

# HC833 HOT CELL INTERLOCK MONITOR



FOR PET AND OTHER  
RADIOPHARMACEUTICAL  
DEPARTMENTS

EASILY CLEANED, STAINLESS  
STEEL ENCLOSURE

SENSITIVE AND STABLE  
DETECTION

ZERO MAINTENANCE

WIDE MEASUREMENT RANGE

COST EFFECTIVE SOLUTION

The Lab Impex Systems HC833 is a self contained gamma monitoring system for use within shielded areas containing radioactive sources, such as hot-cells.

The system is designed to give a visual indication of cell radiation level, and to provide a door interlock function and a visual alarm when levels exceed a preset threshold.

## INTRODUCTION

The HC833 has a large, easy to read analogue scale, which allows the operator to review in-cell radiation levels when required. A variety of scales are available and the system can be supplied with units of Sv, Gy, Rems, Rads, cps and cpm.

The system contains one alarm trip level, and this can be adjusted manually using the logarithmic visual scale and an adjustable locking dial located on the front panel. Alarm events are indicated by a front panel LED and dry contact relay will switch to 'interlock' access to the cell.

The HC833 has a stainless steel enclosure and has mounting fixtures for fascia mounting or bracket mounting. The system is compact and robust, and is designed for easy decontamination in a GMP laboratory environment.

The HC833 is used within an external GM radiation probe mounted within the cell or cell wall. Lab Impex Systems supply a range of GM probes for wide measurement ranges and the system will support an instantaneous measurement of dose rates of 10 Sv/h (1000 Rem/h), equivalent to a 100 Ci (TBq) activity level in most cell environments.

## ALARMS

The front panel of the HC833 contains four status LED's. A green LED is used as a visual indication that the unit is operating in a 'Normal' mode, while 'Alarm' events are indicated using a red LED. LED's are also used to indicate 'Over range' (when the detector count rate goes above the working range) and to register when counts are seen by the detector.

## DETECTORS

The HC833 can be supplied with a range of detectors. Typical choices include the GM-1/324 or a GM-1/314, both of which give a flat energy response and a wide measurement range. Detector output is dead-time compensated and over range protected to improve system performance.

## OUTPUT

For most applications, the HC833 is used in a standalone configuration. However, the system has a 4-20 mA output that will allow the cell activity levels to be transmitted to a building management system or the Lab Impex Systems 9205 Data Management System.

## HC833 HOT CELL INTERLOCK MONITOR

### PERFORMANCE SPECIFICATION

<b>Physical Characteristics</b>	<ul style="list-style-type: none"> <li>• Wall mount or Cell fascia mount as required</li> <li>• Designed for quick, low cost installation</li> </ul>	<b>Outputs</b>	<ul style="list-style-type: none"> <li>• 1 x Fail-safe volt free relay contacts for remote alarm indication/interlock function</li> <li>• 1 x 4-20 mA</li> </ul>
<b>Display</b>	<ul style="list-style-type: none"> <li>• Analogue visual display with a variety of units and scale options</li> <li>• Alarm Threshold pot</li> <li>• Alarm Test button</li> <li>• 4 x status LED's</li> </ul>	<b>Detector Options</b>	<ul style="list-style-type: none"> <li>• GM-1304 Range: 0.1mSv/h - 10Sv/h (0.01rem/h - 1000rem/hr)</li> <li>• GM-1314 Range: 10 uSv/h - 3Sv/h (0.03mrem/h - 300rem/hr)</li> <li>• GM-1324 Range: 0.3 uSv/h - 0.1Sv/h (0.03mrem/h - 10rem/hr)</li> <li>• GM-1202 Range: 0.1 uSv/h - 40mSv/h (0.01mrem/h - 4rem/hr)</li> <li>• GM-1301 Range: 0.1mGy/h - 10Gy/h (0.01rad/h - 1000rad/h)</li> <li>• GM-1313 Range: 10 uGy/h - 3Gy/h (0.001rad/h - 300rad/h)</li> <li>• GM-1321 Range: 3 uGy/h - 0.1Gy/h (0.3mrad/h - 10rad/h)</li> </ul>
<b>Operating Environment</b>	<ul style="list-style-type: none"> <li>• Indoor use (or suitably enclosed)</li> </ul>		
<b>Power Details</b>	<ul style="list-style-type: none"> <li>• Mains AC single phase connection (110/230 VAC)</li> <li>• Frequency: 50-60 Hz</li> </ul>		
<b>Alarm Facilities</b>	<ul style="list-style-type: none"> <li>• Fast, accurate warning of high activity or faults</li> </ul>		
<b>Inputs</b>	<ul style="list-style-type: none"> <li>• 1 x counting channels</li> </ul>		



**making a difference**

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