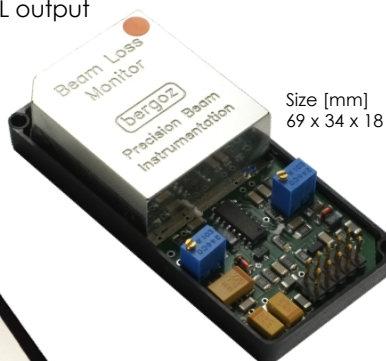


BLM-SE

with single-ended TTL output on HE10 connector



Size [mm]
69 x 34 x 18

BLM-DIF

with differential output on RJ45 connector



Size [mm]
96 x 46 x 21

K. Wittenburg was awarded the Faraday Cup in 2000 for the design of the PIN photodiode Beam Loss Monitor and its implementation at HERA. Bergoz Instrumentation was granted a license by DESY to use Wittenburg's original development.

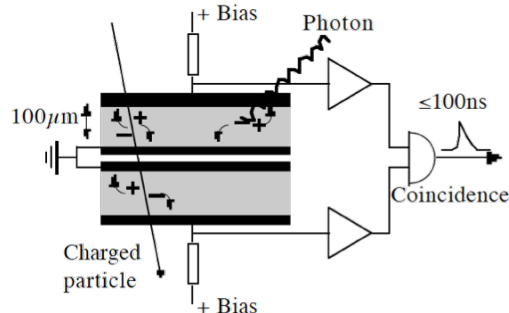
Largest dynamic range
Lowest cost of any BLM

This Beam Loss Monitor (BLM) is a new approach to measure and localize beam losses. Very small size and low unit cost make it possible to monitor all locations where beam loss is predicted. Vacuum quality around the storage ring can be measured based on BLM count rate. Two PIN-photodiodes mounted face-to-face detect charged particles. Coincidence counting make it insensitive to synchrotron radiation photons. Spurious count very low: < 1 count in 10 s
Up to 10MHz counting: dynamic range > 1E8
Recovers 100 ns after a hit
Choice of detector solid angle: Large PIN-diodes can be user installed.
Output is a TTL compatible pulse: easy counting
Tested successfully up to 1 MGray for hardness.

Specifications

Single particle detection efficiency	>30%
PIN-photodiode surface	7.34 mm ²
Spurious count rate	<0.1Hz
Maximum count rate	>10MHz
Count rate @ 6kGray/yr SR photons	≈ 100 Hz
Same with 3cm lead shielding	≈ 1Hz
Output	positive TTL 50Ω pulse
Cable driving capability	>200m RG213
Output female connector	10-pin HE10
Power supply	+5V <50mA; 45mA typ. -5V <80mA; 72mA typ. +24V <10mA; 4mA typ.

Operating principle



The charged particle crosses both PIN diodes, causing a coincidence. Synchrotron radiation photons, if stopped by either PIN-diode, do not cause a coincidence.

Order codes

BLM-SE	BLM with single-ended output
BLM-DIF	BLM with differential output

DISTRIBUTORS

U.S.A.: GMW Associates
www.gmw.com
sales@gmw.com

Japan: REPIC Corp.
www.repic.co.jp
sales@repic.co.jp

India: GEEBEE International
www.geebeinternational.com
info@geebinternational.com

China: Beijing Conveyi Limited
www.conveyi.com
sales@conveyi.com

MANUFACTURER

BERGOZ Instrumentation
www.bergoz.com
Espace Allondon Ouest
01630 Saint Genis Pouilly, France
sales@bergoz.com