

Model 9-7 Ion Chamber Instrument

FEATURES

- Direct Replacement for the Eberline Model RO-7
- Adapts to Existing Eberline RO-7 Detectors
- Design Improvements over RO-7
 - Standard “D” Size Batteries
 - Separate Battery Compartment for Field Replacements
 - kR/h Range Indicator
 - Eliminated Mechanical Switch



Model 9-7 shown with optional mid-range ion chamber detector attached

DESCRIPTION

The Ludlum Model 9-7 Ion Chamber Instrument is a digital readout and control unit that can be attached to any compatible ion chamber (sold separately). This instrument is a direct replacement for the discontinued Eberline Model RO-7 and will work with any of the existing Eberline RO-7 series detectors, extensions and cables.

This instrument provides remote monitoring in high range beta and gamma fields. The gamma measurement range is .001 R/hr to 20,000 R/hr covered by three separate detectors. The 9-7 automatically recognizes which detector is connected so no re-calibration or adjustment is required whenever switching detectors. These ion chambers can either be connected directly to the instrument or via rigid extensions, flexible cables or both to facilitate the length required. The detectors will remain functional with extensions/cables up to 500' in length.

The instrument display and controls are very similar to the original RO-7 to minimize any procedural changes or re-training. The backlit LCD display presents three large 0.5” sized characters together with a floating decimal point to indicate the measurement along the R/hr scale. When connected to the highest range detector, a separate kR/hr indicator is prominently illuminated to warn the operator of the higher scale in use. A rotary switch for selecting instrument On/Off and battery status, a LCD backlight switch, and zero adjust knob are the extent of the external operator controls.

SPECIFICATIONS

Display: Liquid Crystal Display (LCD), 3 1/2 digits, 0.5” High (1.3 cm). Includes, decimal point and minus sign. Backlit illumination provided by activating separate user-controllable switch.

Response Time: Approximately 2.5 seconds to 90 percent of final reading on all ranges

External Controls:

- 3 position rotary switch for instrument off, battery test and instrument on
- Zero control
- Display backlight on/off switch

Indicators:

- Low Battery Alert
- kR/h Range Active

Battery Complement: Two “D” cell batteries

Battery Life: 160 hours

Construction: Painted aluminum case with separate battery compartment and accompanying front access door. Includes folding tripod stand and carrying handle.

Size: 9.5” H x 3.8” W x 9.3” L
(24.1cm x 9.7 cm x 23.6 cm)

Weight: 3.5 lbs. (1.6 kg)

Temperature: -4 to 122° F (-20 to 50° C)

Compatible Detectors:

Ludlum Models: 9-7-LD, 9-7-BM, 9-7-BH

Eberline Models: RO-7-LD, RO-7-BM, RO-7-BH

ION CHAMBER DETECTORS & ACCESSORIES

Ludlum offers the following optional detectors and accessories:

Model 9-7-LD Low Range Detector (Gamma only)
Range: 0.001 to 1.999 R/hr
Resolution: 0.001 R/h (1 mR/hr)
Linearity: Within 10%
Size: 1.5" Dia x 8.5" Long (3.8 cm x 21.6 cm)
Chamber Volume: 50 cm³
Weight: 0.7 lbs. (0.3 kg)

Model 9-7-BM Mid-Range Detector (Beta/Gamma)
Range: 0.1 R/hr to 199.9 R/hr
Resolution: 0.1 R/hr
Linearity: Within 10%
Size: 1.9" Dia x 5.5" Long (4.8 cm x 14.0 cm), including beta shield
Chamber Volume: 7 cm³
Weight: 0.4 lbs. (0.18 kg), including beta shield

Model 9-7-BH High Range Detector (Beta/Gamma)
Range: 0.01 kR/hr to 19.99 kR/hr
Resolution: 0.01 kR/hr
Linearity: Within 10%
Size: 1.9" Dia x 5.5" Long (4.8 cm x 14.0 cm), including beta shield
Chamber Volume: 7 cm³
Weight: 0.4 lbs (0.18 kg), including beta shield



ORDER PART NUMBERS

48-3689	Model 9-7	Ion Chamber Instrument
47-3693	Model 9-7-LD	Low Range Detector
47-3694	Model 9-7-BM	Mid-Range Detector
47-3695	Model 9-7 BH	High Range Detector
8293-689-15	Model 9-7-C15	Flexible Cable, 15 ft (4.6 m) long
8293-689-30	Model 9-7-C30	Flexible Cable, 30 ft (9.14 m) long
8293-689-15	Model 9-7-C60	Flexible Cable, 60 ft (18.3 m) long
4293-483	Model 9-7-RX2	Rigid Extension, 2 ft (61 cm) long
4293-484	Model 9-7-RX5	Rigid Extension, 5 ft (1.5 m) long