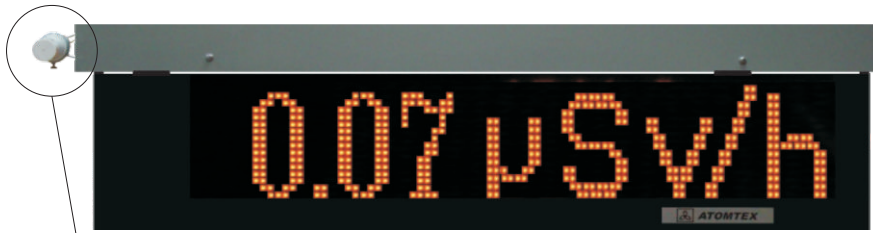


# AT2327 Alarm Dosimeter with Data Display



Gamma radiation detection unit



Control unit

## Information about radiological situation for workers and the public

Alarm dosimeter with data display is designed for radiation monitoring in radiation-sensitive and radiation-dangerous areas and facilities.

### Operating principle

Gamma smart probe is used for measuring of radiation background level.

Dosimeter operation algorithm provides measurement continuity, rapid reaction to background radiation level change and real time display of detection unit data on external display.

Ambient temperature and current time and date is additionally displayed.

Control unit is responsible for controlling the operation modes, performing

necessary calculations, storing and backing-up measurement results, as well as for supplying power to devices.

It hosts command console, interface adapter and backup power supply. Control unit is to be installed indoors.

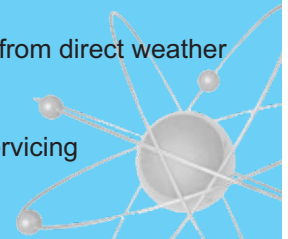


## Applications

- Coach and railway terminals, airports, underground railway systems
- Civil defence and security services facilities, high-security objects
- Manufacturing facilities
- Radiation detection and dosimetric laboratories
- Radiological health care facilities
- Nuclear industry facilities

## Features

- Wide range of gamma radiation dose rate measurement from background to emergency values
- Smart probe for gamma radiation measuring
- Automatic compensation of intrinsic detector background
- Can operate over a wide temperature range
- High reliability
- Operational self check and fault diagnostics
- Internal backup power supply for up to 3 hour of off-line operation
- History logging of dose rate levels and cases of threshold crossing
- Detection unit and temperature probe can be installed up to 1 km away from data display
- Additional protection from direct weather impact
- No dismantling for servicing



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Instruments and Technologies for Nuclear  
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Ionizing radiations  
detectors and  
instruments

# AT2327 Alarm Dosimeter with Data Display

## Specification

<b>Registered radiation type</b>	Gamma radiation
<b>Detector</b>	Geiger-Muller counter tube
<b>Measurement range of ambient dose equivalent rate</b>	0.1 $\mu\text{Sv/h}$ – 10 Sv/h
<b>Limits of tolerable intrinsic relative error</b>	$\pm 15\%$
<b>Energy range</b>	60 keV – 3 MeV
<b>Typical sensitivity to <math>^{137}\text{Cs}</math> gamma radiation</b>	4.0 cps/ $(\mu\text{Sv}\cdot\text{h}^{-1})$
<b>Response time</b> for dose rate measurement (for dose rate $\geq 1 \mu\text{Sv/h}$ )	$\leq 3$ s (accuracy error $\leq \pm 10\%$ )
<b>Energy dependence</b> relative to 662 keV ( $^{137}\text{Cs}$ )	-25% to +35% (60 keV – 1.25 MeV)
<b>Ambient temperature monitoring range</b>	-30°C...+50°C
<b>Data display</b>	LED display with step brightness control
Displayed information	Dose rate, ambient temperature, current time and date
Time format	Hours:Minutes, Days:Months
Maximum legibility distance at any time of day	30 m
<b>Working temperature range</b>	
Detection unit and data display	-30°C to +50°C
Control unit	+5°C to +40°C
<b>Relative humidity</b> with air temperature $\leq +35^\circ\text{C}$ without condensation	$\leq 95\%$
<b>Protection class</b>	
Detection unit	IP57
Data display	IP53
Control unit	IP31
<b>Burn-up life</b>	$\geq 100$ Sv
<b>Power supply</b>	110-230 VAC, 50-60 Hz
<b>Backup power supply</b>	Integrated backup power supply +24 V
<b>Power consumption</b>	100 W max.
<b>Overall dimensions</b>	
Data display with detection unit	1095x392x300 mm
Control unit	500x650x150 mm
<b>Weight</b>	
Data display with detection unit	25 kg
Control unit	30 kg

Design and specifications are subject to change without notice

## Capabilities

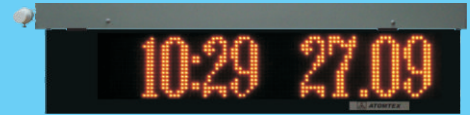
Dose rate



Ambient temperature



Current date and time



The alarm dosimeter complies with:  
GOST 27451-87, GOST 29074-91,  
Safety requirements of IEC 61010-1:2010,  
EMC requirements of EN 55011:2009,  
IEC 61000-4-2:2008, IEC 61000-4-3:2008,  
IEC 61000-4-4:2004, IEC 61000-4-5:2005,  
IEC 61000-4-6:2008, IEC 61000-4-8:2009,  
IEC 61000-4-11:2004



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