

**GSS**  
Gas Sensing Solutions



## Ultra-Low-Power CO<sub>2</sub> sensor

### Fit and forget, fully autonomous operation

The CozIR<sup>®</sup>-A is a low-power NDIR CO<sub>2</sub> sensor using state-of-the-art solid-state LED optical technology. The LED technology enables the CozIR<sup>®</sup>-A to reduce power consumption to levels that make it particularly useful for battery powered or wireless interface applications where power is at a premium.

### About CozIR<sup>®</sup>-A

CozIR<sup>®</sup>-A is a universal sensor option for ambient sensing applications with an easy to use UART digital interface and optional low impedance voltage output for CO<sub>2</sub> measurement readings.

The CozIR<sup>®</sup>-A features built-in auto-calibration, ensuring the sensor exhibits high accuracy over the lifetime of the sensor.

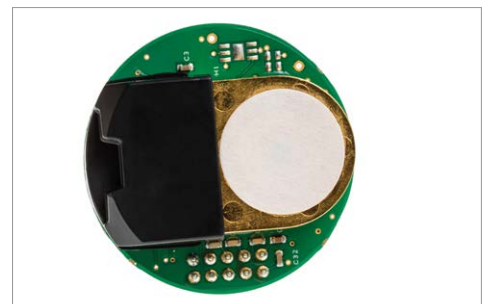
In addition, the CozIR<sup>®</sup>-A has a number of user definable choices to optimise integration into a wide variety of environments including different mechanical mounting options and extended temperature ranges.

### Features

- Ultra-low-power CO<sub>2</sub> sensor
- 30ppm (typ.) measurement accuracy
- Solid state LED optical technology
- Optional Temperature and Relative Humidity sensing
- Optional Analogue (Voltage) output
- UART data interface
- Built-in auto-calibration
- California Building Standards Code, Title 24 compliant

### Applications

- Indoor Air Quality (IAQ)
- IoT and Smart Technology wireless equipment
- Air Quality and HVAC Systems
- Building Management Systems (BMS)
- Demand-Controlled Ventilation (DCV) systems
- Transport
- In-Cabin Air Quality



Rev.l\_062020\_CozIR-A\_engl • Subject to change



## CozIR<sup>®</sup> Series

Further models from our series



**CozIR<sup>®</sup>-Blink**  
Ultra-Low-Power CO<sub>2</sub> sensor with Power Cycling



**CozIR<sup>®</sup>-LP**  
Ultra-Low-Power CO<sub>2</sub> sensor



**CozIR<sup>®</sup>-LP<sup>2</sup>**  
Ultra-Low-Power CO<sub>2</sub> sensor

### CO<sub>2</sub> Sensor Specifications

Measurement Ranges	0-2000ppm, 0-5000ppm, 0- 10000ppm (0-1%)
Accuracy (typ.)	±(30ppm +3% of reading)
Time to 1st Reading	<1.2 seconds
Response Time	<20 Seconds (Diffusion limited)
Sample Method	Solid-state LED NDIR Diffusion

### Electrical and Mechanical Specifications

Measurement Output	UART, Analogue (Optional)
Supply Voltage	3.25V - 5.5V
Power Consumption (typ.)	<3.5mW @ 3.3V
Dimensions and Weight	Ø40.4mm x 11.65mm, 19g - Uncased Ø57mm x 17.25mm, 19g - Cased

### Operating Conditions

Operating Conditions - Temperature	0°C to 50°C (Standard) -25°C to 55°C (Extended)
Operating Conditions - Humidity	0-95% RH, non-condensing
Storage Conditions - Temperature	-40°C to +70°C
Pressure Dependence	500mbar - 1500mbar
Sensor Lifetime	>15 years
Environmental Compliance	RoHS and REACH

### Ordering Information

#### COZIR-A-X-XXX-X

X	Measurement Range
2000	2,000ppm
5000	5,000ppm
1	10,000ppm (1%)
X	Temperature and RH
H	Included
Blank	Not included
X	CO <sub>2</sub> Voltage Output
V	Included
Blank	Not included
X	Temperature Range
E	Extended
Blank	Standard
X	Casing
U	Uncased
X	Cased

Rev.l\_062020\_CozIR-A\_engl • Subject to change

Discover also our further product series

## ExplorIR® Series



Small footprint CO<sub>2</sub> Sensors

## SprintIR® Series



High Speed CO<sub>2</sub> Sensors



HTK Hamburg GmbH

Oehleckerring 32  
22419 Hamburg

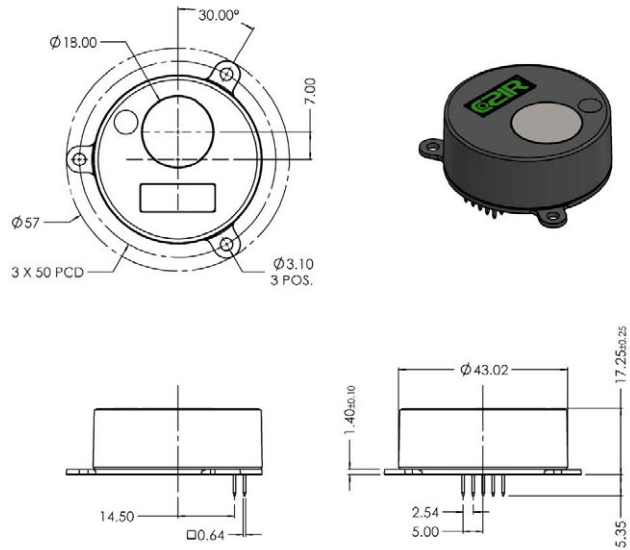
Phone: +49 (0)40 - 600 38 38 - 0  
Fax: +49 (0)40 - 600 38 38 - 99  
info@htk-hamburg.com

Gas Sensing Solutions Ltd.  
60-62 Grayhill Road  
Westfield North Courtyard  
Cumbernauld,  
United Kingdom, G68 9HQ

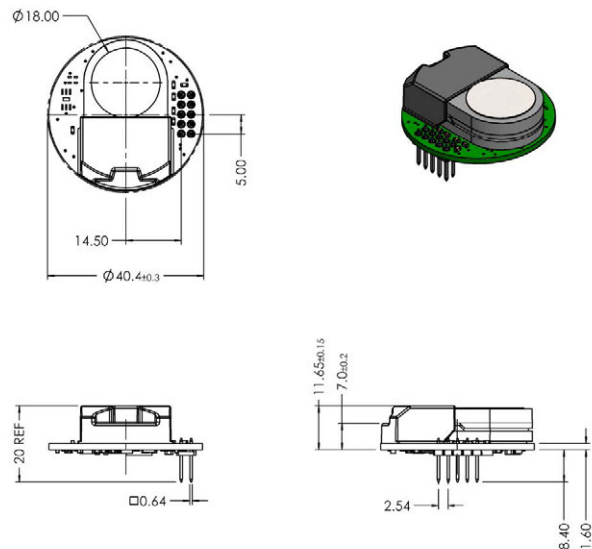
© Copyright 2019 - All contents of this document, in particular Texts, photographs and graphics are protected by copyright. All rights, including reproduction, publication, processing and translation are reserved, HTK Hamburg GmbH. Please contact HTK Hamburg GmbH if you would like to use the contents of this document.

Rev.l\_062020\_CozIR-A\_engl • Subject to change

### Dimension Drawing - CozIR® - A cased



### Dimension Drawing - CozIR® - A uncased



### Pin-Out Description - CozIR® A (Both Types)

Pin	Name	Type	Description
1	GND	Supply	Sensor ground
2	NC	Supply	Do Not Connect
3	VDD	Supply	Sensor supply voltage
4	GND	Supply	Sensor ground
5	Rx_In	Digital Input	UART Receive Input
6	GND	Supply	Sensor ground
7	Tx_Out	Digital Output	UART Transmit Output
8	NITROGEN_ZERO	Digital Input	Set low to initiate a Zero in Nitrogen Calibration Cycle
9	ANALOGUE_OUTPUT	Analogue Output	CO <sub>2</sub> Level (Optional)
10	FRESH_AIR_ZERO	Digital Input	Set low to initiate a Zero in Fresh Air Calibration Cycle