CFP

Innovator In Spectroscopy Equipment
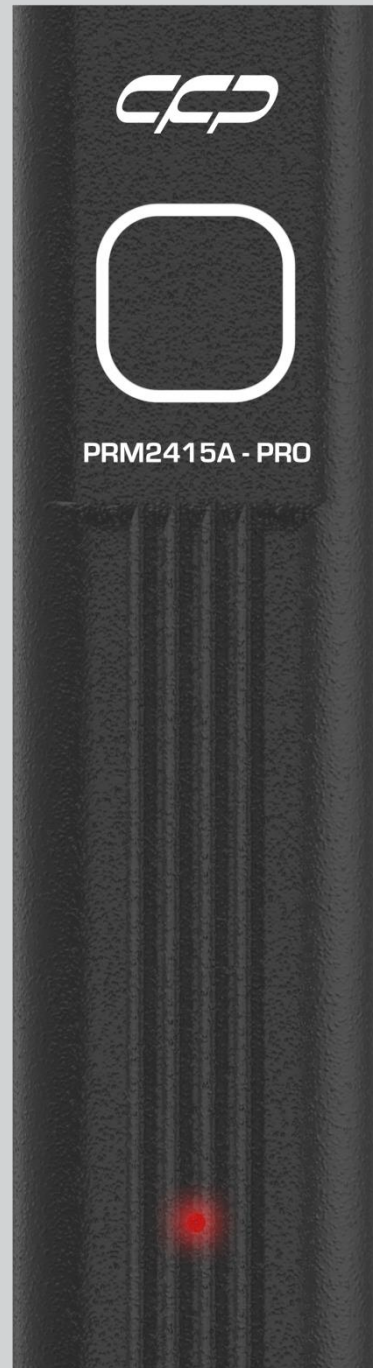
PRM2415A

SIMPLE

ANDROID | Windows

- Hp(0.07)
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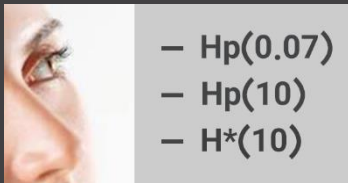
PORTABLE RADIATION MONITOR MODEL PRM2415A SIMPLE

www.cfp.co.ir

PRM2415A - PRO

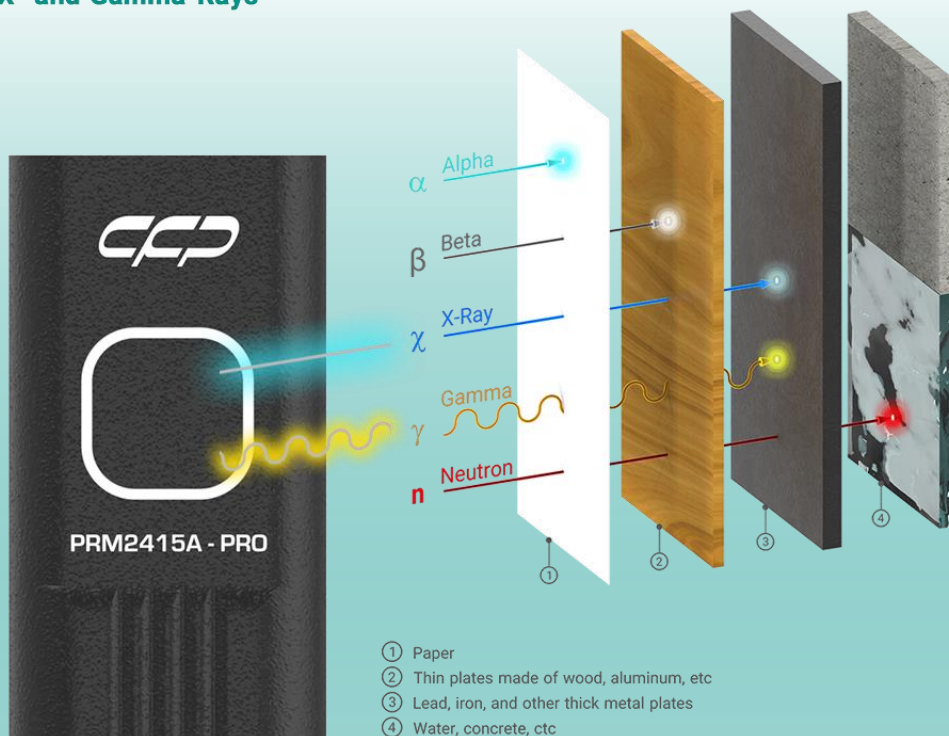**CATALOG**

H*(10)
DOSIMETERS

FREE DOWNLOAD

PORTABLE RADIATION MONITOR
MODEL PRM2415A SIMPLE

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

PRM2415A - PRO

α Alpha
β Beta
χ X-Ray
γ Gamma
n Neutron

① Paper
② Thin plates made of wood, aluminum, etc
③ Lead, iron, and other thick metal plates
④ Water, concrete, ctc

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	SIMPLE	
Version	STD	PRO
Inputs/Outputs		
Port	USB	USB
Controls/Communication		
USB	Set and read all data	Set and read all data
Performance		
Energy range	120keV-3MeV	60keV-3MeV
Battery type	Not included	Not included
Dose range	0.1-10000µSv/h	0.1-10000µSv/h
Accuracy	+/- 20% (Cs-137)	+/- 10% (Cs-137)
Power	0.1W	0.1W
Protection class	IP40	IP40
Continuous run time		
In normal conditions	≥1000 h	≥1000 h
In economy mode	≥5000 h	≥5000 h
Buzzer	Not included	Available
Indicators		
Ring	Green color (Safe) Red Color (Alarm)	Green color (Safe) Red Color (Alarm)

Application

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

Electrical and Mechanical

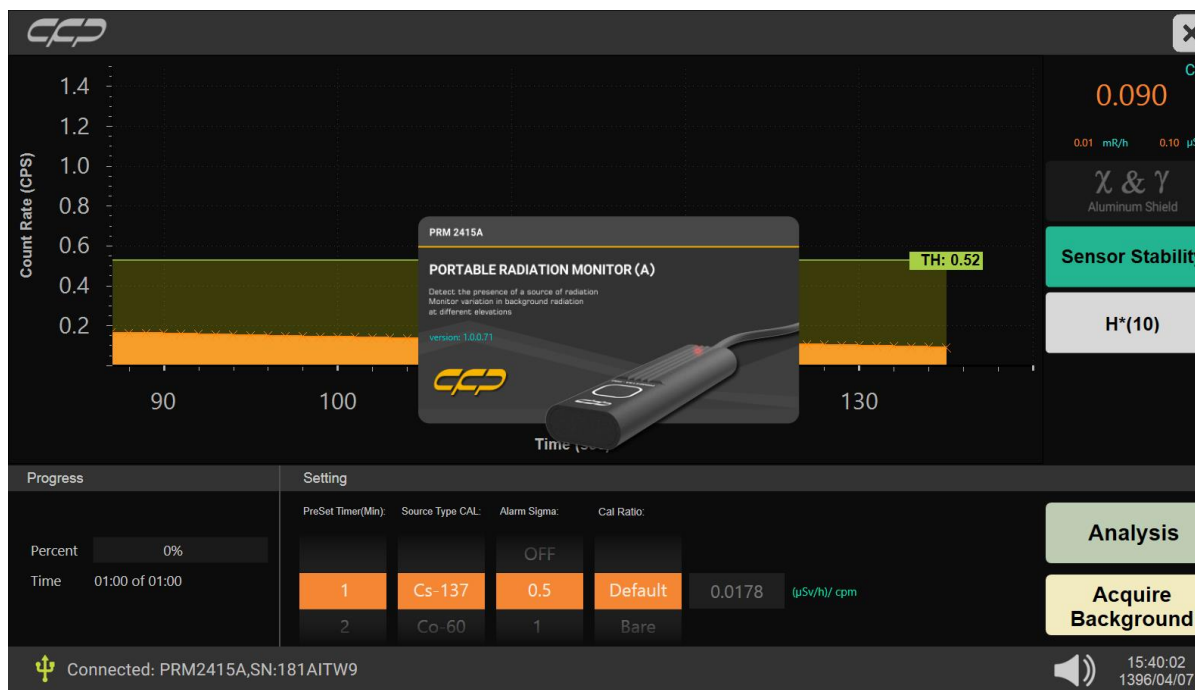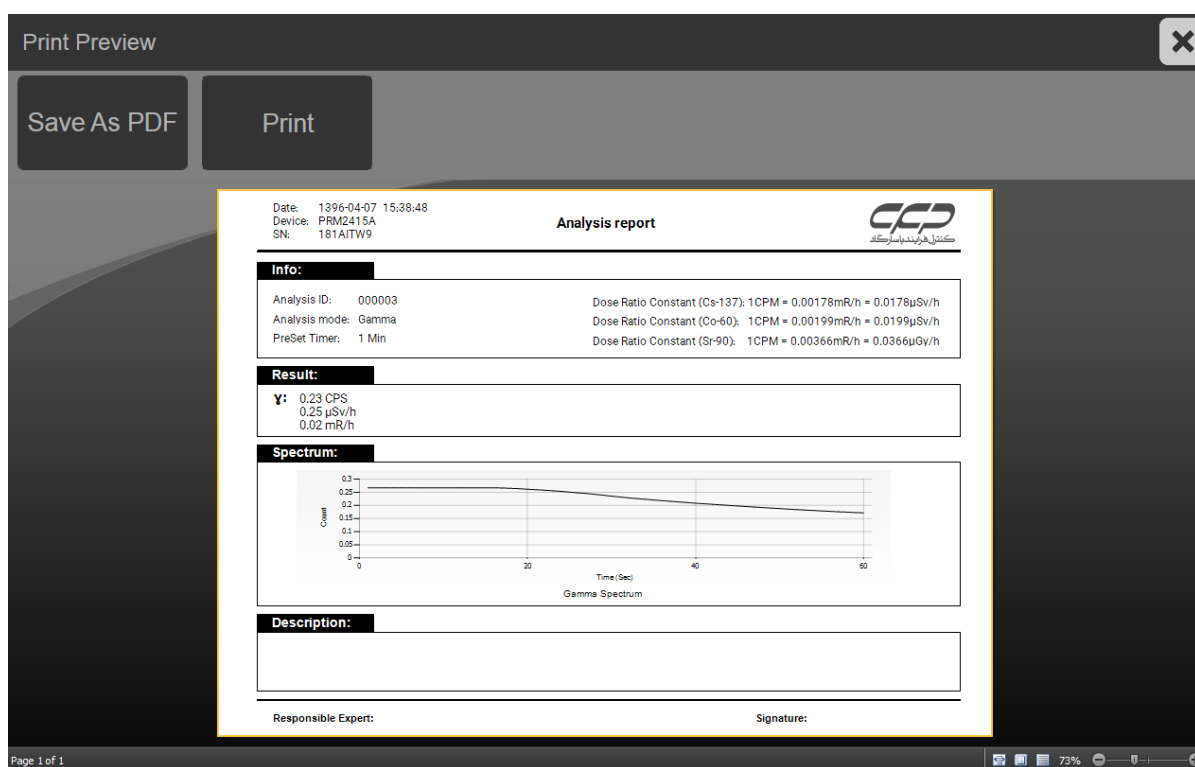| VERSION	
STD	
PRO	
Power required	
0.1W	
weight	
98 gr	
Dimension	
31mm x 137mm	
Storage temperature	
10°C...+40°C	
Operating temperature	
0°C...+50°C	

PRO Version

STD Version

Software

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

- Windows based Tablet and PC Computer via host USB port
- Android based Tablet or smartphone via OTG USB port

Software main window

Software report

Ordering info

Standard package includes PRO Version

Part #	Image	Description
PRM2415ASIMPLE-PRO		RRM 2415A-PRO mountable version
ACCE2415A001-Simple		Phone jack 3.5mm cable
ACCE2415A002-PRO		CD User guide (1 Pack)
ACCE2415A003-PRO		box with foam inserted (1 Pack)

Standard package includes STD Version

Part #	Image	Description
PRM2415ASIMPLE-STD		RRM 2415A-STD mountable version
ACCE2415A001-Simple		Phone jack 3.5mm cable
ACCE2415A002-STD		CD User guide (1 Pack)
ACCE2415A003-STD		box with foam inserted (1 Pack)

Optional accessories and services

Part #	Image	Description
ACCE2415A003		installation
ACCE2415A004		Training