# DIGITAL RATEMETER/SCALER

## Model ~ TBM-3D with PAS-9

#### **FEATURES:**

- PAS-9 ALPHA SCINTILLATION PROBE
- BATTERY OPERATION
- 2 SEPARATE SCALE FACTORS FOR RATE & TOTAL
- HIGH VOLTAGE 400V-1200V DC
- 0.1-99 sec TIME CONSTANT FOR RATEMETER
- 8 DIGIT LCD DISPLAY
- 2" DISPLAY SCREEN
- USER SETTABLE UNITS
- OPTIONAL: ALARM AUDIO / VISUAL (USER SETTABLE)
- IDEAL FOR LONG COUNT UP TO 24 HOURS OR MORE
- USE ANY GM ~ ALPHA, BETA, GAMMA, X-RAY, POSITRON OR ALPHA SCINTILLATION DETECTOR.
- OPTIONAL: USB / RS-232 SERIAL OUTPUT
- CE Mark
- IP65





PAS-9 - Alpha Scintillation Probe

#### **APPLICATION:**

**TBM-3D** Automatic Scaler is a battery-operated instrument. Uses include sample or wipe counter. ``Frisker" monitor and lab monitor. The **TBM-3D** is also used as an area monitor, again making use of the digital ratemeter modes covering six decades and also utilizing the optional preset alarm.

#### **DESCRIPTION:**

It includes a digital ratemeter operating mode in which it presents 6 full decades of accurate readout without switching. This is a multi-purpose lightweight Scaler with internal replaceable battery.

• All 400-1200V GM and scintillation probes are usable with the **TBM-3D** as are digital ion chamber and gas proportional probes.

The **TBM-3D** is a sturdy table top or portable instrument incorporating both scaler and ratemeter functions.

Pulses are seen via flashing red LED for visual service in dark areas. Gate time for the scaler is free running mode. Readings directly in mR/hr or other units can be made by choosing correct scaling factors for the scaler and the ratemeter.

USE ANY GM ~ ALPHA, BETA, GAMMA, X-RAY, POSITRON OR ALPHA SCINTILLATION DETECTOR





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## **PAS-9 DETECTOR DESCRIPTION:**

**Alpha Scintillation Probe** with a 5-1/2" diameter x 0.8 mg/cm<sup>2</sup> window. The 100 cm<sup>2</sup> face of this probe allows rapid surveys to be made of personnel, equipment or flat surfaces.

- Background is in the order of several counts per hour.
- Sensitivity is 10 to 20% for 5 MeV.
- Alphas based on 4Pi geometry (20 to 40% based on 2Pi geometry).

The protective grid is physically separated from the window thus making contamination of the window extremely unlikely. Grid may be removed for cleaning without disturbing the window. Some sacrifice of sensitivity has been made for this feature.

#### **SPECIFICATIONS:**

TBM-3D ELECTRONICS: Mates with GM Probes or Alpha scintillation detectors.

**Detector Connector:** BNC - Standard

**Detector Bias Supply:** 400 V DC to 1200 V regulated and filtered.

Other voltage levels-optional.

**Efficiency:** Greater than 25%

**Units:** Cps, bq - User Settable

Power:

Batteries: 6 AA cells.

Battery Life: 100 hours with Alkaline cells (200 hours with - Lithium cells).

Battery Check: Push button and LED indicator.

**Construction:** All plug in circuit cards, essentially no wires. Rugged, lightweight

**Weight & Dimensions** 

**Dimensions:** 3"H x 5.3" W x 3" D (76mm H x 134mm W x 76mm D)

excluding handle and knobs.

**Weight:** 21 oz. (600 grams)

Options: Alarm circuit with red LED and audio alarm (User Settable)

Computer Interface: USB / RS-232 serial circuit

Pre-amp for proportional detectors

Other connectors - MHV etc In-place rechargeable batteries





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# **DIGITAL RATEMETER/SCALER**

## Model ~ TBM-3D with PAS-9

Digital Display	RATEMETER	SCALER
Range	6 digit LCD	8 digit LCD
User Settable Scale Factor	0.1 - 20,000 count/sec	•0-10,000,000 counts
Time Constant	0.01 to 99 seconds Display Refresh Rate	Free Running







