



SONDELTOX are 4-20mA detectors using electrochemical sensors for the detection of toxic gases & O₂. They are compatible with **EUROSONDELCO** and **SIEMENS CC62P** (using interface) and with any other system provided of 4-20mA standard input.

Sondeltox for oxygen provided of backlit LCD display is available.

Available for these gases; Carbon monoxide (CO), Nitrogen dioxide (NO₂), Sulphur dioxide (SO₂), Nitrogen monoxide (NO), Chlorhydric acid (HCl), Hydrogen sulphide (H₂S), Chlorine (Cl₂), Oxygen (O₂).

	MEASUREMENT RANGE (in ppm)	MODEL WITH DISPLAY
CO	0-50, 0-100, 0-200, 0-300* , 0-500, 0-1000, 0-2000	-
NO ₂	0-5, 0-10, 0-20* , 0-30, 0-50, 0-100, 0-200, 0-300	-
SO ₂	0-10, 0-20, 0-30, 0-50, 0-100, 0-200*	-
NO	0-20, 0-30, 0-50, 0-100, 0-200* , 0-300	-
HCl	0-10, 0-20, 0-50, 0-100, 0-200*	-
H ₂ S	0-5, 0-10, 0-20, 0-30, 0-50, 0-100, 0-200* , 0-300	-
Cl ₂	0-5, 0-10, 0-20, 0-30, 0-50, 0-100, 0-200*	-
O ₂	0-25 (in %)	Yes
H ₂	0-200, 0-300, 0-500, 0-1000, 0-2000, 0-20.000, 0-50.000	-

* Bottom of scale for **EUROSONDELCO** and **SIEMENS CC62P**.

TECHNICAL CHARACTERISTICS (under 20°C / 50% RH / 1013 mBar conditions)

	CO	NO ₂	SO ₂	NO	HCl	H ₂ S	O ₂	Cl ₂	H ₂
Power supply / Consumption	From 10 to 35V DC / 21mA max.								
Resolution	0.5 ppm	0.1 ppm	0.1 ppm	0.5 ppm	0.5 ppm	0.25 ppm	0.1%	0.1 ppm	2 ppm
Measurement Range	0-2000ppm	0-300ppm	0-200ppm	0-300ppm	0-200ppm	0-300ppm	0-25%	0-200ppm	0-200 ppm
Repeatability	1% F.S.	2% F.S.	2% F.S.	2% F.S.	2% F.S.	1% F.S.	1% F.S.	2% F.S.	2% F.S.
Time of response	T90<30 s	T90<35 s	T90<15 s	T90<10 s	T90<120 s (typical 100)	T90<35 s	T90<15 s	T90<60 s	T90<30 s
Temperature range	-20°C to +50°C								
Pressure range	Atmospheric ± 10%								
Pressure coefficient	0,020 ± 0,008% signal/mBar	without data	without data	0.016% signal/mBar	without data	0,008 ± 0.002% signal/mBar	0.02% signal/mBar	without data	0,009 ± 0.003% signal/mBar
Enclosure	IP65								
Relative humidity range	From 15 to 90% without condensation								
Maximum zero change (+20 °C to +40 °C)	9ppm	0.2ppm	0.1ppm	9ppm	1,5 ppm	2ppm	9ppm	0.2ppm	10ppm
Output linearity	Linear in full range								
Output drift	<5% / year	<2% / month	<2% / month	<2% / month	<2% / month	<2% / month	<5% / year	<2% / month	<2% / month
Output impedance	4MΩ	4MΩ	4MΩ	4MΩ	4MΩ	4MΩ	15MΩ	4MΩ	4MΩ
Expected operation life	3 years on air	2 years on air	2 years on air	3 years on air	2 years on air	2 years on air	2 years at 20% O ₂	2 years on air	2 years on air
Backlit LCD Display	Optional								
Storage time (months)	6	6	6	6	6	6	2	6	6
Storage temperature	0-20°C								
Coverage area (m ²) Approx	300	200	200	150	200	150	200	100	100
Installation height -from floor- (cm)	170-200	100	30/40	100	100	100	170-200	100	30/40 cm from ceiling
Measurements (mm) Weight (gr) Approx	125 x 150 x 63 - 300								

INTERFERRING GASES

SONDELTOX has been tested with several commonly cross-interfering gases and the results are expressed in the table below (in ppm):

Interfering Gases	SONDELTOX							
	CO	H ₂ S	SO ₂	NO	NO ₂	Cl ₂	HCl	H ₂
CO	-	300 / <6	300 / <3	300 / 0	300 / 0	300 / 0	300 / <3	300 / <50
H ₂ S	5 / >1	-	15 / ≈ 20	15 / ≈ 5	15 / ≈ -3	15 / ≈ 1,5	15 / ≈ 10	15 / <3
SO ₂	5 / 0	5 / <1	-	5 / 0	5 / 0	5 / 0	5 / ≈ 2	5 / 0
NO	35 / <3,5	35 / 0	35 / 0	-	35 / 0	35 / 0	35 / 0	35 / ≈ 10
NO ₂	5 / 0	5 / ≈ -1	5 / ≈ 6	100 / 0	-	5 / ≈ 5	5 / 0	5 / 0
Cl ₂	1 / 0	1 / ≈ 0,1	1 / ≈ 0,5	1 / 0	1 / ≈ 1X	-	1 / ≈ 0	1 / 0
H ₂	100 / <60	100 / <0,2	100 / 0	100 / 0	100 / 0	100 / 0	100 / 0,5	-
HCN	10 / 0	10 / 0	10 / ≈ 5	10 / 0	10 / 0	10 / 0	10 / 0	10 / ≈ 3
HCl	5 / 0	5 / 0	5 / 0	5 / <1	5 / 0	5 / 0	-	5 / 0
Ethylene	100 / <75	100 / 0	100 / 0	100 / 0	100 / 0	100 / 0	100 / 0	100 / ≈ 80

SONDELTOX CO is provided with a filter to minimize H₂S influence, SO₂ and other interfering gases.

CONNECTION

Use 2 x 1 mm² shield cable for power supply.

GREEN Cable:

Zeroing (multimeter positive borne)

YELLOW Cable:

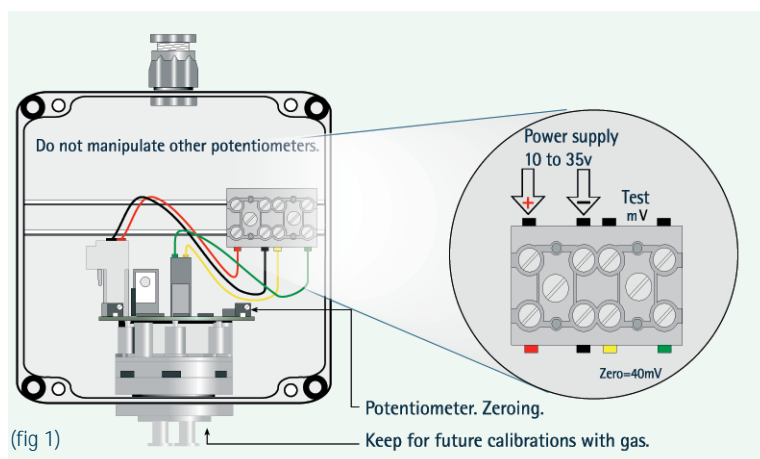
Zeroing (multimeter negative borne)

BLACK Cable:

Negative of power supply. 4-20mA Output.

RED Cable:

Positive of power supply. 4-20mA Output.



ZEROING / CALIBRATION GAS

For **SONDELTOX** detectors zeroing –except for **SONDELTOX O₂** - please proceed as follows:

- 1- Cover the detector during 15 min.
- 2.-Place a multimeter at the scale of 200mV, in parallel, with the yellow and green cable (fig 1).
- 3- Adjust through the ZERO potentiometer of the detector circuit until a reading of 40mV (4mA) is reached.

4- Remove the detector plug. With the plug provided and keep it for future testings.

For **SONDELTOX O₂** zeroing, adjust the potentiometer until obtaining a measurement of 178mV, equivalent to 20.9% of O₂, in a wide and well ventilated room.

The detectors recalibration with gas must be carried out at our laboratories.

GUARANTEE

SONDELTOX is guaranteed against any manufacturing defect for 1 year from the date of purchase. The guarantee covers the total repair of the equipment and will only be valid if the equipment has been installed by a competent person and following the specifications in this manual. Negligent use or installation will exempt **DURAN ELECTRONICA** from its responsibilities for damage caused to property and/or people and from the fulfilment of the terms of this guarantee.

The guarantee does not cover:

- Installations, periodical checks and maintenance.

- Repairs caused by improper handling, inappropriate use, negligence, overload, insufficient power supply or neglecting the equipment, voltage shorts, defective installations and other external causes.

- Repairs or adjustments carried out by personnel not authorised by **DURAN ELECTRÓNICA**.

- The equipment transport costs.

DURAN ELECTRÓNICA reserves the right to carry out improvements or to include modifications in this manual without prior notice.

