

DU 403.3TM

Weatherproof STRIDE Detection Units

The covert movement of special nuclear material or weapons into populated areas represents possibly the greatest threat to the security of our world. Radionuclide identification systems are required to effectively detect and / or deter this threat. They must recognize the presence or movement of radioactive material across borders, into government buildings, at large public gatherings or events and much more plus identify the radionuclide(s) present. STRIDE Detection Units and Systems were designed for this very purpose.

STRIDE Weatherproof Gamma Detector with Nuclide Identification

The DU 403.3 was originally developed at the request of the Security Department of a national laboratory. Their desire was to mount a radiation detection instrument on or behind the front bumper of a security truck. If a suspicious vehicle was pulled over for interrogation, or involved in an accident or other incident, they wanted their driver to know ahead of time if there was any radioactive material in the target vehicle. The security officer would park behind the suspected vehicle and while he or she was preparing to approach the occupants, the STRIDE DU was actively searching for the presence of radioactive material in the vehicle and if present, determine the classification (Innocent, Suspicious or Threat), the categorization (NORM, Medical, Industrial, SNM) and the identity of the radionuclide.

All of this information is provided by the STRIDE system software (sold separately).

Rugged design for vehicle and outdoor installation

The PVC housing is weatherproof plus the internal detector and electronics are cushioned against damage due to normal road bumps and driving vibrations. Two opposing "C" clamp mounting brackets are available for installation. 3 m (9'10.1") cable for communication and power are standardly provided with the system.



FEATURES & BENEFITS

- Weatherproof sealed detection unit for outdoor installations
- Detects the presence of radioactivity or radioactive material.
- Performs rapid and accurate radionuclide identification
- Alarms on dose rate changes above background
- Continually stabilizes for temperature and background changes
- Comes with a reinforced data cable
- Works with all versions of STRIDE Server
- Can be combined with every other STRIDE Detection Unit

SPECIFICATIONS

INPUT/OUTPUT

Power	DC 12 V, 3 W or POE
Ethernet	RJ45, 10 Mbit/s, 100 Mbit/s

PHYSICAL

Dimensions (H × Dia.)	740 mm (29.134") × 140 mm (5.512")
Weight	8.0 kg (17.64 lb)
Housing Material	PVC-U

ENVIRONMENTAL

Ambient/Operating Temperature	-15 °C – +50 °C (5 °F – 122 °F)
Storage Temperature	-30 °C – +70 °C (-22 °F – 158 °F)
Humidity	10 % – 80 %; Non Condensing
Protection Rating	IP 55

PERFORMANCE

Energy Range (Gamma)	20 keV – 3 MeV
Throughput	> 100 kcps
Input Count Rate	300 kcps
Auto Calibration	Yes
Corrections	Spectrum linearization
Spectrum Data	1024 channels; 24 Bits per channel
Dose Rate Range	0.01 μ Sv/h – 1 Sv/h
Dose Rate Resolution	10 nSv/h
Dose Rate Accuracy	\pm 30 % (50 keV – 1500 keV)
Neutron Sensitivity ^{*2}	11 cps/nv \pm 20%, thermal neutrons
Energy Range (Dose Rate)	50 keV – 1500 keV
Measuring Modes	PHA
Stabilization	⁴⁰ K calibration source, LED; \pm 1 % for temperature change rate of 0.5 °C (0.9 °F) per minute

DETECTORS

Gamma	Nal; 2 " × 3 "
Gamma (High Dose Rate)	Energy Compensated GM Detector
Neutron ^{*2}	³ He Tube; 0.75 " × 3 "; 8 atm; surrounded by polyethelene moderator

STANDARDS

ANSI N42.43	Performance Criteria for Mobile and Transportable Systems
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SOFTWARE

Embedded Software	Windows CE Operating System
Interface	STRIDE XML language

Complete specifications available on request.



VARIANTS

Following variations of this device are available. Specifications differing for the variants are marked in the table.

- *1 DU 403.3-NG Ruggedized STRIDE Detection Unit for outdoor installations, Nal Detector, GM Tube.
- *2 DU 403.3-NGH Ruggedized STRIDE Detection Unit for outdoor installations, Nal Detector, GM Tube, ³He Tube.

For situations not covered by these variants please contact our Marketing and Sales Department at the email address or phone number listed below.

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