




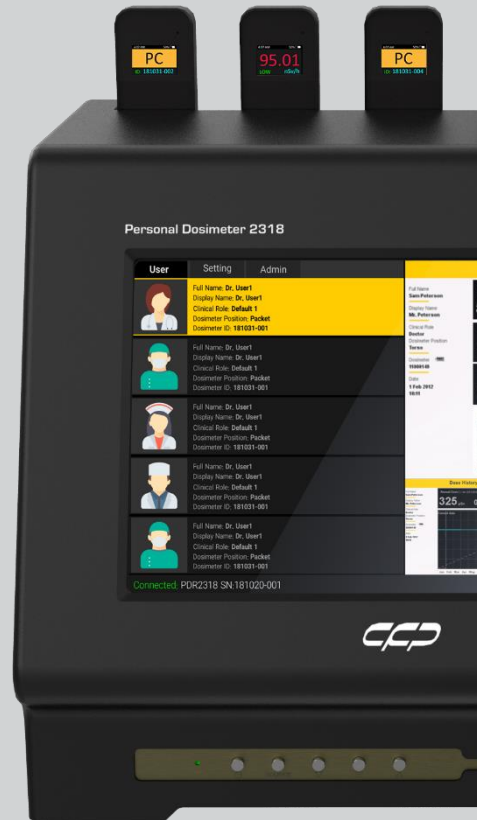
Innovator In Spectroscopy Equipment

PD2318

X & GAMMA

- Hp(0.07)
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PERSONAL DOSIMETER X & GAMMA MODEL PD2318

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CATALOG



DOSIMETERS



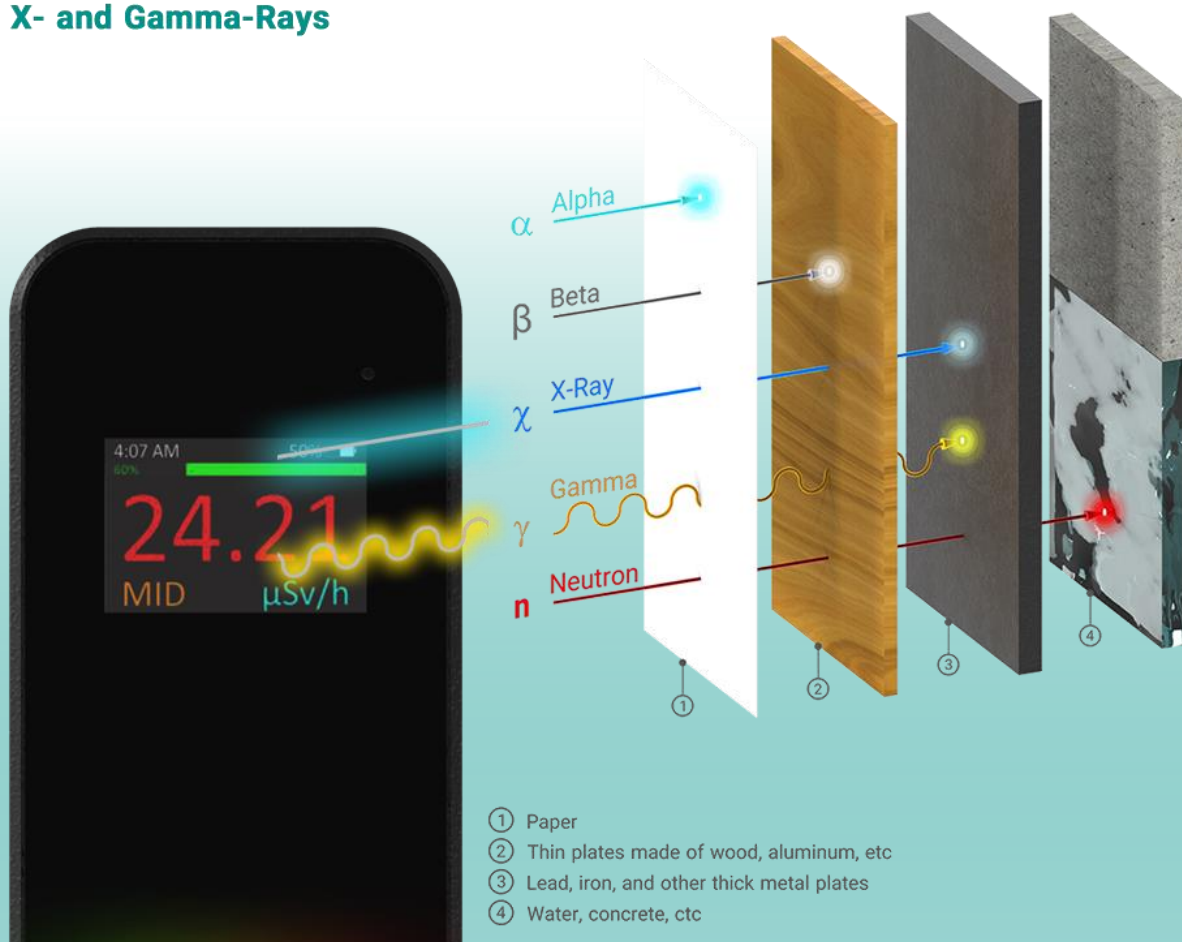
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PERSONAL DOSIMETER X & GAMMA MODEL PD2318

Features

- Parameters self-check
- Full color LCD display
- 3 color Alarm indicator
- Monitor counts/interval (rate)
- Better immunity to interference
- Background radiation monitoring
- Compact design with Low weight
- Easy to use and low maintenance
- Silicon pin photo diode detector
- Atomic Agency Calibration (SSDL)
- Detects all Gamma & X-Ray radiation
- Cost effective Semiconductor Sensor
- Measuring radiation During air travel
- Optional charging and data transfer unit
- Automatic power down mode and sleep mode
- Measurement in wide range energies and dose rate
- STD type gamma energy (120keV-3MeV)
- PRO type gamma energy (60keV-3MeV)
- Light and sound alarm (PRO version only)
- Measurement Count:(0.01cpm~300Kcpm)
- Dose Range: (0.1uSv/h~10mSv/h (@Cs137))
- Measuring radiation during medical procedures
- High sensitivity and wide measurement range
- Detecting hard beta or gamma radiation source (PRO)
- Can you have integrated into a systems or used separately
- Radioactivity measurement in the environmental Resistance to impacts and vibration, dust moisture and electromagnetic interference

X- and Gamma-Rays



Description

The PD2318 is a highly sensitive radiation sensor designed for the embedded systems market. Capable of detecting Gamma and X radiation, it has a simple pulsed output that can be used with any interface. The PD2318 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. We have also written a Windows and Android example program to output graphs to a computer using a USB as the reader. This device comes with an optional unit that can support five PD2318 for simultaneous reading and charging used for health physics. Additionally, the counter comes with an optional enclosure and 3.5mm cable that allow you to connect the counter to some mobile phones. PD2318 is a 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 crystals. The SEM is fully enclosed inside the instrument. When ionizing radiation or a particle strikes the tube, 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.

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. Although the device is specifically designed to capture Gamma and X radiation, it can detect high energy beta 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 device to detect. Beta emissions from tritium and Gamma emissions from Americium-241 are too weak to be detected well using PD2318.

Specifications

UNIT:2318		
TYPE	Personal Dosimeter	
Version	STD	PRO
Inputs/Outputs		
Port	USB for charging	USB for charging
	USB remote read and write	USB remote read and write
Power KEY Push Button	Push turn on, short press function, long press select mode, Long press 3 sec tur off	
Controls/Communication		
USB	Set and read all data	Set and read all data
Power KEY Push Button	Push turn on, short press function, long press select mode, Long press 3 sec tur off	
Performance		
Energy range	120keV-3MeV	60keV-3MeV
Battery type	Li Ion	Li Ion
Dose range	0.1-10000µSv/h	0.1-10000µSv/h
Accuracy	+/- 20% (Cs-137)	+/- 10% (Cs-137)
Power	0.3W	0.3W
Batter life	Over 500 times	Over 500 times
Work time	8 Hours full load	8 Hours full load
	24 Hours intelligent mode	24 Hours intelligent mode
Continuous run time		
In normal conditions	≥1000 h	≥1000 h
In economy mode	≥5000 h	≥5000 h
Buzzer	Not included	Available
Indicators		
LED batt status	Green color (FULL) Red Color (Charging)	Green color (FULL) Red Color (Charging)
LED ALRAM & Sign	Green-Yellow-RED (LOW-MID-HIGH)	Green-Yellow-RED (LOW-MID-HIGH)
Charging and data unit (OPTIONAL)		
Number of docks	5	5
Communication	USB, Network	USB, Network



Application

- Lantern Mantles
- Accelerating installation
- Electronics (ion implanters)
- Nuclear medicine and industry
- Customs and border control
- Civil protection, security and police
- Background Radiation measurement
- Radiation protective measurement
- Roentgenology and radiotherapy
- Individual radiation and protection
- Belding protection and emergency service
- radiation levels during air travel measurement
- Dose monitoring in the case of nuclear disasters
- Counts/Interval vs. Distance and Shielding Studies
- Half-Life Determination (Counts/Interval vs. Time)
- Research activities in Radioecology and Radiology
- In medical procedures (X-Rays, CT scans, etc.)
- X-Ray crystallography and X-Ray fluorescence spectroscopy, electronic microscopy

Electrical and Mechanical

VERSION	STD
	PRO
Power required	0.3W
weight	98 gr
Dimension	135mm x 35mm x 15mm
Storage temperature	10°C...+40°C
Operating temperature	0°C...+50°C

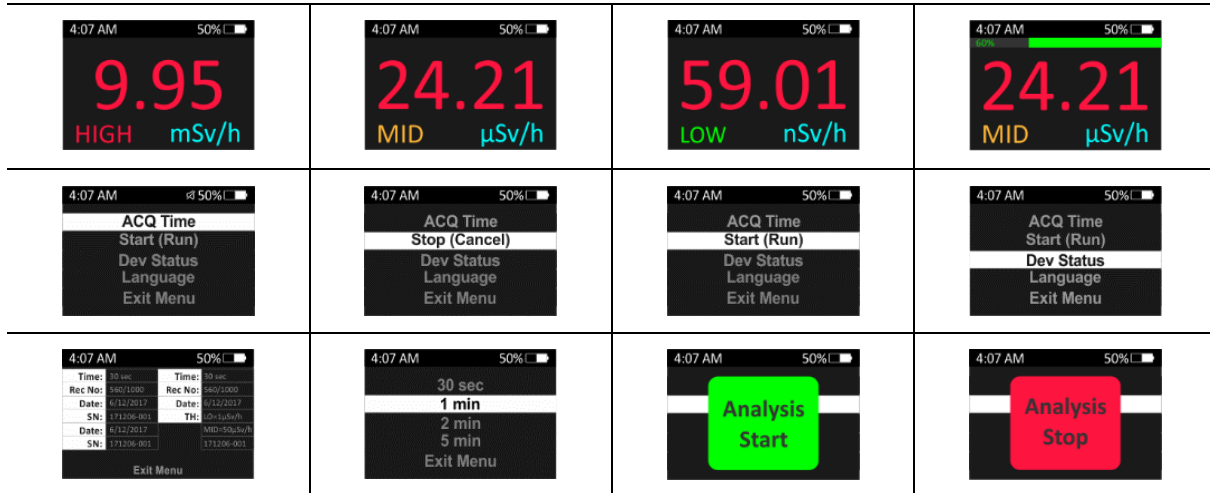


Software

PD2318 sensor can be used stand alone or with one of the below interfaces and the following data-collection software.

- Optional charger and reader unit
- PC Computer
- Tablet with USB host

The main GUI on PD2318 indicates real time dose level, alarm status, battery level and time. The user can set the time for specific dosimetry task.

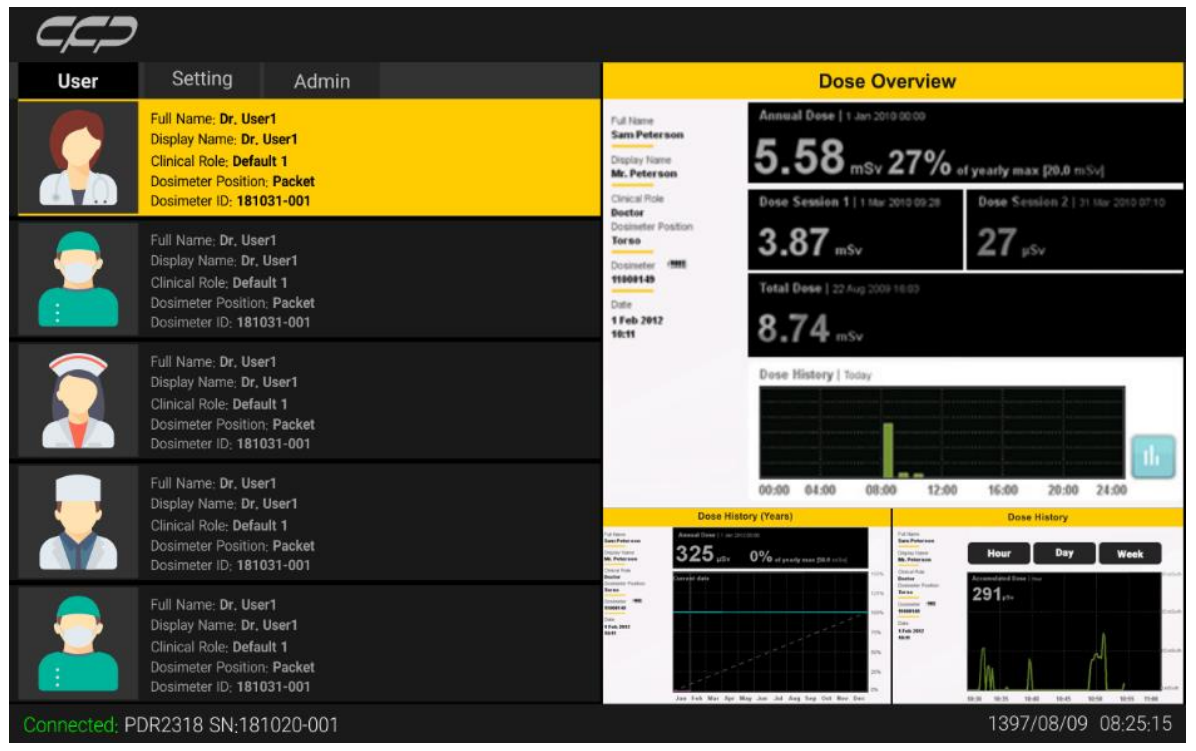


PD2318 main window

PD2318 is also provided with an optional charging and reading unit equipped with a user-friendly software. This software provides various features including dose dashboard with total dose history, annual dose in number and relation to a configurable yearly limit, detailed views presenting time stamped dose history and battery status for different devices in the unit. This software includes the following panels:

- User panel
- Setting panel
- Admin panel





There are also three windows that show the detailed information for each user including dose overview, cumulative dose history (Years) and dose history versus time. *Note that this software can be used in PC and Tablet but with limited features.*







Main window on charger and dock unit

Ordering info

Standard package includes Pro Version

Part #	Image	Description
PD2318 X & GAMMA PRO VER		PD2318-PRO version
ACCE2318001		phone jack 3.5mm cable
ACCE2318002		CD User guide (1 Pack)
ACCE2318003		box with foam inserted (1 Pack)

Standard package includes STD Version

Part #	Image	Description
PD2318 X & GAMMA PRO VER		PD2318-PRO version
ACCE2318001		phone jack 3.5mm cable
ACCE2318002		CD User guide (1 Pack)
ACCE2318003		box with foam inserted (1 Pack)



Optional accessories and services

Part #	Image	Description
ACCE2318004		Charging and data unit with 5 docks
ACCE2318005		Charging and data unit (1 docks)
ACCE2318006		LEMO cable to USB for data unit to PC connection
ACCE2318007		Multi user PC reader software with all features (report, read, data base, etc.)
ACCE2318008		Single user PC reader software with all features (report, read, data base, etc.)
ACCE2318009		Protective hard case for PD2318
ACCE2318010		USB to USB extenuation Cable 10,15, 20, 30 meters
ACCE2318011		Installation
ACCE2318012		Training



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