

IC3™

Portable Ion Chamber Survey Meter (No Desiccant)



The IC3 survey meter provides exceptional capabilities when measuring gamma, beta, and X-ray radiation for ensuring radiological compliance for nuclear power plants, government agencies, radiopharmacies, and other radiation-sensitive environments. It accurately measures both dose and rate information helping radiation protection professionals to ensure worker safety and minimize dose to the general public.

The IC3 survey meter is a battery-operated, auto-ranging vented ion chamber survey meter that operates without the need for desiccant.

It has enhanced dose rate performance for both gamma and beta radiation, with a wide range extending up to 100 Rad/hour. The IC3 survey meter is particularly valuable in open systems where beta radiation levels may exceed the 50 Rad/hour of most ion chambers.

It is the ideal safety tool for X-Ray and non-destructive testing (NDT) safety applications. Not only does the IC3 survey meter enable a wider range of measurements and visibility; it also accurately measures dose to pulsed X-rays down to 50 nanoseconds.

FEATURES

- New Sealed Electrometer provides protection in high humidity areas while requiring no desiccant
- Highly stable, accurate dose measurement readings from 50 nanosecond X-Ray pulses
- Measures dose rate and accumulated dose
- Wide measuring range of 0.1 mR/hr to 100 R/hr (1 μ Sv/hr to 1 Sv/hr)
- Built-in memory to store data
- Large color illuminated display for ease-of-use
- Compact, lightweight design and easy-to-use, one-hand operation
- Beta Window status indication on display and alarm
- Internal accelerometer allows automated sleep function based on movement. Designed for ruggedness and durability

IC3™ – No Desiccant

OPTIMIZED USER EXPERIENCE

The IC3 survey meter is designed for optimized user experience.

- **Portability:** Compact, lightweight and easy to use in one-hand operation.
- **Built-in Memory:** Data storage includes routine measurement points, reducing workload and manual record-keeping.
- **Backlight Display:** An illuminated display offers ease-of-use in poorly lit environments.
- **Connectivity:** An onboard connection to the Mirion ecosystem and WRM radio integrates seamlessly with existing telemetry systems, and a USB connection supports long-term monitoring systems.
- **Combination Display:** Smoothed digital readout for minimum fluctuation and a two decade analog bar graph for fast response.
- **Stored data records** can be downloaded with free software package via USB port.



SPECIFICATIONS

- **Measuring Range:** 0.1 mR/h to 100 R/h (1 μ Sv/h to 1 Sv/h)
- **Accuracy (137Cs):** $\pm 10\%$ of reading within measuring range
- **Gamma Energy Dependence:** Better than $\pm 20\%$ from 20keV to 3MeV
- **Beta Energy Dependence:** Better than $\pm 20\%$ from 200keV
- **Angular Dependence (137Cs):** Less than $\pm 30\%$ (for $\pm 90^\circ$ of front direction)
- **Ion Chamber Volume:** 350 cm³
- **Chamber Wall and Beta Slide Thickness:** 1000 mg/cm² (tissue equivalent)
- **Window Density:** 7 mg/cm² Mylar
- **Response Time:**
 - 3 sec. for readings above 1 mR/h
 - 5 sec. for auto-ranging change, from Low Range to High Range (2 sec. +3 additional seconds for auto ranging delay)
- **Power Use (has Sleep Function to reduce battery consumption):**
 - Four 1.5 Volt AA batteries
 - Hours of Operation: Up to 100 hours (on lowest Backlight)
- **Display:**
 - Color TFT Display
 - 3 digits with auto ranging units of measurement
- **Data Logging:** 200 data records
- **Temperature Range:**
 - Operation: -10 °C to +50 °C (15 °F - 122 °F)
 - Storage: -20 °C to +60 °C (-5 °F - 140 °F)
- **Humidity Range:** Up to 95% RH (non-condensing)
- **Dimensions:**
 - Width 13 cm (5.1"), Length 24 cm (9.5"), Height 14 cm (5.5")
 - Weight: 1000 g (2.2 lb) including batteries
 - Casing: High impact ABS
- **Data Connection:** USB for calibration, configuration, upgrade firmware and stored data points. Optional Internal 900 MHz or 2.4 GHz RF Radio (WRM2/WiFi)
- **Threshold Alarms:** User selectable
- **Backlight:** Yes, switchable and automatic
- **Units:** Switchable US or SI
- **Speaker for Rate:** Yes
- **Speaker for Alarm:** Yes
- **Modes/Menu Options:** 4-button menu driven display with multiple modes and configurable options
- **Temperature-compensated Readings:** Yes
- **Zero Function:** Automatic
- **Desiccant:** No desiccant required
- **Pulsed X-Ray Use:** Yes, down to 50 nanoseconds

