

## TECHNICAL NOTE

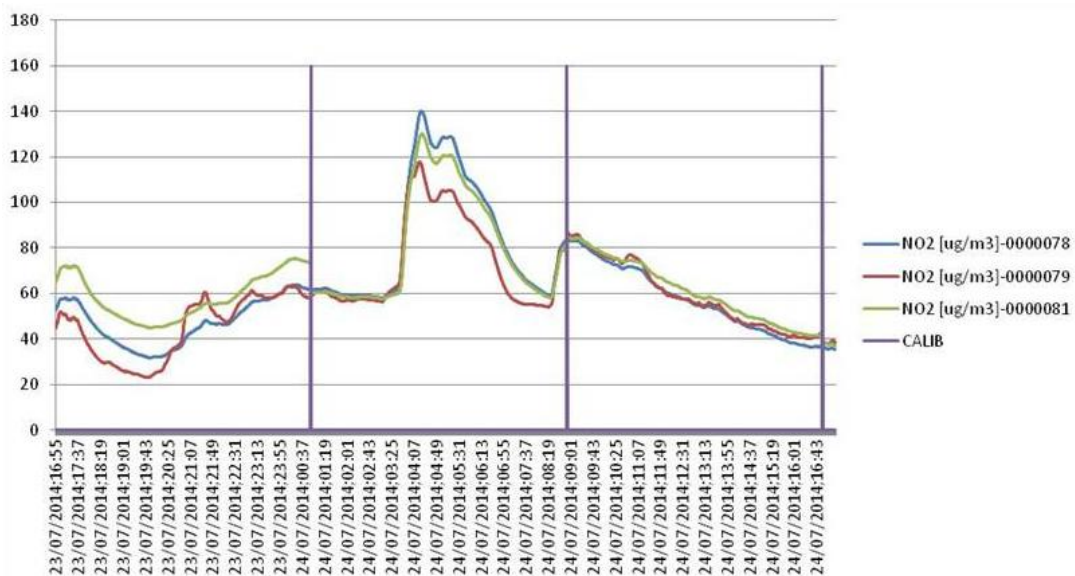
### SENS3000 AND SENS-IT CALIBRATION PROCEDURES

One of the biggest advantage of the ST (Semiconductor Technology) of Unitec SENS3000 and SENS-IT sensors is the long term accuracy and the low drift. It means that the sensors can work continuously in outdoor conditions for months (typically 6-8 months depends on the site) without any kind of maintenance intervention.

After this period Unitec always suggests to the customer to do a factory calibration, in order to ensure another 6-8 months of reliable measurements. In order to have the better maintenance service, Unitec suggest to send back the whole ETL unit. If is not possible or if the customer bought SENS3000 or SENS-IT in OEM version, the single sensor can be shipped (see shipment procedures for details).

The calibration process is a specific procedure developed by Unitec in more than 10 years of experience in field of innovative sensors for air quality monitoring.

The ST SENS-IT sensors calibration is done directly in outdoor conditions to set-up the sensors directly in operative conditions and it is based on a comparison campaign against TÜV certified reference analyzers. The behavior of the sensors is followed daily and it is set up in order to follow the reference analyzer's trend. Setting gain and off-set of the sensors, our technicians bring them to work exactly like the reference, always considering the sensors technical specifications (precision and accuracy). An example of calibration of no. 3 SENS-IT NO2 sensors compared with NO2 chemiluminescence analyser is showed below. The 3 set up intervention are represented by the 3 purple lines.



A filed calibration at the moment is not possible. Nevertheless, with a specific training by us the customer can learn how check and set the basic parameters of the sensors in order to extend the factory calibration intervention to 1 every 12 months. Please contact Unitec at [info@unitec-srl.com](mailto:info@unitec-srl.com) for details