

# STATIC LEVEL MONITORING SYSTEMS

Model 621  
Model 624

Electrostatic monitoring systems in single and multiple channel configurations to warn of excessive static charge build-up in manufacturing and handling processes

## Features:

- 1- 4 Channels
- Monitors magnitude & polarity
- Static event configurations
- Autoranging
- Multicolor LED bar graph
- Available ranges:  
5/50kV  
500/5000V
- Non-contacting vibrating reed sensors
- Air purge
- 4- 20ma &  $\pm 1V$  signal outputs

## Applications:

Many manufacturing and handling applications are adversely affected by electrostatic charge build-up. It can cause disruptions in the process or create a hazardous condition when powders, solvents and gases are involved.

The ETS Models 621 and 624 Static Level Monitoring Systems continuously monitor the process and when levels exceed a preset threshold visual, audible and or countermeasures are activated. The Monitors can be connected to existing plant computer control systems via the 4-20ma or  $\pm 1V$  signal outputs.



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## Description:

Both Models 621 and 624 consist of a Control unit and sealed sensor(s) connected by standard 20' (6m) cable(s) with locking 5-pin DIN connector. The magnitude and polarity of the static charge is displayed on multicolor 10-digit LED bar graph display(s). Bright LED indicators provide visual alarm(s) in addition to activating and latching Form-C relay(s) that are reset either manually by the ALARM RESET button on the Control unit or remotely. The 4-20ma and  $\pm 1V$  output signals provide recording, data logging or connection to a computer via an appropriate A-D interface capability.

Standard system sensitivity is  $\pm 5/50kV$  at 2" (51mm) sensor to object spacing. Sensitivity of 500/5000V at 1" (25mm) is available as an option.

The non-contacting chopper stabilized sensor is configured as a charged plate detector. The charged plate detector configuration has the sensor installed inside a sealed housing that measures the charge induced onto an isolated detector plate enabling measurements in hostile or contained environments. The charged plate detector sensor, shown in the figure, consists of



of an aluminum right angle electrical enclosure that incorporates the sensor and front-end electronics. This allows the sensor to be placed up to 100' (30m) away from the Control unit.

To meet applicable hazardous locations requirements, the sensor supports 1/8" NPT air purge fittings. If required, the user must determine if intrinsically safe barriers can be used. Custom sensor configurations enable the Monitors to measure virtually any liquid, gas, solid, or moving web process.

**Model 621:** A single channel monitor with a one level, 10-step adjustable alarm threshold. Unit is housed in a die cast aluminum enclosure.

**Model 624:** A 1-4 channel monitor features continuously adjustable dual level alarms for each channel. Additional channels (4 max) can be added at a later date. Enclosure is polycarbonate.

## Specifications:

|                              | <b>Model 621</b>   | <b>Model 624</b>                          |
|------------------------------|--|---|
| <b>Channels:</b>             | Single   | Up to 4                                   |
| <b>Sensor:</b>               | Vibrating Reed, Charged Plate Configuration  |   |
| <b>Sensitivity:</b>          | Auto-ranging $\pm 5/50kV$ @ 2" (51mm), std.; $\pm 500/5000V$ @ 1" (25mm), optional |   |
| <b>Accuracy:</b>             | $\pm 10\%$   |   |
| <b>Resolution:</b>           | 500/5000V, std., 50/500V optional  |   |
| <b>Static Level Display:</b> | 10-digit, multicolor, 3mm LED bar graph  |   |
| <b>Alarm Out:</b>            |  |   |
| Indicators:                  | 7mm Red LED  | Lower, 3mm Yellow LED; Upper, 3mm Red LED |
| External:                    | Single pole Form-C Relay, 10A @ 250VAC, 10A @ 30VDC                                |   |
| <b>Signal Out:</b>           | $\pm 1.0V$ and 4-20ma Full Scale   |   |
| <b>Power:</b>                | 115/240VAC, 50/60Hz  | 90-260VAC, 50/60Hz                        |
| <b>Dimensions:</b>           |  |   |
| Sensor [size/weight]:        | 5"Lx1.4"Wx3"H (127x60x76mm)/8.1oz (230gm)  |   |
| Enclosure:                   | 5.5"Wx5.5"Hx2.75"D (140x140x699mm)   | 8"Wx8.375"Hx6.25"D (203x213x159mm)        |
| <b>Warranty:</b>             | One (1) Year   |   |

*Specifications subject to change without notice*