

# MIL-RAM TECHNOLOGY

## TOX-BOX<sup>®</sup>

### Chlorine Gas Portable Instrument Water & Waste Water Treatment

The TOX-BOX Single Gas Portable Instrument provides high resolution measurement (16-bit analog-to-digital conversion) of Mil-Ram's unique *patented* electrochemical chlorine sensor with corresponding meter indication (16 character x 2 line LCD display) and local/external alarm function. The TOX-BOX is housed in a rugged, weather-proof plastic instrument case for dependable service under demanding field conditions. The instrument is easily configured through the operator interface consisting of front panel push button switches and a large backlit LCD display (no dip switches). Low, mid, high and fault relays can be used to activate external alarms and/or switch equipment on/off. The alarm relays are easily configured for non-latching/latching, non-energized/energized and 0-255 sec. time delay. The alarm relays can be configured to trigger with increasing or decreasing meter readings. Software filtering can be enabled at various levels to offer increased stability in noisy electrical environments. A regenerated 4-20mA signal and/or Modbus serial interface (optional) provides reliable connection to a data logger. Continuous diagnostics further ensures system integrity and long-term stable operation and performance.



### Features

- ◆ *no false alarms* patented electrochemical sensor technology
- ◆ No *zero* drift, 0.1 ppm resolution
- ◆ On-board pump continuously draws gas sample past sensor
- ◆ Rechargeable 12 VDC sealed lead-acid battery: >24 hrs./charge
- ◆ Rugged, weather-proof, portable instrument enclosure
- ◆ Backlit LCD display and push button switches
- ◆ Alarm Relays: Fully programmable
- ◆ Local Alarms: Buzzer and LED indicators
- ◆ Regenerated 4-20mA Output
- ◆ Modbus RTU (optional)
- ◆ Low Battery Indicator
- ◆ Buzzer Silence Mode
- ◆ Alarm Disable Mode
- ◆ Digital Filter
- ◆ Continuous Diagnostics
- ◆ Flash Programming

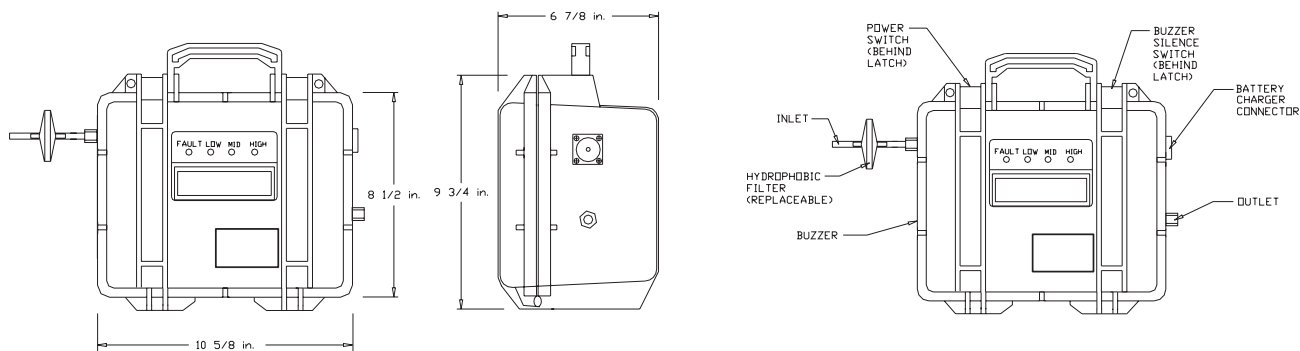
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# Specifications

Instrument Type	Single Gas Portable
Part No.	01-2001TBS-01
Sensor	Mil-Ram electrochemical chlorine sensor (other gas sensors available)
Range	0.0-5.0 ppm; 0.0-10.0 ppm; 0.0-20.0 ppm; 0-50 ppm; 0-100 ppm; 0-200 ppm (specify range when ordering)
Flow Rate	Up to 2 SCFH
Power Source	Rechargeable lead-acid battery, 12 VDC
Power Rating	12 VDC @ 2.1W
Battery Charger	110 VAC operation
Battery Life	>24 hours continuous/charge (most sensors)
Operator Interface	Back-lit LCD display (16 character x 2 lines) 4 push button switches (no dip switches) All parameters front panel programmable
Alarm Levels	Low, mid, high, and fault
Local Alarms	Integral Buzzer, LED's, LCD messages <i>Low Alarm:</i> buzzer pulses, green LED <i>Mid Alarm:</i> buzzer pulses faster, yellow LED <i>High Alarm:</i> buzzer continuous, red LED <i>Fault Alarm:</i> buzzer continuous, red LED All alarm conditions accompanied by LCD messages

Alarm Relays	Low, mid, high and fault SPST, 10 A @ 28 VDC, resistive 12 A @ 120 VAC, resistive
Relay Function	Front-Panel programmable for non-latching/latching, non-energized/energized, 0-255 sec. time delay and alarm on increasing/decreasing reading. Fault relay factory set: non-latching, normally non-energized and 0 sec. time delay
Digital Filter	Selectable levels of digital filtering for increased stability in noisy electrical environments
Analog Output	Regenerated 4-20mA output (16-bit resolution) for connection to data logger or chart recorder
Serial Interface (optional)	Modbus RTU protocol
Operating Temp.	-20°C to +50°C -4°F to +122°F
Rel. Humidity	5-95% non-condensing
Enclosure Type	Plastic-ultra high impact structural copolymer, neoprene o-ring, dust/water/chemical/corrosion resistant. Colors: yellow, orange, or black
Enclosure Dimensions	10 5/8 in. W x 9 3/4 in. H x 6 7/8 in. D
Options	RS-485 Modbus RTU, 2 or 4-wire External Alarm Station 4-20mA Data Logger Calibration Kits Battery Charger Continuous Operation Adapter

Specifications subject to change without notice



**Mil-Ram Technology, Inc.**  
Patented Technology  
*no false alarms*

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