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Model ICX701
Siemens Replacement Ionization Chamber

The Model ICX701 is a drop-in replacement for the Siemens Model 81 67 538 X1651.

These procedures assume that the AEC and x-ray generator are in proper working condition.

Test Set Up:

Select the center field of the ion chamber. Set the generator for 100 kVp and maximum backup time. For 100 kVp use 8 to 10 inches (20cm to 25cm) of water or plastic for a phantom. Metals such as copper, aluminum or lead are not suitable for use as phantoms. Make sure the phantom is homogeneous and completely covers all fields equally. Do not rest the phantom directly on the ion chamber. Center the x-ray beam on the center field. Collimate the x-ray beam so that it completely covers all three fields but does not extend beyond the limits of the phantom.

When exposures are required, use the same film cassette throughout the procedure. Measure film optical density to check the ion chamber calibration as described in the following sections.

Overall Output Check:

Make exposures under the conditions described in the previous section to compare the overall output of the ICX701 to that of any other ion chambers connected to the same AEC. Make adjustments, as required, to the Siemens AEC.

Balance Check:

The ICX701 is factory calibrated to provide matched outputs from the three sensing areas that are matched to within 5% of one another.

For accurate results, a film cassette must be in place when checking the balance of the ion chamber fields. Use a calibrated mAs meter to check the individual fields to see that they are balanced, that is, that they produce the same mAs reading. If mAs readings are not stable from exposure to exposure for an individual field or if an accurate mAs display is not available, then it will be necessary to expose films and make these measrements based upon optical density.

FIELD DIMENSIONS

I: 2.75 X 2.75

II & III: (2.36 X 3.84) – (0.70 X 1.78)

FIELD SELECT SIGNALS

HIGH–ACTIVE (≥+15VDC)

EXPOSURE START SIGNAL

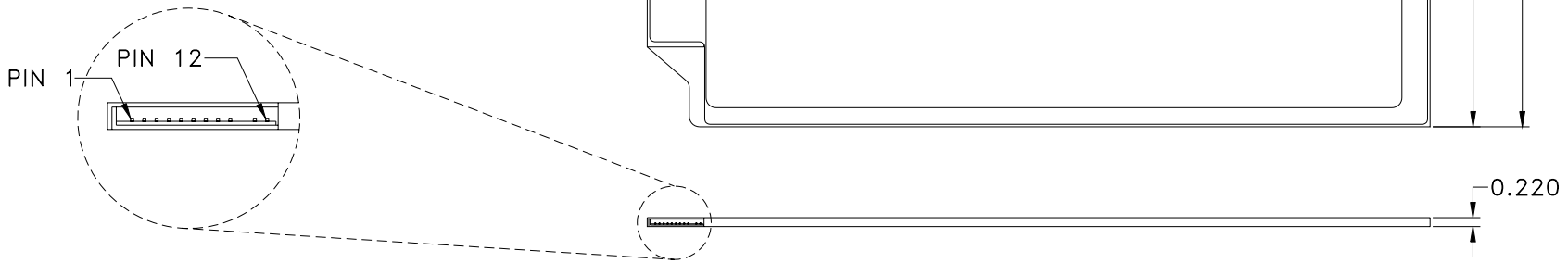
NOT APPLICABLE

OUTPUT

POSITIVE DC LEVEL

PIN–OUT

1 = NO CONNECTION
2 = +15VDC (P_15_A_IONTO)
3 = OUTPUT (RDL_A)
4 = –15VDC (N_15_A_IONTO)
5 = FIELD SELECT RETURN (ANA_GND_IONTO)
6 = FIELD SELECT II (DOM II)
7 = FIELD SELECT I (DOM I)
8 = FIELD SELECT III (DOM III)
9 = GROUND (ANA_GND_IONTO)
10 = KEY
11 = BIAS VOLTAGE (NOT REQUIRED)
12 = NO CONNECTION



REV.	ECN NO.	DATE	REVISIONS	BY
--	1850	05JUL00	THICKNESS WAS 0.281	BRP
--	1850	05JUL00	BIAS VOLTAGE PRODUCED ON PRE–AMP	BRP

DO NOT SCALE

UNLESS SPECIFIED OTHERWISE;
DIMENSIONS ARE IN INCHES.
FRACTIONS ±1/64 DECIMALS ±0.010 ANGLES ±1°

SCALE	DRAWN BY	DATE
NONE	RLS	05JUN95
MATERIAL --	CHECKED BY	
FINISH --	APPROVED BY	

ADVANCED INSTRUMENT DEVELOPMENT, INC.
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MELROSE PARK, IL. 60160

X-RAY

ION CHAMBER DIMENSIONS

USED ON	NEXT ASSY.	DRAWING NO.	REV.
ICX701		ICX701	--