



ACTIVE DOSIMETRY

Beta Module $H_p(0,07)$

For the DMC 3000 Dosimeter



FEATURES

- Dose and dose rate $H_p(0,07)$ displayed
- Connect and ready for use
- High efficiency beta measurement
- Superior $H_p(0,07)$ energy response
- Meets or exceeds applicable IEC and ANSI standards
- Excellent EMC immunity
- Designed for ruggedness and durability

RELATED PRODUCTS

- Telemetry module, Neutron module
- Readers: LDM 2000, LDM 3000M, LDM 3200, LDM 320D/W, LDM 1000
- Software: LDMAccess, DMCUser, DosiCare and DosiServ

OVERVIEW

The Beta Module provides operational dosimetry for hospital personnel, first responders, and radiation workers where there is a Beta radiation risk.

The add-on Beta Module attaches to the DMC 3000 dosimeter is able to measure $H_p(0,07)$ radiation at a wide range of energy levels.

The $H_p(0,07)$ and beta measurements, display and alarms are highly visible on the DMC 3000's LEDs and high contrast backlit LCD display.

Powered by the DMC 3000, the add-on module does not require any supplementary battery and remains operational over 2000 hours in continuous use. Calibration and functional parameters are stored in the module



PHYSICAL CHARACTERISTICS

Hp(0,07) Measurement range (DMC 3000 + module)
• Beta $E_{mean} > 60$ keV (Emax : 0.22 MeV to 2.3 MeV)
Dose Range, IEC 61526 Ed. 3 (Display & Measurement)
Hp(0,07) β
<ul style="list-style-type: none"> • Effective Range of Dose: 0,02 μSv to 100 Sv (0.002 mrem to 10000 rem) • Display Resolution: 0,1 μSv to 10 Sv (0.01 mrem to 1000 rem) up to four decimal places • Overload Indication: from 10 Sv to >100 Sv (1000 rem to >10000 rem)
Dose Rate Range IEC61526 Ed. 3 (Display & Measurement)
Hp(0,07) β
<ul style="list-style-type: none"> • Effective Range of Dose Rate: 0.05 μSv/h to 20 Sv/h (0,005 mrem/h to 2000 rem/h) • Display Resolution: 1 μSv/h to 10,0 Sv/h (0.1 mrem/h to 1000 rem/h) up to three decimal places • Overload Indication: from 10 Sv/h to >50 Sv/h (1000 rem/h to >5000 rem/h)
Accuracy Hp(0,07) Beta
<ul style="list-style-type: none"> • Relative Hp(0,07) Beta response of Pm-147, Kr-85 and Sr-90/Y-90 within $\pm 20\%$ (*) (*) in reference to the typical curve given here below
Hp(0,07) Dose Rate Linearity
• $< \pm 20\%$ up to 10 Sv/h, 1000 rem/h

Display of Hp(0,07) measurement



ELECTRICAL CHARACTERISTICS

- Powered by DMC 3000
- 9 calendar month battery life for beta module and the DMC 3000 (typical, 8 h per day, 5 days per week in run mode, without excessive alarms*)
- 2000 h battery life for DMC 3000 with beta module and DMC 3000 in continuous run, without excessive alarms*
**0.2% of the time in alarm with Duracell industrial battery*

MECHANICAL CHARACTERISTICS

- Rugged, high impact polycarbonate-ABS case
- Dimensions with DMC 3000:
 - 122 x 60 x 21 mm (4.8 x 2.4 x 0.8 in) max. without clip
 - 122 x 60 x 28 mm (4.8 x 2.4 x 1.1 in) with standard clip
- Weight with DMC 3000: < 112 g (3.9 oz) with clip
- Worn by a replaceable standard clip

ENVIRONMENTAL CHARACTERISTICS

- Temperature range: -10°C to 50°C (14°F to 122°F)
- Storage: -20°C to 71°C (-4°F to 160°F)
- Shock, vibration and drop resistant
- IP50 protection
- EMC: complies and exceeds standards by a large margin (C € compliant certificate number: DOC003214)
- MIL STD 461-RS103 (pulsed electric field): exceeds 200 V/m from 10 kHz to 5 GHz
 - MIL STD 461-RS101 (magnetic field 30 Hz to 100 kHz)

PRODUCT CHARACTERISTICS

Histogram Features

- Additional Hp(0,07) measurement (dose, dose rate and maximum dose rate) saved on non volatile memory (EEPROM) at the same time as Hp(10) measurement in configurable steps (10 s, 60 s, 10 min, 1 hour, 24 hours)

Display Features

- Additional Hp(0,07) measurement displayed on DMC 3000 high quality white backlighting
- Blue top LED for Hp(0,07) dose increment indication

Alarm Features and Communication

- DMC 3000 alarming speaker, vibrator, high efficiency red flash LED, 3 top LEDs and display indicators
- Hp(0,07) dose/rate alarms, adjustable over the display range
- Hp(0,07) dose/rate warnings, adjustable over the display range and acknowledgeable

Calibration

- Factory calibration in accordance with ISO/IEC 17025
- Parameters saved into the module

Compatibility

- With all DMC 3000 (firmware upgrade needed if firmware lower than V7.x)

