

# 3FA/5FA Iontomat Chamber XT

## Ionization Chambers for Automatic Exposure Control

### Data Sheet

#### Description

The 3-field and 5-field ionization chambers with preamplifier are used in X-ray diagnostics in automatic exposure control (AEC) systems as radiation-measuring devices. The individually selectable measuring fields permit their universal use in digital and analog radiography systems. The flat chamber with a nominal thickness of 6 mm allows a minimum object-film distance for reduced unsharpness. The integrated preamplifier is characterized by its high output signal range, which is proportional to the dose rate.

#### Features and customer benefits

- High flexibility thanks to 3 or 5 individually selectable measuring fields
- The virtually shadow-free design is ideally suited for use in digital X-ray imaging systems
- Environmentally friendly RoHS-compliant design
- High sensitivity for a wide range of applications
- Integrated preamplifier for improved signal-to-noise ratio

Technical Data		
Type	5FA Iontomat Chamber XT	3FA Iontomat Chamber XT
Mat.-No.	10664277	10664935
Dimensions (L x W x H)	(486 ± 0.8) mm x (455 ± 0.8) mm x (6.4 ± 0.2) mm	
Weight	450 ± 20 g	
Imaging area, centered to central measuring field	430 mm x 430 mm	
Measuring field size central field / side fields	59.3 cm <sup>2</sup> / 59.6 cm <sup>2</sup>	64.0 cm <sup>2</sup> / 65.4 cm <sup>2</sup>
Sensitivity deviation between individual measuring fields (compared to central field)	≤ ±10%	
Reproducibility	≤ 3%	
Type of pre-amplifier	Current to voltage converter	
Gain of pre-amplifier	3 x 10 <sup>7</sup> V/A	
Output signal proportional to dose rate	0.001...10 V	
Typical sensitivity at 100 kV	≥ 850 Vs/Gy	
Minimal dose / picture	0.85 µGy	
Measuring range	40...150 kV	
Dose rate range	0.85...10000 µGy/s	
Dose range	0.85...174 µGy	
Exposure time range	0.001...10 s	
Attenuation equivalent at 70 kV (RQR5, IEC 61267:2005)	<0.7 mm Al	

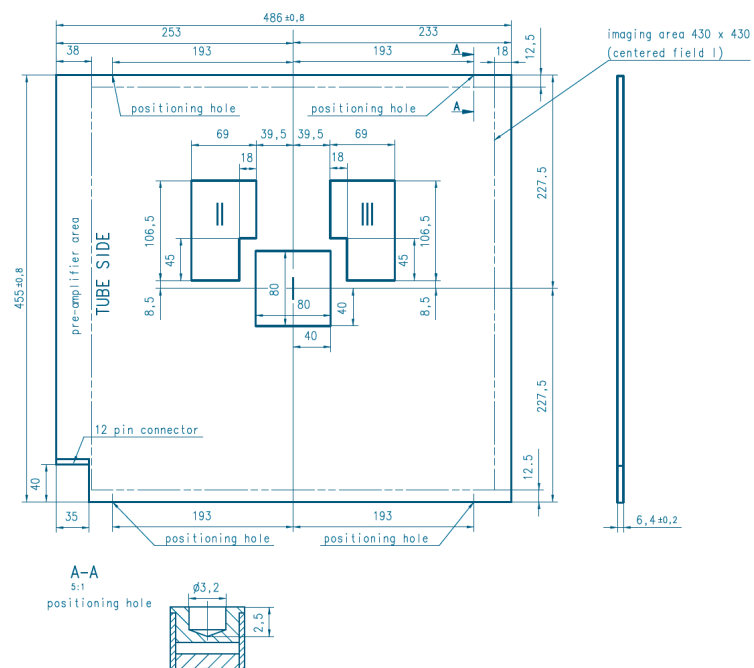
# 3FA/5FA Iontomat Chamber XT

Technical Data	
Type	3FA and 5FA Iontomat Chamber XT
Attenuation difference caused by measuring fields at 40...150 kV (RQR, IEC 61267:2005)	≤ 1%
Environmental conditions for operation:	Temperature 10...60°C Air pressure 600...1060 mbar Rel. Humidity 20...75% (non-condensing)
Ionization voltage [V]	+ 300 VDC ± 15 VDC
Supply voltage [V]	± 15 V, tolerance ± 0.75 V
Connector	12 pin single row plug connector (Type: AMPMODU II, spacing 2.54 mm)

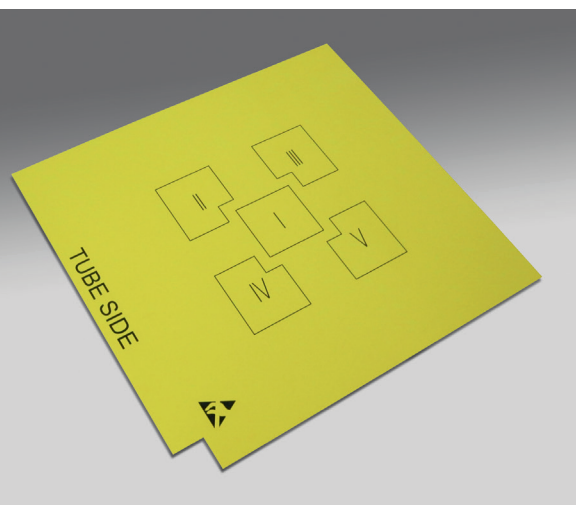
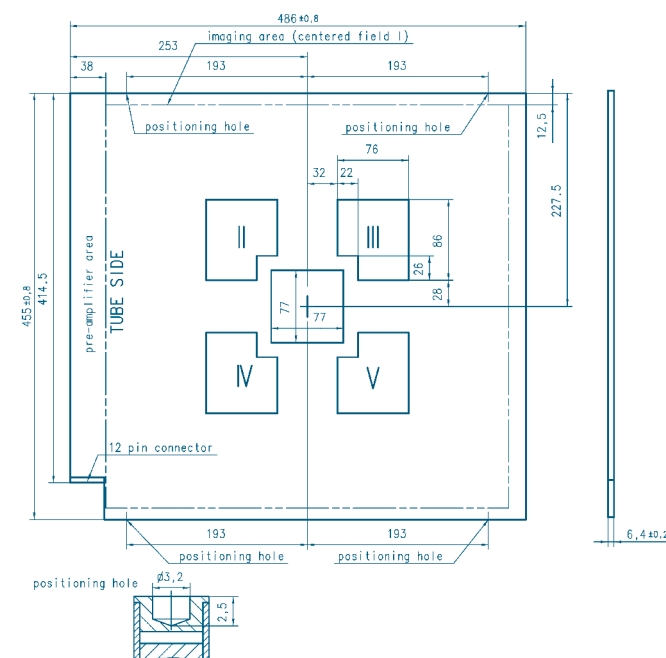
This AEC chamber was designed for use in combination with a Siemens X-ray generator.

## Dimensional drawings

### 3FA Iontomat Chamber XT



### 5FA Iontomat Chamber XT



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