



Medical IT Systems

**Enhancing Electrical Safety in Group 2 Medical Locations
with Medical Insulation Monitoring Device (MED - IMD)**

- Medical Isolating Transformers (IEC 61558-2-15)
- Medical Insulation Monitoring Device (MED - IMD) (IEC 61557- 8)
- Insulation Fault Location System (MED - IFLS) (IEC 61557-9)
- Protective Conductor Continuity Monitoring

MEDICAL ISOLATION PANEL

- Medical IT systems, are critical safety measure for Group 2 medical locations. They ensure the continuity of power supply to critical medical equipment during first fault condition. Insulation monitoring is vital in operating rooms, as it detects and addresses electrical leakage currents caused by poor connections, damaged cables, and defective components. These systems monitor insulation levels, transformer load, and temperature, ensuring any faults are promptly managed.
- Medical IT systems by CAPE significantly enhance safety by integrating various protective measures in medical locations and ensure the reliability and efficiency of critical medical equipment.
- The Medical Isolation Transformer provides electrical separation from TN / TT system, minimizing shock risks and leakage currents. The MED IMD continuously checks the insulation resistance of the ungrounded system, issuing alarms once the insulation level falls below the set limit, and the remote alarm indicator promptly alerts medical staff on any issues, allowing immediate action to ensure patient safety and equipment reliability.

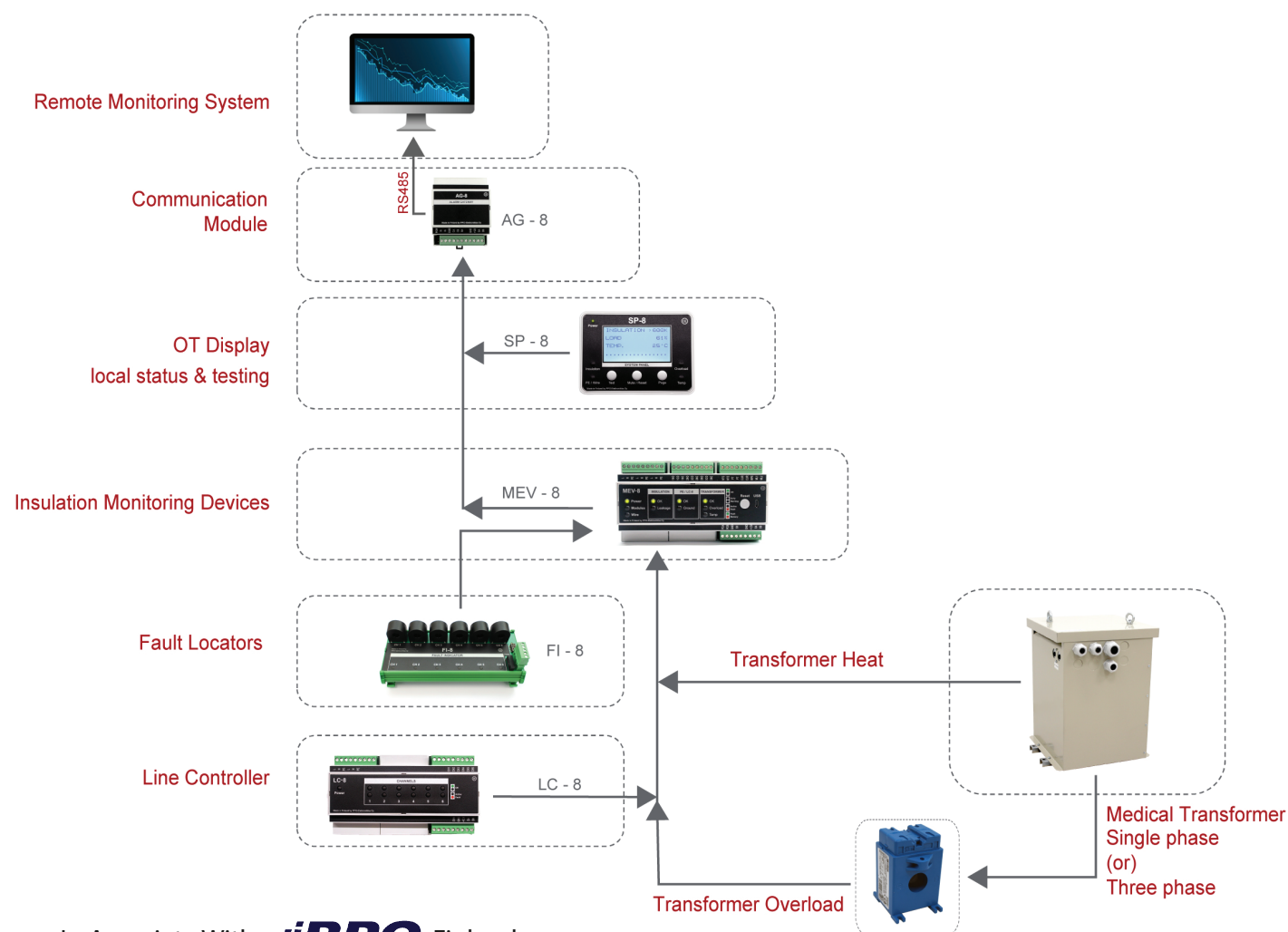


Why to use Medical IT System (insulation monitoring) in group2 locations?

- It is a matter of safety, efficiency and cost savings
- The early detection of potential electric faults prevents risky situations during critical functions; for example, during surgeries.
- More efficient & effective usage of valuable surgical and/or other protection equipment due to: Predictable and timely maintenance which results in substantially smaller operating costs.
- Significantly increased the lifetime of expensive surgical and/or protection equipment.

Model	IPP - G	IPP - GE	IPP - GEC
Standard	IEC 61557-8, IEC 61557-9, IEC 61558-2-15		
Medical Isolation Transformer Rating	3.5 / 5.5 / 7.5 / 10kVA		
No.of source	1	1	2
Supply voltage -1	230 V / 440 V AC		
Supply voltage -2	-	-	230 V AC
Change over switch	-	-	Yes
Rated Frequency	50/60 Hz		
Monitoring Parameters	Insulation Failure, Med. Transformer Overload & Temperature.	Insulation Failure, Med. Transformer Overload & Temperature, Protective Earth	Insulation Failure, Med. Transformer Overload & Temperature, Protective Earth.
Output type	Alarm & visible indication	Alarm & visible indication	Alarm & visible indication
Protection class	IP54		
Panel Dimensions	600x2000x400mm		
Color	RAL 7035		
Mounting Type	Self Standing (Floor)		

Complete Topology for Medical Location with CAPE's Medical IT System



In Associate With **PPO** Finland

- MEV-8 Medical Insulation Monitoring Device (MED IMD) - Monitors the insulation of a IT network (leakage current), transformer load (current A) and temperature (°C).
- SP-8 System monitoring panel - Indicates any insulation level alarms, line controller alarms, and test lead faults as well as transformer overloading and temperature alarms.
- LC-8 Line controller - Monitors the continuity of a floating IT network's protective earth.
- FI-8 Fault locator unit - Locates any insulation faults in a floating IT network.
- AG-8 Alarm transfer unit - The AG-8 Alarm transfer unit transmits alarms to touch-screen panels and controls the room's PC program via the RS-485 bus.

Applications:

- Operation Theatres
- Intensive Care Units
- Anaesthesia Rooms
- Neonatal Intensive Care Units
- Pre-Operative Rooms
- Dialysis Centres

Standards:

- IS17512 – Electrical Installations in Medical Locations.
- IEC 61557-8 - Medical insulation monitoring devices (MED-IMD).
- IEC 61557-9 - Equipment for insulation fault location in IT systems.
- IEC 61558-2-15 – Medical Isolation transformer.

Services to Hospitals by CAPE

- Electrical Safety Verification (Safety Audits) in Existing and New Hospitals.
- Global Earthing Systems / TNS with Protective Multiple Earthing System - Overcurrent and earth fault protection (important in oxygen-enriched areas). Faster disconnections and avoidance of arc/spark.
- Lightning protection system – Protection of buildings from lightning damage.
- Surge protection system – Protection of expensive medical equipment from damage due to transient surges.
- Equipotential Bonding (Main and Supplementary) - Ensuring maximum touch voltages of 25V at medical locations to avoid shock hazards.
- Electromagnetic compatibility and EMP-compliant hospital buildings - Voltage disturbances and EMC compliance for reliable operation of sensitive and expensive biomedical equipment.
- Medical IT System Ensuring continuity of power supply even under first fault conditions for lifesaving equipment with an IT supply (referred to as OT Panels).

Benefits of using solution by CAPE

- Electrical hazards are mitigated in the property.
- Reduced risk of explosion and fire.
- Safety assured for medical personnel and patients from electric shock.
- Availability of the power supply during first fault in group 2 locations.
- Medical equipment that are essential for medical care are protected from degradations and damages.
- Long life assured for bio medical appliances.



GET IN TOUCH



+91 99625 66214
+91 99628 05314



hospitalsafety@capeelectric.in
www.capeelectric.in



A41b, SIPCOT, Oragadam
Kancheepuram Dist, TamilNadu - 602105