

The Radcal SRC-500 Ionization Chamber is a direct replacement for the Fluke® 96010A Ion Chamber. Having the same form factor but manufactured by Radcal Corporation it can be used in the Fluke® Radiation Leakage Detection System. This chamber meets 21 CFR 1020.30(k) for leakage measurement requirements*. Contact Radcal to explore electrometer solutions to accompany this chamber. Also, see our 10x6-500 ion chamber that is part of the Accu-Gold family of systems as a single sensor leakage measurement solution.

SPECIFICATIONS –

Construction

Volume: 500 cc (nominal)
Vented: open to air

Entrance Surface

50 X200 mm (100 cm²)

Connection

Signal (BNC), HV (BNC)

Bias

±400 VDC nom, ±600 VDC max

Nominal Sensitivity

1.84E-05 C/Gy (± 5%) (1.61E-07 C/R)

Reference conditions - IEC 61267

Beam Quality: RQR 8 (100 kVp,
4mm Al hvl)

Energy Response

± 5% 40-150 kVp for IEC 61267

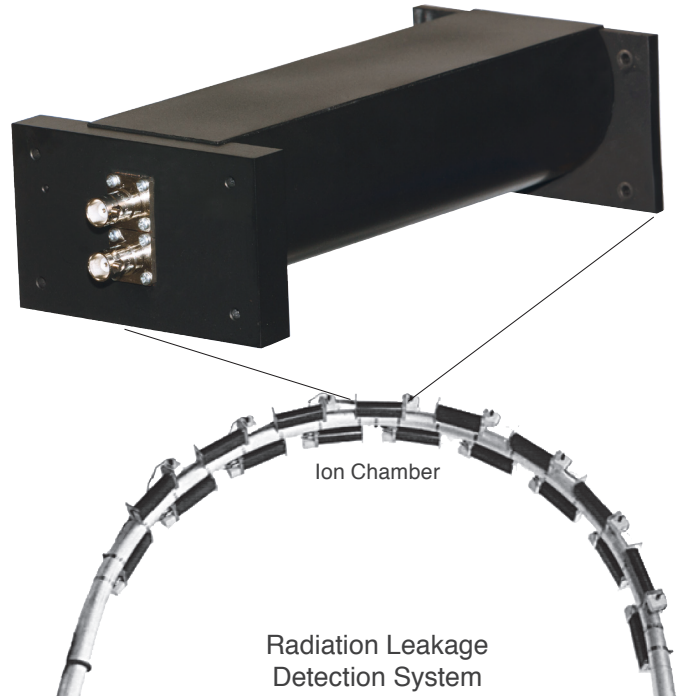
Beam Qualities: RQR and RQA

Rate Dependence

<5% up to 5 Gy/hr (570 R/hr) @ 400 VDC

Electrical Leakage

<50 fA with 400 VDC bias



Ion Chamber

Radiation Leakage
Detection System

ELECTROMETER – *(ordered separately)*

Preamplifier for the SRC-500 Ionization Chamber- serves as a replacement for the Fluke® 50300 Ion Chamber Electrometer.

Application

For use in the Fluke® Radiation Leakage Detection System or other leakage measurement systems.

Model

SRC - PA1A

Mounting

Mounts on the end of the SRC-500

Connections

Signal: BNC (included)

Data: WPI-AMPHENOL 126-1427 (Radcal

CON/126-1427) - Mate: WPI 126-1429 or

equivalent, user supplied.

ELECTRICAL **SPECIFICATIONS**

Nominal Sensitivity

-2.27E+11 V/A (± 1%)

Electrical Leakage

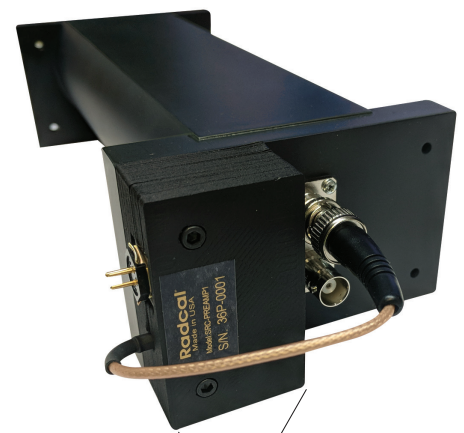
Typical 40 fA (8.3 mV),

< 60 fA (12.5 mV) @25°C

With maximum chamber leakage of 20 fA, the maximum zero offset is less than 10 mV.

Rise Time

220 ms ±10 ms



SRC - PA1A

*(k) Leakage radiation from the diagnostic source assembly. The leakage radiation from the diagnostic source assembly measured at a distance of 1 meter in any direction from the source shall not exceed 0.88 milligray (mGy) air kerma (vice 100 milliroentgen (mR) exposure) in 1 hour when the X-ray tube is operated at the leakage technique factors. If the maximum rated peak tube potential of the tube housing assembly is greater than the maximum rated peak tube potential for the diagnostic source assembly, positive means shall be provided to limit the maximum X-ray tube potential to that of the diagnostic source assembly. Compliance shall be determined by measurements averaged over an area of 100 square cm with no linear dimension greater than 20 cm.