



# Critical Environment Technologies

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## ATW SERIES SPECIFICATION SHEET

### TWO WIRE ANALOG TRANSMITTERS WITH ELECTROCHEMICAL SENSORS

- Dimensions:**
- |   |  |
|---|--|
| <b>Standard</b>   | <b>Optional</b>                                    |
| General purpose enclosure (standard)                        | Water/Dust tight enclosure (P/N suffix "W")        |
| Size: 4.4" (113mm) X 6.5" (165mm) X 2.5" (65mm)             | Size: 4.9" (125 mm) X 4.9" (125 mm) X 2.9" (75 mm) |
| Weight: 9 ounce (255 grams)                                 | Weight: 12 ounces (340 grams)                      |
| * Optional duct sampling kits available for duct monitoring |  |
- Construction:** PVC (general purpose with hinged, secured door)      Polycarbonate (water tight with hinged, secured door)
- Sensors:** Type: electrochemical  
Calibration: one to two times per year (application dependent)
- Calibration:** Automated:
- 1) Span gas concentration value: Move jumper to correct position and set value
  - 2) Null adjustment: Move jumper to correct position, flow clean air. Circuit automatically adjusts null value for accuracy
  - 3) Span adjustment: Move jumper to correct position, flow span gas. Circuit automatically adjusts span value for accuracy
- Note:** Firmware has safety corrections that prevent null adjustment in background gas and span adjusting with clean air or wrong gas concentration
- System Power:** 12 to 28 VDC
- System Circuit:** Microprocessor based, user configurable
- Signal:** 4 - 20 mA loop, linear over entire sensor range
- Visual Indicators:** One green LED (solid=normal operation, slow flashing=warm-up period, 1<sup>st</sup> flash sequence=**sensor self-test**, 2<sup>nd</sup> flash sequence=calibration function, 3<sup>rd</sup> flash sequence=fault condition)
- Fusing:** Automatic resetting thermal overload fuse (reset capabilities to 500 times)
- Wiring:** 2-conductor, 18 - 20 gauge shielded
- Notes:**
- 1) Never install gas detection sensors in the direct path of moving air, such as exhaust fans, make-up air fans, elevator shafts, ramps, ducts, etc. For duct applications use duct kit.
  - 2) If vandalism is a concern, heavy metal (16 gauge) transmitter guards are available. They are easily installed over the transmitters.

SENSOR TYPE (GAS)	STD. RANGE	ESTIMATED LIFE SPAN	TRANSMITTER RESOLUTION	OPERATING TEMPERATURE	OPERATING HUMIDITY	MOUNTING HEIGHT	CROSS SENSITIVITY
Carbon Monoxide (CO)	0-200 ppm	5 years "plus"	1 ppm	-20 to +40C	10% to 90% NC	4' to 6' from floor	H2, CO2 high concentrations
Nitrogen Dioxide (NO2)	0-5.0 ppm	3 years "plus"	0.1 ppm	-30 to +50C	15% to 90% NC	4' to 6' from floor	Cl2, (NO, SO2=minimal)
Oxygen (O2)	0-25.0% volume	2 years	0.1% volume	-30 to +50C	5% to 95% NC	4' to 6' from floor	CO2 (very high)
Nitric Oxide (NO)	0-100 ppm	3 years "plus"	1 ppm	-30 to +50C	15% to 90% NC	4' to 6' from floor	NO2, SO2, Cl2, H2S,
Chlorine (Cl2)	0-5.0 ppm	2-3 years	0.1 ppm	-20 to +50C	15% to 90% NC	6" from floor	
Ozone (O3)	0-2.0 ppm	2 years	0.1 ppm	-30 to +50C	15% to 90% NC	6" from floor	NO2, Cl2, H2S
Ammonia (NH3)	0-500 ppm	2 years *	1 ppm	-40 to +40C	15% to 90% NC	On ceiling	CO, H2S, NO, H2
Hydrogen (H2)	0-2000 ppm	2-3 years	1 ppm	-20 to +50C	15% to 90% NC	On ceiling	
Hydrogen Sulphide (H2S)	0-50 ppm	3 years	0.5 ppm	-30 to +50C	15% to 90% NC	2' to 6' from floor application dep.	SO2, NO, CO, (Cl2, NO2="-")
Sulphur Dioxide (SO2)	0-20 ppm	2 years	1 ppm	-30 to +50C	15% to 90% NC	6" from floor	C2H4, Cl2, NO2, NO
Ethylene Oxide (ETO)	0-20 ppm	2 years	0.1 ppm	-20 to +50C	15% to 90% NC	6" from floor, application dep.	CO, Toluene, MEK, Ethanol

\* Sensor life span will be reduced with constant background exposure or over exposure (very high concentration) of target gas.