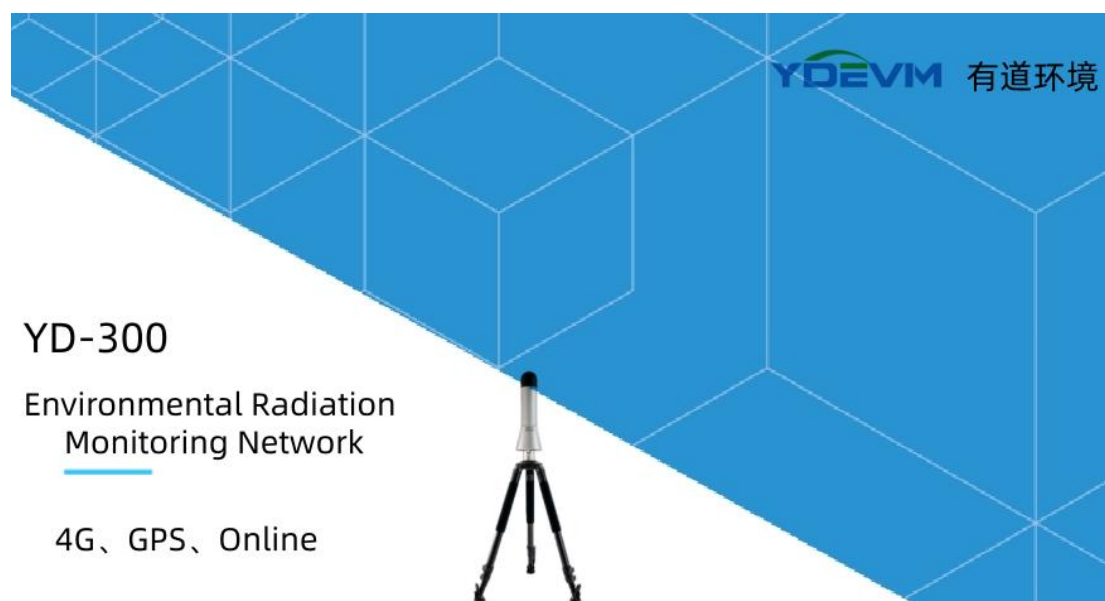


YD-300 Environmental Radiation Monitoring Network



Product description

The Networked Environmental γ Radiation Monitor is a real-time continuous on-line measurement and alarm device designed for outdoor environmental γ radiation monitoring. The instrument employs a high-sensitivity radiation sensor capable of rapid environmental γ measurement. Multiple units may be deployed across a defined area and interconnected via wireless or wired communication to form a distributed monitoring network, providing continuous multi-point surveillance. All measurement data are transmitted in real time to a central control station.

Features

- A high-speed embedded microprocessor is employed to ensure real-time performance and stability of monitoring data.
- Display units are freely switchable between $\mu\text{Sv/h}$ and $\mu\text{Gy/h}$.
- Individual detector units are organised into a distributed network, each integrated with geolocation information (GPS or BeiDou).
- Real-time radiation measurement data from each monitoring point are displayed.
- The system provides visualised real-time data display, upper and lower alarm threshold alerts, and real-time data storage.
- Radiation detectors may be configured with various sensor types, including GM counter, scintillator, and lanthanum bromide (LaBr_3), among others.
- Data transmission is supported via wired or wireless communication, including 4G, public network, satellite, and radio.

Applications

The instrument is intended for use in radiological medicine, occupational health, environmental protection, smelting and metallurgy, petroleum, chemical processing, radiological laboratories,

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nuclear medicine radioisotope applications, industrial non-destructive testing (NDT), radiation processing, outdoor geological surveying, cave exploration, and other settings where environmental γ radiation assessment and measurement are required, and is suitable for regulatory oversight by environmental protection authorities or for academic research purposes.



Specifications

Parameter	GM Counter	Scintillator Detector
Detector	GM counter	Scintillator detector
Energy response	30 keV – 3 MeV, $\leq\pm 30\%$	30 keV – 7 MeV, $\leq\pm 30\%$
Detectable radiation types	X, γ	X, γ
Measurement range	Dose rate: 0.01 $\mu\text{Sv/h}$ – 5.0 mSv/h (optional: 0 – 5 Sv/h)	10 nGy/h – 10 mGy/h

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Parameter	GM Counter	Scintillator Detector
Display	Web interface, mobile app (Android/iOS)	Web interface, mobile app (Android/iOS)
Sensitivity	≥ 5 cps at 1 μGy (per $\mu\text{Sv/h}$)	≥ 1200 cps/ $(\mu\text{Gy/h})$
Relative intrinsic error	$\leq \pm 15\%$ (^{137}Cs , 100 $\mu\text{Sv/h}$)	$\leq \pm 10\%$
Response time	1 s	1 s
Communication	Wired: RS485; Wireless: satellite / 4G / radio, etc.	Wired: RS485; Wireless: satellite / 4G / radio, etc.
Operating environment	Temperature: -25°C to $+50^{\circ}\text{C}$; relative humidity: $\leq 98\%$ (at 40°C)	Temperature: -25°C to $+50^{\circ}\text{C}$; relative humidity: $\leq 98\%$ (at 40°C)
Waterproof rating	IP66	IP66
Power supply	7.4 V / 10000 mAh rechargeable lithium battery	7.4 V / 10000 mAh rechargeable lithium battery
Enclosure	All-metal construction	Fully aluminium alloy construction
Extendable height	0.8 – 1.5 m	0.8 – 1.5 m

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