ISO 9001

Radcal®
426 West Duarte Rd. (626) 357-7921
Monrovia, CA 91016 FAX (626) 357-8863

Model 90M10

Non-invasive mAs Sensor for the 9095, 9096 and 4086

DESCRIPTION:

The mAs sensor connects to the 4-pin DIN connector labeled **mAs** of the model 9095, 9096(Accu-Pro) or 4086 (Accu-kV). The interconnecting cable is a standard S-Video cable with EMI filters. The mAs sensor couples to the x-ray generator by clamping to the x-ray generator HV cables.

The 90M10 will clamp cables up to 23mm in diameter. The sensor measures the current flowing through the cable and these values are digitized with 20 bits of resolution (2A full-scale) and transferred to the 9095, 9096 or 4086 processor. The values are corrected for zero level, and then their absolute values recorded as a waveform with the same 76.8 µs resolution as the kV waveform. The value of mAs is computed by summing mA values during the part of the kV waveform (requires kV sensor in beam) defined by the same thresholds that are applied to determine its width, generally 75% of kVp. Average mA is mAs divided by this width.
To measure Anode current, clamp the 90M10 on the anode cable with the arrow on the clamp pointing towards the X-ray tube. For best results, do not move clamp before and during a measurement.

FEATURES:

- Automatic power control extends battery lifetime.
- Automatic zero.
- Measurement synchronized to kV waveform.
- Maximum 9999 mAs and 0.7mA(RMS noise) to 2A dynamic range with no range switching.
- Measures absolute value of mA.
- mA-waveform available to an external PC using a spreadsheet (with optional XLPRO add on software).

SPECIFICATIONS:

- Range: 0-2000 mA or 0-9999 mAs
  (2-2000 mA when used with 9095)
- mA accuracy:
  ±4% of reading (Limited by 0.7mA RMS noise below 18mA).
- mAs accuracy (1-s pulse):
  ±4% of reading (Limited by 0.7mA RMS noise below 18mA).
- Reverse Battery protection
- Bandwidth:
  2.3 kHz, -3 dB.
- ON/OFF controlled from 9095/9096/4086 (ON only when a kV function is active.)
- Batteries: 2 x IEC-LR6 (1.5V AA Alkaline) Lifetime: Approximately 35 operating hours.

The model 90M10 conforms to the following product specification:
EMC:EN 61326-1

Caution: In the presence of strong electromagnetic fields, performance may degrade up to 1 Amp.