

# MPM System

## Mobile Portal Monitoring System



### BENEFITS

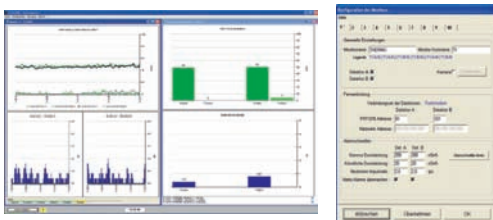
- NBR capability - for very sensitive detection of artificial sources
- High sensitive 6l plastic scintillator detector
- He-3 counting tube with high sensitivity to neutrons without gamma cross talk
- Highly mobile system because of easy set up, dismounting and transport
- Easy one button use (on/off) - no PC is required
- Separate neutron, gamma alarm indication
- Wireless or cable communication between detection unit and control center
- Battery driven detector for autonomous operation
- EMC hardened according to relevant MIL STDs
- Up to 10 detector pairs can be used using the Parallel Detection Mode



The MPM-System can be easily transported and build up even in rough terrain. Therefore the system is unique compared to portal monitors which have to be fixed at the ground. It can be used in field camps or gates for personnel or vehicle monitoring.

The MPM-System detectors are able to distinguish between artificial and natural radiation using the NBR technology. Two detector tubes can be combined to be used as one monitor. Up to ten of these monitors can be added to the system. Each single detector tube is equipped with a plastic scintillator (gamma detection), a He-3 counting tube (neutron detection), one radio transceiver (communication with a parallel detector in order to form one monitor), one wireless radio modem (sending the data to a basis) and an alarming unit for optical and acoustical warning of increased neutron and gamma radiation.

The basic system comes with two detector tubes and a Toughbook. The measuring results of up to 20 detector tubes can be transmitted to a central computer using wireless or cable connection.



## SPECIFICATIONS

### Detector columns

Dimensions	6 in x 51 in (15.5 cm x 130 cm), with handles add : each side 1.4 in (3.5 cm)
Weight	35.5 lbs (16.1 kg)
Temperature range	-22 F to 131 F (-30 C to 55 C)
Communication	Radio: 2.4 GHz (to central station), bitfunk: 2.4 GHz (between 2 ea. detectors), serial (baud rate: 38,400)
Operation time of ruggedized Pb accumulator	60 h
Charge time	11 h (complete discharged)

### Neutron counting tubes

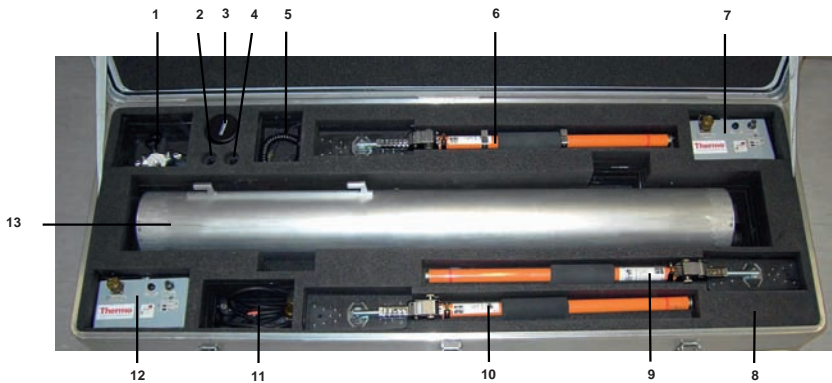
Detector	Sensitive He-3 counter tube
Background rate on sea level	< 1 cps
Neutron sensitivity	20.5 cps / (uSv/h), relates to 2 ng Cf-252 in 1 m, 13 mg Reactor plutonium in 1 m, 80 mg weapon plutonium in 1 m

### Gamma scintillation counter

Detector	Plastic scintillator for NBR-Analysis
Sensitivity	35,000 cps/(uSv/h)
Dose rate accuracy	Up to 10 uSv/h +30 %, the device is a very sensitive detector giving quantitative information
Sensitivity for artificial gamma radiation	Dose rate detection < 20 nSv/h
Gamma dose rate display	A total gamma dose rate alarm threshold can be set starting from 60 nSv/h (assumed a 50 nSv/h natural background)

### Weights

Detector	35.5 lbs (16.1 kg)
Accumulator / replacement accumulator	ea. 18 lbs (8.2 kg)
Tripod	11 lbs (5 kg)
Aluminum Box (empty)	24.2 lbs (22 kg), 62.2 in x 23 in x 12.6 in (158 cm x 58 cm x 32 cm)
Total	131 lbs (59.5 kg )



Item	Qty	Description	Order no.
1	1	Tripod head	424919051
2	1	Radio modem	---
3	1	Alarm unit	SM165205350
4	1	BNC antenna	SM168535400
5	1	Cable accumulator to detector	424919031
6	1	Tripod leg for accumulator	424919051
7	1	Accumulator pack	424919030
8	1	Carrying case	424919070
9	1	Tripod leg	424919052
10	1	Tripod leg	424919052
11	1	Mains-recharger cable	4244540
12	1	Accumulator pack	424919030
13	1	Detector	424919010

