



## Model 43-40 Series

### Alpha Air Proportional Detector

Long term reputation in the medical industry.

Assurance we will offer competitive pricing.

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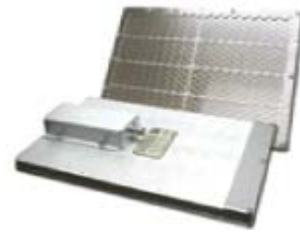
One Stop.

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can do it all!

**Indicated Use:** Alpha survey  
**Working Environment:** Splashproof shields and desiccant vented chamber for outdoor use  
**Window:** 0.4 mg/cm<sup>2</sup> aluminized mylar  
**Efficiency (4pi):** 10%<sup>-239Pu</sup>  
**Background:** 3 cpm or less  
**Suggested Instruments:** Models 12, 16, 18, 2000, 2200, 2221, 2241, 2350  
**Operating Voltage:** Altitude Sensitive:  
 Sea Level - 2050 volts; 2000 feet - 2000 volts;  
 5000 feet - 1925 volts; 7000 feet - 1875 volts  
**Counter Threshold Setting:** 2 mV  
**Temperature Range:** -4° F to 122° F;  
 (-20° C to 50° C) May be certified to 150° F.

	Active Window Area (cm <sup>2</sup> )	Open Window Area (cm <sup>2</sup> )	Chamber Depth (inches)	Screen % Open	Overall Height (inches)	Overall Width (inches)	Overall Length (inches)	Overall Weight (lbs)
43-40	79	52.4	0.25	66.0	0.44	2.5	9	0.83
43-40-1	144.8	110.8	0.25	76.5	0.44	3.51	9.28	1.4
43-40-2	239	188	0.25	79.1	4	4.2	9	2.5
43-40-3	320	253	0.25	65.0	4	5.5	9	3.5
43-40-4	805	625.7	0.25	77.7	1.21	9.78	14.56	7.1
43-40-5	132.3	128.9	0.25	97.5	0.95	5.04	13.03	1.5
43-40-6	88.9	87.6	0.25	98.5	0.38	5.03	9.02	0.85
43-40-7	135.3	112.9	0.25	83.4	2.5	3.5	8.5	1.2



Ludlum Measurements, Inc. manufactures many different types of detectors to measure alpha, beta, gamma, and neutron radiation.

**Proportional Detectors** are similar to GM in that they utilize an electric field to produce a signal when radiation ionizes a neutral gas molecule. Depending on the construction they can be used to detect alpha, beta, gamma, or neutron radiation. Like GM detectors they are inexpensive and easy to use, but they are also capable of energy discrimination. Drawbacks to this type of detector are the fragility of the windows, altitude dependence, and a constant need for gas replenishment (excluding sealed gas proportional tubes and air proportionals).

#### Common Specifications for all Detectors:

**Connector:** Series "C" (others available)  
**Construction:** Aluminum housing with beige powder coat paint  
**Temperature Range:** -4° F to 122° F (-20° C to 50° C). May be certified for operation from -40° F to 150° F (-40° C to 65° C).

*Note: All efficiencies and sensitivities are typical and different detectors may vary.*

