PPO-Elektroniikka

Professional Security Electronics since 1981

Highest Creditworthiness
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MEV-7 SAVES LIVES IN OPERATING ROOMS: ELECTRICAL SAFETY WITHOUT EARTH LEAKAGES

MEV-7 System for insulation monitoring

The absolute reliability of electrical systems is of vital importance in certain environments. Earth (grounding) leakages of electrical currents occur in new and old electrical devices alike. They can even cause the death of people around the defective equipment.

PPO-Elektroniikka Oy's **MEV-7 Insulation Monitoring System** provides constant, safe and secure monitoring of your electrical systems with IT-type earthing (grounding) to ensure the very early detection of potential insulation deteriorations, PE-wires and isolation-transformer malfunctions.

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MEV-7 SAVES LIVES IN OPERATING ROOMS:
ELECTRICAL SAFETY WITHOUT EARTH LEAKAGES

MEV-7 System is made for critical environments

The monitoring of electrical conditions is a very important albeit invisible part of the everyday life in settings where defective electrical equipment can cause seriously dangerous situations. Examples of such places and processes:

- **In hospitals: operating rooms, operating-preparation and post-operation premises; anaesthetic rooms; intensive care rooms; heart catheterisation premises; arteriographic/angiographic rooms; preterm-babies care rooms**
- **Chemical laboratories**
- **Production and service areas**
- **Operation of cranes and other hoisting equipment**
- **Explosive-sensitive (ATEX) premises and warehouses, ammunition factories, etc.**

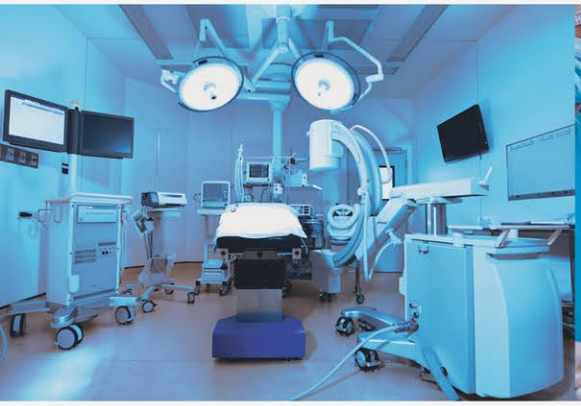
In the previous environments, if the preliminary conditions for a malfunction begin to form in the electricity supply of the devices in critical environments, MEV-7 immediately alarms and thus prevents the accidents at a very early stage thus saving money and even human lives.

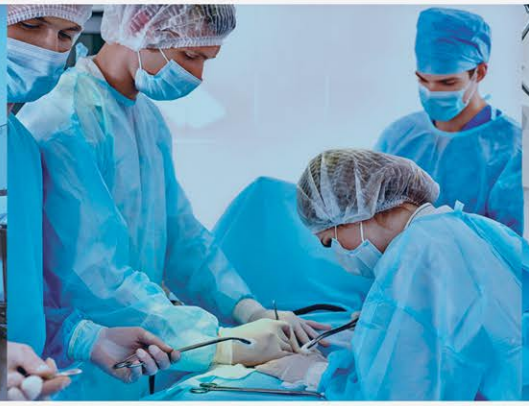
PPO-Elektroniikka Oy – 35 years experience in insulation monitoring

PPO-Elektroniikka Oy has delivered more than 24 000 monitoring systems since its foundation in 1981.
Our insulation-level monitoring systems and other PPO-Elektroniikka Oy's solutions are being used in 15 countries.

Nearly all operating rooms in Finland use MEV-7 or its earlier generation systems. Required by law in the European Union to be used in the operating rooms of hospitals and similar Class II medical premises.

The early detection of potential electric faults prevents risky situations during critical functions – for example, during surgeries – potentially, even saving the lives of personnel, patients, and clients!





More efficient & effective usage of valuable surgical and/or other production equipment due to:

• predictable and timely maintenance which results in substantially smaller operating costs;
• due to previous – better productivity of own staff – you can plan in advance when you need personnel to perform operations.

Significantly increased lifetime of expensive surgical and/or production equipment!

During a surgery such leakages in the operating and other equipment can be dangerous both to the patient and to the personnel who performs the surgical procedures. Our solution separates the operating room's equipment from the mains power system with an isolation tranformer.

Partnering with you enables PPO-Elektroniikka Oy to be in tune with your needs

New electrical equipment is being installed on a regular basis in the operating rooms, ATEX-premises, and similar critical environments.

We actively partner with distributors by providing them the necessary training and support in sales, installation and commissioning, testing and long-term maintenance of our equipment.

We are committed to the safety of end-users' personnel, clients, and patients and we also create flexible solutions to suit your needs. We offer you our expert knowledge in insulation monitoring by supplying critical environments such as operating rooms with all necessary equipment for insulation-level monitoring. We support you in several ways:

- When you design the new premises, we can advise you how to incorporate safe insulation in your electricity supply.
- When MEV-7 is being installed:

o inspection and commissioning are performed according to your needs, as well as functional and fault-clearance tests;
o the operators are trained how to use MEV-7.

MEV-7 is a highly reliable insulation-level and isolation-transformer monitoring system both for Class II medical premises – such as operating rooms – and for industrial purposes. Obviously, our equipment satisfies all needs and criteria for safety in power supply.

MEV-7 –type insulation monitoring systems are required in the operating rooms in all countries in the European Union due to EU regulation in EC DIRECTIVE 89/336/EC and EC DIRECTIVE 1999/5/EC. The insulation monitoring devices produced by PPO-Elektroniikka Oy are produced in compliance with the following regulation acts and technical standards:

- Standard SFS 6000-7-710 based on international standard I**EC 60364-7-710: 2012: Electrical Installations of Buildings – Requirements for Special Installations or Locations – Medical Locations,** Section 413.1.5 and **CENELEC HD 60364-7-710:2012**. SFS 6000-7-710 is a national Finnish standard which stipulates the requirements for monitoring of IT-type earthing systems (grounding systems) in medical premises. In force since 1983 in Finland.

- **European Standard EN 55022, Class B – Rated emissions**. As a result of the requirements of the following three EU directives, **insulation monitoring systems of MEV-7 –type are required in the operating rooms in all countries in the EU**. EN 55022 covers essential requirements as given in Article 4(a) of the **EC Directive 89/336/EC** and Annex I Article 1(a) of the and essential requirements of Article 3.1(b) (emission only) of the **EC Directive 1999/5/EC** EN 55022 specifies, among others, the requirements for the electromagnetic compatibility of medical and household devices (Class B). It complies with standard **CISPR 11:2003** regulating industrial, scientific, and medical equipment.

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