NUVIATECH INSTRUMENTS

NuROLL

Dose Rate Measurement /
Video Inspection

The NuROLL robot has been designed to inspect areas with access constraints and/or in environments where radio transmissions are normally restricted. Its modularity allows it to be used in several fields (nuclear, hydraulic/water and sanitation, etc.) thanks to the possibility to incorporate various features such as cameras or measurement sensors. Wireless, it can beThe NuROLL is a wireless device controlled with a joystick.

Benefits

· Miniature to fit into small areas
· 4K (UHD) Camera to monitor the path of the NuROLL
· Choice of dose rate or gamma spectrometry sensors
· Modularity of sensors embarked
· Visual inspection (ITV)
· Radiological mapping
· Agile and robust
· Quick and easy deployement
· Remote and wireless control

Key figures

LoRa 868 MHz
➡ LoRa - long-range communication

20°C To +60°C
➡ Operating Temperature

IP68
➡ Ingress Protection

Supporting your energy

Applications

- Visual Inspection (ITV)
- Radiological mapping
- Radioactive source searching
- Inspection of industrial facilities/networks (maintenance, etc.)
- Inspection and monitoring of areas with constraint access
- Inspection and monitoring of areas with restricted radio transmission

Measurement: Modular Sensor

	Gamma Spectrometry		Dose Rate		
	S-60	**S-500**	**DR-H**	**DR-M**	**DR-L**
Sensor	CZT (60 mm³)	CZT (500 mm³)	If	If	Csl (Tl)
Transmitter	Gamma	Gamma	Gamma	Gamma	Gamma
Unit of Measurement	Blow / keV	Blow / keV	Gy.h-1	Gy.h-1	Gy.h-1
Measuring Range	≤ 10 mGy.h-1	≤ 1 mGy.h-1	1 µGy.h-1 to 10 Gy.h-1	1 µGy.h-1 to 100 mGy.h-1	10 nGy.h-1 to 1 mGy.h-1
Energy Range	59 keV to 2 MeV	59 keV to 2 MeV	59 keV to 2 MeV	59 keV to 2 MeV	59 keV to 2 MeV
Channels	1024	1024	-	-	-
Energy Resolution	<2.5% at 662 keV	<3% at 662 keV	-	-	-

Technical Specifications

ELECTRICAL FEATURES

- Battery: Lithium Polymer
- Nominal Voltage: 3.6V
- Maximum charge: 3.8 Ah
- Battery life: ~1 hour
- Monthly discharge: ~2%
- Charging system: External charger, 85–264 VAC @ 50/60 Hz

MECHANICAL CHARACTERISTICS

- Ingress protection: IP68
- Dimensions: 96 x 175 x 80 mm
- Weight: 750g

VIDEO

- Définition: 4k (UHD)
- Transmission : 2,4 / 5 Ghz

COMMUNICATION

- Name: iCOM
- Long-range communication: LoRa (868 MHz)
- Short-range communication: BLE
- Security: AES-256 / RSA-1024

ENVIRONMENT....

- Operating temperature: -20°C to +60°C
- Storage temperature: -20°C to +60°C
- Temperature during charging: 0°C to +45°C

STANDARDS

- Complies with CE standard and RED Directive (2014/EU)