

Model 43-68 Alpha Beta Detector



Ludlum Measurements, Inc.



Specifications

Part Number: 47-2005

INDICATED USE: alpha beta survey

SUGGESTED INSTRUMENTS: Models 12, 16, 18, 2000, 2200, 2221, 2224-1, 2241-2, 2350-1, 2360

DETECTOR TYPE: rechargeable gas proportional

RECOMMENDED COUNTING GAS: P-10 (10% methane, 90% argon)

GAS RECHARGE: will operate on static charge for at least 15 hours with a 1 m (39 in.) cable; 5-hour static charge if connected to a simultaneous alpha/beta measuring instrument

GAS CONNECTORS: double-end quick disconnect

EFFICIENCY (4 π): 20%–²³⁹Pu; 15%–¹⁴C; 30%–⁹⁹Tc; 20%–⁹⁰Sr/⁹⁰Y less than 1%–gamma

SIMULTANEOUS ALPHA/BETA COUNTING: 17.5%–²³⁹Pu; 20%–⁹⁹Tc; 20%–⁹⁰Sr/⁹⁰Y

WINDOW: typically 0.8 mg/cm² metalized polyester (other thicknesses available)

WINDOW AREA: 126 cm² (19.5 in²) active, 100 cm² (15.6 in²) open

BACKGROUND: alpha: < 3 cpm (when operating at alpha-only plateau region)

beta-gamma: typically 350 cpm (10 μ R/hr field)

OPERATING VOLTAGE: alpha typically 1100–1400 volts; beta-gamma: typically 1600–1800 volts

COUNTER THRESHOLD SETTING: typically 2–5 mV

SIZE: 10 x 11.7 x 19.8 cm (3.9 x 4.6 x 7.8 in.) (H x W x L), with handle

WEIGHT: 0.9 kg (2 lb)

Model 43-68 Detector Accessories

Part Number	Quantity	Description
4342-097	1	replacement window for Model 43-68 detector
2310017	1	2-stage regulator
13-7836	1	regulator output fitting (1/4 in. FPT to 1/4 in. tube)
48-2146	1	Model 2750 Flow Control Station
22-9689	3	plastic fitting nuts for 1/4 in. vinyl tubing
22-9522	2	fittings for flowmeter (1/8 in. MPT to 1/4 in. tubing)
21-9547	1	10 to 100 cc flowmeter (1/8 in. MPT to 1/4 in. tubing)
22-9514	AR	x feet 1/4 in. OD vinyl tubing for gas supply

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Note: specifications subject to change without notification. We are not responsible for errors or omissions.