

ANV S2 radiation monitoring system

Ships and submarines



Key features

- Proven performance in active deployment
- Dependable data throughout expended deployment
- Up to 7 detectors capable of measuring varied levels of radiation

Overview

Ultra Energy's ANV S2 Radiation Monitoring System has been supplied to Navies throughout NATO and the rest of the world, providing new systems and in-service support for maritime operations. The ANV S2 system meets the current operational requirements of both surface and submarine fleets.

The ANV S2 system monitors the radiological environment within a vessel to provide continuous data regarding the external threat in both air and water. It has proven performance in active deployment and following recent enhancements is able to interface with Platform Management Systems (PMS) via a standard data port. Radiological threat information can now be presented direct to the platform commander as and when an alarm situation occurs or when there is a heightened status of alert.

Technical specifications

Other features

- 4-digit alphanumeric display for displaying information according to the selected mode and menu option
- Extended measurement range
- Variable alarm threshold
- Low cost design
- Excellent reliability
- Intergrated diagnostics
- In service with NATO fleets
- Stainless steel housing with modular construction
- High intensity audio-visual alarm

System Configuration

Operational requirements in the maritime environment have transformed over recent years and current and predicted future activities will expose platforms to significant asymmetric threats.

A back-fit option is available for users supplied with MK22NRS and MK23NRS systems by the specialist suppliers of Plessey or, more recently, Siemens. The backfit option provides a cost-effective method of upgrading performance by simple unit replacement.

The ANV S2 naval system provides the platform commander with dependable data throughout extended deployments where there may be a radiological threat.

The ANV S2 system design has been proven in a comprehensive range of environmental and other conditions against UK MOD Defence Standards. The system's modules are designed to perform continuously with minimum maintenance, have excellent reliability and an extended pedigree with many navies.

An ANV S2 system can have up to seven detectors capable of measuring from natural background to full threat levels which may be experienced post nuclear weapon detonation. The detectors are sited to monitor the exposure of the crew, the airborne threat and sea water contamination. For smaller vessels and submarines, a two detector system is used providing the same comprehensive data, alarms and displays for the platform.



Performance specifications

ANV S2 Naval performance specifications	
Outline Specifications	<ul style="list-style-type: none"> • Range: 10nGy/h to 100Gy/h • Energy response: 60keV to 1MeV $\pm 20\%$, 1MeV to 3MeV $\pm 35\%$
Operating Specifications	<ul style="list-style-type: none"> • Humidity: 93.2% RH at 55°C • Temperature: -40°C to +80°C (operating) • Immersion: IP67 (4m depth for detectors) • Def Stan 00-35 (for enclosures)
Power Supply	<ul style="list-style-type: none"> • Ship's AC supply: 115V @ 60Hz or 230 V 50Hz • Ship's DC supply: 24V DC Supply
Station dimensions and weight	<ul style="list-style-type: none"> • Indicator Unit (including enclosure) 342 x 190 x 254mm 15Kg • Detectors 140 x 170 x 55mm 0.75Kg
Testing	<ul style="list-style-type: none"> • Lamp test • Internal Confidence test • Detector test • Simulation • Diagnostic test

About Ultra Energy

Organizations working with nuclear and industrial technologies must deliver reliable production at the same time as safeguarding people, the environment and infrastructure. We develop and manufacture measurement and control solutions that give our customers complete, long-term control over systems operating in harsh environments, helping them operate safely and increasing the value derived from their investments over their total lifespan.

Part of Ultra Group, a global electronics company, Ultra Energy has worked with nuclear and industrial customers for over 60 years. We support customers across the world from facilities located in the US and UK. Our solutions are embedded in strategic national infrastructure and our people are active partners in customer programs that are focused on delivering advanced future nuclear and industrial capabilities.

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