

Model 400SBD γ C 型号400SBD γ C

HIGH PERFORMANCE TRITIUM IN AIR PORTABLE SURVEY MONITOR 高性能气氛便携式巡查监测器

SENSITIVITY

灵敏度

The 400SBD γ C is useful for measurements as low as 2 μ Ci/m³. The new OTC electrometer, which measures to below 10⁻¹⁶ amperes combines low noise and high zero stability. Unlike other instruments, the 400 series instruments no longer require a front panel manual zero control. Thermally induced zero shifts of the electrometer and associated electronics have been eliminated.

400SBD γ C有效测量低至2 μ Ci/m³，新型Overhoff公司的静电计测量灵敏度达10⁻¹⁶安培，而且噪音低和零点稳定性高；和其它仪器不同的是，400系列仪器不在要求前板手动调整零点。静电计热零点漂移及其相关电子学已经淘汰

RADON INTERFERENCE, NOISE RESPONSE

氡干扰，噪音响应

For an unambiguous measurement of very low tritium a monitor must be able to ignore response to ambient radon. The 400SB series incorporates this capability and therefore produces accurate, fast and drift free measurements to nearly ± 1 μ Ci/m³.

对于低浓度氡准确测量，要求仪器必须忽略对环境氡的响应，400SB系列能够做到，因此测量精确快速无漂移，测量到大约 ± 1 μ Ci/m³。

TOTAL GAMMA COMPENSATION

总伽马补偿

Cruciform ionization chamber geometry provides nearly perfect gamma compensation regardless of photon energy, flux gradient or flux direction. Gamma compensation of the 400 series instruments is typically three orders of magnitude better than instruments using nested or side by side ionization chambers.

十字形排列电离室提供了几乎完美的伽马补偿而不考虑光子能量，通量梯度或通量方向。400系列仪器伽马补偿为典型3个数量级，优于使用嵌套式或并列电离室的仪器。

FAST RESPONSE

快速响应

Its exceptionally rapid response is uniquely due to its ability to ignore radon. The electronic time constant is only 10 seconds, the pneumatic time constant of about 12 seconds, for an overall time constant of only 15 seconds. Meter readings will reach 90 % of final value within 30 seconds to a step response of aspirated tritium.

它异常快速响应源于其忽略氡的能力，电子时间常数仅10秒，气动时间常数仅15秒，30秒内仪表读数将达到终值的90%，进入吸氡响应阶段。

FAST WARM UP, NO ZERO DRIFT

快速预热，无零点漂移

After applying power, the initial transient "warm up" drift effects take less than a minute. Long term drifts have been eliminated, manual zero adjustments are no longer required.

接通电源后，初始瞬间“预热”漂移少于1分钟，长期漂移被淘汰，手动零点调整不再需要。



1160 US ROUTE 50
MILFORD, OHIO 45150-9705
TELEPHONE (513) 248-2400
FACSIMILE (513) 248-2402
E-MAIL sales@overhoff.com
WEB www.OVERHOFF.com

HTO DISCRIMINATION (MODEL 400SBD γ C-HTO)

HTO识别 (型号400SBD γ C-HTO)

By addition of a desiccant column, this survey instrument will specifically measure HTO in the presence of other radioactive gases as well as background gamma. The desiccant can be regenerated repeatedly for reuse.

通过添加干燥柱,此款监测器将专门用于有其它辐射气体和本底伽马在场的情况下测量HTO。干燥剂可以反复再生以便重新使用。



MODEL 400SBD γ C

PERFORMANCE SPECIFICATIONS 性能规格

MEASUREMENT RANGE 测量范围	1 – 19,999 μ Ci/m ³ , basic sensitivity of the order of 1 μ Ci/m ³ 1 – 19,999 μ Ci/m ³ , 基本灵敏度1 μ Ci/m ³
DISPLAY 显示	0 – 19,999 digits, LCD panel meter 0 – 19,999 digits, LCD仪表显示
ACCURACY, SPAN 精度, 量程	\pm 10 % reading, \pm 1 μ Ci /m ³ , whichever is greater 读数的 \pm 10 % , \pm 1 μ Ci /m ³ ,取较大者
NOISE LEVEL 噪音值	\pm 1 μ Ci/m ³ , 1 S.D. (10 second electronic time constant) \pm 1 μ Ci/m ³ , 1 S.D. (10秒电子时间常数)
ZERO STABILITY 零点稳定	\pm 1 μ Ci /m ³ long term 长期 \pm 1 μ Ci /m ³
GAMMA COMPENSATION 伽马补偿	Four chambers in a cruciform pattern to reduce errors due to external gamma radiation. 十字排列四电离室减少因外部伽马辐射影响产生错误
ALPHA PULSE SUPPRESSION α 脉冲抑制	a circuit provides recognition and cancellation of undesirable noise spikes attributed to airborne radon 电路识别并消除由气溶胶氡产生的噪声尖峰
RESPONSE RATE 响应率	30 seconds to reach 90% of final reading 30秒秒内仪表读数将达到终值的90%,
ALARM (ACOUSTIC) 报警 (声音)	1. Ten position stepped attenuator set point for signal alarm 2 - 1,000 μ Ci/m ³ , steady tone. An OFF position is included. 十位阶式减光板设定点用于信号报警, 2 - 1,000 μ Ci/m ³ ,稳定音, 包含OFF位置 2. Low flow produces an intermittent tone 低流产生间歇声 3. Mute switch silences audible tone 静音开关关闭响音
ALARM (VISUAL) 报警 (视频)	signal level: red LED 信号水平: 红色LED low flow: yellow LED, flashing 低流: 黄色LED low battery: red LED 低电: 红色LED



1160 US ROUTE 50
MILFORD, OHIO 45150-9705
TELEPHONE (513) 248-2400
FACSIMILE (513) 248-2402
E-MAIL sales@overhoff.com
WEB www.OVERHOFF.com

EXTERNAL CONNECTIONS 外部连接	mini DIN plug for output signal, and for alarms 微型DIN插头用于输出信号和报警
IONIZATION CHAMBER VOLUME 电离室容量	effective volume: 400 cm ³ port to port volume: 440 cm ³ 有效容积: 400 cm ³ 口对口容量440 cm ³
DUST FILTER 尘滤器	HEPA, in-line disposable cartridge, Pall P/N 12082 HEPA, 在线一次性滤芯
PUMP 泵	internal rotary vane pump 内置旋片式泵
FLOW RATE 流量	nominally 1.5 - 2 LPM 普通型 1.5 - 2 LPM
ENVIRONMENTAL 环境	0° C to +50° C, 0 - 95 % relative humidity 0° C to +50° C, 0 - 95 % 相对湿度
BATTERIES 电池	two "D" size batteries alkaline external jack for supplementary power input 两节"D"电池 碱性, 辅助电源输入外部接口
POWER CONVERTER 电源转换器	100-240 VAC, 50/60 Hz, .25 A to 3.3 Vdc @ 1.2 A 5.5 mm O.D. x 2.1 mm I.D. Plug, center pin is positive 外径5.5 mm x内径2.1 mm 插头, 中间销为正极
CASE 外箱	lightweight aluminum 轻量铝
SIZE AND WEIGHT 尺寸和重量	7.6" [193mm] L x 5.2" [132mm] W x 6.9" [175mm] H excluding handle, 6.5 lbs (3 kg) 7.6"长x 5.2"宽 x 6.9"高, 不含把手6.5 lbs (3 kg)
OPTIONAL EQUIPMENT 可选设备	• transit case 运输箱 • RS232 Serial Data output RS232 串口数据输出

NOBLE GAS DISCRIMINATION: 惰性气体识别

MODEL 400SBD γ C -HTO ONLY: 仅限型号400SBD γ C -HTO

A special version of the basic 400 series instrument is for measurement of tritium (oxide) in the presence of radioactive noble gases. By addition of a desiccant cartridge, this instrument will respond solely to HTO, ignoring all other airborne radio nuclides and gamma fields.

400基本系列仪器中专门测量在有辐射惰性气体出现情况下的氚(氧化), 通过添加干燥柱, 这款仪器只对HTO反应, 忽略所有其它辐射核素和伽马场。



1160 US ROUTE 50
MILFORD, OHIO 45150-9705
TELEPHONE (513) 248-2400
FACSIMILE (513) 248-2402
E-MAIL sales@overhoff.com
WEB www.OVERHOFF.com