Digital Smart Detector Area Monitor

Victoreen® Model 1060AM

- **Self contained, reliable, continuous area monitors**
- **Wide range of applications in NEMA 4 Enclosure**
- **RS-485 interface for multi-drop applications**
- **Optional WIN 1060 Windows® Applications Software monitors up to 30 channels**
- **Custom configurations available**
- **16-bit embedded controller**
- **Optional remote display with alarm indicator**

Introduction

The Model 1060AM is a versatile smart radiation detector designed for reliable, continuous area monitoring applications. The unit collects, interprets, analyzes, and communicates radiation measurement data. It is available in low, medium, and high range versions employing internal Geiger-Mueller (GM) detectors. The MHV version accommodates a wide variety of external GM probes. Circuitry that detects pulse pileup conditions in a high radiation field is employed to prevent erroneous readings.

The Model 1060AM is suitable for stand-alone operation or in a network environment employing multiple channels, communicating via an RS-485 interface to a main computer system. WIN1060 PC applications program provides the ability to display multiple channels, to maintain both alarm and measurement history, and to access to system configuration options. An optional remote display, consisting of a visual alarm indicator and a logarithmic meter corresponding to the detector range, is available.

Applications

The Model 1060AM is available in multiple versions supporting a wide range of monitoring applications found in medical facilities and facilities with radioisotope sources. In addition, the Model 1060AM provides an EMI shielded watertight National Electrical Manufacturers' Association (NEMA®) enclosure that is CE marked. The Model 1060AM provides two RS-485 connectors to simplify connections between multiple units. A remote display with alarm lamp is available for each version.

Features

- Available in 4 operating ranges
- MHV version for external probe
- All versions available in SI units
- Simple installation and setup

Specifications

Radiation detected Gamma rays

Typical energy dependence ± 15% from 100 keV to 1.5 MeV

Operating range

Environmental range	1 µR/hr to 1000 µR/hr (0.01 uSv/hr to 10 uSv/hr)
Low range	0.01 mR/hr to 1 R/hr (0.1 µSv/hr to 10 mSv/hr)
Medium range	0.1 mR/hr to 10 R/hr (1 µSv/hr to 100 mSv/hr)
High range	1 mR/hr to 100 R/hr (10 uSv/hr to 1 Sv/hr)

High voltage Regulated 500 to 2500 VDC, < 1 mV ripple, digitally controlled with 1 V resolution, 500 microamperes at 1400 V

Input circuitry High and low discriminator setpoints. Jam detection (anti-jam)

Power requirements 12 VDC @ 500 mA power converter

Enclosures A plastic rectangular housing, NEMA 4 type for outdoor or indoor applications:

Outside dimensions	Mounting hole pattern
3.8 x 11.125 x 4.0 in (9.65 x 28.26 x 10.16 cm)	2.9375 x 9.375 in (7.46 x 23.81 cm)

User interface RS-485 supporting multi-drop applications for communications with IBM® compatible personal computer running WIN1060 applications software

Environmental

Temperature range 32° to 122°F (0° to 50°C)

Relative humidity 5 to 95%, non-condensing

Shock and vibration Mechanical shock and vibration specifications are per ANSI N42.17A, Section 8.4 and 8.5

Operating system Real-time, interrupt driven, embedded system

Optional accessories

WIN 1060 Applications Software (Model 941060WN)

RS-485 to RS-232 Converter

Model	Description	Typical geo. Region
90-177	Converter RS-232/RS-485 power cube, cable	US
90-178	Converter RS-232/RS-485 power cube, cable	Europe
90-179	Converter RS-232/RS-485 power cube, cable	Australia
90-180	Converter RS-232/RS-485 power cube, cable	UK

External Probes (Consult Factory)

Custom configurations available

Available model(s) and optional display

Range	NEMA enclosure	Remote display (add -SI for SI units)
Environmental range: 1 µR/hr to 1000 µR/hr (0.01 µSv/hr to 10 µSv/hr)	1060AM-NM-ER	1060DS-ER (-SI)
Low range: 0.01 mR/hr to 1 R/hr (0.1 µSv/hr to 10 mSv/hr)	1060AM-NM-LR	1060DS-LR (-SI)
Medium range: 0.1 mR/hr to 10 R/hr (1 µSv/hr to 100 mSv/hr)	1060AM-NM-MR	1060DS-MR (-SI)
High range: 1 mR/hr to 100 R/hr (10 uSv/hr to 1 Sv/hr)	1060AM-NM-HR	1060DS-HR (-SI)
External probe[1]	1060MHV-NM	NA

[1]Consult factory for external probe options.

For more information, receive our full product catalog, or order online, contact **Radiation Management Services** business of **Fluke Biomedical**: 440.248.9300 or www.flukebiomedical.com/rms.

Specifications are subject to change without notice.

1060AM-ds rev 5 03 jun 05