Product Datasheet

Neutron Telemetry Module (nTx)

For the DMC 3000 dosimeter

The purpose of the Neutron Telemetry Module is to provide an additional Neutron measurement and to transmit worker's data (worker information, gamma and neutron radiological data and setpoints) to WRM3 Telemetry System components. Neutron Telemetry Module is also backward compatible with WRM2 Telemetry System.

The add-on Neutron Telemetry Module attaches to the DMC 3000 dosimeter is able to measure Hp(10) radiation at a wide range of energy levels. The Hp(10) measurements (gamma and neutron) are highly visible on the high contrast backlit LCD display of the DMC 3000. The module provides also a supplemental visual alarm indication (LED).

Features

- Dose and dose rate Neutron *H*p(10) displayed.
- Totalised dose for *H*p(10) Gamma + Neutron displayed.
- Superior gamma rejection in Neutron channel.
- Transmits dosimeter informations, in pre-configured intervals to WRM3 or WRM2 Telemetry receivers.
- Low-power optimised for long battery life.
  >50 h* for 900 MHZ module and
  >100 h* for 2,4 GHz module.
- 900 MHz and 2.4 GHz Options.
- Module power supply: AAA battery or micro USB connector.
- Full Neutron energy range coverage.
- Meets or exceeds applicable IEC and ANSI standards.
- Designed for ruggedness and durability.
- Excellent EMC Immunity.
- Waterproof IP67 (1 m 1 hour).

*With Duracell industrial battery

Related Products

- Telemetry Systems: WRM3 and WRM2.
- Readers: LDM 2000™, LDM 3200™, LDM 320D/W™, LDM 1000™.
- Software: LDMAccess™, DMCUser™, Teleview 3000™ and TelemetryStudio™.
- Dosimeter DMC 3000™

Specifications

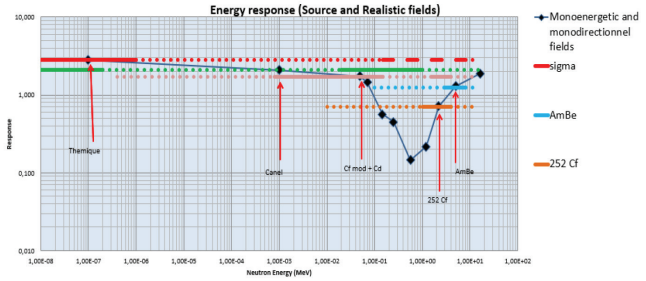
Physical Characteristics	
Measurement Range *Hp*(10) (DMC 3000 + module)	**Neutron energy range:** 0.025 eV to 15 MeV
Dose Range, IEC 61526 Ed. 3 (Display & Measurement) ***Hp*(10) N**	**Effective Range of Dose:** 2 µSv to 100 Sv (0.2 mrem to 10000 rem) **Display Resolution:** 0,1 µSv to 10 Sv (0.01 mrem to 1000 rem) up to four decimal places **Overload Indication:** From 10 Sv to >50 Sv (1000 rem to >5000 rem)
Dose Rate Range, IEC61526 Ed. 3 (Display & Measurement) ***Hp*(10) N**	**Effective Range of Dose:** 1 µSv/h to 10Sv/h (0.1 mrem/h to 1000 rem/h) **Display Resolution:** 100 µSv/h to 10 Sv/h (10 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*(10) Neutron	≤ ± 10% (AmBe, 0.75 mSv/h, 75 mrem/h, target 1,3) Hp(10) Typical Energy response from thermal to fast Neutron (see curve)
Dose Rate Linearity *Hp*(10)	≤ ± 20% up to 10 Sv/h, 1000 rem/h
Transmit power output and sensitivity	125 mW (900MHz), 10 mW - 63 mW (2.4 GHz) locally regulated **Sensitivity:** -106 dBm (900 MHz), -100 dBm (2.4 GHz)
Frequencies	900 (902-928) MHz or 2.4GHz (ISM frequency range)
Transmission Interval	User configurable

Electrical Characteristics	
Internal Power	AAA Alkaline Battery (LR03)
External Power	Battery adaptor 1.5 V - 3.6 VDC, external power 100 - 220 VAC with USA and Euro adapter or through micro USB connector

Mechanical Characteristics	
Case	Rugged, high impact polycarbonate-ABS case
Dimensions with DMC 3000	141 mm x 60 mm x 21 mm (5.6 in x 2.4 in x 0.8 in) max. without clip 141 mm x 60 mm x 28mm (5.6 in x 2.4 in x 1.1 in) with standard clip
Weight	168 g (5.9 oz) with DMC 3000 and battery 85 g (3 oz) nTx module only
	Worn by a replaceable clip in pocket or on belt

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
Waterproofing	IP67 protection 1 m (39 in) during 1 hour
EMC	Complies with and exceeds standards by a large margin (CE compliant certificate number DOC012026) – MIL STD 461-RS103 (pulsed electric field) exceeds 200 V/m from 80 MHz to 5 GHz – MIL STD 461-RS103 (magnetic field) 30 Hz to 100 GHz

Product Characteristics	
Display Features	Additional *Hp*(0,07) measurement displayed on DMC 3000 high quality white backlighting LCD Blue LED indication for dose increment
Alarm Features and Communication	DMC 3000 alarm speaker, vibrator, high efficiency red flash LED, 3 top LEDs and display indicators *Hp*(10) Neutron dose/rate alarms, adjustable over the display range *Hp*(10) Neutron 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	Compatible with DMC 3000 firmware V7.V or higher Compatible with WRM2 or WRM3 system (AWM and more)



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