



**CSA C22.2 No. 61010-2-091:19**

**Safety requirements for electrical equipment for measurement, control and laboratory use — Part 2-091: Particular requirements for cabinet X-ray systems**  
(IEC 61010-2-091:2019, MOD)

**CSA C22.2 n° 61010-2-091:19**

**Règles de sécurité pour appareils électriques de mesurage, de régulation et de laboratoire — Partie 2-091 : Exigences particulières pour les équipements à rayons X montés en armoire**  
(IEC 61010-2-091:2019, MOD)



**Standards Council of Canada**  
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# SAFETY REQUIREMENTS FOR ELECTRICAL EQUIPMENT FOR MEASUREMENT, CONTROL, AND LABORATORY USE –

## Part 2-091: Particular requirements for cabinet X-ray systems

### 1 Scope and object

This clause of Part 1 is applicable, except as follows:

#### 1.1 Scope

##### 1.1.1 Equipment included in scope

*Deletion:*

*Delete the first paragraph.*

*Replacement:*

*Replace the second paragraph (above items a) to c)) with the following new text:*

This part of IEC 61010 specifies particular safety requirements for cabinet X-ray systems, which fall under any of categories a), b) or c) below.

*Addition:*

*Add the two following new paragraphs at the end of the subclause:*

Equipment covered by this document can be both PROTECTED EQUIPMENT or PARTIALLY PROTECTED EQUIPMENT, with X-ray generator voltage up to 500 kV.

A cabinet X-ray system is a system that contains an X-ray tube installed in a cabinet, which, independently of existing architectural structures except the floor on which it may be placed, is intended to contain at least that portion of a material being irradiated, provide radiation attenuation and prevent operator access to the radiation beam, during generation of X-radiation.

These cabinet X-ray systems are used in industrial, commercial, and public environments, for example, to inspect materials, to analyse materials, and to screen baggage.

##### 1.1.2 Equipment excluded from scope

*Addition:*

*Add the following new items to the list:*

- aa) Equipment intended to apply X-radiation to humans or animals;
- bb) Equipment incorporating an X-ray tube but not incorporating complete shielding against X-radiation HAZARDS, such as:
  - equipment intended to be used within a shielded room which excludes personnel during operation;
  - equipment intended to be used with separate portable or temporary shielding;
  - equipment intended to produce an emerging beam of X-radiation.