



# Portable Gas Monitor

## Thermo Electron Innova Series

Thermo Electron's Innova Series of portable gas monitors are designed to protect workers from hazardous gases in confined spaces and other industrial work sites. The Innova features a powerful built-in pump, rugged electronics for the harshest conditions, simple operation, quick calibration, and robust sensors for

### Innova ST™ - One, two, three, or four gases

This unit can be configured to monitor up to four gases in several combinations, including the detection of hydrocarbons in the % Vol, % LEL, or ppm range, oxygen content, and a choice of one or two toxics.

- Monitors hydrocarbons in LEL or ppm ranges
- Convenient top-mounted switches make operation and calibration simple
- Easy replacement of batteries and sensors
- One-button calibration



### Innova FV™ - Fuel Vapor

Innova FV is designed to measure combustible fuel vapors in aircraft wing tanks and fuel storage areas.

- Extra sensitive ppm combustible range (0-1,000 ppm) in 10 ppm increments
- Humidity resistant, combustible sensor
- Calibrated with hexane to represent fuel vapors
- Dual mode operation can distinguish between methane or natural gas and other volatile combustibles

### Innova XT™ - Transformer

The Innova XT tests for the presence of combustible gases in the inert headspace of power transformers.

- Detection in ppm or LEL is standard
- Significant cost savings over dissolved gas analysis (DGA)
- All necessary accessories (dilution fitting, probe, and tedlar bag) come standard with each unit

### Innova LS™ - Land Surveyor

The Innova LS is designed to test for methane and other gases. This multi-gas monitor detects methane in the ppm, % LEL, and % Vol. ranges, oxygen, and one toxic gas (either carbon monoxide or hydrogen sulfide).

- Monitoring of methane in two optional range sets
- Autorange adjusts to the correct range as methane concentrations increase, allowing hands-free operation

### Innova SV™ - Soil Vapor

The Innova SV is designed for applications such as soil remediation and bore hole monitoring. Designed to detect total hydrocarbons (including methane) in percent LEL or ppm.

- Dual mode operation can distinguish between methane or natural gas and other volatile combustibles
- Extra sensitive ppm combustible range (0-1,000 ppm) in 10 ppm increments
- Humidity resistant combustible sensor is not affected by changes in relative humidity (RH)



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## Thermo Electron Innova Series Specifications

### Sampling Method

Sample-draw, internal pump

### Response Time

- 90% in 30 seconds
- 90% in 50 seconds (HCN)
- 90% in 60 seconds (NH3)

### Accuracy

- LEL: ±5% of reading ppm, Cl<sub>2</sub>, CO, HCN, H<sub>2</sub>S, NH<sub>3</sub>, NO, NO<sub>2</sub>, PH<sub>3</sub>, SO<sub>2</sub>, ±10% of reading
- O<sub>2</sub>: ±0.5% Vol.
- % by Vol. CH<sub>4</sub> ±10% of reading

### Repeatability

- LEL: ±2% of reading ppm, Cl<sub>2</sub>, CO, HCN, H<sub>2</sub>S, NH<sub>3</sub>, NO, NO<sub>2</sub>, PH<sub>3</sub>, SO<sub>2</sub>: 1% by Vol. CH<sub>4</sub> ±5% of reading
- O<sub>2</sub>: ±0.2% Vol.

### Operating Temperature

-4°F to 113°F (-20°C to 45°C)

### Humidity Range

0 to 95% RH, non-condensing

### Alarms

- User defined, programmable alarm levels
- Latching or self-resetting modes
- Low battery, low flow, or sensor failure
- Two levels of alarm with audible & visual indication to warn of unsafe gas levels

### LCD Display

- Real-time gas concentrations
- Date & time
- Battery capacity
- Alarm set points
- Back light on demand
- TWA, STEL, minimum & maximum readings

### Power Sources

Four "D" alkaline or NiCd batteries

### Battery Life (20°C/68°F)

Alkaline: 24 hours at 68°F (20°C)

NiCd: 12 hours at 68°F (20°C)

### Dimensions

10" L x 6" H x 5" W (254 mm x 152 mm x 127 mm)

### Weight

Approximately 5 lbs (2.25 kg)

### Casing Materials

High impact, chemical, and RF resistant Xenoy® (polycarbonate-polyester) plastic

### Splash Resistance

Water resistant, gasketed housing

### Approvals

- Certified intrinsically safe for Class I, Groups A, B, C, D to US and Canadian standards
- Labeled Certified, EEx ia IIC T4 hazardous locations

### Warranty

- One year (materials and workmanship)

Gas	Formula	Standard Range	ST	FV	LS	SV	XT
Ammonia	NH <sub>3</sub>	0 to 100 ppm in 1 ppm increments	X				
Carbon monoxide	CO	0-300 ppm in 1 ppm increments	X		X		
Chlorine	Cl <sub>2</sub>	0 to 10.0 ppm in 0.1 ppm increments	X				
Combustible	HC	0 to 100% LEL in 1% increments	X	X	X	X	X
		0 to 1,000 ppm in 10 ppm increments		X		X	
		1 to 100% Vol. in 1% increments			X		X
		0 to 10,000 ppm in 20 ppm increments	X		X		
Hydrogen cyanide	HCN	0 to 30 ppm in 1 ppm increments	X				
Hydrogen sulfide	H <sub>2</sub> S	0 to 200 ppm in 1 ppm increments	X		X		
Methane	CH <sub>4</sub>	0 to 5% Vol. in 0.1% increments (specify range with order)	X		X		
		0 to 100% Vol. in 1% increments			X		
		0 to 10,000 ppm in 20 ppm increments	X		X		
		0 to 100% LEL in 1% increments	X		X		
Nitric oxide	NO	0 to 100 ppm in 1 ppm increments	X				
Nitrogen dioxide	NO <sub>2</sub>	0 to 10.0 ppm in 0.1 ppm increments	X				
Oxygen	O <sub>2</sub>	0 to 30.0% Vol in 0.1% increments	X	X	X		X
Phosphine	PH <sub>3</sub>	0 to 3.00 ppm in 0.1 ppm increments	X				
Sulfur dioxide	SO <sub>2</sub>	0 to 10.0 ppm in 0.1 ppm increments	X				



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