

# Iso-Gard® Line Isolation & Overload Monitor (LIOM) MLHG6



## Device Features

- Monitors total hazard current (THC) and overload current
- Configurable to monitor currents from 10A to 200A
- Digital and analogue bar graph displays
- Automatic self-calibration and self-check
- Provision for MLHG6RD-AU Remote Indicator
- System event log and history storage
- Easy-to-clean stainless steel surround
- RS-485/BMS Communication Port

## Product Description

The MLHG6 Iso-Gard Line Isolation and Overload Monitor (LIOM) measures the total hazard current (THC) and load current in an isolated (ungrounded) AC system. The THC is calculated by measuring the system's leakage impedance to ground. Alarm indication is displayed on a seven-segment display, LED bar graph and digital display.

The MLHG6 features many different alarms:

- Total hazard current (THC)
- Transformer overload
- Overvoltage and undervoltage
- Ground connection
- Insulation resistance and impedance

## Operational Information

Any impedance (from a person or equipment) between an isolated conductor and ground results in a small amount of current which the LIOM measures, and then calculates and displays the value of the THC.

The THC is shown on the seven-segment display and the LED bar graph. In the normal condition, the green "SAFE" LED is illuminated, the display shows a low leakage value (green) and the bar graph is in the non-alarm, or normal, green zone. THC levels will increase as additional loads are connected to the system, and/or when a line-to-ground fault has occurred. A visual and audible alarm is generated when the THC exceeds the LIOM setting of either 2mA or 5mA (red).

The red "HAZARD" LED remains illuminated for the duration of the alarm condition. The audible alarm may be silenced by pushing the "MUTE" button. After the fault is removed, the LIOM will automatically reset to the normal condition.

The LIOM has a test button to check the LIOM operation. This test does not add to the hazard current, nor does the test include the effect of the line-to-ground stray impedance.

## Associated Products

The following products form part of the isolated power supply system:

- MLHG6B-AU Recessed Wall Box
- MLHG6RD-AU Remote Display Unit
- E14/36 3.6kVA Isolating Transformer
- E14/48 4.8kVA Isolating Transformer
- E14/72 7.2kVA Isolating Transformer

## Standards Compliance

The Schneider Electric MLHG6 LIOM complies with the following Standards:

AS/NZS4510:1999 Isolated Electrical Supply Systems for Medical Application.

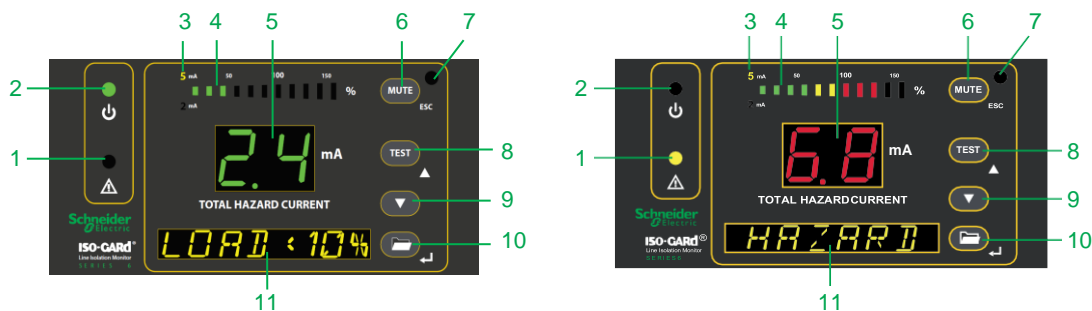
AS/NZS3100:2009 Approval and Test Specification – General Requirements for Electrical Equipment.

The MLHG6 LIOM fulfils the requirements of isolated power supplies under AS/NZS3003:2011 Electrical Installations - Patient Areas.

### Display States

THC	THC Display	Text Display	SAFE LED	HAZARD	LED Buzzer
< 5mA	value (green)	LOAD %	ON	OFF	OFF
> 5mA	value (red)	HAZARD	OFF	flashing	ON
> 9.9mA	EF (red)	HAZARD	OFF	flashing	ON

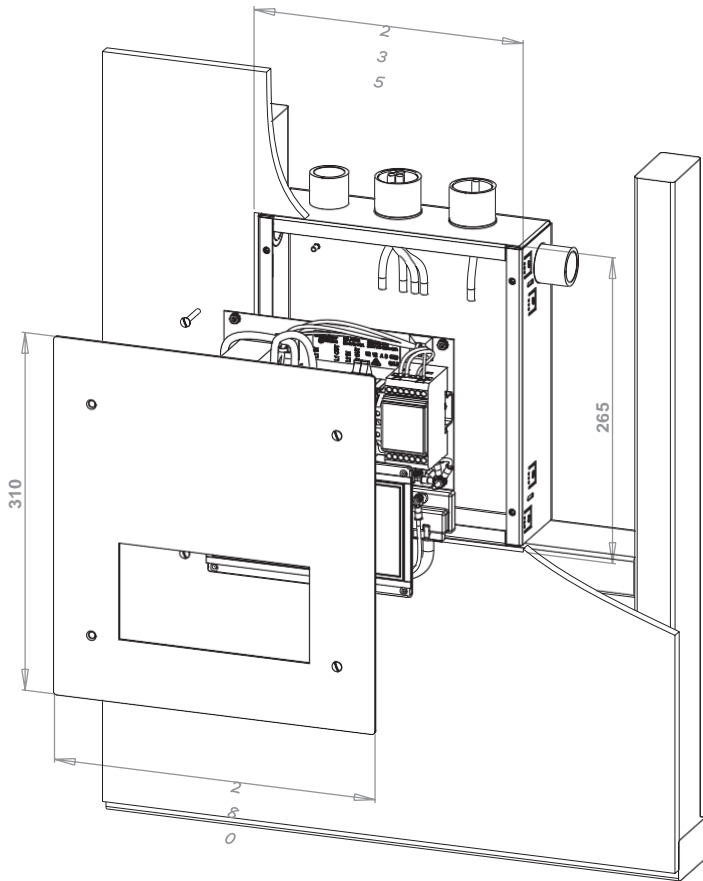
### Display and Operating Elements



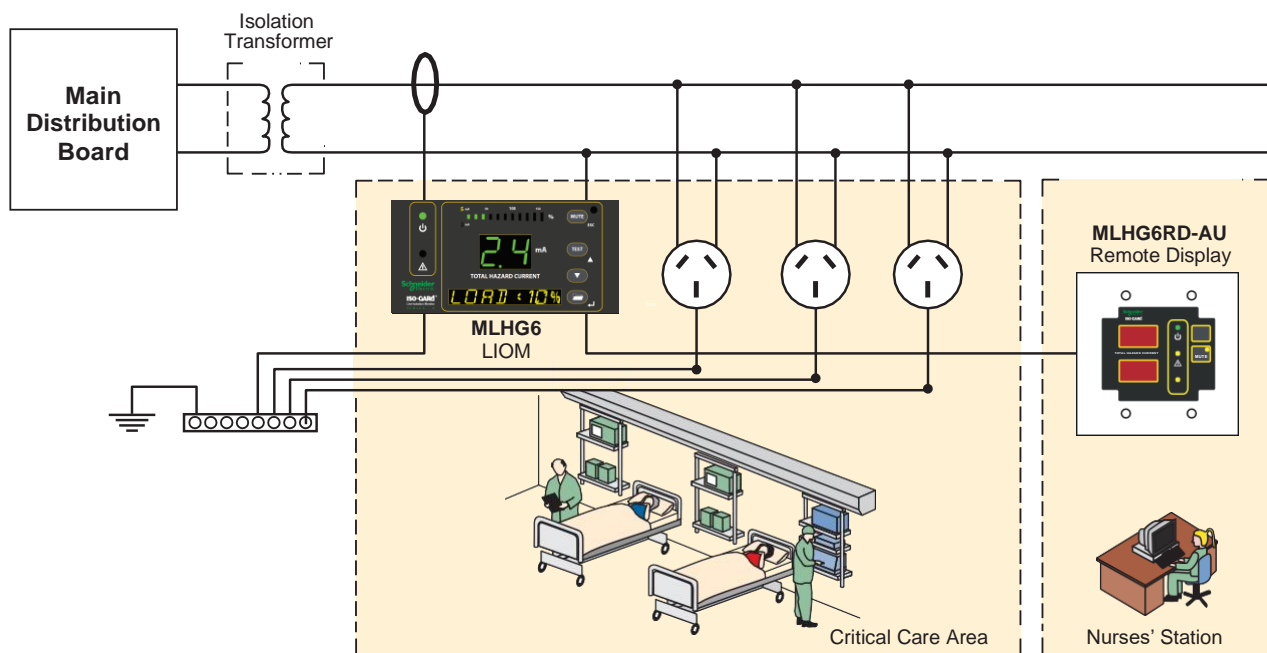
### LIM Panel Display for Normal and Hazard (Alarm) Operation

Figure Ref.	Panel Feature	Normal State	Hazard State
1	HAZARD LED (yellow)	Not illuminated.	Flashes yellow.
2	SAFE LED (green)	Illuminated in the system normal condition when the displayed Total Hazard Current (Prospective) is below the 5mA response value.	Not illuminated.
3	Measuring range indicator light (yellow)	Not illuminated.	Indicates the 5mA trip level has been activated.
4	LED bar graph	In a system normal condition, only the green bars and possibly yellow bars are illuminated.	In a system alarm condition, the red bars will be illuminated.
5	Display of Total Hazard Current (Prospective)	Green in colour for the system normal condition.	Red in colour in a system alarm condition
6	MUTE button/ESC key	Moves to a higher level in the menu.	Press to mute audible alarm in alarm state.
7	MUTE LED	Not illuminated in the system normal condition.	Will illuminate yellow after the MUTE button has been pressed and the detected fault is still present.
8	TEST button	Activates self-test/UP key: moves up in the menu and increases values.	
9	DOWN key	Moves down in the menu and decreases values.	
10	MENU key	Enters the main menu/ENTER key: confirms entries.	
11	Digital display	Reads LOAD % in the normal condition. Displays menu options when in Menu mode.	Reads HAZARD in the alarm condition. Displays menu options when in Menu mode.

Dimensions of Unit in Wall



Isolated Power Supply Architecture



## ELECTRICAL SPECIFICATIONS

Category	Parameter	Value
Supply Voltage		
	Supply voltage Vs	100–240V
	Power consumption	< 22VA
Isolated Power System Being Monitored		
	Nominal voltage Vn	100–240V
	Operating range of Vn	85–110%
	Rated frequency fn	50/60Hz
Insulation and THC Monitoring		
	Response value: THC	5mA/2mA
	Response tolerance	4.5-5mA/1.8-2mA
Voltage Monitoring		
	Response value undervoltage (<U)	80–300V 230V
	Response value overvoltage (>U)	80–300V 250V
Load Current Monitoring		
	Response value	10–200A
Serial Interface		
	Interface A-B/Protocol	RS-485/proprietary bus
	Baud rate	9.6kBit/s
	Cable length	3937ft.
	Terminating resistor	120Ω (0,25W) connectable via DIP switch