

942A/946A/956A

Universal Digital Ratemeters

Formerly a Victoreen product

Technical Data



Universal Digital Ratemeters (UDR) are radiation monitoring instruments capable of being directly interfaced to pulse producing or low-current producing detectors and displaying the radiation signal in various engineering units; (CPM, mR/h or $\mu\text{Ci/cc}$). The UDRs are also capable of being interfaced to a computer system, via the digital communications port, and can be used as a local controller. Designed using military specification components, Fluke Biomedical's family of UDRs achieves a high degree of reliability and are qualified for use in nuclear safety related applications. Thousands of UDRs have been installed around the world.

The 942A-200 UDR can be used with all 943 Series Beta and Gamma Scintillation Detectors. The detector, when connected to the UDR, will comprise a single channel digital process monitoring channel. The 946A-200 UDR can be used with all 977 Series Wide Range Ion Chamber Detectors. The 956A-201 can be used with all 897A Series GM Detectors. Simulators are available for all models.

Key Features

- User-adjustable alarm set-points; retained indefinitely on power outage, keylock protection available
- Front panel pushbuttons for check-source activation, high-voltage indication, alarm-setpoint indication, alarm acknowledge, and power ON/OFF
- Small front-panel size allows dedicated display for each channel while minimizing panel space
- Ability to use existing cables when replacing most analog readouts
- Plug-in connectors for field connections
- Remote alarm acknowledge capability
- Available with international units display
- Ability to interface with "smart detectors"
- Optional ribbon cable output adapter
- For use as area or process monitor readout
- Compatible versions for all GM, ion chamber or scintillation detectors
- High visibility LED display and status indicators
- Analog outputs for recorder, remote display, and computer
- Fail safe DPDT relay contact outputs for warn, high, and fail functions
- Full seismic, environmental, and EMI qualifications

Technical Specifications

The Universal Digital Ratemeters (UDR) feature a bright LED digital display and tricolor LED bar graph, both of which are easily read from a distance of 20 feet. The bar graph changes color with changes in alarm status, providing instantaneous recognition of relative levels and alarm status.

Main Display

5 digits with backlighted engineering units display

Bargraph Display

3 segments per decade, changes color with alarm status: green (normal), amber (warn) and red (alarm)

Alarm Indicators

HIGH (red LED), WARN (amber LED), FAIL (red LED) and RANGE (red LED)
Optional RATE alarm (red LED) for the 942A-200 only. HIGH and WARN flash until acknowledged

Display Selects

Momentary pushbuttons: High Alarm Setpoint, Warn Alarm Setpoint, High Voltage (942A-200 only) and optional Rate Alarm Setpoint (942A-200 only)

Control Pushbuttons

Check source activation (with associated Green LED indicator). Alarm acknowledge. Power ON/OFF switch and optional Trip Test

Outputs

Contact outputs: rated 5 A @ 120 VAC, 5 A @ 28 VDC, for High Alarm, Warn Alarm, Fail Alarm and optional Rate Alarm.
Recorder/computer outputs: two 4 mA DC to 20 mA DC (500 Ω , max) and one 0-10 VDC (1000 Ω , min)

Statistical Accuracy

User selectable at 2 %, 5 %, or 10 %, or fixed one-second update

Dimensions

15 in L x 5.6 in W x 3.5 in H
(38.1 cm L x 14.2 cm W x 8.9 cm H)

About Fluke Biomedical

Fluke Biomedical is the world's leading manufacturer of quality biomedical test and simulation products. In addition, Fluke Biomedical provides the latest medical imaging and oncology quality-assurance solutions for regulatory compliance.

Today, biomedical personnel must meet the increasing regulatory pressures, higher quality standards, and rapid technological growth, while performing their work faster and more efficiently than ever. Fluke Biomedical provides a diverse range of software and hardware tools to meet today's challenges.

Fluke Biomedical Regulatory Commitment

As a medical device manufacturer, we recognize and follow certain quality standards and certifications when developing our products. We are ISO 9001 certified and our products are:

- FDA Compliant
- CE Certified, where required
- NIST Traceable and Calibrated
- UL, CSA, ETL Certified, where required
- NRC Compliant, where required

Weight

5 lb (2.27 kg)

Power Requirements

120 VAC \pm 10 %, 50/60 Hz, 28 W (220 VAC optional)

Environmental

Operating temperature 32 °F to 122 °F
(0 °C to 50 °C)
Storage temperature 32 °F to 122 °F
(0 °C to 50 °C)
Relative humidity 0 % to 95 %, non-condensing

Optional

Computer interfaces: RS232C/RS485, analog inputs. Single channel analyzer/ americium regulator windows. Selectable analog outputs, international SI units

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Ordering Information

Model

- 942A-200** Universal Digital Ratemeter, for use with all Model 943 Series Beta and Gamma Scintillation Detectors
- 946A-200** Universal Digital Ratemeter, for use with all Model 977 Series Wide-Range Ion Chamber Detectors
- 956A-201** Universal Digital Ratemeter, for use with all Model 897A Series GM Detectors

Fluke Biomedical.

The accuracy you need from a company you can trust.

Fluke Biomedical

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