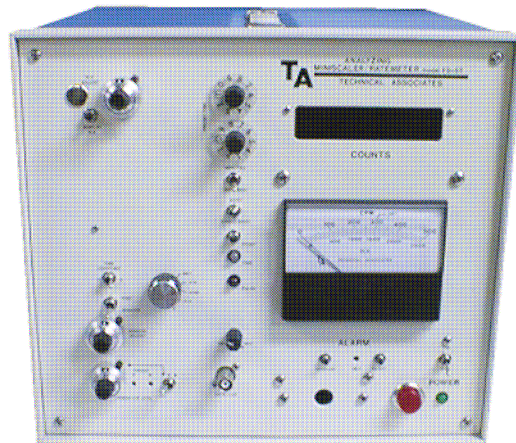# TRITIUM IN WATER MONITOR
REAL TIME CONTINUOUS
Model # LIQ-X-(H3)

FEATURES:

•REAL TIME - AUTOMATIC
•CONTINUOUS MONITORING
•NOT INFLUENCED BY OTHER NUCLIDES
•NO LIQUID SCINTILLANT REQUIRED
•EASY CALIBRATION
•SENSITIVE TO 2,000 pCurie/l Tritium
          74 Bq/l
•NEW STATISTICAL SIGNIFICANCE DISPLAY

APPLICATION:

MEETS EPA DRINKING WATER LEVELS
MONITOR LEAKS IN CANDU TYPE REACTORS.
MONITOR TRITIUM CONTAMINATION IN GROUND WATER.
MONITOR LABORATORY OR PLANT LIQUID WASTE STREAM.

SSS-33M81 - Low count mode	SSS-33M81 - High count mode
10,000 pCi/l (370 Bq/l) in 7 days	1 mCi/l in 1 hour
20,000 pCi/l (740 Bq/l) in 24 hours	10 mCi/l in 2 minutes
40,000 pCi/l (1480 Bq/l) in 12 hours	100 mCi/l in 10 seconds
Display update every 2 minute	Display update every 3 seconds

TRITIUM IN WATER MONITOR
REAL TIME CONTINUOUS
Model # LIQ-X-(H3)

DESCRIPTION: This system consists of a small light tight detector assembly which is interfaced with the sample via male 1/4" pipe fittings with the readout and processor assembly via two BNC connectors.The sample is passed through a deionizer and filter and thence to the detector assembly, where it is viewed by a matched pair of photo multiplier tubes.

The table top or rack mounted processor and display portion of this system conditions and analyzes the output from the photo multiplier tubes by pulse height and coincidence, thereby permitting the system to eliminate counting most background (noise) counts.

SSS-33M81 includes unique statistical significance display.

This function rates strength of the data: Significance **HIGH**, **LOW**, or **NOT SIGNIFICANT** Thereby preventing most false positives or negatives.

* SSS-33M8 users, see ``Deionizer and Filter'' specification (SSS-33M8/D and SSS-33M8/F).

SPECIFICATIONS:

•**Display Update:**   Every 2 minutes. All Monitors
•**Tritium Sensitivity:** See chart
•**Range:** 0-100 µ Ci/liter – other ranges optional higher or lower.

Flow Rate: Minimum - 1 ml/min
                        Maximum - 100 ml/min
•**Sample Temperature:** Standard - < 80° F (liquid); (optional - to 115° F)
•**Ambient Temperature:**
   Detector - < 80° F (**Optional** - to 115° F)
   Readout - < 115° F
•**Lead Shielding:** 1" thick is standard
                          2" thick is optional
•**Dimensions:**
   Detector - 4"dia x 19"Long
   Readout - 10"H x 16"L x 19"W
•**Weight (Standard Unit):**
   Detector Housing - 20 lbs.
   Readout Housing - 40 lbs.
   Shipping - 90 lbs.
   Optional shielding – 65 lbs.
•**Display:** Digital 5 digits, plus overflow (LED)

OPTIONS

Data logging hardware; records up to 5 yrs readings
Remote readout via Ethernet
Network reporting and communication via the ORO overdrive network
Model SSS-33M81 requires occasional interruption of sample to allow 24 hour background count.

MODEL SSS-33M82- same as above but in **SSS-33M82** there are 2 flow through detectors. The first one
looking at clean "baseline" water and making a "Background count" and the second detector is measuring the potentially
contaminated sample water. Then every 24 hours a valve automatically sends the baseline water through the second
detector to wash it out and get a new baseline count, and the valve sends the sample water through the first detector to
make sure the sample water is continuously monitored so not even a short term (higher level) Tritium release can go
undetected.

MODEL SSS-33M84 – achieves increased sensitivity due to increased detection volume, and shielding as well as
advanced system design.

TRITIUM IN WATER MONITOR
REAL TIME CONTINUOUS
Model # LIQ-X-(H3)
System Includes:

TASK	TOOL	MODEL	INCLUDED
MAKE HOLE	cone penetrometer	CP-VAPL	optional
	coring tool	CT-VAPL	optional
	auger-drill	AD-VAPL	optional
VAPOR COLLECTION			
Push tube	Hollow push-tube with closed-end and side-hole liquid-intakes	PUSH-LIQ	YES
Water Build-up Chamber		W-BUC	optional
PUMP	Liquid Water Pump	built-in	YES
FILTER	Coarse filter in Push-tube	built-in	YES
Particulate filter	Fine filter at detector inlet	built-in	YES
MEASUREMENT DEVICE			
High Tritium concentration	Flow thru Tritium monitor	SSS-33M81	YES
Low Tritium concentration	Portable Liquid Scintillion counter	SSS-22P	optional
REJECTION FEATURES			
Noise Rejection	Dual PMT, Coincidence counting	built-in	YES
Gamma Background	Energy Analyzer	built-in	YES
Radon Rejection	Energy Analyzer	built-in	YES
DETECTION OF OTHER NUCLIDES			Submit list of
Sr-90, Cs-137, Rn, etc.	Four channel Energy Analyzer	4-CHNL	nuclides of concern
DATA TRANSMISSION			
A-Serial	Serial RS-232	RS-232	Choose
B-Ethernet-wired	Ethernet wired	EW	A, B, and/or C
C-Ethernet-wireless	Ethernet wireless	EW-LS	when ordering

TRITIUM IN WATER MONITOR
REAL TIME CONTINUOUS
Model # LIQ-X-(H3)

TASK	TOOL	MODEL	INCLUDED
DATA STORAGE			
Hardware and software	Palm data-logger	P-LOG	optional
Software and cable	Store data to your laptop	WIN-W	optional
DATA NETWORK			
	Universal, Easy ORO Network	ORONET	YES
	for all kinds of sensors	Overdrive	YES