

SURFACE CONTAMINATION MONITOR

Model # TBM-3

Model # TBM-3S

Model # TBM-3SR**

FEATURES:

- SENSITIVE TO ALPHA, BETA & GAMMA
- ONE HAND OPERATION
- BUILT-IN SPEAKER
- ANTI SATURATION CIRCUIT
- LARGE 2" PANCAKE DETECTOR
- BETA SHIELD/WINDOW PROTECTION (TBM-3SR)

DESCRIPTION: Small three range Ratemeter with built -in 2" diameter pancake tube and speaker. Reads out in counts per minute (and mR/h). Thin window recessed and protected by sturdy grill. Additionally TBM-3SR has sliding methacrylate beta shield which also acts as additional protection for thin GM tube window. Instrument will see alpha, beta, and gamma radiation. Anti saturation circuit will not fall below full scale high fields. Tested to 100 R/h.

APPLICATION: Its small size, light weight, one hand operation, and large detector area make this a very useful monitor for surveying bench tops or checking hands, clothes, and fingertips for almost any radioactive contamination. Excellent for Fire Department, Ambulance, Police, First Response, and U.S. Custom Personnel use for surveying people, cars, luggage, surface of rooms, etc...



Figure 1: TBM-3SR (Shown With Sliding Beta Shield)

Cited by the National Institute of Standards and Technology, in SP 981 (pgs 51-52), for Fire Department use on every fire engine.

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SRRevision: 1.4 \$

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SPECIFICATIONS:

Meter:	TBM-3: 2-1/2" Rectangular. TBM-3S & TBM-3SR: 2-1/2" Ruggedized.
Ranges:	3 ranges, linear: 0-500; 0-5,000; 0-50,000 cpm (0-;15; 1.5; 15 mR/h).*
Switch Positions:	Off, Battery Test, X100, X10, X1.
Audio:	TBM-3: internally mounted speaker; TBM-3S: sonalert with volume control.
Detector:	T-1190 "pancake GM tube"
Diameter:	2"; 5cm
Window Diameter:	1-3/4"; 4.5 cm
Window Thickness:	1.5 mg/cm ²
Quench Gas:	Halogen for long life.
Background:	Typical 50 cpm. Thin Profile of tube (13mm) gives low background.
Efficiency:	100% for all betas and alphas that have the energy to penetrate the thin window. Gamma sensitivity nominal is 3 cpm/uR/h (based on Cs 137). (see attached graph pg 3)
Physical dimensions:	3" Wide x 5-1/4" Long x 2-1/4" High. Excluding meter and handle. (7.6 cm x 13.3 cm x 6 cm)
Beta Shield:	Methacrylate 0.125", 3.1 mm.
Calibration:	Single master calibration pot as well as individual cal pots for each range.
Power:	9 volt "transistor" battery; Eveready 1222, or equivalent.
Battery Life:	100 hours in normal operation.
Handle:	Swivel type, polished anodized aluminum
Weight:	22 oz; 625 gm

* Option c/s, *uSv/hr* meter scale (SI Units)

** Identical to TBM-3S except addition of sliding beta shield/window protection.

See "Beta Pancake Response" specification (BETA PANCAKE RESPONSE)

Fire Fighters: **TBM-3SR** is available with the Background x 10 meter, replacing the mR/hour; or a **single** Counts Per Minute Scale or mR/hr Scale. (Upon Request)

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