

DATA LOGGING RADIOMETER PMA2100



Features

Wide variety of detectors available

Many standard detectors are available off the shelf. Due to its novel features the PMA2100 allows us to interface custom detectors quickly and inexpensively.

Ease of use

The PMA2100 automatically configures itself for the new sensor when connected, becoming a UV meter, Photometer / Light Meter or Radiometer. No more entering programs and calibration factors. The detector setup and algorithms are encapsulated in the detector. The detector is ready to use out of the box.

Portability

The PMA2100 with its powerful features easily fits into the palm of your hand. Up to 2 detectors can be connected simultaneously via a 1ft/5ft cable enabling measurements in difficult to reach places. Rechargeable batteries allow for 30 hours of continuous operation.

Data Logging

Up to 1024 data records can be stored in the internal non-volatile memory. The storage can be triggered manually or automatically in a user-set interval (1 minute-2 hours). Uniform record structure for all detectors simplifies data management.

Traceability

Each data sample is accompanied by a set of auxiliary information such as: date, time, detector type and serial number, currently used units, user set scale factor, detector calibration due date and a set of flags indicating the state of the meter. This encourages an implementation of Good Laboratory Practices (GLP) and eases interfacing to Laboratory Information Management Systems (LIMS).

Noise immunity

The signal amplification is done inside the detector encapsulated in a metal enclosure. The signal is delivered to the PMA2100 through a shielded cable offering high immunity to EMI and ESD.

Automatic unit conversion

The measurement result can be displayed in one of many units customary for the particular measurement. A push of a button changes the unit selection. Custom units and conversion algorithms can be programmed to the detector on request. Dose integration. A dose integration can be started from the keypad or remotely.

Computer interface

Connection to a PC through a USB interface enables transfer of collected data. PMA Organizer, a Windows-based software facilitates data retrieval, archiving and presentation.

User defined alarms

An independent alarm can be set for the instantaneous value or integrated dose for each detector. The alarm settings are stored in the detector and automatically recalled when the detector is in use.

Isolated Digital Input/Output

A process can be controlled by the PMA2100 through the optically isolated digital I/O. The inputs can start or stop the dose collection while the outputs are triggered by the dose and value alarms. Controlling the dose of radiation to a subject is one possible application. Power relay is available as an accessory.

Custom Narrow band Sensors

Solar Light can create a custom sensor for virtually any wavelength and bandwidth. Bandwidth is given as the Full Width at Half Maximum response.

Specifications

Detector Inputs:

2 detector inputs with up to 2 analog signals each.

Input ranges:

$\pm 0.4V$, $\pm 4V$, auto-ranging Resolution 15uV on the $\pm 0.4V$ range 0-5Vdc output accessible through db-25 connection

Dynamic range: $>2 \cdot 10^5$

Accuracy: 0.5% FS all ranges

Nonlinearity: max 0.02% FS within each range

Temperature coefficient: max 50 ppm/ $^{\circ}C$

Operating temperature: 0 to $50^{\circ}C$

Power source: 4xAA NiCad or Alkaline batteries; external 9-12V AC or DC adapter

Weight: 17 oz (480 grams)

Size: 4"W x 7.6"H x 1.75"D (10x19.5x4.5 cm)