



## Envitem's E4100 Air Quality Station

Product Datasheet



- **Measures up to four most common pollutants**
- **Basic meteorological variables including humidity, pressure and temperature**
- **Extremely compact, low-cost and elegant design**
- **Low power consumption**
- **Wireless Internet connection (2/3G modem) as an option**
- **Easy integration and open API**
- **RS-485 serial interface for local connectivity (Modbus support)**

Envitem's E4100 revolutionizes measuring air quality. It is a cost effective, compact solution to monitoring air quality and meteorological data.

E4100 is an air quality transmitter that measures up to four most common gaseous pollutants and basic meteorological data of ambient air. The measurement data will be sent wirelessly to a web-based database or locally via a serial interface.

Small and elegantly designed, Envitem's E4100 is excellent for monitoring air quality in urban areas and around industry. It is the first air quality transmitter for ambient air.

The measured pollutant gases include nitrogen monoxide (NO), nitrogen dioxide (NO<sub>2</sub>), sulphur dioxide (SO<sub>2</sub>), hydrogen sulphide (H<sub>2</sub>S), carbon monoxide (CO), ozone (O<sub>3</sub>) and volatile organic compounds (VOCs).

[envitem's.com/go/e4100](http://envitem's.com/go/e4100) 



## Technical specifications

Data protocols	HTTP (open API), SMS, Modbus, ASCII
Serial data interface	RS-485
Console interface	RS-232
2/3G connection for Internet protocols	Quad-band 850/900/1800/1900 MHz GSM/GPRS/EDGE + 2100 MHz UMTS
Power and data connector	Standard 8-pin M12 male
Operating voltage	8 — 30 VDC
Power consumption	Typ. 0.5 W, max. 2 W
Operating environment	-30 — 50 °C, RH 15 — 95 %
Protection class	IP65
Enclosure materials	Anodized aluminium, stainless steel
Dimensions W x H x D	128 x 125 x 128 mm
Weight	690 g (without 2/3G modem)
Warranty	2 years (sensors not included)

## Measurement specifications

Gas	Range	Min. detection	Resolution	Precision	Linearity	Unit
SO <sub>2</sub>	0 — 2	0.005	±0.001	<±1 % FS	<±1 % FS	ppm
NO <sub>2</sub>	0 — 2	0.005	±0.001	<±1 % FS	<±1 % FS	ppm
NO	0 — 2	0.005	±0.001	<±1 % FS	<±1 % FS	ppm
H <sub>2</sub> S	0 — 2	0.005	±0.001	<±1 % FS	<±1 % FS	ppm
CO	0 — 10	0.01	±0.01	<±2 % FS	<±2 % FS	ppm
O <sub>3</sub>	0 — 2	0.005	±0.01	<±3 % FS	<±2 % FS	ppm

Temperature range	-40 — 85 °C
Temperature resolution	0.1 °C
Temperature accuracy	±0.3 °C, repeatability ±0.1 °C
Humidity range	0 — 100 %RH (non-condensing)
Humidity resolution	0.1 %RH
Humidity accuracy	±2 %RH, repeatability ±0.2 %RH
Pressure range	800 — 1100 mbar
Pressure resolution	1 mbar
Pressure accuracy	TBD
Sampling interval	1 — 1440 minutes
Response time	<60 seconds
Factory calibration	1-3 years depending on sensor configuration

Important Information and Disclaimer: All product specifications are subject to change without notice to improve accuracy, function or design or otherwise. As applications of use are outside our control, the information provided is given without legal responsibility. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application.



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## Ordering information

E4100-A Base unit

## Accessories included

Installation cable (2 m), calibration certificate, and user manual.

## Options

- 001 CO sensor
- 002 VOC sensor
- 003 NO sensor
- 004 NO<sub>2</sub> sensor
- 005 SO<sub>2</sub> sensor
- 006 H<sub>2</sub>S sensor
- 007 O<sub>3</sub> sensor
- 015 2/3G modem
- 016 Additional memory card
- 020 Mounting kit
- 021 Installation cable (5 m)
- 022 Installation cable (10 m)
- 025 PC connection cable

## Conformity

EMC: IEC/EN 61326-1, IEC/EN 61000-4-2/3/4/5/6, CISPR 22

GSM/UMTS: FCC 47 parts 15 and 24, EN 301 511, EN 301 489-1/7, EN 60950-1:2006

Reference methods: EN 14211:2005, EN 14626:2005, EN 14625:2005, EN 14212:2005, EN 12341, EN 14907

