

ILMOS

Insulator Leakage Current Monitoring System



OBJETIVES:

- 1.-To determine the characteristics and the intensity of the losses in the power Transmission and Distribution system due to pollution:
 - Insulators in Lines.
 - Insulators in Substations.
- 2.-To Continuously record the surface leakage currents flowing to ground on insulators, for different ceramic, glass or elastomeric materials during adverse pollution conditions.

PROCESS:

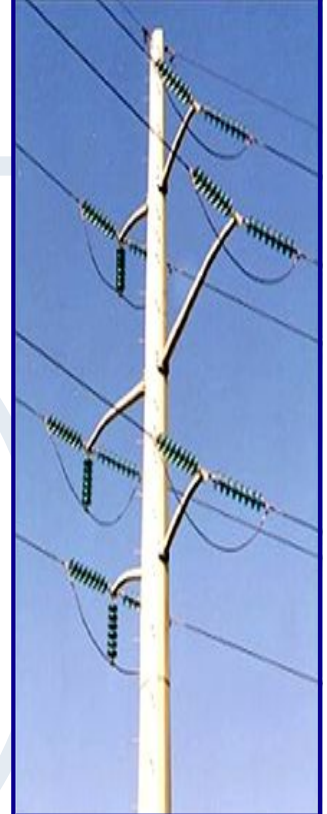
Collecting and analyzing the insulator surface leakage currents to ground in transmission and distribution systems proved to be a valuable asset to enable analysts and system engineers to check for system improvements and/or validate the insulator design

INFORMATION WILL ALLOW YOU TO::

- Monitor the intensity of the leakage current during different seasons.
- Determine the influence of the geographic location on the current losses and the reliability of the overhead power system.
- Determine the influence of the weather on the operation and maintenance requirements of the system.

BENEFITS:

- Identify and focus in specific Critical pollution locations for lines and substations.
 - Have an alarm telling you when to wash the insulators, predefined
 - according to your criteria. You do not need to rely on the leakage current noise to decide when to wash anymore.
 - Understand better why lines gets out of service and operations evens, line openings, recloser operation and others.
 - Monitor the insulator power losses will tell you the money you may be loosing if the insulator was not properly selected.
- You will able to monitor better the status of the leakage currents in substations, transmission and distribution lines.
- You will avoid critical situations and be well prepared for the first rains of the season.
 - You will be able to evaluate the impact of improvement in the system by monitoring alternative technical solutions.
 - You will be able to optimize the maintenance system and migrate from a time based schedule to a status based schedule, saving money and resources while improving reliability.



Now is easier to improve insulation reliability in high voltage lines and substation.



The ILMOS's data acquisition unit process and save the voltage signal coming from the current processing unit.

POWER SIGNAL PROCESSING Inc.

KEY FEATURES

- ILMOS can be easily mounted at the structure insulator base for transmission lines, circuit breakers, transformers, capacitors banks and others.
- Low data acquisition cost, no significant capital expenses
- Small size allows easy installation and data retrieving.
- Very simple monitoring system's settings and maintenance.
- Battery operated. No need of low voltage power supply available on site.
- No need to connect computer on site.
- Easy to train personnel to handle the system.
- Download can be done on field using a notebook



A BNC coax connection allows downloading the acquired information. An Interphase cable supplied with the kit is including a BNC terminal for the ILMOS acquisition box in one end, and a DB9 terminal to be plugged into the computer in the other.

A composite image showing the ILMOS device on the left and its software interface on the right. The device is a small metal box with a yellow warning label that reads "DANGER DISCONNECT POWER BEFORE SERVICING". The software interface is titled "ILMOS Insulator Leakage Current Monitor System (Ver 1.11)" and displays a "Leakage Current Histogram" with 8 levels. The histogram shows voltage levels and counts for each level. Below the histogram are buttons for "Reconnect", "Reset", and "Quit". The interface also shows "EEPROM Dump" information, including "Current Date and Time: 2002/11/24 20:18:42", "Number of Saved Readings: 56", and "Saving Interval: 4 Hours". The status bar at the bottom indicates "Waiting for user command" and the date/time "2002/11/27 10:07:35".

Level (+)	Count (+)	Level (+)	Count (+)
1 1.070 Volt	000000000	5 2.355 Volt	000000000
2 2.305 Volt	000000000	6 2.355 Volt	000000000
3 2.305 Volt	000000000	7 2.355 Volt	000000000
4 2.355 Volt	000000000	8 3.340 Volt	000000000

Important: All information, including illustrations, are reliable. Users should independently evaluate the suitability of each monitor for their application. PSP Technologies makes no warranties as to the accuracy of the information, and disclaims any liability regarding its use. **PSP Technologies** reserves the right to make changes — without notification to customers — to processing or materials that do not affect compliance with any applicable specification. **ILMOS** is a trademark of **PSP Technologies Inc.**