Automation und Messtechnik GmbH

automess

- **Safety by distance: Telescope extendible up to 4 m total length**
- **Wide range from 0.1 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**

TELETECTOR® 6112D/H

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

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TELETECTOR 6112D/H

The Teletector 6112D/H is a portable battery operated dose rate meter to measure photon radiation (gamma and X-radiation), and to detect beta radiation. Two GM counting tubes serve as detectors. 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: wide range, simple operation, easy reading, and the telescope allowing measurements at large safety distances and at places difficult to reach.

The Teletector 6112D is in the market since 1981. In 2005, the electronics were totally re-designed providing 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 new electronics are compatible with the old ones so that they may be used to upgrade or repair older Teletectors including Roentgen versions. The new electronics also provide various operational modes which allow to disable some of the new features making operation appear more or less similar to the old electronics.

Operation is extremely simple: Just turn the main switch to the required range:

- »B« for battery voltage indication,
- »mSv/h« for the high dose rate range,
- »µSv/h« for the low dose rate range,
- »mSv« for the dose 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.

OPTIONAL ACCESSORIES

Acoustical pulse detection: A socket on the right side of the Teletector serves to connect either the earphone 6112B-134C or the loudspeaker attachment 6640C. This allows the GM tube pulses to be heard as crackling sounds which makes changes in dose rate easier to recognise.

Probe cover 6112B-142: If you plan to use the Teletector with the telescope pulled out under conditions where water may get into the telescope (for example, when dipping the probe into liquids), you have to slide the probe cover over the telescope. The probe cover also protects the telescope against dirt and contamination.

The aluminium case 6605.22 serves for safe storage and transportation of the Teletector and its accessories.

TECHNICAL DATA

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/cm²
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%
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)*