DATASHEET

Teletector® 6112D/H

Gamma Dose (Rate) Meter with Telescopic Probe for Ambient Dose Equivalent H*(10)

A portable battery operated dose rate meter to measure photon radiation (gamma and X-radiation), and to detect beta radiation.

First introduced in 1981 the Teletector 6112D's electronics were totally re-designed in 2005 to provide all the benefits of a modern microprocessor, such as a floating time constant and digital calibration with excellent linearity. The self-monitoring feature issues an error message if the GM tubes appear to be defective. The LCD has four large digits with an LED backlight. In order to save batteries, the backlight goes on automatically only if ambient light conditions are insufficient.

The current electronics are compatible with the old ones so that they may be used to upgrade or repair older Teletectors including Roentgen versions. They also provide various operational modes which allow the user to disable some of the new features making operation appear more or less similar to the old electronics.

Two GM counting tubes serve as detectors on the Teletector 6112D/H. The stainless steel telescope can be continuously extended up to four metres; its tip carries the two tubes. The 6112D/H is designed to measure Ambient Dose Equivalent H*(10) in Sievert units.

Particular advantages of the Teletector 6112D/H are:

- Safety by distance: Telscopic extendable up to 4 m total length.
- Wide range from 01 µSv/h to 10 Sv/h
- Beta detection.
- Modern electronics, microprocessor controlled, self-monitoring, floating time constant, digital calibration with excellent linearity, automatic battery warning.
- Various operational modes allow adaptation to individual requirements.
- LCD with LED backlight controlled by ambient light conditions.
- Rugged construction, simple operation.
- Low power consumption, up to 5000 operating hours with four C cells.

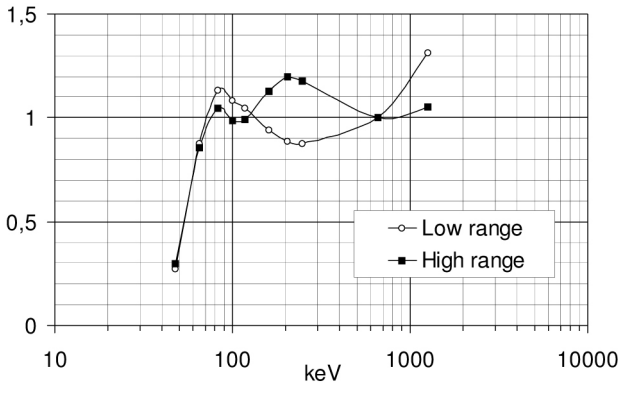
Operation is extremely simple, just turn the main switch to the required range.

The time constant switch allows to set the counting period to 1, 4, or 16 seconds. However, the time constant switch is only required for some of the operational modes. Most modes, including factory default, use a time constant which floats automatically from 16 to 1 seconds according to dose rate.

Specifications

Detectors (energy compensated)	Low range: Beta/gamma end window GM tube ZP1400 or equivalent. High range: Gamma GM tube ZP1300 or equivalent.
Designed for	Ambient Dose Equivalent H*(10)
Energy range and angular range	80 keV to 1.3 MeV, ±45° around the preferential direction (= perpendicular to the probe axis).
Dose rate ranges	Low range: 0.01 - 9900 µSv/h. High range: 0.01 - 9900 mSv/h
Response time	Time constant controlled by microprocessor, floating from 16 s to 1 s
Dose range	0.001 - 9999 mSv
Instrumental background	< 0.2 µSv/h (low range tube)
Accuracy and linearity	Better than ±10%, calibration with Cs-137 gamma radiation.
Detection of beta radiation	With the low range tube through beta window in the probe head's front surface, thickness approx. 25 mg/cm^2
Display	Four-digit LCD.
Display backlight	Orange LEDs controlled by ambient light intensity.
Acoustic radiation detection	Optionally through earphone or loudspeaker attachment.
Temperature range	-20°C to + 50°C, deviation max. ±10% referred to indication at +20°C
Humidity	Nominal range 0 to 85% Humidity.
Atmospheric pressure	Nominal range 60 to 130 kPa (600 to 1300 mbar).
Power supply	Four C cells (LR14, C, AM2), nominal voltage range 3.5 to 7 Volt.
Battery life with alkaline batteries	600 to 5000 hours depending on how frequently the LCD backlight will be on.
Housing	Aluminium die-cast.
Dimensions	Length: 895 mm (telescope pushed in), Width: 130 mm, Height: 84 mm
Weight	Approx. 3 kg without batteries, approx. 3.3 kg including batteries.

Energy response referred to H(10), normalised to indication at Cs-137 (662 keV)*



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