

VICTOREEN**A Fluke Brand**Trusted
radiation
protection.

942A, 946A, and 956A Series

Universal Digital Ratemeters

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, Victoreen'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.

Applications

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

- 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
- 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

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 Model 942A-200 only. HIGH and WARN flash until acknowledged

Display selects

Momentary pushbuttons: High Alarm Setpoint, Warn Alarm Setpoint, High Voltage (Model 942A-200 only) and optional Rate Alarm Setpoint (Model 942-200 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 V ac, 5 A @ 28 V dc, for High Alarm, Warn Alarm, Fail Alarm and optional Rate Alarm. Recorder/computer outputs: two 4 mA to 20 mA dc (500 ohms, max) and one 0-10 V dc (1000 ohms, min)

Statistical accuracy

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

Dimensions (*w x d x h*)

5.6 x 15 x 3.5 in
(14.2 cm x 38.1 cm x 8.9 cm)

Weight

5.0 lb (2.27 kg)

Power requirements

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

Environmental

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

Options

Computer interfaces: RS-232C/RS-485, analog inputs. Singlechannel analyzer/ americium regulator windows. Selectable analog outputs, international SI units

Available model(s)

Model 942A-200

- Detector Scintillation detectors, GM process monitors
- Dynamic count range 10 to 107 CPM
- Bargraph 18 segments
- High voltage output 450 V to 1500 V @ 0.2 mA

Model 946A-200

- Detector Ion chambers
- Dynamic range 0.1 mR/h to 107 mR/h
- Bargraph 24 segments

Model 956A-201

- Detector GM detectors
- Dynamic range each detector model provides 5 decades
- Readout covers 0.01 mR/h to 105 mR/h
- Bargraph 24 segments
- High voltage output 450 V to 1500 V @ 0.2 mA

Ordering information

Model

942A, 946A, and 956A Series:
Universal Digital Ratemeters



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