



Innovator In Spectroscopy Equipment

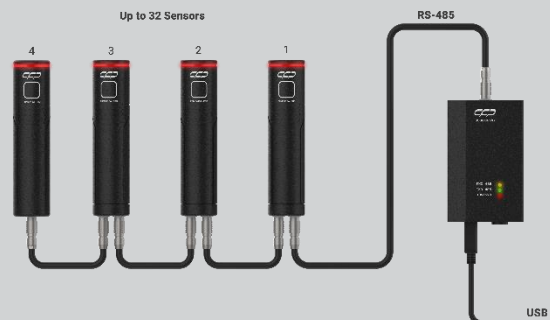
USBOIC2715



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USB OPTICALLY ISOLATED CONVERTER MODEL USBOIC2517



CATALOG



DOSIMETERS



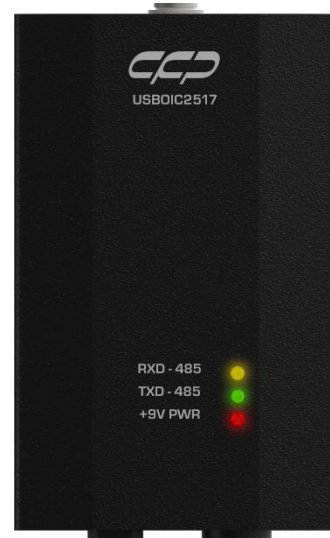
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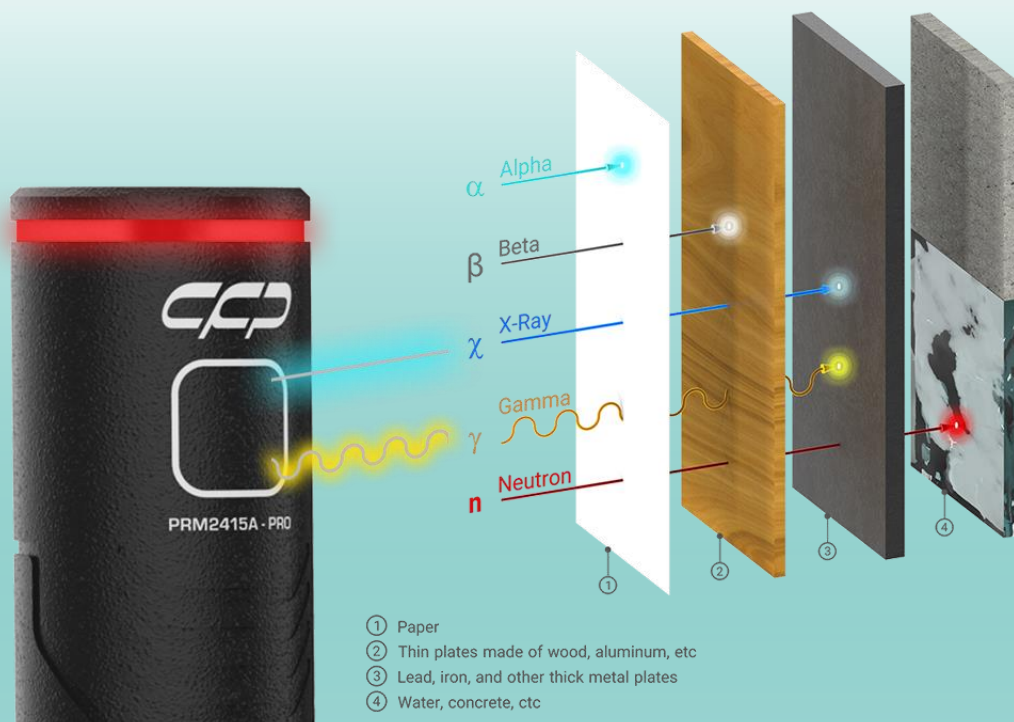
USB OPTICALLY ISOLATED CONVERTER MODEL USBOIC2517

Features

- Detects all Gamma & X-Ray radiation
- Measurement Count:(0.01cpm~300Kcpm)
- Dose Range: (0.1uSv/h~10mSv/h (@Cs137))
- Compact design with Low weight
- Cost effective Semiconductor Sensor
- 2 versions STD type (120keV-3MeV) and PRO type (60keV-3MeV) gamma energy
- Light and Sound alarm (PRO version only)
- Detect the presence of a source of radiation During air travel or during medical procedures (X-Rays, CT scans, etc.)
- Monitor counts/interval (rate)
- High sensitivity and wide measurement range
- Monitor variation in background radiation at different elevations.
- Monitor radioactivity in the environment over long periods of time.
- Monitor counts per interval (rate) from a hard beta or gamma radiation source as a function of the distance between the source and the Radiation Monitor



X- and Gamma-Rays



Description

The PRM2415A from CFP is a highly sensitive radiation sensor designed for the embedded systems market. Capable of detecting Gamma and Beta radiation, it has a simple pulsed output that can be used with any interface. The PRM2415A has an onboard DC boost circuit, so the board can be supplied with a friendly 5V. Using only 31mW (6mA @ 5V), it is very low power. CFP has a handful of documents and example sample to get you up and running. They have also written a Windows and Android example program written in C# to output graphs to a computer using a USB as the reader. Additionally, the counter comes with an optional enclosure and 3.5mm cable that allow you to connect the counter to some mobile phones. Portable combined multi-purpose instrument, which can be equipped with different external detection units for various applications as applicable.

The Radiation Monitor senses ionizing radiation by means of a SEM. The tube is fully enclosed inside the instrument. When ionizing radiation or a particle strikes the SEM surface, it is sensed electronically and monitored by a computer, or by a flashing count light. Radiation is measured in counts in a time interval,

as configured in data-collection software. About 5 to 25 counts at random intervals (depending on location and altitude) can be expected every minute from naturally occurring background radiation.

Further Tips for Monitoring Radiation

To measure gamma and X-rays, hold the tip of the Radiation Monitor toward the source of radiation. Low-energy gamma radiation (10–40KeV) cannot penetrate the side of the PRM, but may be detected through the window. To detect hard beta radiation, point the window toward the source of radiation. Beta radiation has a longer range through air, but can usually be shielded (e.g., by a few millimeters of aluminum). High energy beta particles may be monitored through the back of the case. Some isotopes detected relatively well are cesium-137, cobalt-60, technetium-99m, phosphorus-32, and strontium-90. Some types of radiation are very difficult or impossible for this PRM to detect. Beta emissions from tritium are too weak to detect using the Radiation Monitor. Gamma emissions from Americium-241 are too weak to detect using the Radiation Monitor well.

Specifications

UNIT:2415A			
TYPE	MOUNTABLE		
Version	STD	PRO	BETA
Inputs/Outputs			
Port	USB		
Controls/Communication			
USB	Set and read all data		
Performance			
Energy range for gamma	120keV-3MeV	60keV-3MeV	60keV-3MeV
Energy range for beta	---	---	100keV-3MeV
Battery type	Not included		
Dose range	0.1-10000 μ Sv/h		
Accuracy for gamma	+/- 20% (Cs-137)	+/- 10% (Cs-137) +/- 10% (Co-60) +/- 10% (Am-241)	+/- 10% (Cs-137) +/- 10% (Co-60) +/- 10% (Am-241)
Accuracy for gamma	---	---	+/- 10% (Sr-90)
Power	0.1W		
Protection class	IP40		
Continuous run time			
In normal conditions	\geq 10 h		
Buzzer	Not included	Available	
Indicators			
Ring	---	Green (Norm), Red (Alarm)	Green (Norm), Red (Alarm)

Application

- Lantern Mantles
- Research activities
- Accelerating installation
- Dose monitoring of population
- Nuclear medicine and industry
- Customs and border control
- Emergency rescue service
- Medical and health physics
- Radioecology and Radiology
- Individual radiation and protection
- Civil protection, security and police
- Medical procedures (X-Rays, CT scans, etc.)
- Belding protection and emergency service
- Counts/Interval vs. Distance and Shielding Studies
- Background Radiation and search X-ray apparatus
- Half-Life Determination (Counts/Interval vs. Time)
- Radiation monitoring during decontamination operations
- X-Ray crystallography and X-Ray fluorescence spectroscopy, electronic microscopy
- Detects all Gamma & X-Ray radiation: Check radiation levels during air travel or during
- Radiation protective measures in case of nuclear disasters

Electrical and Mechanical

VERSION

STD

PRO

BETA

Power required

0.1W

weight

98 gr

Dimension

31mm x 137mm

Storage temperature

10°C...+40°C

Operating temperature

0°C...+50°C





Software

This sensor can be used with one of the above interfaces and the following data-collection software.

CFP Logger Computer 4hour with internal battery

PC Computer

Tablet with USB host








Software main window (Mode 1)







Software main window (Mode 2)

Ordering info

Standard package includes STD Version

Part #	Image	Description
USBOIC2517		USB Optically Isolated Converter
ACCE2517001		LEMO 5pin cable
ACCE2517002		Dc power supply 15V /6A
ACCE2517003		CD User guide (1 Pack)
ACCE2517004		box with foam inserted (1 Pack)

Optional accessories and services

Part #	Image	Description
ACCE2415A006		Rugged bag
ACCE2415A007		USB extraction cable (10m, 20m, 30m)
ACCE2415A004		installation
ACCE2415A005		Training