



MODEL 200SS PORTABLE TRITIUM IN AIR MONITOR

The **Model 200SS** is a low-cost, lightweight portable tritium in air survey meter. The 200SS uses both 200cc ionization chambers for tritium measurement, providing additional detector volume for better sensitivity, but eliminating gamma compensation. Useful for applications that don't require gamma compensation, allowing you to accurately measure low levels of tritium with a fast response time at a very affordable price.

A high volume pump and fast electronics combine to give this instrument fast overall response. Meter readings will reach 90% of the final value within 15 seconds to a step response of aspirated tritium.

DIFFERENCE FROM THE MODEL 200SB

Based on the popular Model 200SB, the only difference in the Model 200SS is that it converts the gamma compensation chamber into a second measurement chamber, thereby removing gamma compensation, but providing additional measurement volume for enhanced sensitivity.

SENSITIVITY

The 200SS is useful for situations where gamma compensation is not required. The enhanced measurement volume offers greater sensitivity than the 200SB at an extremely affordable price.

RADON INTERFERENCE, NOISE RESPONSE

For an unambiguous measurement of very low tritium a monitor must be able to ignore response to ambient radon. The 200SS incorporates this capability and therefore produces accurate, fast and drift free measurements.

CONVENIENT FOR USE, FAST WARM-UP TIME

The Model 200SS is ready for use by merely selecting the desired alarm level and activating the instrument power. After applying power, the "warm up" time is less than 30 seconds before it is ready for accurate readings.

FAST RESPONSE

The high volume pump samples at 3 liters per minute, and fast electronics yields a time constant of 5 seconds. Meter readings will reach 90% of their final value within 15 seconds to a step response of aspirated tritium.



Enhanced Sensitivity	to 3 $\mu\text{Ci}/\text{m}^3$ (0.4 MBq/m^3)
Fast Response	15 seconds to reach 90%
No Zero Drift	long term zero stability to better than $5\mu\text{Ci}/\text{m}^3$
Rapid Warm Up	less than 30 seconds
Gamma Compensation:	Not available

Overhoff Technology Corporation

1160 U.S. Highway 50, Milford, Ohio, 45150-9705 USA

Telephone: 513 248 2400 Fax: 513 248 2402

Email: sales@overhoff.com www.overhoff.com



TECHNICAL SPECIFICATIONS

MEASUREMENT RANGE	1 – 19,999 $\mu\text{Ci}/\text{m}^3$ Other available measurement ranges: 0.1 to 1,999.9 MBq/m^3 or DAC 1 to 19,999 MPCa
SENSITIVITY	3 $\mu\text{Ci}/\text{m}^3$ (0.1 MBq/m^3)
DISPLAY	LCD panel meter
ACCURACY, SPAN	$\pm 10\%$ of reading, $\pm 5 \mu\text{Ci}/\text{m}^3$, whichever is greater
NOISE LEVEL	$\pm 5 \mu\text{Ci}/\text{m}^3$, 1 S.D. (5second electronic time constant)
ZERO STABILITY	after 1 minute (or less) warm up, zero drift less than $\pm 10\mu\text{Ci}/\text{m}^3$
GAMMA COMPENSATION	chambers in a side by side pattern reduce errors due to external gamma radiation.
RESPONSE RATE	15 seconds to reach 90% of final reading
ALARM (ACOUSTIC)	1. Nine position stepped attenuator set point for signal alarm 20 - 10,000 $\mu\text{Ci}/\text{m}^3$, steady tone. 2. Low flow produces a steady tone
ALARM (VISUAL)	signal level: red LED low flow: yellow LED low battery: red LED
EXTERNAL CONNECTIONS	not available
IONIZATION CHAMBER VOLUME	effective measurement volume: 400 cm^3 port to port volume: 440 cm^3
DUST FILTER	external in-line disposable cartridge type
PUMP	high volume internal rotary vane pump
FLOW RATE	nominally 2-3 LPM
ENVIRONMENTAL	0° C to +40° C, 10 - 95 % relative humidity non-condensing
BATTERIES	two "D" size batteries, alkaline
POWER CONVERTER	optional 100-240VAC power converter
SIZE	7.6" L, 5.2" W, 4.4" H excluding handle
WEIGHT	5 lbs (2.3 kg)

Accessories included:

- 2 "D" Size Alkaline Batteries
- Sniffer hose
- Dust filter
- AC Power converter (*optional*)
- Carrying case (*optional*)

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