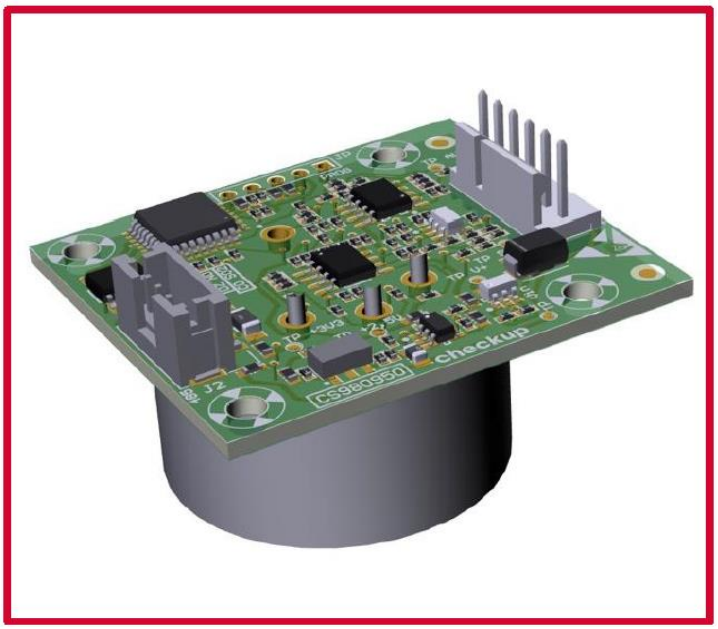
DATA SHEET
AQ7 BOARD

checkup
OBJECTS WITH LIFE INSIDE



KEY FEATURES

AQ7 BASED

Based on Honeywell AQ7 sensors which guarantee high precision and stability of the signal over time even with variations in temperature and humidity.

DIGITAL OUTPUT

The board provides a digital calibrated output in RS485 or I2C (depending on the versions) for an easy integration with control and transmission units.

COMPENSATED

Each board has an integrated compensation algorithm dedicated to the mounted sensor that processes the specific characteristics of the sensor itself, the temperature monitored on the board, the signal of the other sensors (valid for the SO2 version).

ANALOG CONNECTION

The board also provides two analog outputs: a raw output comes directly from the amplification stages and is similar (even in the connector) to the competition solutions for an immediate exchange. The second output is calibrated and compensated.

FACTORY CALIBRATED

The solution comes with factory calibration which guarantees a good level of accuracy at a very competitive price.

PRODUCT APPLICATIONS

- ❑ AQMS – Air Quality Monitoring Station
- ❑ Industrial Environmental monitoring
- ❑ Indoor Air Quality monitoring

DESCRIPTION

The AQ7 board is designed in collaboration with Honeywell to maximize the performance of their sensors, offering high precision and signal stability, even with fluctuations in temperature and humidity. Its form factor ensures compatibility with existing market solutions, integrating digital communication and a compensation algorithm to deliver directly usable PPB measurement data.
The AQ7 board provides a digitally calibrated output in RS485 or I2C (depending on the version), facilitating easy integration with control and transmission units. The integrated compensation algorithm adjusts for the sensor's specific characteristics, temperature, and other sensor signals (for the SO2 version). Additionally, two analog outputs are available: a raw output for easy interchange with competing solutions, and a factory calibrated, compensated output, ensuring accuracy at a competitive price.

TECHNICAL SPECIFICATIONS

SENSOR	RANGE	LOW DET. LIMIT	RESOLUTION
AQ7 – CO	0-20 ppm	40 ppb*	10 ppb*
AQ7 – NO_2	0-1 ppm	5 ppb*	5 ppb*
AQ7 – O_3	0-1 ppm	5 ppb*	5 ppb*
AQ7 – SO_2	0-1 ppm	5 ppb*	2 ppb*

Common specifications of the sensors

Sensor life expectancy:	2 years in fresh air
Temperature range:	-30°C to +50°C

Board specifications

Power supply:	5V DC
Operating temperature:	-30°C to +50°C
Temperature sensors:	Range: -40°C to +85°C Accuracy: ±0.2°C
Analog output 1:	Raw signal, not calibrated
Analog output 2:	0 to 3 Volt, calibrated and compensated
Digital output:	RS485 or I2C
Dimensions:	39.1 x 44.6 x 29 mm with sensor included
Weight:	8.5 gr without sensor
Certifications:	CE, RoHs

* Specifications are based on measurements made with cylinder gases using a flow rate of 500 ml/min and are valid at 20°C, 50 %RH and 1013 mBar. Performance characteristics outline the performance of sensors supplied within the first three months.

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