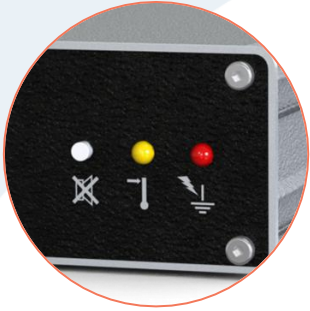


# Mains Supply Guard

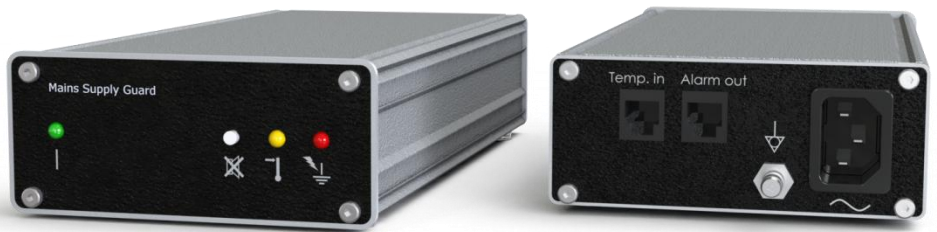
Isolation monitor for mobile applications



Alarm for Isolation  
fault & overload



NO & NC  
alarm outputs



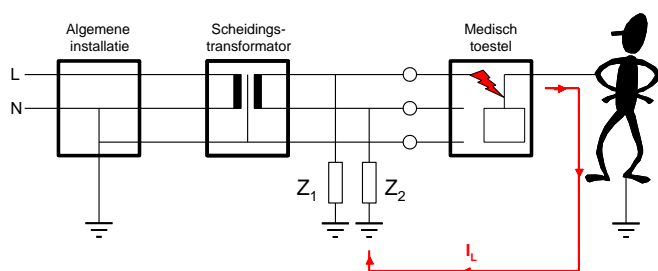
**Jansen**  
medicars

## Mains Supply Guard

The Mains Supply Guard monitors the electrical installation supporting a medical isolation transformer. This is done by signalling when the transformer has been overloaded and when the maximum permitted insulation between the transformer outlet and the earth has been exceeded.

## Why using an isolation transformer?

The objective of using a medical isolation transformer is to increase the electrical safety of the patient and the medical personnel. The transformer creates a galvanic isolation between the wall socket and the medical equipment resulting in a "floating supply" in respect to the electrical earth being created to which the medical appliances can be connected.



The advantage of this is that an electrical fault in a medical appliance, leading to a short circuit with the earth, will not result in a power failure. In addition the maximum current that could pass through a body when live parts are touched would be very small in this fault situation. See the figure above for this. This means that the medical procedure being carried out can proceed even when this electrical fault occurs.

## Why is isolation monitoring required?

The first fault will often not be noticed because it only connects the "floating net" with the earth. Power failure or a dangerous electrical situation could only arise when a second fault occurs. Therefore the leakage current from the electrical installation and the medical appliances on the trolley should be measured frequently, preferable continually.

## Application

The Mains Supply Guard is an appliance that has been developed for mobile installations with an isolation transformer. This mainly involves the trolleys/towers with medical equipment used in various departments, such as treatment rooms and operating theatres.

There is usually an isolation monitor when the electrical installation of a room has an isolation transformer (i.e. an operating theatre). This monitor cannot measure the installation of a trolley with transformer when it is connected in this room. This is because the trolley is equipped with a transformer. It is conceivable that a dangerous fault could occur in the installation of the trolley in this situation without the room's monitoring system signalling it. The Mains Supply Guard on the trolley is essential in this situation.

The transformer on the trolley ensures extra safety if the room does not have a medical isolation transformer (such as a treatment room). This extra safety will be negated at the first fault and, without Mains Supply Guard, not signalled.

## Specifications

Dimensions wxdxh	108 x 225 x 48	[mm]
Weight	<1	[kg]
Mains voltage	230	[VAC]
Classification	EN 60601-1	
Earth Potential Balancing	POAG-6	
Alarm output	- isolation fault	NO/NC
	- overload	NO/NC

