

# BLM-IC02

Ionization Chamber Beam Loss Monitor



## HIGHLIGHTS

### FEATURE

### BENEFIT

Particularly suited for beam loss monitoring in high energy particle accelerators

High sensitivity

Facilitating the detection of electromagnetic cascades of very low intensities

Thickness of less than 5 cm

Allowing for installation in tight spaces

Flat profile favouring an orientation perpendicular to the direction of the penetrating radiation

Additional guard rings

Increasing the homogeneity of the electric field, limiting leakage currents to less than 200 fA (at 1000 V)

Several standard M6 screw threads

Easy secure mounting

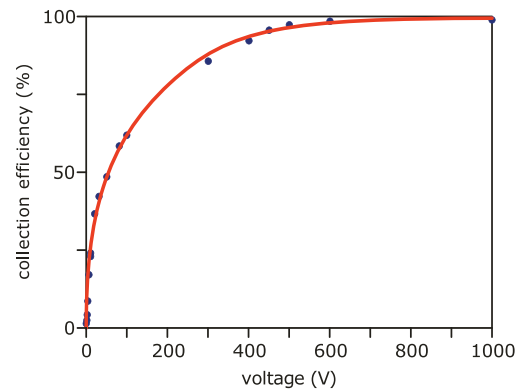
## APPLICATIONS

- Dose measurement
- Beam loss monitoring
- Machine protection
- Insertion devices

## HOW DOES IT WORK?

Ionizing radiation creates free charges in an enclosed gas volume of 1.3 litres. The electrodes collect these charges and the current between them can be measured with an extremely high degree of accuracy.

The chamber has a gas inlet and outlet to allow for operation with a constant gas flux of typical detector gases such as argon or nitrogen. Alternatively, it can work in air without an external gas supply. Filled with air at standard atmospheric pressure, the sensitivity of the chamber amounts to 46  $\mu\text{C}/\text{Gy}$  (in terms of generated charge per absorbed dose).



*Ion collection efficiency of the BLM-IC02 as a function of applied high voltage*

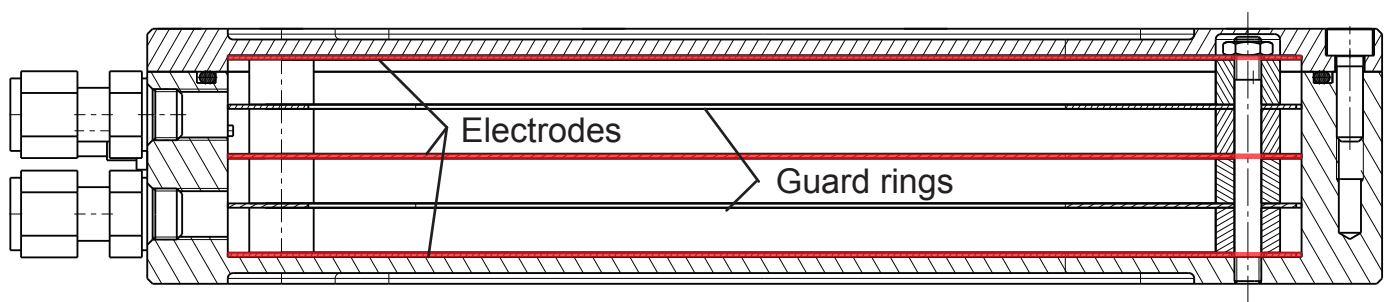
## SPECIFICATIONS

<b>Sensitivity (in air)</b>	46 $\mu\text{C}/\text{Gy}$
<b>Maximum voltage</b>	1000 V
<b>Gas volume</b>	1.3 l
<b>Output connector</b>	BNC
<b>HV connector</b>	SHV
<b>Gas inlet/outlet</b>	6 mm Swagelok® tube fittings
<b>Weight</b>	2700 g
<b>Dimension</b>	230 x 230 x 47.5 mm

## RELATED PRODUCTS

The BLM-IC02 can be easily interfaced with the following:

- XPi data acquisition system
- AH401B picoammeter
- AH501B picoammeter



*Cross section of the BLM-IC02 showing the three main electrodes and additional guard rings.*

## Contact us!

### Industrial Liaison Office

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