Meters • Data Logging Radiometer

PMA2100

Radiometer / Photometer with Dual Input and on Board Data Logging

Applications

- Laboratory and Industrial Radiometry
- UV Curing, Printing, and Photolithography
- Skin and SPF Testing
- Clinical Studies
- Phototherapy
- Environmental Monitoring
- Material Testing
- UV-A Transmission Measurements

Features and Benefits

- High Sensitivity
- Dynamic Range $2*10^5$
- Excellent Long-Term Stability
- Manual or Automatic Data Logging
- Automatic Sensor Recognition
- NIST Traceable Calibration
- Radiometric Units

The PMA2100 Data Logging Radiometer is designed for scientific professionals offering accuracy and flexible data management. It can be used with a full range of Solar Light Smart Detectors for applications from UV to VIS to IR. Smart detectors allow automatic rotor recognition when connected to the PMA2100, so you never have to match meters and sensors. Any PMA meter can be used with any PMA detector. The graphic display shows clear readings, and it has a dose integration capability as well as tracking minima, maxima and average radiation levels. The PMA2100 can store 1024 records with full traceability. Data logging can be triggered automatically or manually, and data can be outputted through the on-board serial interface in text format.

Any PMA Sensor can interface with any PMA Meter thanks to a memory chip which makes it unnecessary to permanently load sensor information into the meter. The sensor output algorithm provides precision readings, choice of units and date of calibration.

Data logging capacity is 1,024 entires, each including time, date and sensor calibration status. Data can be stored manually or automatically in 1 minute to 2 hour intervals, and is stored in a non-volatile memory.

The datalogger downloads through a RS232 serial output port to any PC or Laptop computer. USB connectors are supplied.

Instant values, such as power, can be time integrated to also show energy. Units can be altered, for example ft-candles to lux. Min., Max., Average can be displayed. Programmable alarm from a time integral or max. value. Numerical or graphical LCD display. Auto ranging, Sensors remember the last configuration, including units, alarms and data storage settings.

SOLAR® LIGHT

Specifications	
Detector inputs	2 Sockets with Up to 2 Analog Signals Each
Input Ranges	±0.4V, ±4V, Auto Ranging
Resolution	15µV on 0.4V Range
Dynamic Range	>2x10^5
Accuracy	0.2% FS All Ranges
Nonlinearity	Max 0.02%FS within Each Range
Operating Environment	32 to 120 °F (0 to +50 °C) No Precipitation
Temperature Coefficient	Max 50ppm/°C
Power Source	4 x AA NiCd or Alkaline Batteries, 9-12V AC or DC Charger
Battery Life	Up to 40 Hours Between Charges
Interfaces	RS-232 Serial Interface and Opto-Isolated Digital I/O
Program Control	12-Button Keypad
Size WxDxH	4" x 1.75" x 7.5" (10 x 4.3 x 19.2cm)
LCD Size	2.25" x 1.25" (5.7 x 3cm)
Weight	18 oz. (510 grams)

Ordering Information	
PMA2100	Dual input, datalogging radiometer package, features the PMA Datalogging Organizer software (sample rate in minutes), a battery charger, a USB cable, and a hard cover carrying case.
PMA2100B	Basic model with no datalogging, case or accessories.
PMA2100C	Dual input, datalogging radiometer package, features the PMA Datalogging Organizer software (sample rate in seconds), a battery charger, a USB cable, and a hard cover carrying case.

References

[1] The biological effects of UV-A radiation - Edited by F. Urbach and R.W. Gange, Praeger Publishers, New York, 1986
[2] Nichodemus F., "Self study manual on optical radiation measurements", NBS Technical Note 910-1 (1976)

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Fig. 1. PMA2100 Package

Fig. 2. PMA2100 Package Contents