# ETL ONE

## MULTI-COMPONENT
## AIR QUALITY MONITOR

**UniTec**
*Innovation in Analysis*

522
370  210

DIMENSIONS (mm)

The ETL One is the new All-In-One air quality monitoring solution designed and manufactured by Unitec for indicative measurement (as defined by European Directive 2008/50/EC).

The ETL One is a multiparametric station equipped with Unitec SENS-IT for continuous gas and dust monitoring with high precision and accuracy, featured by easy use and very low ownership costs. The IP55 case permits easy and direct outdoor installation (no cooling system or air treatment are required!).

The Unitec SENS-IT gas sensors are based on proprietary technology and can monitor continuously gas pollutants in outdoor applications ensuring excellent sensitivity and selectivity (also at ppb levels), with no needs of frequent maintenance or calibration.

Each SENS-IT sensor is specific for a single gas and independently connected to the datalogger with plug-in connector, for easy in-field replacement.

The ETL One is equipped with a fully integrated dust monitoring module based on orthogonal light scattering technology for real-time particulate monitoring (PM10 or PM2.5 or PM1). Alternatively the ETL One can be equipped with external OPC dust module for multi PM simultaneous monitoring (PM10, PM2.5 and PM1). For both solution the ETL One has an automatic autozero calibration system that ensures long-time reliable measurement, reducing drift and maintenance activities.

The built-in datalogger handles all activities, including continuously data acquisition, hourly average storage, dust module automatic daily zero calibration and data transmission. Many options are available: weather stations, GSM modem, UMTS modem (for VPN connection), noise meter, solar panel kit, ecc.

Different software solutions are also available for data download, data export, unit configuration, geolocalization, real-time visualization, ecc.

A mounting kit is always supplied, suitable for any pole diameter.

## FEATURES

- ◆ HIGH QUALITY DATA WITH UNITEC SENS-IT SENSORS
- ◆ GAS PARAMETERS: CO, $NO_2$, $O_3$, $C_6H_6$, $CH_4$, $SO_2$, $H_2S$, $NH_3$, VOC, $CO_2$
- ◆ DUST PARAMETERS: PM10, PM2.5, PM1
- ◆ DIRECT OUTDOOR INSTALLATION
- ◆ EASY TO INSTALL, CONFIGURE AND SET UP
- ◆ LOW PRICE
- ◆ LOW POWER CONSUMPTION
- ◆ LOW MAINTENANCE AND OWNERSHIP COSTS

## APPLICATIONS

- ◆ URBAN AIR QUALITY
- ◆ ROADSTREET POLLUTION
- ◆ INDUSTRIAL AREA AIR QUALITY
- ◆ FENCELINE MONITORING
- ◆ LANDFILL MONITORING

# ETL ONE

| | PARAMETERS | RANGE | PRECISION | RESOLUTION |
|---|---|---|---|---|
| **SENS-IT**<br>(TF-MOS – Thick Film Metal Oxide Semiconductor) | CO | 0.1-80 ppm | 0.2 ppm | 0.1 ppm |
| | $NO_2$ | 10-250 ppb | 10 ppb | 1 ppb |
| | $O_3$ | 10-250 ppb | 10 ppb | 1 ppb |
| | $C_6H_6$ | 0.1-30 ppb | 0.2 ppb | 0.1 ppb |
| | $CH_4$ | 1-1,500 ppm | 5 ppm | 1 ppm |
| **SENS-IT**<br>(EC - Electrochemical Technology) | $NH_3$ | 7-100 ppm | 0.3 ppm | 0.1 ppm |
| | $SO_2$ | 5-10,000 ppb | 20 ppb | 1 ppb |
| | $H_2S$ | 2 -3,000 ppb | 15 ppb | 1 ppb |
| | VOC | 0.6-25 ppm | 0.1 ppm | 0.1 ppm |
| **SENS-IT**<br>(IR - Infrared Technology) | $CO_2$ | 10-5,000 ppm | 50 ppm | 1 ppm |
| **DUST MODULE**<br>(Orthogonal Light Scattering) | PM10 or PM2.5 or PM1 | 1-400 ug/$m^3$ | < 2% f.s. | 1 µg/$m^3$ |
| **DUST MODULE (OPC)** | PM10 and PM2.5 and PM1 | 1-6,000 µg/$m^3$ | < 1% f.s. | 1 µg/$m^3$ |

## GENERAL SPECIFICATIONS

| | |
|---|---|
| **OPERATING CONDITIONS** | -20°C to +50°C<br>10 to 95% RH, non-condensing |
| **DIMENSIONS** | 540 x 710 x 310 mm |
| **WEIGHT** | ~ 15 Kg |
| **EXECUTION** | IP55 – ready for outdoor installation - (no cooling system or air treatment is required) |
| **POWER SUPPLY** | 220 V, 110V, 12V (different power kits available) |
| **POWER CONSUMPTION** | 50-70 W (depends on configuration) |
| **DATA LOGGER** | LCD Display<br>Flash memory<br>Frequency of readings: 1 sec<br>Storage of 60' or 15' averages<br>Output RS232, ASCII string |

## OPTIONS

| | |
|---|---|
| **REMOTE COMMUNICATION** | Modem GSM<br>Modem UMTS with VPN functionalities |
| **WEATHER STATIONS** | Wind direction, wind speed, Temperature, Humidity, Pressure, Rain fall, Solar radiation, UV radiation |
| **SOLAR PANEL KIT** | Solar panels, battery, regulator for 24 hours autonomy. This kit is designed to power an ETL One with up to 5 sensors, modem GSM and meteorological station. |
| **NOISE METER** | Class 1: 60 dB dynamic range |
| **HEATED LINE** | Heated sampling line for dust module (available only with 220V power supply) |
| **SOFTWARE** | @COM3000 (data download, export and unit configuration)<br>ETL BAR (real time visualization)<br>ETL TOTEM (data download, visualization and geolocalization) |