

DETECTION UNITS

Models SA, SB, SAB are accessories used with an AB-5 monitor and External PMT, for surface contamination detection

The SA (Alpha), SB (Beta) and SAB (Alpha and Beta) are used to detect Alpha and/or Beta radiation on surfaces to determine if the surface is contaminated. The levels are measured with Pylon's AB-5. An External PMT is required for making measurements of this type.

The Pylon model SA, SB, SAB detect Alpha, Beta, and Alpha & Beta radiation, depending on an accessory type. If no differentiation is required between alpha and beta emitters, the SAB is recommended.

Applications:

- Ideally suited for general survey work

Features:

- Portable
- Light
- Easy to operate
- Interchangeable
- Can be used on the AB-5 in ratemeter mode for scanning or continuous mode



SA

Theory of Operation:

The SA, SB, SAB use a scintillator sheet with PMT technology to detect particles. The AB-5 radiation monitor collects the results and displays it for the user to see. Surface contamination is then quickly and easily found.

SA / SB / SAB

DETECTION UNITS

Specifications:

	<u>SA</u>	<u>SB</u>	<u>SAB</u>	
Radiation Detected:	Alpha	Beta	Alpha & Beta	
Scintillator - Alpha:	ZnS(Ag)	-	ZnS(Ag)	
Scintillator - Beta:	-	Plastic	Plastic	
		Type BC400	Type BC400	
Energy Ranges - Alpha:	4.5 to 9	-	4.5 to 9	MeV
Energy Ranges - Beta:	-	0.1 to 3	0.1 to 3	MeV
LAD - Alpha ¹ :	2.5	-	2.5	dpm
LAD - Beta ¹ :	-	115.4	115.4	dpm
Efficiency - Alpha:	20	-	20	%
Efficiency - Beta:	-	13	13	%
Accuracy ² :	± 5	± 5	± 5	%
Active Surface Area:	46 (7.13)	46 (7.13)	46 (7.13)	cm ² (in ²)
Detector Background:	< 0.5	< 15	< 15	cpm
Calibration ³ :	Single Point	Single Point	Single Point	
Light Shield:	Aluminized Mylar	Aluminum	Aluminized Mylar	
Operating Temperature Range:	0 to +50 (+32 to +122)	0 to +50 (+32 to +122)	0 to +50 (+32 to +122)	°C (°F)
Storage Temperature Range:	-20 to +75 (-4 to +167)	-20 to +75 (-4 to +167)	-20 to +75 (-4 to +167)	°C (°F)
Relative Humidity Range ⁴ :	0 to 90	0 to 90	0 to 90	%
Diameter:	10 (4)	10 (4)	10 (4)	cm (in)
Height:	23 (9)	23 (9)	23 (9)	cm (in)
Weight:	600 (1.3)	600 (1.3)	600 (1.3)	g (lb)

¹ Lowest Activity Detectable.

² At a 2σ Confidence Level.

³ Custom Calibrations Available. Custom calibrations include multi-point calibrations and calibrations at non standard activity levels.

⁴ Non-Condensing.

- Values are nominal.
- Specifications are based on new units which have been appropriately calibrated.
- Alpha Efficiency refers to an Am241 point source at contact.
- Beta Efficiency refers to a Sr90/Y90 point source at contact.
- Maximum operating range of approximately 5 cm for alpha radiation.
- Maximum operating range of approximately 1-2 m for beta radiation.

Ordering Information:

Model	Part Number	Description
SA	A201770	Surface alpha contamination detector probe
SB	A201780	Surface beta contamination detector probe
SAB	A201750	Surface alpha/beta contamination detector probe

The SA/SB/SAB require an external PMT Assembly which is sold separately.

Specifications subject to change without notice.

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