Product Datasheet

6150AD1 & AD5 (/H, /E)

Universal Radiation Meter for Measuring Photon Radiation (Gamma and X-radiation), and for Detecting Alpha and Beta Radiation if Operated with External Probes

The **6150AD is a portable, battery operated dose rate meter to measure photon radiation (gamma and X-radiation). A built-in GM counting tube serves as the detector.**

As implied by the letters 'AD' in its name, the 6150AD displays the current dose rate in both analog and digital form. Furthermore, it permanently measures dose rate mean value, dose rate maximum value, and accumulated dose.

All models have alarm thresholds for dose rate, some models also for dose. Some models have programmable thresholds that allow you to set alarm thresholds to any value within the instrument's range. All models support audible single pulse detection.

Features

- Detectors: Built-in GM counter and external probes.
- Gets all the benefits from a modern microprocessor: Automatic range selection, smart time constant, digital calibration providing high accuracy, recognises external probes automatically.
- Simultaneously measures current value, average value, and maximum value of dose rate, as well as accumulated dose (non-volatile dose memory provided).
- Alarm thresholds for both dose and dose rate including one freely programmable threshold each.
- Automatic battery monitoring.
- Approx. 3000 operating hours with a 9 V alkaline battery.
- Robust waterproof aluminium die-cast housing.
- Serial RS232 interface for connection to a PC.

Optional Accessories

Source Holder 761.1

The source holder 761.1 serves to mount the check source 6706 (333 kBq Cs-137) or equivalent onto the 6150AD in a well-defined position. This allows reproducible radiological checks.

Wall Holders

The wall holder 761.8 serves to store (not operate) the 6150AD at a wall. The wall holder with AC adapter 761.13 allows stationary operation of the 6150AD from the 230 V mains.

Bags and Cases

There is a variety of bags and cases for safe storage and transportation of the 6150AD and its accessories.

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Specifications

Detector (Energy compensated)	GM tube ZP1310, effective length 16 mm, sensitivity approx. 500 pulses per µSv
Measuring Quantity	/H, /E models: Ambient dose equivalent H*(10) Others: Exposure dose J_s
Energy Range	/H, /E models: 45 keV - 2.6 MeV Others: 45 keV - 3 MeV
Angular Range	±45° around preferential direction (perpendicular to the front side)
Analog (A) and Digital (D) Dose Rate Range	A: 1 µSv/h to 1000 mSv/h D: 0.0 µSv/h to 999 mSv/h
Useful Dose Rate Range (Low fluctuations)	0.2 mSv/h to 999 mSv/h
Time Constant	8 s, 1 to 2 s on sudden significant changes in dose rate
Instrumental Background	< 20 nSv/h
Linearity of Dose Rate Measurement	Deviation max. ±10%, calibration with Cs-137
Overload Resistance	Up to 50 times the amount of the full range dose rate
Average Dose Rate Digital Range	0.000 µSv/h to 9.999 mSv/h value flashes as long as standard deviation is greater than 5%
Digital Dose Range	6150AD1 (/H, /E): 0 µSv - 9.99 Sv 6150AD5 (/H, /E): 0.00 µSv - 99.9 mSv
Fixed Dose Rate Alarm Thresholds	25 µSv/h, 250 µSv/h, 1 mSv/h 2.5 mSv/h, 10 mSv/h (disabled)
Fixed Dose Alarm Thresholds (with smart models 6150AD5 and AD6 only)	15 mSv, 100 mSv, 250 mSv (disabled)
User Programmable Alarm Thresholds	One freely programmable threshold for each dose and dose rate (with smart models 6150AD5 and AD6 only)
Audible Single Pulse Detection	Yes, may be turned on and off with loudspeaker key
Display Illumination	EL-lamp, goes on when pressing the illumination key, continues for ten seconds after releasing the key
LCD Test (all segments on)	Automatically after switching on while the on/off key is kept down

Temperature Range	-30°C to + 50°C, deviation max. ±10% referred to indication at +20°C
Humidity	Nominal range 0 to 95% within specified temperature range
Atmospheric Pressure	Nominal range 60 to 130 kPa (600 to 1300 mbar)
Geotropism	None (no change of response as a result of gravitational effects)
Power Supply	9V battery (alkaline according to IEC 6LR61 recommended) or 9V accumulator (rechargeable battery)
Battery Life with 6LR61	Approx. 3000 hours (approx. 60 hours with illumination)
Battery Check	Voltage is indicated digitally after switching on, or later if requested with the arrow key
Supply Voltage	Nominal range 5.5 to 10 Volt
Battery Monitoring	Automatic visual and audible warning if battery voltage goes below 5.5 Vol
Housing	Aluminium die-cast, waterproof, protection class IP 67 according to DIN 40050
Buzzer	Piezo buzzer inside the housing
Dimensions	130 x 80 x 29 mm³
Weight	Approx. 400 g
Carry Strap (included)	Plastic, easy to decontaminate, length 1 m

Specifications are subject to change without notice.
For the most up-to-date specifications, please visit www.automess.de

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