

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.

Connections & Settings



Connection

Terminal Connection

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|-----|-----|-----------|------------------------|---|---------------------|------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| GND | UB+ | 24V AC/DC | Temperature 0...10V | Air Quality (CO ₂) 0...10V | Humidity 0...10V | n.a. |
| | | | | | | n.a. |

Dimensional Drawing

