PRODUCT OVERVIEW

DU 403.4™

Weatherproof and Waterproof 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. Additionally several STRIDE systems are designed to discover environmental threats on land, sea and air.

STRIDE Saltwaterproof Gamma Detector with Nuclide Identification

The STRIDE DU 403.4 is supplied in a cylinder shaped, saltwaterproof housing. It is ideal for long term underwater applications in fresh and saltwater where a high sensitivity is required. The DU 403.4 is provided with a 3" by 3" NaI detector with DSP based electronics with LED stabilization against temperature and background condition changes and 50 m (164'0.5") waterproof cable. Operating power is provided via PoE (Power over Ethernet).

Stride Monitor Network

The STRIDE Server software (sold separetly) automatically detects any DU 403.4 connected to the network. Depending on the STRIDE Server configuration the DU 403.4 can be combined with other STRIDE detection units, resulting in a higher sensitivity and source tracking abilities.

FEATURES & BENEFITS

- For freshwater and saltwater
- Waterproof for long term installations
- Detects the presence of radioactivity or radioactive material.
- Performs rapid and accurate radionuclide identification
- Alarms on doserate changes above background
- Continually stabilizes for temperature and background changes
- Easy setup and configuration through a web interface
- Can be combined with every other STRIDE Detection Unit

FLIR®
Extraordinary Protection

SPECIFICATIONS

INPUT/OUTPUT

Power	Power over Ethernet
Ethernet	SubConn® Cat5e connector; 10 Mbit/s; 100 Mbit/s

PHYSICAL

Dimensions (H × Dia.)	460 mm (18.110") × 145 mm (5.709")
Weight w/o Cable	6.0 kg (13.23 lb)
Housing Material	PA 6 (Nylon)

ENVIRONMENTAL

Ambient/Operating Temperature	-15 °C – +50 °C (5 °F – 122 °F)
Storage Temperature	-30 °C – +70 °C (-22 °F – 158 °F)
Humidity	≤ 100 %
Protection Rating	IP 68
Max. Water Depth	15 m (49'2.6")
Rapid Temperature Change	Sudden temperature change must not exceed 30.0 °C (86.0 °F) in order to avoid damage to the detector crystal

PERFORMANCE

Energy Range (Gamma)	20 keV – 3 MeV
Throughput	> 100 kcps
Input Count Rate	300 kcps
Corrections	Spectrum linearization
Spectrum Data	1024 channels; 24 Bits per channel
Dose Rate Range	0 µSv/h – 100 µSv/h
Dose Rate Resolution	10 nSv/h
Dose Rate Accuracy	±30 % (50 keV – 1500 keV)
Energy Range (Dose Rate)	50 keV – 1500 keV
Neutron Sensitivity *2	11 cps/nv ± 20%, thermal neutrons
Measuring Modes	PHA, MPHA
Stabilization	^{40}K Calibration source and LED; ±1 % for temperature change rate of 0.5 °C (0.9 °F) per minute

DETECTORS

Gamma	NaI; 3 " × 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

SOFTWARE

Embedded Software	Windows CE Operating System
Interface	STRIDE XML protocol

Complete specifications available on request.

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VARIANTS

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

*1 **DU 403.4-NG** Underwater STRIDE Detection Unit, NaI Detector, GM Tube

*2 **DU 403.4-NGH** Underwater STRIDE Detection Unit, NaI Detector, GM Tube, ^{3}He 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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