



Trusted
radiation
monitoring.

Technical Data

1042, 1046, and 1056 Series

Universal Digital Ratemeters

The 10XX Universal Digital Ratemeters (UDR) are 2nd generation digital 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, $\mu\text{Ci/cc}$, etc.). The 2nd generation of Victoreen digital instrumentation is inherently more reliable and requires less maintenance than the 1st generation digital equipment. The UDRs are capable of being interfaced to a computer system, via the digital communications port, and can be used as a local controller. Victoreen's 10XX UDR is designed to achieve a high degree of reliability and is qualified for use in nuclear safety related applications.

Applications

The 10XX UDR can be used with all 943/953 Series Beta and Gamma Scintillation Detectors, all 977 Series Wide Range Ion Chamber Detectors, and all 897A Series GM Detectors. A detector, when connected to the UDR, will comprise a single channel digital process monitoring channel. Simulators are available for all models. The 10XX comes in a rack mountable version and a wall mountable version.



1042WM (Wall Mount Version)

Key features

- High visibility LCD color display with push buttons for reliability and longevity of display
- For use as area or process monitor readout
- Compatible with all GM, ion chamber, or scintillation detectors
- Menu based or PC setup
- Download of historical data via USB
- Ethernet enabled
- 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
- Password protection, keylock protection available
- 6 button navigation panel for menu selections: check source activation (with associated indicator), test, high voltage display, alarm acknowledge, and power ON/OFF switch.
- Small front panel size allows dedicated display for each channel while minimizing panel space
- Can be used as a direct replacement for most analog and 1st generation digital channels with appropriate connectors
- Plug-in connectors for field connections
- Remote alarm acknowledge capability
- Available with international units display
- Optional ribbon cable output adapter
- User adjustable alarm set-points; retained indefinitely on power outage



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Technical Specifications

The 10XX Universal Digital Ratemeters (UDR) feature a color LCD digital display and tricolor simulated 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 3.5" LCD color display

7 digits with double digit exponent units display; X.XXE+XX

Bargraph display

LCD simulated display, selectable range changes color with alarm status: green (normal), amber (warn) and red (alarm)

Alarm indicators

HIGH (red), WARN (amber), FAIL (red) and RANGE (amber). HIGH and WARN flash until acknowledged

Navigation pushbuttons

6 button navigation panel for menu selections: check source activation (with associated indicator), test, high voltage display, and alarm acknowledge.

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)

Ports

RS485 (3)
Ethernet (1)
USB (1)



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

Standard Features

Computer interfaces: RS-485, analog inputs (2). Modbus. VICO-LOOP. Triple channel analyzer. Selectable analog outputs (3), international SI units

The 1042, 1046, and 1056 Series UDRs serve as a direct replacement for the below models:

Model 942A-200

- Detector Scintillation detectors, GM process monitors
- Dynamic count range 10 to 10⁷ CPM

Model 946A-200

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

Model 956A-201

- Detector GM detectors
- Dynamic range each detector model provides 5 decades

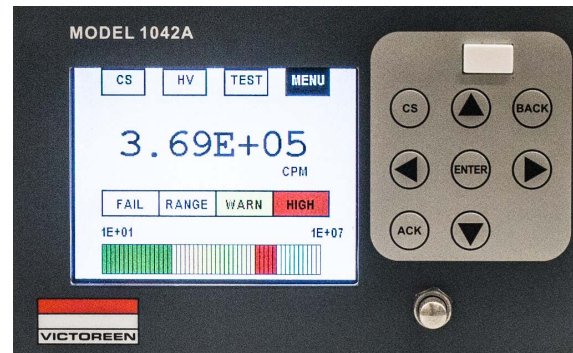
Victoreen 800 Series Analog Ratemeters

Ordering information

Model

- 1042 - Scintillation and Process GM Detectors
- 1046 - Ion Chamber Area Detectors
- 1056 - GM Area Detectors
- 10XXA - rack mountable versions
- 10XXWM - wall mountable versions

Example Order: 1042WM for wall mountable UDR for use with scintillation and process GM detectors



1042A (Rack Mount Version)



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