## WIDE RANGE ION CHAMBER AREA MONITOR

Model ~ FIL-9DP

### FEATURES:

- ON-LINE REAL-TIME MONITORING ALL PLUG-IN MODULAR
- BETA, GAMMA DETECTION
- LAM-10D-IC RATEMETER
- AC POWER OR RECHARGEABLE BATTERY BACK-UP WITH BUILT-IN CHARGER
- WALL MOUNT OR BENCH TOP
- SINGLE OR MULTI-CHANNEL
- ION CHAMBER FOR EXCELLENT ENERGY RESPONSE
- LOCAL OR REMOTE MONITORING
- HIGH LEVEL ALARM, SOLID STATE RELAY, NON-CONTACTING
- RS-232 COMPUTER INTERFACE
- MICROPROCESSOR BASED DATA MEASUREMENT AND DISPLAY



LAM-10D -IC RATEMETER IP64

#### **APPLICATION:**

Area monitor for use in and around nuclear reactors, hot cells, irradiators and other facilities handling radioactive materials or X-rays.

#### **DESCRIPTION:**

The FIL-9DP Wide Range Area Radiation Monitor incorporates:

- Digital Alarm Ratemeter MODEL ~ LAM-10D-IC
- Alarm
- Electrometer & Reliable Ion Chamber.
- Ion Chamber and circuit design prevent the system readings from falling even in very high fields.
- Front panel controls allow the alarm set point to be displayed.
- Alarm activation produces flashing red light on front panel and piercing intermittent 2000Hz tone.
- Operated by AC mains or by rechargeable batteries.
- Batteries are automatically put in trickle charge mode when LAM-10D is plugged into AC.







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SPECIFICATIONS:	
Range:	FIL-9DP: 0.1 - 10,000 mR/h (5 decades) is standard.
	<b>OPTIONAL:</b> 0.01 mR/h – 1R/h ( $0.1\mu$ Sv/h – 10 mSv/h)
A	Range systems offer any 3 or 5 consecutive decades from 0.1 mR/n to 10 R/n.
Accuracy:	+/- 10% of decade
Detector:	Air equivalent ion chamber.
	Standard systems use Model IC-2 (Gamma) or Model IC-1 (Beta-Gamma).
	Both models have graphite lined phenolic walls and an active free air volume of 2 liters.
	<b>Optional</b> high range systems use smaller chambers. Detector is supplied with 8 ft. cable.
Detector Response:	
Gamma Energy:	<b>IC-1</b> is thin wall ion chamber, sensitive down to 2 KeV; energy independent (15%) 4 KeV to 6 MeV.
	<b>IC-2</b> is a solid wall ion chamber, sensitive down to 10 KeV; energy independent (15%) 20 KeV to 7 MeV.
Beta Energy:	Sensitive down to 0.15 MeV; energy independent (25%) 0.4 MeV to 7 MeV (IC-1 ONLY).
Environment:	Operating range between 22° F - 149° F (-30° C - 65° C)
	Drift less than 0.4% per °C at room temperature.
	RH 0-95% non-condensing.
ELECTRONICS:	
Model:	Standard LAM-10D-IC RATEMETER.
	OPTIONAL: FM-9W-HUB for central data access from multiple instrument locations
Digital Display:	Length = 6 digit rate, 8 digit total dose Other meter scale markings are available.
Engineering Units:	User can input correct conversion factor and change to any units.
Controls:	Front Panel: On-Off, Alarm-mute, Rate, Integrate, Reset.
Alarm:	2000 Hz audio tone with audio "mute" switch + RED LIGHT, High current relay. 0-100% of full scale.
Serial Output:	Two-way RS-232 standard, Ethernet optional.
Computer Interface:	RS-232 standard, <b>OPTIONAL:</b> USB
Power:	115-125 volts, 50-60 Hz (220 V optional)
Battery Back-Up:	Lithium Ion Battery Pack with built-in charger.
Battery Life:	100 Hours in Non-Alarm Status; 18 Hours in Alarm Status
Mounting:	Wall or bench top mount for electronics and detector
Construction:	Rugged and splash-proof case.
Weight:	3 lbs. (1.4kg) including batteries and hardware, excluding probe.
OPTIONS:	
• Mu	Iltiple Channel Systems. • Remote Meter Readout with Alarm
• Rei	mote Alarm-Flasher-Howler • Data Archive & Retrieval

 $T_A$ 

NEMA-4X polycarbonate gasketed case: •





• NEMA 4 (hostile environment) cabinet.

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