



# DZM

## Area Radiation Monitor



- ◆ Compact, self contained, Mains operated
- ◆ Large and bright 7 Seg display with 5" Touch screen TFT Display and fault / error messages displayed on Display with Alarm annunciation
- ◆ Compact and rugged case construction , IP-65 ingress protection
- ◆ N42.17 compliance for Environmental and EMC
- ◆ SCADA based Modbus RTU - RS485 or TCP/IP communication protocol, Web based browser for monitoring upto 250 instruments

### APPLICATIONS

- ◆ Nuclear Power Industry
- ◆ Nuclear Process Labs
- ◆ Radiography
- ◆ Environmental Survey / Health Physics Labs

## SCOPE

- ◆ Area Radiation Monitor, Model DZM is a compact, simple to use, stand alone instrument to monitor Gamma Radiation. It is useful in Health Physics applications in Nuclear laboratories, reactors and power plants.
- ◆ It is ideally designed for area and process monitoring in Nuclear facilities.
- ◆ Area Radiation Monitor, DZM is completely self contained, mains operated and SBC based unit.
- ◆ Main function of DZM is to display Dose rate level of the area and give visual indication if any alarm situation arises.
- ◆ It includes Geiger Muller detector to detect Gamma Radiation, necessary high voltage to operate the GM detector and pulse processing electronics.
- ◆ DZM provides 7seg LED and 5" touch screen TFT LCD display. It also provides Audio and Visual indication for Alarm whenever Dose rate exceeds threshold level.
- ◆ DZM is housed in robustly constructed wall mounting type enclosure to provide immunity against EMI/RFI or line transients and IP65 rated.

## SPECIFICATIONS

	DZM-10m	DZM-100m	DZM-1	DZM-M5
<b>ORDER CODES</b>	VNIM0038	VNIM0040	VNIM0049	VNIM0050
<b>DETECTOR USED</b>	Internally Mounted Energy compensated GM tube			Externally connected Smart Probe
<b>RADIATION DETECTION</b>	gamma & X-ray			-
<b>ENERGY DETECTION RANGE</b>	48 KeV to 3 MeV			-
<b>DOSE RATE RANGE</b>	0.001 mR/h to 10 mR/h 10 nSv/h to 9999 $\mu$ Sv/h 10 nGy/h to 9999 $\mu$ Gy/h	0.01 mR/h to 100 mR/h 0.1 $\mu$ Sv/h to 99.99 $\mu$ Sv/h 0.1 $\mu$ Gy/h to 99.99 $\mu$ Gy/h	0.01 mR/h to 1000 mR/h 0.1 $\mu$ Sv/h to 999.9 $\mu$ Sv/h 0.1 $\mu$ Gy/h to 999.9 $\mu$ Gy/h	- - -
<b>DOSE RATE LINEARITY</b>	$\pm$ 15% with Co60			-
<b>DISPLAY UNITS</b>	R/h, Sv/h, Gy/h and CPS			
<b>RESPONSE TIME</b>	Auto: 1 to 30 seconds as per dose rate Abrupt Detection: within 1 second			
<b>DISPLAY</b>	6 Digit 7 Segment LED Display 5" Touch Screen TFT Display			
<b>ALARMS</b>	Green Lamp for Normal Yellow Lamp for HV and Detector Failure Red Lamp and Hooter for Alarm condition ACK and RST push buttons for Alarm Acknowledgment and Reset. OL - Over load OR - Over range DET - Detector Fail EHT - High Voltage Fail			
<b>OUTPUTS</b>	Two changeover Potential free Relay contacts (230VAC, 3 A) for Radiation alarm and Power failure Alarm operating in Fail safe mode. 4-20mA current output equivalent to Dose-rate Range. Remote ACK and RST Contacts.			
<b>COMMUNICATION</b>	Display of Doserate, Alarm status and ACK / RST Alarms. TCP/IP MODBUS RS485 MODBUS RTU Web access over Ethernet			
<b>SELF DIAGNOSTICS</b>	POST(Power On Self Test) inclusive of all functions with display of error messages			
<b>POWER SUPPLY</b>	88-264 VAC, 47-63 Hz with Power line harmonic filters and choke fuses provision.			
<b>ENVIRONMENTAL COMPLIANCE</b>	As per IS 9000 / ANSI 42.17 Operating Temperature: 0° to 50°C Relative Humidity: 20% to 80% or better			
<b>EMI /EMC COMPLIANCE</b>	As per IEC 61000 / ANSI 42.17 as per IEC 61000-4-3 as per IEC 61000-4-6 as per IEC 61000-4-8			

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<b>CONSTRUCTION</b>	Rugged, powder coated MS Chassis with IP65 Ingress Protection, Wall Mounting or Table Top			
<b>WEIGHT</b>	3.5 Kg	3 Kg		
<b>DIMENSION</b>	320 mm x 220 mm x 70 mm	250 mm x 220 mm x 70 mm		
<b>PC SOFTWARE (OPTIONAL)</b>	RadMonitor PC Software			
<b>STANDARD ACCESSORIES</b>	USB Pendrive with User Manual			
	Standard Wall mount			

## OPTIONAL ACCESSORIES

Optional Accessories	Order Codes
RadMonitor PC Software License	VNIA0104
External Siren and Tower Lamp	VNIA0101
Calibrator TG-10	VNIA0105
USB Keyboard	VNSXA130
Magnetic Door lock for enclosure	VNIA0103
Large External Digital Display	VNIA0102

Optional Accessories	Order Codes
SGX-10mC	VNIM0051
SGX-100mC	VNIM0052
SGX-1C	VNIM0053
SGX-10C	VNIM0054
10 meter cable for SGX	VNIA0107
Custom length cable for SGX	VNIA0108